

# TURKS AND CAICOS ISLANDS NATIONAL CURRICULUM

PRIMARY EDUCATION  
MATHEMATICS  
GRADE THREE TO SIX



*The Revised Turks and Caicos National Curriculum (Grade Three- Six)*

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# Director of Education's Foreword

The revised Turks and Caicos Islands National Curriculum (TCINC) is the inauguration of Education Reform at the primary level. The goal of the government of TCI is to have a broad, balanced, coherent, relevant, seamless, and continuous curriculum that meets the diversity of the island's children. This curriculum does such as it reflects local and international standards to ensure all students are exposed to a high quality educational experience. There was broad-based support received from major stakeholders during development, review, and final approval stages. It is crucial that we receive a similar level of commitment and consensus during the implementation stage.

The Turks and Caicos Islands National Curriculum (TCINC) framework encompass three major missions (i.e., Civic Competencies, Multiliteracies, and Career & Life Skills) that were used to guide the development process, as the essential goal is to create well-rounded individuals ready for the demands of the 21st century.

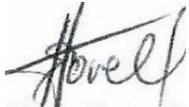
The TCINC translates national development goals to classroom instruction and pedagogical practices to allow all students to reach their full potential. As a result, the curriculum is set to help our children develop the knowledge, skills, and competencies to enable them to become credible, resilient, innovative, reliable, socially and culturally conscious citizens capable of competing globally.

The TCINC, therefore, focuses on the following:

- Development of Values, Character, and Citizenship to create active agents of change
- Exposure to and development of multiple communication skills
- The utilization of an Integrated and thematic approach across nine (9) learning areas
- Incorporation of Career & Life Skills (TVET, STEAM & STEM) across the learning areas
- Infusion of Information and Communication Technologies (ICTs)
- Differentiated Instruction to meet diverse learning needs
- Assessment for Learning, Assessment as Learning and Assessment of Learning

The curriculum is expanded to include skills and experiences essential to students in the 21st century; some include public speaking, communicative skills (various modes), environmental awareness, community action, sports, money management, agricultural science, entrepreneurship, patriotism, and tourism. Teachers will be exposed to continuing professional development to help them acquire the skills and competencies required for effective and efficient implementation of the curriculum. In addition, they will be exposed to various teaching strategies that will enhance their pedagogical practices.

Teaching will be seen as a dynamic process where teachers use their creativity to bring their lessons to life thereby engaging their students in meaningful learning. Teachers will collaborate and plan within and across disciplines to form cross-curricular links in all learning areas to avoid teaching in isolation. Teachers are encouraged to utilize the curriculum as a guide as they are exposed to teaching strategies, methodologies, and assessments to meet the diverse learning needs of each student in the Turks and Caicos Islands.



Edgar Howell  
Director of Education

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Introduction

Since the 1993 Primary School Curriculum implementation, there has been significant development and change to the education system within the Turks and Caicos Islands (TCI). There have been combined educational, economic, social, and cultural growth in TCI society- advances are taken into account in this revision. All stakeholders such as students, parents, teachers, and school leaders played a crucial part in the planning and development process to ensure we created a curriculum that reflected our current society and all the partners and interests in primary education.

The initiation of the revision process began with the implementation of The Education Sector Plan 2018-2022. The plan constituted a proposal for curriculum reform for K1-Grade 6 as there was a need for an updated curriculum to improve its significance to Turks and Caicos Islanders facing the demands of the 21<sup>st</sup> Century. There was also a desire for a curriculum that addresses our diverse communities' needs while appreciating Turks and Caicos Islands culture (ESP, 2018, p. 27). This Turks and Caicos Islands National Curriculum (TCINC) for Grade three to six outlines a detailed curriculum framework that reflects our society's desires to cultivate agents of change and outlines the rationale and goals of The Education Sector Plan 2018-2022; integrates modern educational philosophies and innovative and effective pedagogical practices. This curriculum is grounded in the constructivist perspective and governed by three missions, i.e., Civic Competencies, Multiliteracies, and Career & Life Skills. This curriculum proposes themes harnessed from the country's major occupational areas to equip students with the skills and competencies needed to respond to fast-advancing societal changes. These themes are used to engage students in project/problem based learning utilizing an integrated approach based on cross-curricular teaching and learning. It aims to provide teachers with the resources to enable students to learn how to learn and to develop an appreciation of the importance and practice of lifelong learning.



Elisann Delancy-Mesitumbo  
Curriculum Development Officer

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Vision

Our vision is to provide every primary school child with a broad and balanced curriculum that reflects our core principles to create well-informed reactive citizens who are more adept at real-life experiences. The primary school leaver will be holistically developed in terms of empathy and resilience combined with literacy, numeracy, and critical thinking.

## Curriculum Design

The Turks and Caicos National Curriculum (TCINC) for Grade three to six design process involved Dylan William's (2013) seven fundamental curriculum development principles. Our goal was to harmonize the four broad philosophies that answer the question, "What is the purpose of education for a Turks and Caicos Islands citizen. (1) personal empowerment; (2) cultural transmission; (3) preparation for citizenship; and (4) preparation for work.

Our seven fundamental principles used in the curriculum design process are:

- **Balanced** – Promotes intellectual, moral, spiritual, aesthetic, creative, emotional, and physical development.
- **Rigorous** – Seeks to develop intra-disciplinary habits of mind; powerful ways of thinking developed through sustained engagement with the subject.
- **Coherent** – Makes explicit connections and links between the various subjects and experiences.
- **Vertically and Horizontally Integrated** – Focuses on progression by careful sequencing and continuity of knowledge over time within a subject and integrating various subjects.
- **Appropriate** – Matches the level of challenge to a student's current level of maturity and knowledge.
- **Focused** – Seeks to keep the curriculum manageable by teaching the most crucial knowledge; identifies the big ideas or key concepts within a subject.
- **Relevant** – Seeks to connect the valued outcomes of a curriculum to the students being taught it; provides opportunities for the student to make informed choices.

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Framework

As our society shifts toward agriculture, entrepreneurship, tourism, and rapid social change, there is an urge for well-rounded, adaptable citizens who aim to become agents of change. This revised Turks and Caicos Islands National Curriculum (TCINC) provides a framework for teaching at the Primary School level from Grade three to Grade six. The framework illustrates the interrelationship between the teaching and learning process. It explicitly outlines three missions integrated throughout this document, transforming students into well-rounded, active society members.

### ✚ Civic Competencies

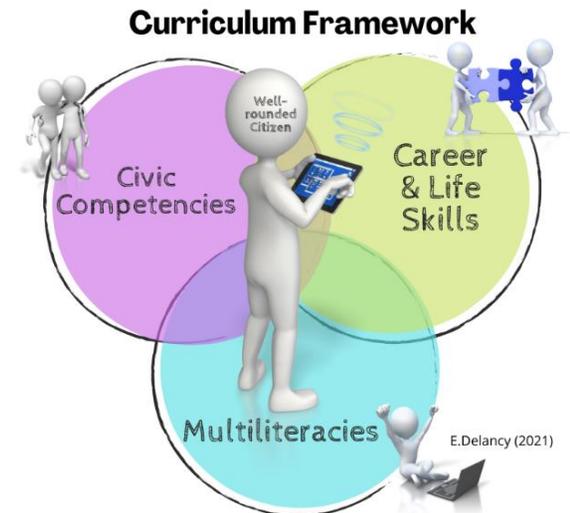
This mission requires teachers to help students become active and engaged participants in their communities. Teachers encourage students to use knowledge about their community, country, and the world to become problem solvers. Students understand how to combat social problems and issues by taking steps towards social action while gaining a deeper understanding on becoming active change agents.

### ✚ Multiliteracies

Multiliteracy in the 21st Century reflects a pedagogy that allows students to experience, conceptualize, analyse and apply knowledge to create meaning and develop critical and analytical skills. Through the teacher's guidance, students identify, interpret, create, and communicate meaning across various communication forms such as written, gestural, spatial, audio, visual, and oral. Therefore, by utilizing multiple modes, students gain a complex, more profound understanding of the context, which prepares them for a successful life in a rapidly changing, globalized world.

### ✚ Career & Life Skills

The integration of Career and Life skills increases the capabilities of students to think critically and develop hands-on skills. This guide is grounded in developing STEAM and STEM skills with a focus on problem/project-based learning. Students are engaged in activities that provide them with the skills and competencies needed to function in the 21<sup>st</sup> Century. Opportunities are made for students to solve authentic problems/projects to develop skills that allow them to contribute to society as creative problem-solvers to become well-informed citizens.



# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Development Process

This curriculum aims to build on students' previous knowledge and skills that foster self-reliance and critical thinking to accomplish each mission. It utilizes the constructivist approach, based on the belief that learning occurs as learners are actively involved in meaning and knowledge construction instead of passively receiving information. This curriculum was developed based on the Tada (1962) model using a grass-roots approach. She believed that teachers who teach the curriculum should be active participants in developing the curriculum. Five steps are used in the development of this curriculum.

*Step 1: Locate or develop standards of work to be studied.*

*Step 2: Test these standards with students.*

*Step 3: Adapt standards as necessary after the testing.*

*Step 4: Create a framework for testing to ensure that all materials are covered clearly and completely.*

*Step 5: Put the standards of study into practice.*

This curriculum outlines concepts and attainment targets for each grade level. It provides teachers with suggested teaching strategies, resources, and integrated activities to enhance their pedagogy experience and improve the teaching and learning process. A significant focus of the Ministry of Education is to encourage a student-centred environment. The suggested teaching and learning activities are designed to be student-centred, and the teacher is seen as a facilitator of learning. This curriculum caters to students with diverse learning experiences and a wide range of abilities, focusing on problem-solving, technology integration, group work, and team-building activities. The suggested evaluation strategies emphasize authentic assessments that are worthwhile, significant, and meaningful to the learner. Teachers are encouraged to provide students with feedback to ensure progress in skills and understanding of key concepts. "I hear, and I forget, I see, and I remember, I experience, and I understand"- Kung-fu-tse

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## General Objectives

This Mathematics curriculum is designed to conjure students at the primary level ability to think and communicate mathematically, solve problems, and make sense of the world using mathematics. This document exposes students to authentic tasks and problems that they may encounter in everyday life, laying the foundations for students to become confident life-long learners. This document provides a wealth of activities and strategies that enable students to engage in hands-on experiences and apply mathematical concepts.

The curriculum is underpinned by the following general objectives that enable students to:

- Develop a positive attitude towards mathematics;
- Appreciate its practical applications in life;
- Develop problem-solving skills and the ability to use mathematics in everyday life;
- Gain a deeper understanding and knowledge of numbers and numeration;
- Develop skills to perform the four basic operations;
- Develop skills in measurement, approximation and estimation;
- Develop spatial reasoning and the ability to use them;
- Understand and use the techniques of collecting, representing and interpreting data;
- Use mathematical language appropriately when communicating mathematical ideas, reasoning, and findings —both in written and oral forms;
- Understand mathematical connections within mathematics and other subjects;
- Develop reasoning and investigating skills to identify patterns and relationships in mathematics;
- Recall and understand mathematical terminology, facts, definitions, and formulae;
- Perform mathematical operations and manipulations with confidence, speed, and accuracy;
- Develop an appreciation for their own culture and others;
- Understand that life is an integrated approach and so is learning;
- Improve critical thinking abilities by teaching higher-order thinking skills;
- Seize all opportunities presented to them by new knowledge, technologies, and experience;
- Exhibit a positive attitude to life;
- Demonstrate innovation, resilience, motivation, and reliability;

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Organization of Curriculum

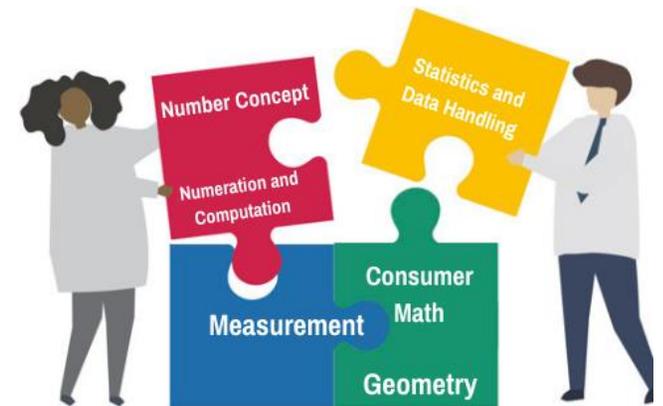
Mathematics has been described as the science of amount, number, shape, space, and relationships using the language of symbols and diagrams. This

Mathematics curriculum incorporates a body of knowledge, skills, and procedures that can be used in various ways to help students describe, illustrate, interpret, predict, and explain patterns and relationships in Numbers, Shapes and Space, Measures, and Data. This curriculum provides students with opportunities in each strand to develop mathematical language and apply skills learnt to everyday life. Although the emphasis is placed on a particular strand, it is crucial to understand the strands' interconnectedness and build on students' ability to apply mathematical concepts.

## Scope and Sequence

This Grade 3-6 Mathematics curriculum is organized around eleven (6) main stands:

- Number Concepts
- Numeration and Computation
- Consumer Math
- Measurements
- Geometry
- Statistics and Data Handling



TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
SOCIAL STUDIES  
SCOPE AND SEQUENCE

CURRICULUM STRANDS	GRADE 3	GRADE 4	GRADE 5	GRADE 6
<b>NUMBER CONCEPTS</b>				
Number and Number Sense	✓	✓	✓	✓
Number Relationships and Sets	✓	✓	✓	✓
Place Value	✓	✓	✓	✓
Rounding	✓	✓	✓	
Number Patterns	✓	✓	✓	✓
Factors and Multiples	✓	✓	✓	✓
Exponential/ Scientific Form			✓	✓
Algebraic Expressions			✓	✓
Roman Numerals			✓	✓
<b>NUMERATION AND COMPUTATION</b>				
Addition	✓	✓	✓	✓
Subtraction	✓	✓	✓	✓
Multiplication	✓	✓	✓	✓
Division	✓	✓	✓	✓
Average			✓	✓
Fraction	✓	✓	✓	✓
Decimals		✓	✓	✓
<b>CONSUMER MATH</b>				
Money	✓	✓	✓	✓
Ratio/ Proportion			✓	✓
Percentage			✓	✓
<b>MEASUREMENT</b>				
Time	✓	✓	✓	✓
Length	✓	✓	✓	✓
Area and Perimeter	✓	✓	✓	✓
Mass/Weight	✓	✓	✓	✓
Capacity	✓	✓	✓	✓
Volume		✓	✓	✓
<b>GEOMETRY</b>				
Lines/ Line Segments	✓	✓	✓	✓
Angles	✓	✓	✓	✓
2- Dimensional/ Plane Figures	✓	✓	✓	✓
3- Dimensional Figures/ Solids	✓	✓	✓	✓

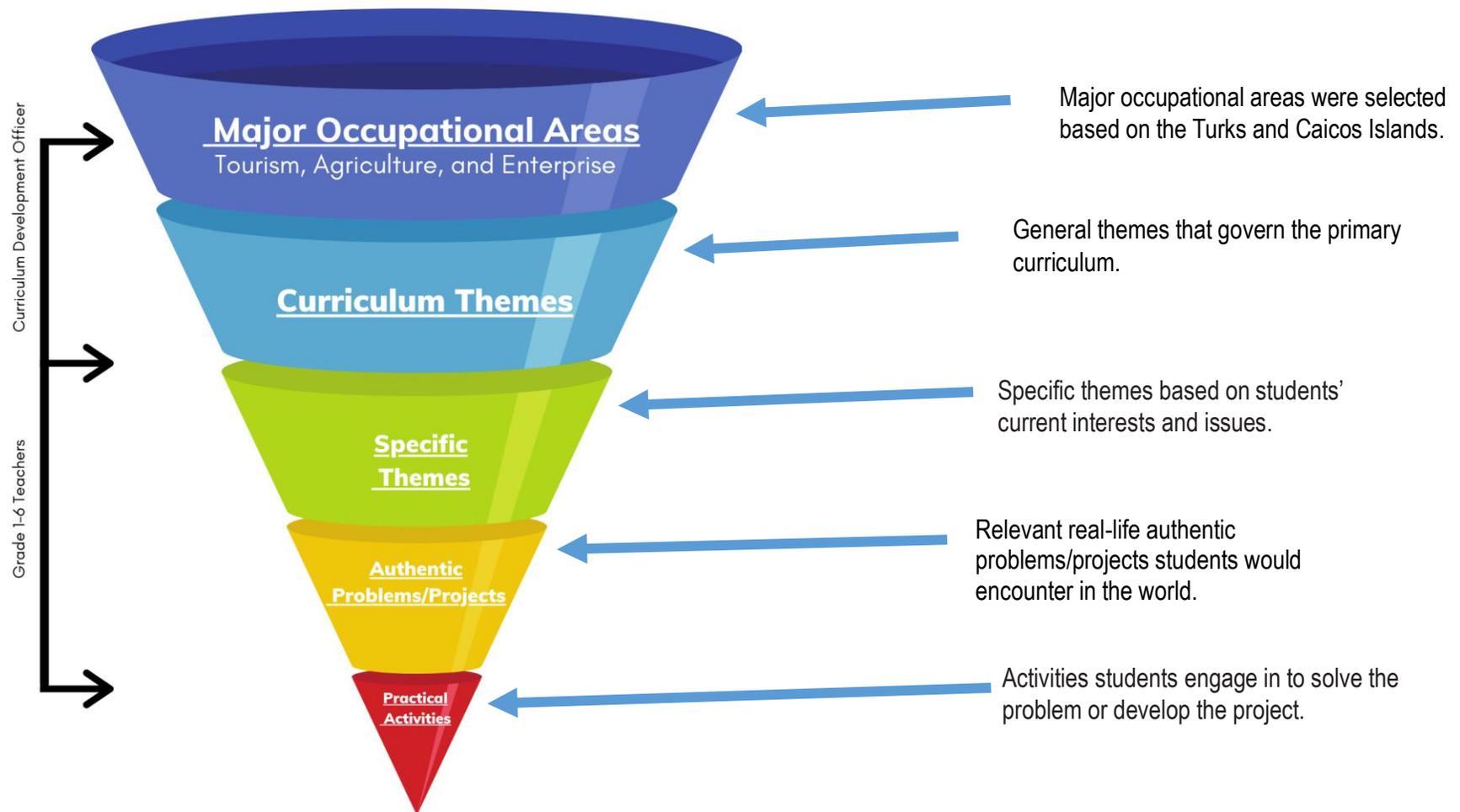
TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 SOCIAL STUDIES  
 SCOPE AND SEQUENCE

Transformation	✓	✓	✓	✓
<b>STATISTICS AND DATA HANDLING</b>				
Data Representation	✓	✓	✓	✓
Statistics			✓	✓
Probability			✓	✓

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Development of Curriculum Themes

The curriculum is divided into themes designed based on selected major occupational areas within The Turks and Caicos Islands. All themes provide a project criterion that the teacher uses to: (i) develop specific themes, (ii). design a problem/project and (iii). create/ select activities students should engage in to solve the problem or develop a project.



# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Themes by Grade

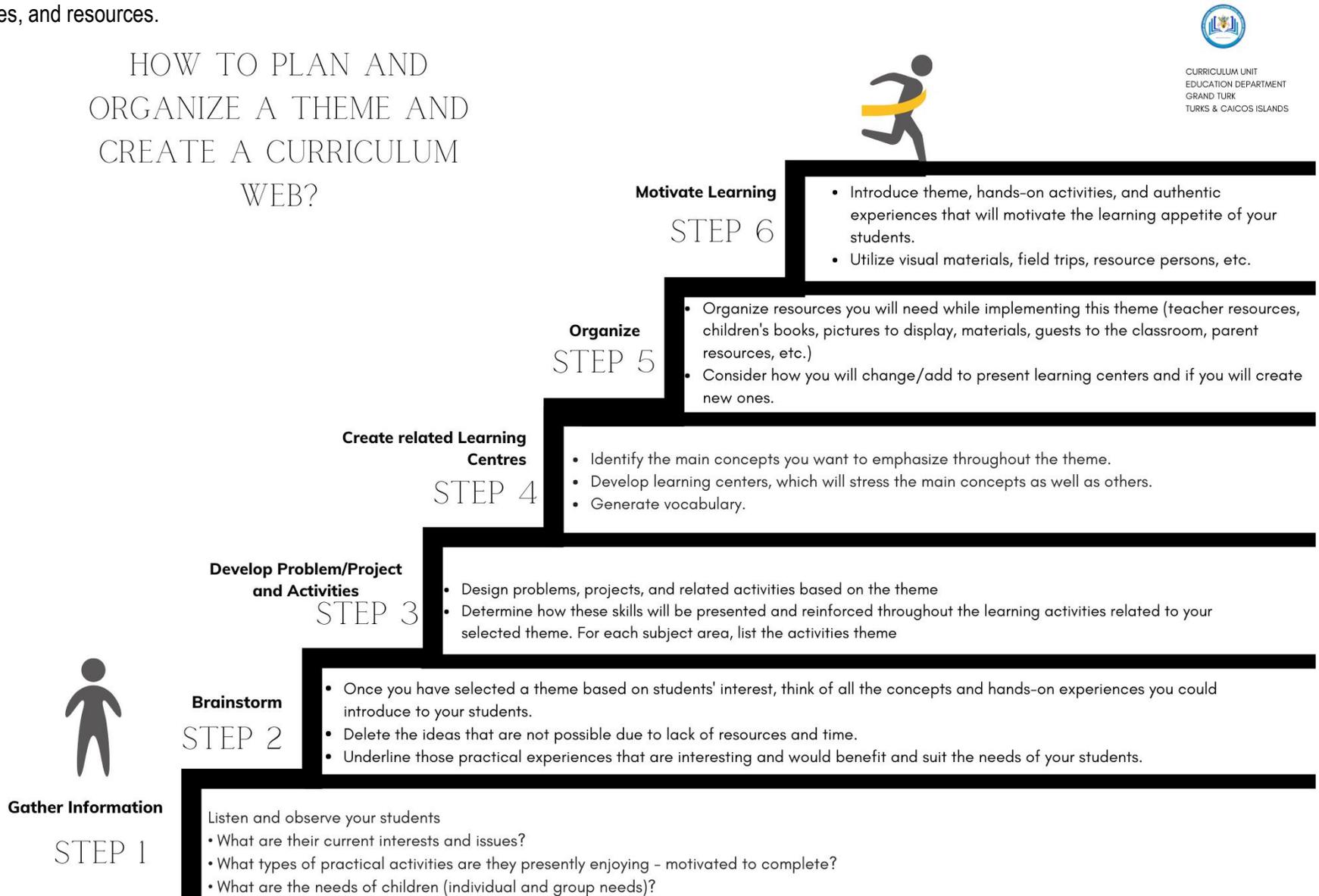
	<b>Term 1</b>	<b>Term 2</b>	<b>Term 3</b>
<i>Grade 3</i>	<p>Growing Plants</p>  <p>Exploring Art</p> 	<p>Community Action</p> 	<p>Exploring Music and Dance</p> 
<i>Grade 4</i>	<p>Managing Money</p>  <p>Travel</p> 	<p>Environmental Awareness</p> 	<p>Introduction to Fishing</p> 
<i>Grade 5</i>	<p>Tourist Destinations</p>  <p>Growing Food</p> 	<p>Sports Involvement</p> 	<p>Basic Food Preparation</p> 
<i>Grade 6</i>	<p>Producing a Product/ Service</p> 	<p>Planning an Enterprise</p> 	<p>Running an Enterprise</p> 

# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Web

Curriculum Webs must be used to show the integration of a theme across curriculum subjects. Themes are reflected in problems/project statements, activities, and resources.

### HOW TO PLAN AND ORGANIZE A THEME AND CREATE A CURRICULUM WEB?



# THE CURRICULUM GUIDE FOR GRADE THREE TO SIX

## Curriculum Web

INSTRUCTIONS: USE THIS TEMPLATE TO CREATE CURRICULUM WEBS. A THEME SHOULD NOT EXCEED (4) FOUR WEEKS.

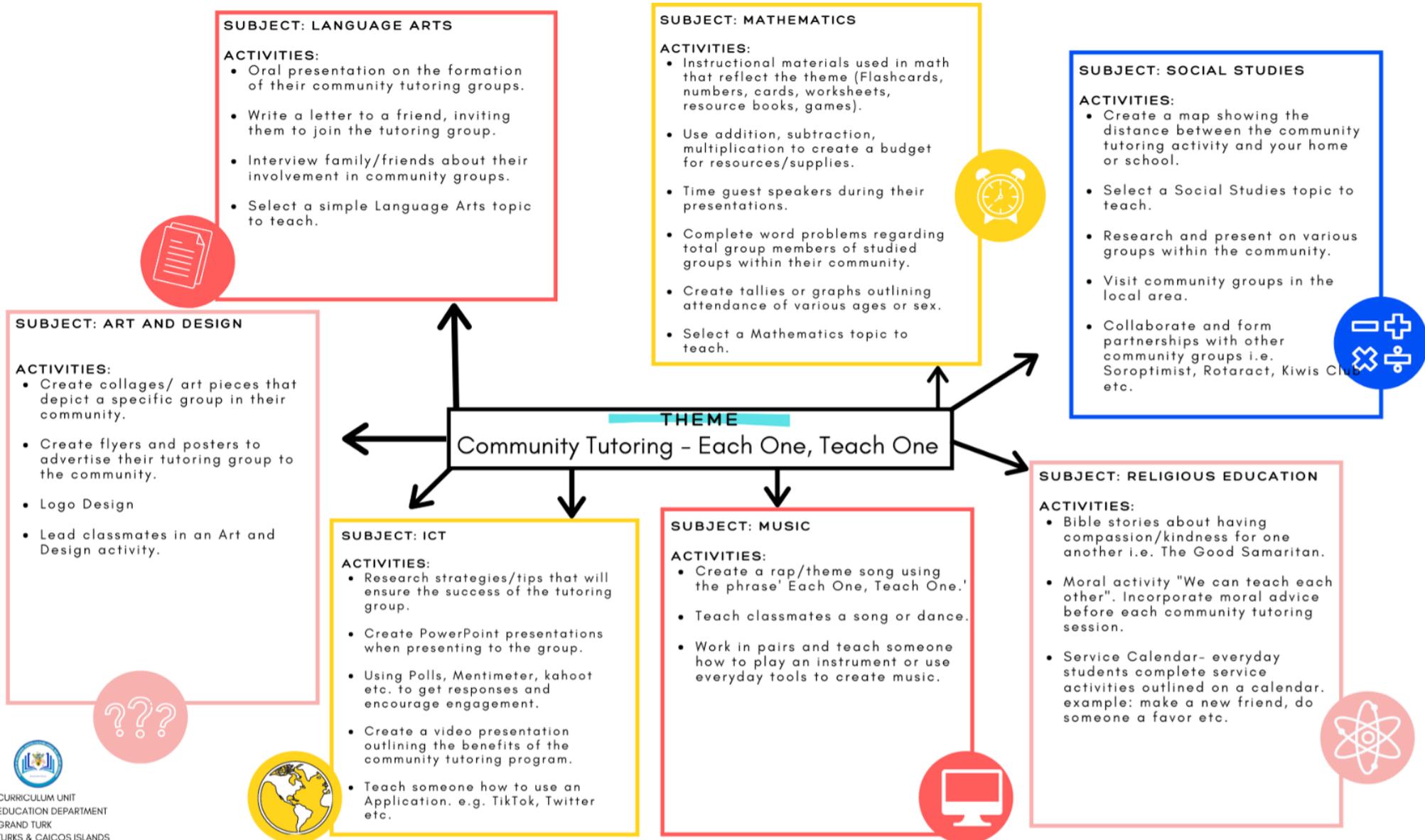
TEACHER NAME: MRS. COX

GRADE: 3

TERM: 2

SCHOOL: ENID CAPRON PRIMARY SCHOOL

CURRICULUM THEME: COMMUNITY ACTION

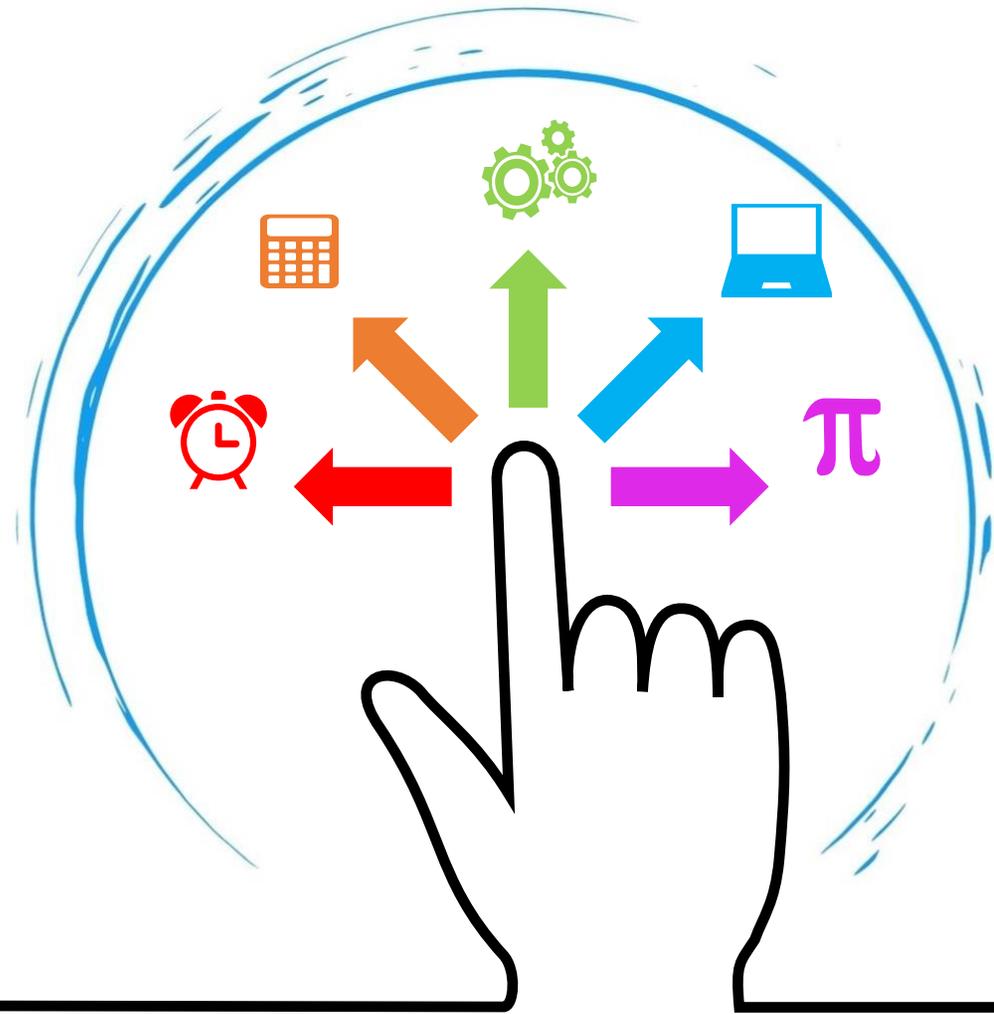


# GRADE 3

## Term 1

Strands: Number Concepts; Numeration and Computation

Themes: Growing Plants; Exploring Art



Term: 1

Curriculum Theme: **Growing Plants**

Aim: The aim of this theme is to inspire students to grow plants and understand the most appropriate conditions for growing.

Project Criteria:

1. Name the conditions needed for growth
2. Give examples of different types of growing medium
3. Give examples of different growing locations
4. Choose an appropriate container or site for a chosen plant
5. Choose an appropriate growing medium for a chosen plant
6. Care for the plant over an agreed amount of time, with assistance
7. Comment on the outcomes of the task

Suggested assignments/activities

- Guest speaker/visit to a local garden/farm – this would be an excellent introduction to the different growing media, requirements of plants, and growing locations.
- Activity in pairs or groups – looking at pictures of different effects of growing medium, e.g., growing towards the light, not enough water. Actual examples would be even better. Students match the effect with the right reason.
- Practical activity – students can feel and touch different growing media and put the correct name to each.
- Teacher-led discussion on the different growing locations for seeds, bulbs, etc.
- Activity – pair/group matching examples of flowerpots, bowls, etc., with the correct name.
- Worksheets – quizzes to reinforce opportunities and assessment evidence.
- Assessment – students list different conditions, types of growing medium, and locations for growing plants.
- Student-led discussion regarding what is to be grown, where and in what container.
- Reinforcement of the information could be carried out using worksheets or having a class quiz on Kahoot.
- During the care of the plant, many opportunities will arise for student-led discussion around the most appropriate action to be taken regarding:
  - amount of water to add, if any is needed
  - shifting the plant's location due to being too hot or too cold, not enough light.
- These discussions could be recorded, or witness statements kept.
- Student-led discussion assessing the success of the plant growth. As a result of the discussion, students create a list of modifications for growing a plant at a future date.
- Assessment – students grow a plant with teacher assistance and provide photographic evidence.
- Assessment feedback, review, and evaluation of theme.
- **CPEA Project Rubric**

Term: 1

Curriculum Theme: **Exploring Art**

Aim: The aim of this practical theme is for students to explore different types of art technique. Students will have the opportunity to use various techniques and media to create pieces of art.

Assessment Criteria:

1. List different art techniques
2. Identify techniques used in relation to a given selection of artwork
3. Choose art techniques for own piece of art
4. Select appropriate equipment/materials
5. Follow safety guidance while producing piece of art
6. Create a piece of art according to agreed theme
7. Comment on the success of own piece of art
8. Tidy work area and correctly storing equipment.

Suggested assignments/activities

- Group activity – the group discusses the health and safety issues for their class and creates a list of five rules to be followed by the entire group.
- Students should be introduced to a variety of different forms of art.
- Teacher-led discussion about how the art has been created and the different media used.
- Students should be able to recognize, after some practice, a variety of different styles. Quizzes/ worksheets for completion could be used.
- Group discussion about various pieces of artwork, to encourage students to think about techniques and what they like or dislike in a piece of artwork.
- An outing to a local artist art gallery, with a worksheet for completion.
- Assessment – practical task, where students list different techniques which they are able to identify from a selection of pieces of art supplied by the teacher.
- Teacher should provide demonstrations to show students new techniques. The teacher will demonstrate good practice regarding health and safety.
- Group activity – creating a checklist for setting up their area and cleaning up afterwards.
- Practical – students should be given as many opportunities as possible to try different techniques to create their own art.
- Assessment – observation of practical work, with witness statements completed. Students discuss the success of their work with the teacher. The student's work photographed and stored in a portfolio/class.
- Assessment feedback, review and evaluation of theme.
- **CPEA Project Rubric**

	Term 1	Term 2	Term 3
<b>G R A D E  3</b>	<p><b>NUMBER CONCEPTS:</b></p> <ul style="list-style-type: none"> <li>• Number and Number Sense</li> <li>• Number Relationships and Sets</li> <li>• Place Value and Rounding</li> <li>• Number Patterns</li> <li>• Factors and Multiples</li> </ul>	<p><b>CONSUMER MATH:</b></p> <ul style="list-style-type: none"> <li>• Money</li> </ul>	<p><b>GEOMETRY:</b></p> <ul style="list-style-type: none"> <li>• Lines/ Line Segments</li> <li>• Angles</li> <li>• 2- Dimensional / Plane Figures</li> <li>• 3- Dimensional Figures/ Solids</li> <li>• Transformation</li> </ul>
	<p><b>NUMERATION AND COMPUTATION</b></p> <ul style="list-style-type: none"> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> <li>• Fractions</li> </ul>	<p><b>MEASUREMENT:</b></p> <ul style="list-style-type: none"> <li>• Time</li> <li>• Length</li> <li>• Area and Perimeter</li> <li>• Mass/Weight</li> <li>• Capacity</li> </ul>	<p><b>STATISTICS &amp; DATA HANDLING:</b></p> <ul style="list-style-type: none"> <li>• Data Representation</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 1

<b>STRAND: NUMBER CONCEPTS</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Number and Number Sense	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>• Count by 2's, 5's, 10's, 20's, and 25's, and 100 and beyond, using starting points that are multiples of 2, 5, 10, 20, 25 and 100, respectively</li> <li>• Define and use number associated vocabulary, e.g. pair, dozen, double, triple, twice etc.)</li> <li>• Represent and describe numbers to 1000, concretely, pictorially and symbolically</li> <li>• Count in sequence within 10,000 in ascending and descending order</li> <li>• Skip count in ascending and descending order within a specified amount</li> <li>• Read and write numbers to 1000</li> <li>• Read and write numbers to 10,000</li> <li>• Outline the position using an ordinal number up to the 50<sup>th</sup> position</li> <li>• Solve problems related to ordinal numbers up to 50<sup>th</sup> position</li> <li>• Order and compare a set of two, three and four-digit numbers in order of magnitude</li> <li>• Explain the concepts of 'even number' and 'odd number.'</li> <li>• Classify numbers as odd and or even up to 50</li> <li>• Solve problems involving number concepts</li> </ul>
Number Relationships and Sets	<ul style="list-style-type: none"> <li>• Use the language and symbols associated with equality and inequality</li> <li>• Determine whether a given number sentence is true or false</li> <li>• Calculate the unknown in number sentences involving addition, subtraction, multiplication and division of whole numbers</li> <li>• Understand the concept of a set</li> <li>• Compare sets that are equal, unequal and equivalent (same as, less than, more than, equal) using =, &gt; and &lt; signs</li> <li>• Estimate the number of objects in a set and check by counting</li> </ul>
Place Value and Rounding	<ul style="list-style-type: none"> <li>• Illustrate pictorially and use concrete examples to show the meaning of place value for numerals to 1000.</li> <li>• Identify the place value, face value and total value of each digit in a 4- digit number</li> <li>• Compose (expanded notation) and decompose 4 digit numbers</li> <li>• Round a 2-digit and 3-digit number to the nearest ten or hundred</li> </ul>
Number Patterns	<ul style="list-style-type: none"> <li>• Recognize patterns in a sequence of shapes and numbers</li> <li>• Complete a repeating pattern of shapes and numbers</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 1

	<ul style="list-style-type: none"> <li>• Explore increasing and decreasing patterns up to 100</li> </ul>
Factors And Multiples	<ul style="list-style-type: none"> <li>• Explain the meaning of factors and multiples</li> <li>• Distinguish between factors and multiples</li> <li>• Use arithmetic skills to complete fact families using addition and subtraction/multiplication and division</li> <li>• List factors of a given number and explain what they are</li> <li>• List all the factors of numbers up to 100</li> <li>• Determine if a 1-digit whole number is a factor of a given whole number</li> <li>• List the 1st 12 multiples of numbers 1-12</li> </ul>
<b>STRAND: NUMERATION AND COMPUTATION</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Addition	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>• Understand mathematical language associated with addition (sum, total)</li> <li>• Apply mental mathematics strategies and number properties (such as using doubles, making 10, using addition to subtract, using the commutative property, using the property of zero) for basic addition facts to 18.</li> <li>• Recall and use addition facts within 20</li> <li>• Know and use addition facts up to 100</li> <li>• Demonstrate an understanding of addition and numbers with answers to 1000, concretely, pictorially and symbolically</li> <li>• Understand the expanded form to solve problems in addition</li> <li>• Understand the place value of numbers in addition</li> <li>• Understand the regrouping process for addition and subtraction</li> <li>• Show addition involving numbers with up to three digits with and without regrouping</li> <li>• Show addition of up to 4 digit numbers with up to 3 or more addends with and without regrouping</li> <li>• Estimate an answer to a calculation in addition</li> <li>• Determine the reasonableness of an answer in addition based on estimation</li> <li>• Utilize inverse operations to check answers in addition</li> <li>• Solve problems with missing digits in addition</li> <li>• Mentally add whole numbers</li> <li>• Solve one-step and two steps word problems involving addition</li> <li>• Show application of addition skills in practical situations</li> </ul>

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 MATHEMATICS  
 GRADE 3 STRUCTURE

TERM 1

Subtraction	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with subtraction (difference)</li> <li>• Apply mental mathematics strategies and number properties (such as using doubles, making 10, using subtraction to add, using the commutative property, using the property of zero) for basic related subtraction facts to 18</li> <li>• Recall and use subtraction facts within 20</li> <li>• Know and use subtraction facts up to 100</li> <li>• Understand the expanded form to solve problems in subtraction</li> <li>• Demonstrate an understanding of subtraction of numbers with answers to 1000, concretely, pictorially and symbolically</li> <li>• Compute subtractions involving numbers with up to four digits without regrouping</li> <li>• Compute subtractions involving numbers with up to four digits, with regrouping in one place(column)</li> <li>• Compute subtractions involving numbers with up to four digits, with regrouping in two places</li> <li>• Solve problems with missing digits in subtraction</li> </ul>
Multiplication	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with multiplication (Product, multiply, factor, By, Times, Lots Of, four 3's)</li> <li>• Understand properties of multiplication (commutative, and distributive, identity)</li> <li>• Representing and explaining multiplication using equal grouping and arrays</li> <li>• Modelling multiplication using concrete and visual representations and recording the process symbolically</li> <li>• Recall and use multiplication facts of 2,5 and 10 multiplication tables</li> <li>• Know multiplication facts for 3,4 and 8 multiplication tables</li> <li>• Compute multiplication facts within 40 by repeated addition</li> <li>• Explore the result of multiplying a number by ones, tens and hundreds</li> <li>• Show multiplication of three 1-digit numbers</li> <li>• Multiply a two-digit number by a one-digit number without and with regrouping</li> <li>• Multiply a two-digit number by a two-digit number without and with regrouping</li> <li>• Multiply a three-digit number by a one-digit number without and with regrouping</li> <li>• Multiply a three-digit number by a two-digit number without and with regrouping</li> <li>• Estimate an answer to a calculation in multiplication</li> <li>• Determine the reasonableness of an answer in multiplication based on estimation</li> <li>• Utilize inverse operations to check answers in multiplication</li> <li>• Solve problems including missing number problems involving multiplication</li> <li>• Mentally multiply 10's and 100's by a 1-digit whole number</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 1

	<ul style="list-style-type: none"> <li>• Show multiplication of numbers ending in zeros using word problems</li> <li>• Solve one-step and two steps word problems involving multiplication</li> <li>• Show application of multiplication skills in practical situations</li> </ul>
Division	<ul style="list-style-type: none"> <li>• Use appropriate division vocabulary such as number of groups, number of objects in each group, etc.</li> <li>• Model equal sharing and equal grouping (up to 100) using concrete and visual representations,</li> <li>• Demonstrate an understanding of division (limited to division related to multiplication facts)</li> <li>• Recall and use division facts of 2,5 and 10 multiplication tables</li> <li>• Know division facts for 3,4 and 8 multiplication tables</li> <li>• Find the unknown factor in division problems</li> <li>• Divide a two-digit number by a one-digit number, without and with a remainder</li> <li>• Divide a three-digit number by a one-digit number without and with a remainder</li> <li>• Demonstrate an understanding of division (limited to division related to multiplication facts)</li> <li>• Estimate an answer to a calculation in division</li> <li>• Determine the reasonableness of an answer in division based on estimation</li> <li>• Utilize inverse operations to check answers in division</li> <li>• Mentally divide 10's and 100's by a 1-digit whole number</li> <li>• Solve one-step and two steps word problems involving division</li> <li>• Solve mixed operations involving division with or without parentheses (Order of operations)</li> <li>• Write number sentences to represent division</li> <li>• Show application of division skills in practical situations</li> </ul>
Fractions	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with fractions (e.g. Numerator, denominator)</li> <li>• Represent fractions as a part of a region, set, or linear model.</li> <li>• Identify fractions of a whole or group/set</li> <li>• Explain the concepts of 'numerator' and 'denominator.'</li> <li>• Compare unit fractions and other proper fractions using the symbols '=', '&lt;', and '&gt;'</li> <li>• Order unit fractions and other proper fractions (same numerator, same denominator)</li> <li>• Represent and describe the concept of equivalent fractions concretely, pictorially and symbolically</li> <li>• Generate fractions that are equivalent to given fractions</li> <li>• Solve up to 1-step word problems involving fractions</li> <li>• Show application of fraction and proportional reasoning skills in practical situations</li> </ul>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number and Number Sense</b></p>	<ul style="list-style-type: none"> <li>Count by 2's, 5's, 10's, 20's, and 25's, and 100 and beyond, using starting points that are multiples of 2, 5, 10, 20, 25, and 100, respectively</li> <li>Define and use number-associated vocabulary, e.g., pair, dozen, double, triple, twice, etc.)</li> <li>Represent and describe numbers to 1,000, concretely, pictorially, and symbolically</li> <li>Count in sequence within 10,000 in ascending and descending order</li> </ul>	<p>Students play hopscotch using counts of 2s, 5's, 10's, 20's, and 25's, and 100 and beyond.</p> <p>Students arrange cut-outs of numbers in the correct sequence.</p> <p>Students complete a fingerprint skip counting activity with finger paint and numbers..</p> <p>Match words to meanings to numbers, e.g., pair - two - 2, dozen- twelve-12</p> <p>Use manipulatives, place value charts, and blocks to represent and describe numbers.</p> <p>Use number cards and arrange them in ascending to descending order.</p> <p>Tag students with numbers and allow them to arrange themselves in ascending to descending order.</p> <p>Create a number spin board and have students take turns spinning and ordering numbers.</p>	<p>Manipulatives</p> <ul style="list-style-type: none"> <li>Cut-out number cards</li> <li>Hundred board</li> <li>Place value blocks,</li> </ul> <p>Worksheets</p> <p>Whiteboard</p> <p>Smartboard</p> <p>YouTube: Skip Counting Songs</p> <p>Math Kits</p>	<p><b>Science</b>                  Students count rocks by 2's, 5's 10's, '20s, and 25's, and 100</p> <p><b>ICT</b>                  Students use the Smartboard to match examples of pair, dozen, double, triple, twice etc.</p> <p><b>Language Arts</b>                  Vocabulary development – Students learn new words: dozen, pair, double, triple</p> <p><b>Social Studies</b>                  Students complete Who am I - My fingerprint and my story composition</p> <p><b>Physical Education</b>                  Work-out and skip count</p>	<p>Performance-Based Assessment</p> <p>Oral presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number and Number Sense</b></p>	<ul style="list-style-type: none"> <li>• Skip count in ascending and descending order within a specified amount</li> <li>• Read and write numbers to 1,000</li> <li>• Read and write numbers to 10,000</li> <li>• Outline the position using an ordinal number up to the 50<sup>th</sup> position</li> <li>• Solve problems related to ordinal numbers up to 50<sup>th</sup> position</li> </ul>	<p>Students use number cards and a hopscotch game to skip count.</p> <p>Students use place value blocks and chart to read and write numbers,</p> <p>Use a number spin board to identify and read numbers.</p> <p>Engage students in activities to introduce them to numbers 0-10,000 numerically and written. (e.g., word walls). Students match words to the corresponding figure, then write the numbers on the whiteboard.</p> <p>Conduct a whole-class discussion on the word 'ordinal' and its relation to sequencing numbers.</p> <p>Students note orally and written the position of letters of the alphabet, e.g., J- 10th letter.</p> <p>Students fill in the sequence of numbers up to the 50th position.</p> <p>Engage students daily by using ordinal numbers such as "What happened second in the story?", "What was the tenth toy John listed?", What were the positions after the race? What date is it today?</p>	<p>Place Value Chart</p> <p>Blocks</p> <p>Number spin board</p> <p>Hopscotch game</p> <p>Various seeds, leaves</p> <p>Online Games</p> <p>Alphabet chart</p> <p>Picture cards</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Projector</p> <p>Internet Access</p>	<p><b>Language Arts</b> Students form legible numerals</p> <p>Students sequence events in a story</p> <p>Alphabetical Ordering</p> <p><b>Science</b> Students use pictures of living and non-living things to skip count</p> <p>Students use ordinal numbers for the labelling of animals and plants</p> <p><b>Physical Education</b> Students race against each other and state the number place of their position</p> <p><b>Social Studies</b> Students draw and label the position of the children in their families.</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Performance-Based Assessment</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number and Number Sense</b></p>	<ul style="list-style-type: none"> <li>Order and compare a set of two, three, and four-digit numbers in order of magnitude</li> <li>Explain the concepts of 'even' and 'odd' number</li> <li>Classify numbers as odd and or even up to 50</li> <li>Solve problems involving number concepts</li> </ul>	<p>Students identify and describe ordinal numbers in real-life situations. (e.g., 1st in class, 3rd house on the left).</p> <p>Students arrange license plate numbers in order.</p> <p>Students watch a video on even and odd numbers.</p> <p>Students explore types of numbers by discussing examples of each using manipulatives and number symbols. (e.g., 10 apples shared among three people use to explain even and uneven numbers).</p> <p>Students discover the concept of odd and even numbers by using a numbers chart and observing examples.</p> <p>Teacher records all students' birthdates on paper. Then, students indicate which dates are even or odd numbers, e.g., 16 September (even).</p> <p>In groups, pairs, or individually, students solve problems involving number concepts.</p>	<p>Hundreds Chart</p> <p>Seeds/Stone</p> <p>Number cards</p> <p>Deck of cards</p> <p>Interactive Odd and Even Numbers Game</p> <p>YouTube</p> <p>Manipulatives</p> <p>Computer</p> <p>Smartboard</p> <p>White Board</p> <p>Internet Access</p> <p>Counter</p> <p>Projector</p>	<p><b>Language Arts</b> Students sequence sentences.</p> <p><b>Science</b> Students use pictures of vertebrates and invertebrates and identify odd and even number sets</p> <p><b>Social Studies</b> Students arrange the islands in the Turks and Caicos in order of size Then, record the islands that have even number or odd number size, e.g., North Caicos 48 sq. miles (even number)</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number Relationships and Sets</b></p>	<ul style="list-style-type: none"> <li>Use the language and symbols associated with equality and inequality</li> <li>Determine whether a given number sentence is true or false</li> <li>Calculate the unknown in number sentences involving addition, subtraction, multiplication, and division of whole numbers</li> <li>Understand the concept of a set</li> <li>Compare sets that are equal, unequal, and equivalent (same as, less than, more than, equal) using =, &gt; and &lt; signs</li> <li>Estimate the number of objects in a set and check by counting</li> </ul>	<p>Students make cardboard cut-outs of set symbols associated with equality and inequality and use them to complete Math sentences. E.g. =, &gt;, &lt;, ≤ or ≥.</p> <p>Students play a game of "Simon Says" to indicate whether a given number sentence is true or false, E.g. Simon Says <math>15 = 13 + 1</math>.</p> <p>Students complete number sentences on the Smartboard by finding the unknown number.</p> <p>Students work in pairs to solve problems using concrete objects.</p> <p>Students arrange ungrouped pictures (e.g., animals, toys, fruits) or manipulatives (e.g., bottle caps, beans, coins) into sets. Students describe what they see within each set and name each of the constructed sets.</p> <p>Show two sets of objects and discuss the following questions with students: "Which set has more?" "Which set has less?" "Are the sets the same or equal?"</p> <p>Students assemble sets of 2s-20s using manipulatives, e.g., coins. Then, they regroup sets to a given number. E.g., 3 sets of 2 apples.</p>	<p>Number line</p> <p>Cardboard</p> <p>Worksheets</p> <p>Coloured blocks</p> <p>Cut-out shapes</p> <p>Workbooks</p> <p>Computer</p> <p>Projector</p> <p>Manipulatives</p> <p>YouTube</p> <p>White board</p> <p>Smartboard</p> <p>Math Kits</p>	<p><b>Language Arts</b> Students write sentences to describe sets</p> <p>Students create structured sentences to convey information about sets</p> <p><b>Social Studies</b> Students group the islands of the Turks and Caicos, e.g., Turks islands/Caicos Islands/Fishing Islands</p> <p><b>Science</b> Students group living and non-living things</p> <p><b>Music</b> Students write and perform jingles about sets</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Peer Assessment</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Performance-Based Assessment</p>



**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Factors And Multiples</b></p>	<ul style="list-style-type: none"> <li>● Explain the meaning of factors and multiples</li> <li>● Distinguish between factors and multiples</li> <li>● Use arithmetic skills to complete fact families using addition and subtraction/multiplication and division</li> <li>● List factors of a given number and explain what they are</li> <li>● List all the factors of numbers up to 100</li> <li>● Determine if a 1-digit whole number is a factor of a given whole number</li> <li>● List the 1st 12 multiples of numbers 1-12</li> </ul>	<p>In groups, students research factors and multiples and present them to the whole class.</p> <p>In pairs, students create a cartoon strip outlining the difference between factors and multiples.</p> <p>Students remove two numbers from a box and use them to create fact families, e.g., 3 and 4.</p> <p>Teacher provides numbers for students to learn and write factors of whole numbers to 100.</p> <p>Students use square tiles to determine factors of a given number. (e.g., Ask students to find as many arrays as they can from 18 square tiles, all rows must have the same number of tiles.)</p> <p>Students use counters to find factors of a given number. (e.g., Give students several counters, each with two-four small bowls. Allow them to group the counters to find factors of a number).</p> <p>Students use the Smartboard to drag digital counters into circles to determine factors of a given number.</p> <p>Students identify the first 12 multiples of numbers 1-12 on a hundreds chart.</p>	<p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Number line</p> <p>YouTube</p> <p>Flashcards</p> <p>worksheets</p> <p>Workbooks</p> <p>Computer</p> <p>Projector</p> <p>Manipulatives</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Math Kits</p>	<p>I N T E G R A T E A C R O S S U B J E C T S</p>	<p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with addition (sum, total)</li> <li>Apply mental mathematics strategies and number properties (such as using doubles, making 10, using addition to subtract, using the commutative property, using the property of zero) for basic addition facts to 18</li> <li>Recall and use addition facts within 20</li> <li>Know and use addition facts up to 100</li> <li>Demonstrate an understanding of addition and numbers with answers to 1000, concretely, pictorially, and symbolically</li> <li>Understand the expanded form to solve problems in addition</li> </ul>	<p>Students state words they may use in the place of 'add.'</p> <p>Discuss 'SUM' by asking students to answer questions in numerical and word problems using mathematical language associated with addition.</p> <p>Students learn basic mental math strategies and engage in repetitive activities to reinforce concepts, i.e., doubling, making 10, using addition to subtract, using the commutative property, using the property of zero.</p> <p>Students learn number facts by using manipulatives and pictorial representation before moving onto numbers.</p> <p>Students use "number facts" flashcards to practice number facts up to 100. For example, the card shows 3, 9, and 6. Practice all addition combinations of every basic fact.</p> <p>Students practice addition using concrete objects, pictures, and symbols.</p> <p>Students solve expanded forms of problems in additions using the Smartboard.</p>	<p>Addition, word problem cards</p> <p>Pack of cards</p> <p>Addition flashcards</p> <p>Beach Ball</p> <p>YouTube</p> <p>Flashcards</p> <p>worksheets</p> <p>Workbooks</p> <p>Computer</p> <p>Projector</p> <p>Manipulatives</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b> Students learn word meanings and syllabication of words (sum, total, addend, plus)</p> <p><b>Social Studies</b> Use a family tree for 'addition facts' exercise</p> <p>E.g. 3 sons + 4 daughters = 7 children</p> <p><b>Science</b> Use food labels to add calories present in food.</p>	<p>Performance-Based Assessment</p> <p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Understand the place value of numbers in addition</li> <li>Understand the regrouping process for addition</li> <li>Show addition involving numbers with up to three digits with and without regrouping</li> <li>Show addition of up to 4 digit numbers with up to 3 or more addends with and without regrouping</li> <li>Estimate an answer to a calculation in addition</li> </ul>	<p>Students add numbers by writing under the appropriate heading.</p> <div style="text-align: center;">  </div> <p>Students demonstrate how to (carry) regroup using blocks, sticks, worksheets, and the Smartboard.</p> <p>In small groups, students use base ten blocks to show addition with regrouping</p> <p>Students model steps in addition with and without regrouping using the base ten blocks, manipulatives, and the columnar formal written method.</p> <p>Students play games (speed and online) and complete worksheets of problems that require the addition of up to four digit numbers with up to three or more addends with and without regrouping.</p> <p>Students estimate answers on worksheets using the round and estimate method by rounding the number to the closest ten or hundred</p> <p><u>Round and Estimate Example:</u> When estimating <math>26 + 17</math> Think 26 as 30 and 17 as 20. <b>Estimation:</b> <math>30 + 20 = 50</math></p>	<p>Base ten blocks</p> <p>Popsicle sticks</p> <p>Straws</p> <p>Bottle tops</p> <p>YouTube</p> <p>Flash cards</p> <p>worksheets</p> <p>Workbooks</p> <p>Computer</p> <p>Projector</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Language Arts/Social Studies</b> Interview citizens to get the number of persons in schools, churches, community groups</p> <p><b>Language Arts</b> Students create 'addition story' problems and create a class book, "Our Addition Stories."</p> <p><b>Science</b> Use seeds and leaves for estimation and addition.</p>	<p>Demonstration</p> <p>Quizzes</p> <p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Determine the reasonableness of an answer in addition based on estimation</li> <li>Utilize inverse operations to check answers in addition</li> <li>Solve problems with missing digits in addition</li> <li>Mentally add whole numbers</li> <li>Solve one-step and two steps word problems involving addition</li> <li>Show the application of addition skills in practical situations</li> </ul>	<p>Students estimate addition sums from number cards and explain how they arrive at the estimate.</p> <p>Students engage in a discussion on estimations and practice by rounding numbers, making numbers compatible, and using properties of operations. Students review classmates' work to check reasonableness by comparing estimates with correct answers.</p> <p>Students use inverse operations (subtraction) to check answers.</p> <p>Use number bonds or worksheets and allow students to solve addition problems involving filling in missing numbers in a problem using number facts such as if <math>10 + 2 = 12</math>, then <math>\_ + 10 = 12</math>. <i>The missing number is 2.</i></p> <p>Students add mentally. (e.g., to calculate <math>27 + 3</math>, begin with 27 by saying 27 and count on three.: 'Seven, eight, nine, ten.")</p> <p>Teacher exposes students to 1-2 step word problems involving addition. -e.g., Your grandmother gave you 34 pencils for your birthday, and your parents gave 65. more. You give away 28 of them., How many are left?</p> <p>Students use addition to work out the length of time. i.e., journey, cooking, etc.</p> <p>Students use addition to add up bills and receipts.</p>	<p>Number cards</p> <p>Pictures of Animals</p> <p>Number bond mats</p> <p>Math addition flash cards</p> <p>Word problem cards</p> <p>YouTube</p> <p>Worksheets</p> <p>Workbooks</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Language Arts</b> Students demonstrate practical speaking skills through explanation of determining "reasonableness"</p> <p>Students identify synonyms for key terms, e.g., for estimate: approximate, guess, judge</p> <p><b>Science</b> Students estimate the number of plants and animals in pictures.</p> <p><b>Language Arts</b> Read and explain word problems</p> <p>Students write addition word problems utilizing proper grammar and mechanics</p>	<p>Demonstration</p> <p>Quizzes</p> <p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

NUMERATION					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Subtraction</b>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with subtraction (difference)</li> <li>Apply mental mathematics strategies and number properties (such as using doubles, making 10, using subtraction to add, using the commutative property, using the property of zero) for basic related subtraction facts to 18</li> <li>Recall and use subtraction facts within 20</li> <li>Know and use subtraction facts up to 100</li> <li>Understand the expanded form to solve problems in subtraction</li> </ul>	<p>Teacher elicits from students synonyms associated with the word 'subtract.' Students read word problems and circle all words associated with subtraction.</p> <p>Students mentally subtract using the 'split' Strategy.</p> <p>Students solve problems involving subtraction using a variety of mental strategies (e.g., to subtract 37 - 26, subtract the tens, subtract the ones, then combine the tens and ones, like this: 30 - 20 = 10, 7 - 6 = 1, 10 + 1 = 11).</p> <p>Teacher gives students flash cards showing three numbers. E.g., a card shows 3, 9, and 6. Then, students practice all twelve combinations of every basic fact. Example: 6 + 3, 9 - 6, 9 - 3, 6 + ? = 9.</p> <p>Students learn number facts using a Rainbow facts family. In pairs, students select a number from a box and then write subtraction facts using those numbers.</p> <p>Expanded forms:</p> $\begin{array}{r} 98 \rightarrow \text{minuend} = 90 + 8 \\ -52 \rightarrow \text{subtrahend} = 50 + 2 \\ \hline \rightarrow \text{difference} = 46 \end{array}$	<p>Number cards</p> <p>Worksheet</p> <p>Rainbow facts family graphic</p> <p>YouTube</p> <p>Worksheets</p> <p>Workbooks</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Social Studies</b> Students tell the difference between the size of the islands within the TCI.</p> <p>Use the dates of birth and death of outstanding Turks and Caicos Islanders to calculate their ages, e.g., Hon. Jags McCartney, Hilly Ewing etc.</p> <p><b>Science</b> Use food labels to find the difference in calories</p> <p><b>Language Arts</b> Write subtraction word problems</p>	<p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Peer Assessment</p> <p>Demonstration</p> <p>Worksheet</p> <p>Quiz</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Subtraction</b></p>	<ul style="list-style-type: none"> <li>● Demonstrate an understanding of subtraction of numbers with answers to 1000, concretely, pictorially, and symbolically</li> <li>● Compute subtractions involving numbers with up to four digits without regrouping</li> <li>● Compute subtractions involving numbers with up to four digits, with regrouping in one place(column)</li> <li>● Compute subtractions involving numbers with up to four digits, with regrouping in two places</li> <li>● Solve problems with missing digits in subtraction</li> </ul>	<p>Within small groups, students subtract with answers to 1000, using concretely, pictorially, and symbolically. Students complete worksheets or activities using the Whiteboard.</p> <p>Students model steps in subtraction without regrouping using base ten blocks, manipulatives, and the columnar formal written method.</p> <p>Students use columnar methods to complete word problems on the whiteboard that require them to subtract numbers up to four- digits.</p> <p>Teacher guides a discussion and uses demonstration involving bundling of tens. Students practice to understand the concept of borrowing.</p> <p>Students write and solve both numerical and word problems that arise from real-life situations. In pairs, students answer two-step problems and compute each by deciding which operations to use and why.</p> <p>Students use the smartboard to complete number problems by writing in missing digits in subtraction problems.</p> <p>Teacher engages students in practical application of subtraction: e.g. buying and selling, household duties, etc.</p>	<p>Place value blocks</p> <p>Abacus</p> <p>Worksheets</p> <p>Counters</p> <p>Subtraction fact cards</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Quiz</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Performance Based Assessment</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with multiplication (Product, multiply, factor, By, Times, Lots Of, four 3's)</li> <li>Understand the properties of multiplication (commutative, and distributive, identity)</li> </ul>	<p>Students answer math problems on the smartboard.</p> <p>Teacher exposes students to words relating to multiplication. (e.g., <i>Stacy and Vicky both collect stickers. Vicky has seven times as many stickers as Stacy. If Vicky has 63 stickers, how many stickers does Stacy have?</i>)</p> <p>Students complete word or number problems, including the word 'product.' (e.g., What is the product of <math>3 \times 54 = ?</math>)</p> <ul style="list-style-type: none"> <li>factor → 54</li> <li>factor → <math>\times 3</math></li> <li>product → 162</li> </ul> <p>Teacher uses a PowerPoint to provide direct instruction. Students learn, when the order of factors changes, the product stays the same. Then, students practice examples.</p> <p>Using a radio or laptop, the teacher engages students in the following song about commutative. "<i>When multiplying numbers two or more, Change the order, but you still score! Don't let multiplying in order be the aim, Because the product stays the same!</i>"</p> <p>Students use pictures, arrays, or beads to introduce distributive properties by breaking up one factor into addends.</p>	<p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>PowerPoint</p> <p>Projector</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Language Arts</b></p> <p>Vocabulary development – Students learn key terms such as factor, product, etc.</p> <p>Forming words from the word multiplication, e.g., lip, pill,</p> <p>Use decoding skills to pronounce unfamiliar words.</p> <p><b>Social Studies/Music</b></p> <p>Create and perform a rake and scrape song about multiplication</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Quiz</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Representing and explaining multiplication using equal grouping and arrays</li> <li>Modelling multiplication using concrete and visual representations and recording the process symbolically</li> <li>Recall and use multiplication facts of 2,5 and 10 multiplication tables</li> <li>Know multiplication facts for 3,4 and 8 multiplication tables</li> <li>Compute multiplication facts within 40 by repeated addition</li> </ul>	<p>Using the whiteboard, the teacher explains multiplication using grouping and arrays. e.g. <math>4 \times 3 = 12</math></p>  <p>Students use beads, beans, stones, etc., to engage in multiplication and record number sentences to show understanding.</p> <p>Students practice mental methods through doubling as they connect the 2,4, and 8 multiplications.</p> <p>Students sing songs and use repeated addition to assist with recalling multiplications.</p> <p>Students use the Smartboard to complete number problems by writing in missing numbers for 3,4, and 5-time table facts.</p> <p>Students build multiplications facts using an appropriate YouTube video as a guide.</p> <p>Students relate multiplication and addition by showing that multiplying numbers can be thought of as adding a number to itself repeatedly. Students use concrete and visual representations.</p> <p>Students play online games to find multiplication facts. .</p>	<p>Time table wheels</p> <p>Counters</p> <p>Egg boxes</p> <p>Beads</p> <p>Counters</p> <p>Workbooks</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Art and Design</b> Students create timetable wheels</p> <p><b>Science</b> Use pictures of flowers and insects for multiplication e.g.</p>  <p>How many legs would 2 ladybugs have? <math>6 + 6 = 12</math> <math>6 \times 2 = 12</math></p> <p><b>Language Arts</b> Students write multiplication word problems.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Quiz</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<b>Multiplication</b>	<ul style="list-style-type: none"> <li>Explore the result of multiplying a number by ones, tens, and hundreds</li> <li>Show multiplication of three 1-digit numbers</li> <li>Multiply a two-digit number by a one-digit number without and with regrouping</li> <li>Multiply a two-digit number by a two-digit number without and with regrouping</li> <li>Multiply a three-digit number by a one-digit number without and with regrouping</li> <li>Multiply a three-digit number by a two-digit number without and with regrouping</li> </ul>	<p>Students use the Think-Pair-Share Strategy to multiply various numbers by ones, tens, and hundreds and explain their findings.</p> <p>In small groups, students throw three dice and multiply the numbers on each die. E.g. 2 x 3 x 4</p> <p>Students watch a step-by-step procedure on multiplying with and without regrouping, then demonstrate their understanding individually and in pairs.</p> <p>Students complete as many problems as they can on five work cards within a 10-minute period.</p> <p>Students complete word problems that require regrouping.</p> <p>Students complete online multiplication activities with and without regrouping.</p>	<p>Dice</p> <p>MIMIO</p> <p>Work cards</p> <p>Workbook</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E</p> <p>A C R O S S</p> <p>S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Quiz</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Oral Presentations</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Estimate an answer to a calculation in multiplication</li> <li>Determine the reasonableness of an answer in multiplication based on estimation</li> <li>Utilize inverse operations to check answers in multiplication</li> <li>Solve problems including missing number problems involving multiplication</li> </ul>	<p>Students estimate the result of multiplication (product) by mentally rounding the numbers to the nearest numbers. <i>"Estimate <math>305 \times 12</math> Round 365 to the nearest hundred, and 12 to the nearest ten. So <math>305 = 300</math>, and <math>12 = 10</math>. Then <math>305 \times 12 = 300 \times 10 = 3000</math>."</i></p> <p>Using the Think-Pair-Share- Strategy, students receive multiplication cards to estimate and use calculators to find correct answers. Then, students compare the answers and determine the reasonableness of estimation.</p> <p>Students recall multiplication and division facts in a whole-class discussion. Students observe the inverse relationship of multiplication and division using examples to check answers.</p> <p>Teacher provides students with completed multiplication equations and students to use the inverse operations to check answers.</p> <p>Students use multiplication flash cards with missing numbers and solve using concrete objects.</p> <p>Students solve problems on missing number problems involving multiplication.</p> <p>Students play online games or complete worksheets (individually and in pairs) on multiplication problems.</p>	<p>Multiplication cards</p> <p>Manipulatives</p> <p>Work cards</p> <p>Workbook</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Analysis of Student work</p> <p>Oral Presentations</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Mentally multiply 10's and 100's by a 1-digit whole number</li> <li>Show multiplication of numbers ending in zeros using word problems</li> <li>Solve one-step and two steps word problems involving multiplication</li> <li>Show application of multiplication skills in practical situations</li> </ul>	<p>In small groups, students participate in a "Mental Math Competition" multiplying by 10 and 100.</p> <p>Students multiply up to 3 digit numbers ending in zero using story problems displayed on a PowerPoint or handouts. <i>e.g., A cruise ship holds 300 passengers. How many passengers would 9 cruise ships hold?</i></p> <p>Students watch a video on solving worded problems involving multiplication.</p> <p>Students read worded problems and demonstrate how to solve them.</p> <p>Students complete activities that require the application of multiplication skills.</p> <ul style="list-style-type: none"> <li>Number of tiles of a floor</li> <li>Number of eggs in a crate</li> <li>Chocolate chunks in a bar.</li> <li>People sitting in a theatre, stadium, etc.</li> </ul>	<p>Multiplication flash cards</p> <p>Word problem cards</p> <p>Counters</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Analysis of Student work</p> <p>Discussion</p> <p>Quiz</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p>

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Division	<ul style="list-style-type: none"> <li>Use appropriate division vocabulary such as number of groups, number of objects in each group, etc.</li> <li>Model equal sharing and equal grouping (up to 100) using concrete and visual representations</li> <li>Demonstrate an understanding of division (limited to division related to multiplication facts)</li> <li>Recall and use division facts of 2,5 and 10 multiplication tables</li> <li>Know division facts for 3,4 and 8 multiplication tables</li> <li>Find the unknown factor in division problems</li> </ul>	<p>Teacher leads a discussion with students on words related to division. Students answer written and oral problems using various vocabulary.</p> <p>Students use manipulatives to understand equal sharing and grouping. For example, "A farmer is filling baskets of apples. The farmer has 24 apples and 4 baskets."</p> <p>Students partition objects into a specific numbers e.g.15 balloons shared between 3 people.</p> <p>Students make multiplication and division facts cards and show concrete presentation of them.</p> <p>Students complete interactive lessons on the MIMIO Smartboard and give choral responses to 2,5 and 10 timetables.</p> <p>Students use 100 board to write division facts and play "I Spy" for division facts of 3, 4, and 8 timetables.</p> <p>Students discuss various multiplication strategies to find the unknown factor. Then, students choose a strategy to find the unknown factor in division problems, i.e., repeated addition, skip counting, arrays, equal groups.</p>	<p>MIMIO Smartboard</p> <p>Worksheets</p> <p>Fact cards</p> <p>Workbooks</p> <p>Multiplication and division flash cards</p> <p>100 board</p> <p>I Spy Game</p> <p>YouTube</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Online Games</p>	<p><b>Language Arts</b> Make a list of words associated with division, e.g., share, quotient, equal</p> <p>Write a paragraph explaining the steps involved in long division</p> <p><b>Music</b> Students create and perform timetable chants</p> <p><b>Mathematics</b> Students use multiplication to check answers in division.</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

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<b>Division</b>	<ul style="list-style-type: none"> <li>● Divide a two-digit number by a one-digit number, without and with a remainder</li> <li>● Divide a three-digit number by a one-digit number without and with a remainder</li> <li>● Demonstrate an understanding of division (limited to division related to multiplication facts)</li> <li>● Estimate an answer to a calculation in division</li> <li>● Determine the reasonableness of an answer in division based on estimation</li> <li>● Utilize inverse operations to check answers in division</li> </ul>	<p>Watch a video showing the steps involved in long division.</p> <p>Students demonstrate their understanding of long division. N.B. Students may use counters if necessary.</p> <p>In pairs, students practice estimations by rounding the divisor and dividend up and down and looking for familiar patterns.</p> <p>Students compare their estimate to the exact answer orally to determine if the answer is reasonable.</p> <p>Students recall multiplication facts and use them to check division problems</p> <p>Students follow these steps to check answers in division:</p> <p>Students complete division problems, Multiply the divisor's quotient times, and If there is a remainder, add it to the multiplication product.</p> <p>Students play online division fact games.</p>	<p>Counters</p> <p>Time tables Chart</p> <p>Multiplication and division fact flash cards</p> <p>Online division facts game</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p> <p>Performance-Based Assessment</p>

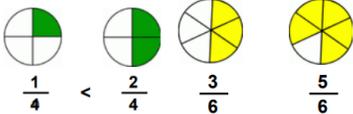
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<p><b>Division</b></p>	<ul style="list-style-type: none"> <li>Mentally divide 10's and 100's by a 1-digit whole number</li> <li>Solve one-step and two steps word problems involving division</li> <li>Solve mixed operations involving division with or without parentheses (Order of operations)</li> <li>Write number sentences to represent division</li> <li>Show application of division skills in practical situations</li> </ul>	<p>Students play "Mental Math Division Game." Students answer questions and receive points based on the speed and accuracy of their responses.</p> <p>Teacher provides students with 1-2 step word problems. Students show step by step working to solve problems involving division.</p> <p>Students watch a video on the order of operations. Then, they discuss the rules and acronym PEMDAS for order of operations.</p> <p>Teacher displays examples of mixed order of operations on the Smartboard involving division. Teacher explains to students how they can be solved by simplifying.</p> <p>Students play an 'Order of Operations Relay.' Teacher provides students with examples to complete, where different students complete each aspect of the problem until it is solved.</p> <p>Students complete worded problems to write number sentences.</p> <p>Students apply division skills in practical situations: i.e., A son/ dance divided into sections for various singers/dancers, dividing food equally, land division, budgeting.</p>	<p>Counters</p> <p>Time tables Chart</p> <p>Multiplication and division fact flash cards</p> <p>Online division facts game</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Language Arts</b> Use context clues to solve word problems</p> <p><b>Social Studies</b> Create division scenarios related to the family and community</p> <p><b>Art and Design</b> Students create large cut-out and form and complete number sentences.</p> <p><b>Physical Education</b> Students jump, skip or hop and mentally divide</p>	<p>Analysis of Student work</p> <p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with fractions (e.g., Numerator, denominator)</li> <li>Represent fraction as a part of a region, set, or linear model</li> <li>Identify fractions of a whole or group/set</li> <li>Explain the concepts of 'numerator' and 'denominator.'</li> </ul>	<p>Students complete, "What Am I? Riddles, e.g., I am the top number in a fraction, what am I?</p> <p>Students use pattern blocks to create a fraction model.</p> <p>Students use a paper plate or fruit to divide into fractional parts such as <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, etc.</p> <p>Students identify the numerator and denominator with the help of a song and diagrams on the Smartboard.</p> <p>Teacher help students to identify the numerator and denominator using a cut out of a pizza or a cake.</p> <p>Students use number cards to form fractions. e.g., the denominator is 8, the numerator is 7 (<math>\frac{7}{8}</math>)</p>	<p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p> <p>Counters, blocks, straws.</p> <p>Dictionary</p> <p>Worksheets</p> <p>workbook</p> <p>Number cards</p> <p>Fraction squares</p> <p>Manipulatives</p>	<p><b>Language Arts</b></p> <p>Use of dictionary for word meaning and syllabication</p> <p>Use of capital letter, full stop, and subject-verb agreement, E.g., The numerator is the top number in a fraction.</p> <p><b>Social Studies</b></p> <p>Use scenarios related to the family to represent fractions, e.g., What fraction are males?</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Compare unit fractions and other proper fractions using the symbols '=', '&lt;', and '&gt;'</li> <li>Order unit fractions and other proper fractions (same numerator, same denominator)</li> <li>Represent and describe the concept of equivalent fractions concretely, pictorially, and symbolically</li> </ul>	<p>Teacher reviews '&lt;' (less than), '&gt;' (greater than) and '=' (equal to) symbols with students.</p> <p>Students compare fractions utilizing the '&lt;' less than, '&gt;' greater than and '=' equal to signs.</p>  <p>Students use fraction strips/charts/ number lines to compare fractions and then put them in order.</p> <p>Teacher uses the Smartboard to present fractions with a common numerator and denominator. Students put fractions in order.</p> <p>Students use fraction models to show equivalent fractions.</p> <p>Teacher uses a projector to display a variety of graphical representations of fractions for whole class discussion.</p> <p>Students use pie charts to answer equivalent questions.</p> <p>Students use pictorial representations of fractions to determine equivalents.</p>	<p>Fraction pizza</p> <p>Fraction strips</p> <p>Fraction chart</p> <p>Online fraction chart</p> <p>Online interactive activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p>I N T E G R A T E D A C T I V I T I E S</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

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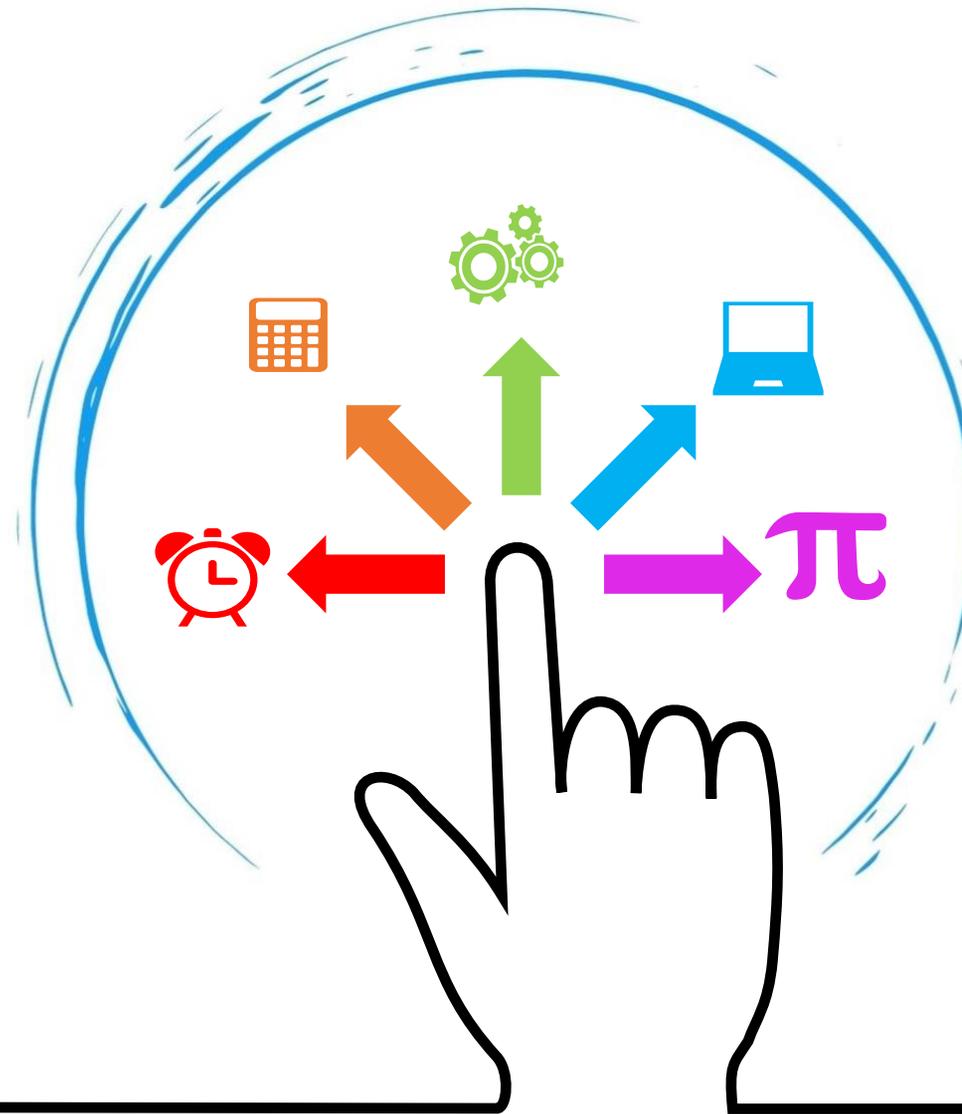
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>● Generate fractions that are equivalent to given fractions</li> <li>● Solve up to 1-step word problems involving fractions</li> <li>● Show application of fraction and proportional reasoning skills in practical situations</li> </ul>	<p>Students multiply or divide the numerator and denominator by the same number. Then, they use fraction models/charts to verify.</p>  <p>Students work in groups to solve worded problems using fraction models.</p> <p>Students use manipulatives such as beans, buttons, etc., to write and solve 1 step word problems. e.g., "Your shirt has 10 buttons, <math>\frac{1}{2}</math> have four holes while the remaining buttons have 2 holes. How many of the 10 buttons had 2 holes?"</p> <p>Students follow a recipe to make a cake and adjust the recipe by increasing or decreasing.</p> <p>Students separate a pizza or cake to demonstrate fraction and proportional reasoning skills.</p>	<p>Fraction models</p> <p>Fraction chart</p> <p>Fraction Pizza</p> <p>Ingredients for cake</p> <p>Online interactive activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Language Arts</b> Students read worded problems fluently</p> <p>Write a composition on steps to making a cake</p> <p><b>Science</b> Create fraction word problems, e.g., What fraction of the pictures shows hurricanes?</p> <p><b>Language Arts</b> Students read and follow recipes to make a cake, e.g., <math>\frac{1}{2}</math> cup sugar, <math>\frac{1}{4}</math> cup butter</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

# GRADE 3

## Term 2

Strands: Consumer Math; Measurement

Theme: Community Action



Term: 2

Curriculum Theme: **Community Action**

Aim: The aim of this theme is to encourage students to participate in local community activities and understand the benefits of these activities for themselves and the community.

Project Criteria:

1. Identify a community group in their local area and what it does
2. Participate in a relevant community action activity
3. Identify how this activity benefits others

Suggested assignments/activities

- Student-led discussion – What are community groups? For example, activities for people with shared interests, to provide a service for people in the community, to take action on an issue of importance to the community.
- Paired research or visits – gather information about community groups in the local area.
- Paired presentation on information gathered.
- Activity – students interview family/friends about their involvement in community groups.
- Guest speakers – from local community groups to speak about their group's role and how the individuals involved benefit.
- Assessment – students record information in the format of a notice for display in their school or community.
- Teacher-led group discussion to select community activity from a range of given options.
- Student-led one-on-one or small group meetings to confirm choice for activity.
- Role-play activities that relate to community activity.
- Debrief and feedback to include health and safety aspects and individual responsibilities.
- Practical – involvement in a community activity.
- Assessment – present evidence of community activity involvement and how others benefited, such as diary or log, witness statement, and photographs.
- Assessment feedback, review, and evaluation of theme.
- **CPEA Project Rubric**

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 2

<b>STRAND: CONSUMER MATH</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Money	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>• Understand mathematical language associated with consumer math</li> <li>• Recognize and describe the coins and notes in circulation in the Turks and Caicos</li> <li>• Use correct notation to represent the value of a given amount of money (use of the dollar and cent signs)</li> <li>• Explore the value of coins and bills (1¢, 5¢, 10¢, \$1, \$5, \$10) and their equivalence</li> <li>• Express cents to dollars and cents and dollars and cents to cents</li> <li>• Understand the decimal point in relation to money</li> <li>• Represent values up to \$50 using coins and notes in a variety of combinations</li> <li>• Understand how to read, represent and interpret the price of items</li> <li>• Find the total bill of a set of items with totals up to \$50.00 and work out change using notes and coins</li> <li>• Compare prices of goods and services for the best value</li> <li>• Solve word problems involving money</li> <li>• Show application of money management skills practical situations</li> </ul>
<b>STRAND: MEASUREMENT</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Time	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>• Read, interpret and record calendar dates in a variety of formats</li> <li>• Use a calendar to solve problems</li> <li>• Use time vocabulary appropriately (a.m., p.m., morning, afternoon, noon and mid-night)</li> <li>• Read and record time using an analogue and digital clock using the appropriate words and notations (12-hour)</li> <li>• Investigate the relationship between units of time (Minutes-hour, Hours-day, Seconds-Minute, Days-week, Days-Month, Weeks-month, Months-year and Days-year)</li> <li>• Solve problems involving converting hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>• Show and record time with analogue and digital clocks using intervals (on the hour, ½ hour and ¼ hour), using the format: minutes to/minutes past</li> <li>• Determine the length of time elapsed</li> </ul>

This curriculum serves as a guide for teaching & learning in the Turks and Caicos Islands; teachers have the autonomy to make adjustments where necessary. 50

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 MATHEMATICS  
 GRADE 3 STRUCTURE

TERM 2

	<ul style="list-style-type: none"> <li>• Estimate time to the nearest hour</li> <li>• Solve problem involving time</li> </ul>
Length	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with length (taller than, shorter than, etc.)</li> <li>• Explore the meanings of the prefix deci-, centi-, milli-, and kilo-</li> <li>• Distinguish between standard and non-standard units of measure (for length)</li> <li>• Know the relationships between kilometre and metre, metre and centimetre</li> <li>• Select and justify appropriate instruments and units of measurement for length</li> <li>• Measure and record standard units and nonstandard units of length</li> <li>• Measure, record, compare and order standard units of length (i.e., centimetre, metre, kilometre) (e.g., centimetres are smaller than metres)</li> <li>• Demonstrate an understanding of the relationship between estimated and precise measurements</li> <li>• Estimate a reference measure of 1 kilometre</li> <li>• Estimate and measure lengths, heights and distances using the meter and centimetres as units of measure.</li> <li>• Demonstrate how to use a ruler to measure the length of objects (with zero as the starting point; with other starting points)</li> <li>• Demonstrate how to draw line segment of a given length in centimetres and millimetres</li> <li>• Add and subtract linear measurements</li> <li>• Measure line segments and curves using the centimetre and millimetres as the unit of measure</li> <li>• Demonstrate an understanding of the concept of conversion of measurements between meters and centimetres</li> <li>• Compare the length or height of objects given their measurement in the same or different unit</li> <li>• Solve problems in real-life situations involving length</li> </ul>
Area and Perimeter	<ul style="list-style-type: none"> <li>• Understand the concept of Perimeter and Area</li> <li>• Find the total distance around an object (perimeter)</li> <li>• Differentiate between area and perimeter</li> <li>• Estimate, measure and compare the area of regular polygons by counting unit squares</li> </ul>
Mass/Weight	<ul style="list-style-type: none"> <li>• Understand the concept of Mass</li> <li>• Distinguish between standard and non-standard units of measure of mass</li> <li>• Investigate the mass of objects using phrases such as 'heavier', 'lighter', 'lightest'</li> <li>• Select and justify the most appropriate standard unit for measuring mass/weight (kilogram, gram)</li> <li>• Measure, record, compare and order mass/weight, using standard and non-standard units</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 2

	<ul style="list-style-type: none"><li>• Show estimation, measurement, recording and comparison of the mass of objects using standard units (kilogram)</li></ul>
Capacity	<ul style="list-style-type: none"><li>• Understand the concept of capacity</li><li>• Distinguish between standard and non-standard units of measure of capacity</li><li>• Investigate containers according to their capacity using phrases such as 'holds more', 'holds the least' etc.</li><li>• Demonstrate an understanding of the concept of conversion of measurements between litres and millilitres</li><li>• Select the appropriate standard unit for capacity of liquids (litres and millilitres)</li><li>• Estimate, measure and record the capacity of containers using the litre as a unit of measure</li><li>• Compare similar capacity of liquids given in various standard units of capacity</li><li>• Solve problems in real-life situations involving volume</li></ul>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Money	<ul style="list-style-type: none"> <li>Understand mathematical language associated with consumer math</li> <li>Recognize and describe the coins and notes in circulation in the Turks and Caicos.</li> <li>Use correct notation to represent the value of a given amount of money (use of the dollar and cent signs)</li> <li>Explore the value of coins and bills (1¢, 5¢, 10¢, \$1, \$5, \$10) and their equivalence.</li> </ul>	<p>Students think of words associated with money and create a word tree as a whole class. Then, students use credible resources to find the meanings of words.</p> <p>Teacher distributes notes and coins of various denominations and asks students to identify such from 1 cent to \$100 when requested.</p> <p>Students review bills of different denominations to understand that notes differ based on country.</p> <p>In small groups, students receive coins and notes used in the Turks and Caicos Islands. Students identify and describe each.</p> <p>Students sample notes and coins to write the amount correctly using the '\$' and '¢' symbols.</p> <p>Students sequence different coins and notes in order of value. e.g. 5 cents, 10 cents, 20 cents, 50 cents, \$1, \$2, \$5, \$10, \$20, \$50 and \$100.</p> <p>Students exchange a note or coin for an equivalent set of notes or coins of a smaller denomination in role play.</p>	<p>Cut-out shapes of word trees</p> <p>Local notes and coins</p> <p>Money cash register</p> <p>Class Shop Area</p> <p>Online interactive activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>White board</p> <p>Smartboard</p> <p>Online Games</p>	<p><b>Social Studies</b> Research Money and Trade in the Caribbean</p> <p>Identify different currencies used in the Caribbean</p> <p>Listen to resource person about ways the country earns money</p> <p><b>Art and Design</b> Create examples of money</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Express cents to dollars and cents and dollars and cents to cents</li> <li>Understand the decimal point concerning money</li> </ul>	<p>Students receive cents totalling dollar amounts to express as dollars and cents and vice versa.</p> <p>Students manipulate real coins and bills to count.</p> <p>Students participate in a shop role play to identify the values of the notes and coins.</p> <p>Students use money flash cards to match cents to dollars and vice-versa, E.g., \$4.10 = 410 cents</p> <p>Using the Mimio software, students find the total amount of money expressed as coins and notes.</p> <p>Students participate in a discussion, help students understand the relationship between decimal, place value, and money. "\$5.48 written as 5 dollars + 4 dimes + 8 pennies."</p> <p>Teacher uses direct instruction on the movement of the decimal, changing the value of the money. "\$54.08 written as 54 dollars + 8 pennies."</p>	<p>Real coins and bills</p> <p>Money flash cards</p> <p>MIMIO Interactive Whiteboard</p> <p>Mathematics Workbooks</p> <p>Cash register</p> <p>Online interactive activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p><b><u>Social Studies</u></b>                      Set up 'Shop Corner' with different items from Caribbean islands</p> <p><b><u>Art and Design</u></b>                      Use crayons to imprint images displayed on various coins.</p> <p><b><u>Language Arts</u></b>                      Write poems about money</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>• Represent values up to \$50 using coins and notes in a variety of combinations</li> <li>• Understand how to read, represent and interpret the price of items</li> <li>• Find the total bill of a set of items with totals up to \$50.00 and work out a change using notes and coins</li> </ul>	Students use the Think-Pair-Share method with a cash register and hand-made notes/coins to represent amounts of money summing up to \$50.	Cash register	I N T E G R A T E A C T I V I T I E S	Exit/Entrance slips
		Students play monopoly to interpret the price of land, houses, and utilities.	Hand-made notes and coins		Teacher made test
		Teacher sets up a 'Corner Shop" role play with the whole class. Students research prices of items, then create hand-made price tags to price items.	Price tags		Analysis of student work
		Watch a YouTube video on "Adding Money and Making change.	Price guns		3-2-1 Strategy
		Students demonstrate 'buying and selling activities "using the "Corner Shop." Students work out changes.	Shop Items		Think-Pair-Share
		Students use a variety of problems to determine the total bill and work out the change. For example: "The price of an item is \$26. You give the cashier a \$50 bill. What is the change?"	Monopoly game		Online Discussion
		Students participate in a fundraising activity to practice giving change: for example, a charity coffee morning.	Newspaper clippings		Quiz
	YouTube	Observation			
	Worksheets	Pre-assessment			
	Computer	Response Cards			
	White board	Project			
	Smartboard				

**CONSUMER MATH**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Money</b></p>	<ul style="list-style-type: none"> <li>• Compare prices of goods and services for the best value</li> <li>• Solve word problems involving money</li> <li>• Show application of money management skills in practical situations</li> </ul>	<p>Students attend a field trip to a local supermarket to get an experience of comparison shopping.</p> <p>Students examine advertisements on the costs of items.</p> <p>Students compare prices of the same item and find the difference between the costs and make simple calculations when paying for an item.</p> <p>Teacher displays the same goods with different prices/brands. Students discuss which item to purchase.</p> <p>Students learn how to open a savings account using the teacher as the bank and discuss saving, interest, bank books, writing a cheque, using an atm.</p> <p>Students work in small groups. Teacher gives each group a scenario (money stories). Groups use the scenario to present ways to utilize money management skills.</p> <p>Students Identify items they need to spend money on and prepare a simple personal weekly budget</p>	<p>Sample goods</p> <p>Resource person</p> <p>Scenario strips</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Computer/Laptop</p> <p>Sample Money and coins</p>	<p><b>Language Arts</b> Debate prices of iPhone vs android based on the best value.</p> <p><b>Social Studies</b> Students discuss the importance of money</p> <p>Students create collages of current and past currencies of the country and currencies of different countries</p> <p><b>Art and Design</b> Students make their own personalized visa cards.</p>	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Oral Presentation</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Time	<ul style="list-style-type: none"> <li>Read, interpret and record calendar dates in a variety of formats.</li> <li>Use a calendar to solve problems</li> <li>Use time vocabulary appropriately (a.m., p.m., morning, afternoon, noon, and midnight)</li> </ul>	<p>Display, analyse, and discuss calendar dates in a variety of formats: Common format - Day/Month/Year (31 May 2021)</p> <p><i>Separators (e.g. 31.05.2021, 31/05/2021, 31-05-2021),</i></p> <p><i>Zeros included (e.g., 31/5/2021 vs. 31/05/2021),</i></p> <p><i>Number of digits of the year are written (e.g., 31.05.2021 vs. 31.05.21),</i></p> <p>Students learn the number of days within each month.</p> <p>Create calendars as a group activity and use them to solve problems such as: Which statement about Zoey and Ryan's ages is true?</p> <ul style="list-style-type: none"> <li>Zoey is 1 month older than Ryan.</li> <li>Ryan is 1 month older than Zoey.</li> <li>Zoey is 1 year older than Ryan.</li> <li>Ryan is 1 year older than Zoey.</li> </ul> <p>Students express time using a.m., p.m., morning, afternoon, noon, and midnight.</p>	<p>Calendars</p> <p>Clock</p> <p>Watch</p> <p>Projector</p> <p>Scenario strips</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Computer/Laptop</p>	<p><b>Social Studies</b> Read and interpret hurricane Season dates, months that cultural activities take place, e.g., Regatta, Valentine's Day Cup</p> <p><b>Language Arts</b> Writing sentences including dates in various formats.</p> <p><b>Art and Design</b> Create a picture collage showing the times when activities are completed</p> <p><b>Religious Education</b> Students note the time of different events in the Crucifixion of Jesus</p>	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>Read and record time using an analogue and digital clock using the appropriate words and notations (12-hour)</li> <li>Investigate the relationship between units of time (Minutes-hour, Hours-day, Seconds-Minute, Days-week, Days-Month, Weeks-month, Months-year and Days-year)</li> <li>Solve problems involving converting hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> </ul>	<p>Students make model clocks to show and tell time.</p> <p>Students use the Smartboard to play guessing games to determine the time on an analogue clock.</p> <p>Students illustrate the time in words and figures.</p> <p>Students play speed games to set clocks in groups and individually.</p> <p>students match analogue and digital times using time flash cards</p> <p>Students research and determine the relationship between units of time and engage in conversation activities.</p> <p>Students recite conversion table of time and convert from one unit of time to another</p> <p>Students solve problems involving conversions of units. i.e. 60 Minutes = 1 hour 24 Hours = 1 day, 60 Seconds = 1 Minute, 7 Day = 1 week, 28-31 Days = 1 Month, 4 Weeks = 1 month, 12 Months= 1 year and 365 Days = 1 year</p>	<p>Time flash cards</p> <p>Time bingo</p> <p>MIMIO interactive whiteboard</p> <p>Analog Clock</p> <p>Chart on Units of Time, e.g., 7 days = 1 week</p> <p>Digital Clock</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Computer/Laptop</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>Show and record time with analogue and digital clocks using intervals (on the hour, <math>\frac{1}{2}</math> hour and <math>\frac{1}{4}</math> hour), using the format: minutes to/minutes past</li> <li>Determine the length of time elapsed</li> <li>Estimate time to the nearest hour</li> <li>Solve problem involving time</li> </ul>	<p>Students tell time by the hour, half-hour, quarter-hour using the analogue clock and set clocks to show the hour, half-hour, quarter to, and quarter past a specific time.</p> <p>Draw hands on a clock face to show the hour, half-hour, quarter to and quarter past, minutes of given figures or words. For example: Fifteen minutes past seven = 7:15 Five minutes to four = 3:55 9:10 = Ten minutes past nine</p> <p>In pairs, students use two clocks with different times to determine the time that elapses.</p> <p>Students use clock faces to estimate times to the nearest hour, e.g., 6:50 to the nearest hour is 7.</p> <p>Students work with peers to solve word problems related to time.</p> <p>Students independently solve word problems that involve calculating time. i.e... "Brandon left school at 3:15 p.m. He walked to the library to work on his homework. It took 15 minutes to walk to the library. Brandon's father picked him up at the library one hour after he arrived. What time did Brandon's dad pick him up? (4:30 p.m.)"</p>	<p>Hand-made clocks</p> <p>Time charts</p> <p>Analog Clock</p> <p>Chart on Units of Time, e.g., 7 days = 1 week</p> <p>Digital Clock</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Computer/Laptop</p>	<p><b>Language Arts</b></p> <p>Listening Comprehension - ask students questions about a story, e.g., What do they do at 4:15?</p> <p>Draw a timeline of the activities from a story</p> <p><b>Art and Design</b></p> <p>Allow students to design their own analogue clocks.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with length (taller than, shorter than, etc.)</li> <li>Distinguish between standard and non-standard units of measure (for length).</li> <li>Explore the meanings of the prefix deci-, centi-, milli-, and kilo-</li> <li>Know the relationships between kilometre and metre, metre and centimetre</li> </ul>	<p>Students use vocabulary such as longer than, shorter than, taller than, longest, shortest, and tallest to compare lengths of objects in a whole-class discussion.</p> <p>Students research and discuss the meaning of standard and non-standard units.</p> <p>Expose students to a variety of length standards, i.e., kilometre, metre, and centimetre</p> <p>Ensure students are aware of the various abbreviations or symbols.</p> <p>Display various prefixes and allow students to match to words and meanings (Kilo-, Kilometre- comes from the Greek word meaning 1000)</p> <p>Use measurement charts to discuss the meaning of the prefixes and show the relationship of the units.</p> <p>Students research and recite the connection between m to km and m to cm.</p> <p><math>1\text{ km} = 1000\text{m}</math> <math>1\text{ m} = 100\text{cm}</math></p>	<p>Cubes</p> <p>Paper clip</p> <p>Rulers</p> <p>Squares</p> <p>Metre stick</p> <p>Measuring tape</p> <p>Clothes pegs</p> <p>Object (to measure)</p> <p>Measurement chart</p> <p>YouTube</p> <p>Worksheets</p> <p>White board</p> <p>Smartboard</p> <p>Computer/Laptop</p>	<p><b>Language Arts</b></p> <p>Students complete activities on comparison of adjectives</p> <p>Prefixes - e.g. milli-(metre)</p> <p>Abbreviations, e.g., cm-centimetres</p> <p>Phonics - 'th'</p> <p><b>Art and Design</b></p> <p>Create a measuring height chart</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

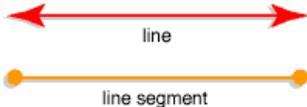
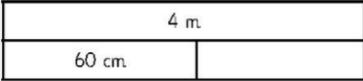
**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>• Select and justify appropriate instruments and units of measurement for length</li> <li>• Measure and record standard units and non-standard units of length</li> <li>• Measure, record, compare and order standard units of length (i.e., centimetre, metre, kilometre) (e.g., centimetres are smaller than metres)</li> </ul>	<p>Explore various units of measurement of length and discuss what each can be used to measure, e.g., length of a book - cm, the distance around a track - m</p> <p>Students demonstrate understanding of standard and non-standard units of measure by measuring objects, i.e., using different body parts, paper clips for non-standard units of length, and rulers for standard.</p> <p>Utilizing a series of lines, students measure lengths in both m and cm and compare the length of both lines.</p> <p>Students discuss that km is used to measure longer distances, such as a 5k race. Students race the distance of 100 meter and 1 km, then compare the distance to determine which is longer and shorter.</p> <p>Observe the size of standard units of length and the conversion table, then sequence units of measurement. E.g., mm, cm, m, km</p> <p>Provide students with various measurements in centimetre, metre, and kilometres and ask students to order the smallest to largest or vice versa.</p>	<p>Paper clip</p> <p>Rulers</p> <p>Metre stick</p> <p>Measuring tape</p> <p>Clothes pegs</p> <p>Objects (to measure)</p> <p>Measurement chart</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p><b>Social Studies</b></p> <p>Observe a landscape picture map and calculate the distances between landmarks, e.g., post office to the gas station</p> <p><b>Language Arts</b></p> <p>Answering questions in complete sentences on a landscape picture map</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the relationship between estimated and precise measurements</li> <li>• Estimate a reference measure of 1 kilometre</li> <li>• Estimate and measure lengths, heights, and distances using the meter and centimetres as units of measure</li> </ul>	<p>Students discuss strategies they can use during estimation, such as using their body or fingertips; A metre is also approximately the distance of one large step or jump.</p> <p>Explore the relationship between estimated and precise measurements and when it is appropriate to use each, i.e., drawing hop scotch squares versus making clothes.</p> <p>Students estimate measurements of objects and then compare them with actual measurements.</p> <p>Students watch a YouTube video about the kilometre</p> <p>Students use Google Maps to see distances between towns/landmarks</p> <p>Students go outside to estimate and measure distances, heights, and lengths, e.g., distance from the bathroom to the classroom.</p> <p>Students work in pairs and estimate their classmate's height and measure to determine accuracy.</p>	<p>Measuring instruments: ruler, metre stick, measuring tape</p> <p>Objects (to measure)</p> <p>Measurement chart</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p><b><u>Physical Education</u></b> Students measure jumps and throw accurately</p> <p><b><u>ICT</u></b> Students use Google maps to measure distance.</p> <p><b><u>Art and Design</u></b> Students draw shapes using estimation and precision.</p> <p><b><u>Science</u></b> Measuring different examples of matter, e.g., paper, computer, person</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate how to use a ruler to measure the length of objects (with zero as the starting point; with other starting points)</li> <li>• Demonstrate how to draw a line segment of a given length in centimetres and millimetres</li> <li>• Add and subtract linear measurements</li> </ul>	<p>Students choose an object and demonstrate how to measure using a ruler.</p> <p>Students use a ruler to draw a line of a given length (in centimetres).</p> <p>Students practice drawing lines in different lengths in cm and mm.</p> <p>Students use the Smartboard to demonstrate how to draw line segments at given lengths in cm and mm.</p> <div style="text-align: center;">  </div> <p>Students use the part-whole model to answer addition and subtract questions about linear measurements.</p> <div style="text-align: center;">  </div> <p style="text-align: center;"> <math>400 \text{ cm} - 60 \text{ cm} = 340 \text{ cm}</math>  <math>340 \text{ cm} = 3 \text{ m } 40 \text{ cm}</math> </p>	<p>Rulers</p> <p>Objects in the classroom</p> <p>Measurement chart</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Length	<ul style="list-style-type: none"> <li>Measure line segments and curves using the centimetre and millimetres as the unit of measure</li> <li>Demonstrate an understanding of the concept of conversion of measurements between meters and centimetres</li> <li>Compare the length or height of objects given their measurement in the same or different unit</li> <li>Solve problems in real-life situations involving length</li> </ul>	<p>Use cords/strings and rulers to measure line segments and curves in centimetre and millimetres as the unit of measure.</p> <p>Utilize conversion table and explain how to convert from cm to m and vice versa</p> <p>Students convert m to cm and cm to m using multiplication and division. Teacher explains, to convert metres to centimetres, we multiply the number of metres by 100, and to convert centimetres to metres, we divide the number of cm by 100.</p> <p><math>1\text{ m} = 100\text{cm}</math>  <math>1200\text{cm} / 100 = 12\text{m}</math>  <math>12\text{m} \times 100 = 1200\text{cm}</math></p> <p>Students use <math>&lt;</math>, <math>&gt;</math> or <math>=</math> to complete statements.</p> <p>7 metres  17 metres  18 cm  18 m  32 cm  32 centimetres</p> <p>Students draw bar models to solve measurement problems within groups.</p> <p>Students respond to given scenarios involving length. For example "The Lewis family is going camping. They want to place two sleeping bags end to end. The lengths of the sleeping bags are 153cm and 167cm. How long should the tent be? Provide your answer in cm and m."</p>	<p>Tape Measure</p> <p>Rulers</p> <p>Cords</p> <p>Workbooks</p> <p>Sentence strips</p> <p>Measurement chart</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p>I N T E G R A T E A C T I V I T I E S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Area and Perimeter</b>	<ul style="list-style-type: none"> <li>Understand the concept of Perimeter and Area</li> <li>Find the total distance around an object (perimeter)</li> <li>Differentiate between area and perimeter</li> <li>Estimate, measure, and compare the area of regular polygons by counting unit squares</li> </ul>	<p>Utilizing images and diagrams teacher informs that; "A perimeter is the boundary of a two-dimensional shape." (G.M. Progression, p. 16). and area the amount of space taken up by a 2D shape or surface.</p> <p>Students use Legos/geoboard to form shapes and use hand to show the perimeter.</p> <p>Students find the perimeter of two-dimensional shapes by measuring side lengths of 2D shapes in whole-number units.</p> <p>Students mark out shapes on tiles and use different coloured chalk to show the perimeter and area. (Trace Perimeter and shade Area)</p> <p>Using the Smartboard displays images within a grid and allow students to compare the area of different figures.</p> <p>Teacher Uses graph sheets with objects printed, and students compare the number of square units that make up each figure.</p> <p>Students compare the area of figures created on graph paper by classmates.</p> <p>Provide students with 1 square centimetre and 1 square meter shapes to help students visualize the sizes.</p>	<p>Legos, geoboard, elastic band, floor tiles</p> <p>String or pipe cleaners</p> <p>Paper plate and rectangular object (optional)</p> <p>Crayons or markers</p> <p>Rulers</p> <p>Square-inch tiles</p> <p>Right-angle template</p> <p>Quadrilaterals Template</p> <p>Polygons Template</p> <p>Game Cards</p> <p>Grid sheets</p>	<p><b>Language Arts</b>                      Utilize reference resources to gather information about perimeter and area</p> <p><b>Science/Social Studies/Art and Design</b>                      Students draw local plants and animals and find the area.</p>	<p>Demonstration</p> <p>Observation</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Mass/Weight</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of mass</li> <li>Distinguish between standard and non-standard units of measure of mass</li> <li>Investigate the mass of objects using phrases such as 'heavier,' 'lighter,' 'lightest.'</li> <li>Select and justify the most appropriate standard unit for measuring mass/weight (kilogram, gram)</li> <li>Measure, record, compare, and order mass/weight using standard and non-standard units</li> <li>Show estimation, measurement, recording, and comparison of the mass of objects using standard units (kilogram)</li> </ul>	<p>Students use dictionaries to locate the word mass. Students understand mass used in the proper context.</p> <p>Watch a YouTube video about non-standard and standard units of measure of mass.</p> <p>Use various parts of the body as a non-standard measure (handful).</p> <p>Students use a beam balance to measure the mass of various objects.</p> <p>Write sentences comparing the masses using phrases such as 'heavier,' 'lighter,' 'lightest.'</p> <p>Teacher Introduces grams and kilograms to students by allowing students to hold objects weighing 1g versus 1kg.</p> <p>Give each student an object or picture of an object and allow them to say what unit is appropriate for measuring and give reasons.</p> <p>Students work in small groups and explore the mass of objects using different units of measure.</p> <p>Estimate the mass of objects and then use a measuring device to verify and compare measurements.</p>	<p>Beam balance</p> <p>Spring balance</p> <p>Objects</p> <p>Pictures</p> <p>Standard and non-standard units (scale, beam balance, cups, marbles)</p> <p>Worksheets</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p>	<p><b>Language Arts</b> Comparison of Adjectives (heavier, lightest)</p> <p>Write a descriptive letter to a friend telling him/her what they have learned about mass.</p> <p><b>Science</b> Demonstrate that air has mass</p> <p><b>Art and Design</b> Make a beam balances</p> <p><b>Science/STEM</b> Investigate the relationship between matter and mass</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment</p> <p>Analysis of Student Work</p> <p>Strategic Questioning Strategies</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>One-Minute Papers</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Capacity</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of capacity</li> <li>Investigate containers according to their capacity using phrases such as 'holds more,' 'holds the least,' etc.</li> <li>Distinguish between standard and non-standard units of measure of capacity</li> </ul>	<p>Students watch a YouTube video about capacity and share what they learned in a summary chart using pictures or drawings.</p> <p>Through a demonstration, students learn that capacity is a term used to describe how liquid is measured.</p> <p>Give students different size containers to fill with water to explore the concept of capacity.</p> <p>Teacher Utilizes non-standard units to measure water and juices to determine how many smaller containers can fill different size containers.</p> <p>Students manipulate standard and non-standard units of measure relating to capacity. Then, they compare and contrast them.</p>	<p>Measuring cylinders</p> <p>Measuring cups</p> <p>Teaspoons, tablespoons</p> <p>Sand</p> <p>Marbles</p> <p>Coins</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Liquids</p>	<p><b>Science/STEM</b> Students engage in investigations regarding properties of water ;i.e. Floating and sinking</p> <p><b>Language Arts</b> Students write findings in Standard English after investigating the capacity of liquids.</p> <p><b>Art and Design</b> Students create a drawing of measuring tools.</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment</p> <p>Analysis of Student Work</p> <p>Strategic Questioning Strategies</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>One-Minute Papers</p>

**MEASUREMENT**

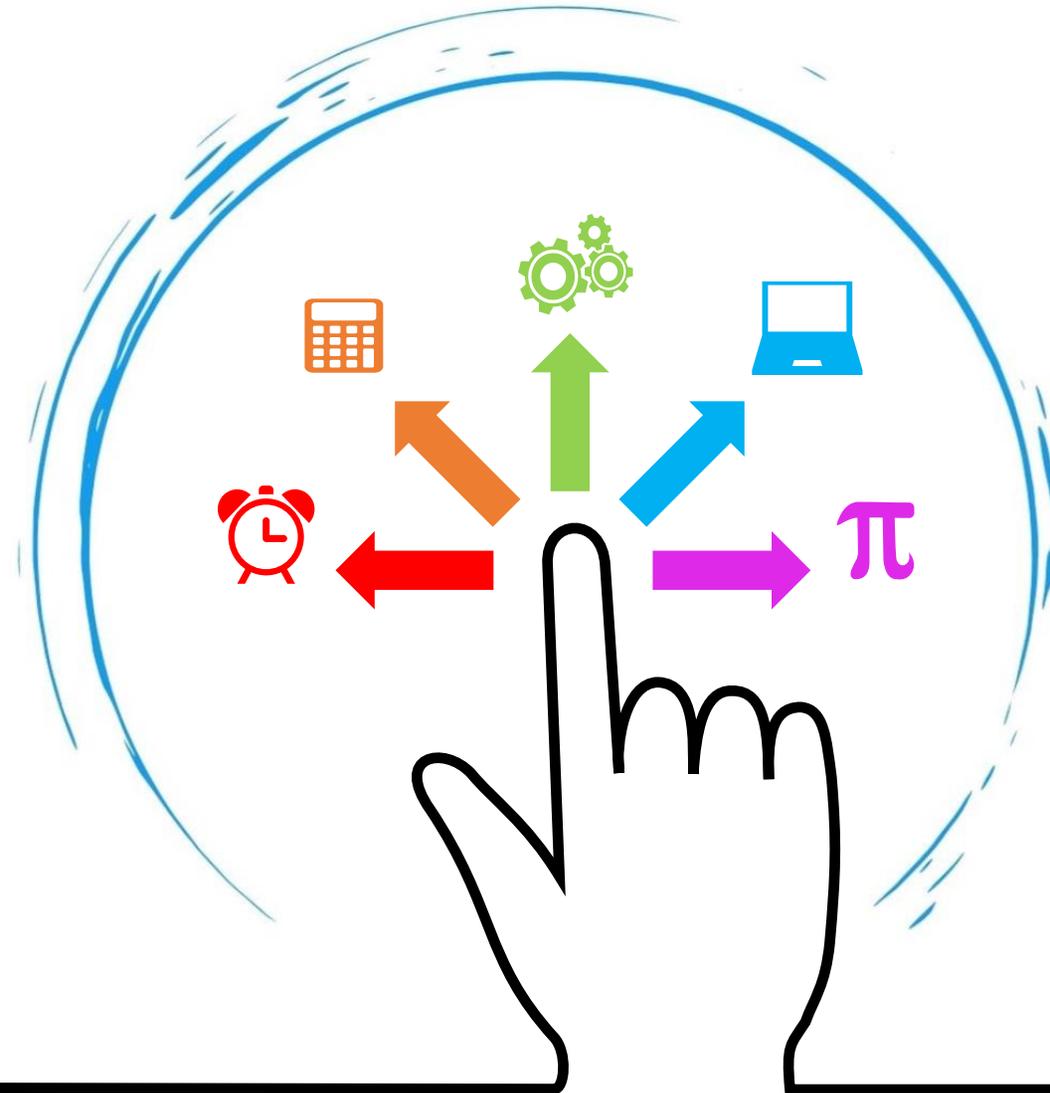
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Capacity</b>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of the concept of conversion of measurements between litres and millilitres</li> <li>Select the appropriate standard unit for the capacity of liquids (litres and millilitres).</li> <li>Estimate, measure, and record the capacity of containers using the litre as a unit of measure</li> <li>Compare similar capacity of liquids given in various standard units of capacity</li> <li>Solve problems in real-life situations involving volume</li> </ul>	<p>Using visuals, students learn the difference between a millilitres and a litre. "A single raindrop contains about 1millilitre of liquid" and "This bottle contains about 1 litre of liquid" *shows the bottle.</p> <p>Teacher us direct instruction <i>1 Litre = 1,000 millilitres</i>. To convert litres to millilitres we multiply the number of litres by 1,000. To convert millilitres to litres we divide the number of millilitres by 1,000.</p> <p>Students discuss appropriate standards unit of capacity by posing option questions. "Identify the most reasonable unit to measure the volume of a neighborhood swimming pool."</p> <p>Students use labels on liquids to compare capacity and solve problems.</p> <p>Students solve real-life problems involving volume:</p> <ul style="list-style-type: none"> <li>Calculating daily consumption of water.</li> <li>determines the cost of gasoline by the volume</li> <li>Measuring liquids used in Cooking and Baking</li> <li>The number of liquid cleaning products used in Cleaning House</li> <li>Water Conservation</li> </ul>	<p>Measuring cylinders</p> <p>Measuring cups</p> <p>Teaspoons, tablespoons</p> <p>Labels from liquids: juice, milk, water</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>White board</p> <p>Smartboard</p> <p>Liquids</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

# Grade 3

## Term 3

Strands: Geometry; Statistics and Data Handling

Theme: Exploring Music and Dance



Term: 3

Curriculum Theme: **Exploring Music and Dance**

Aim: This theme aims to give students the opportunity to listen, experience and take part in different types of dances and creating music

Project Criteria:

1. Identify different types of music from a given selection
2. Identify a number of musical instruments from their sound
3. Create a simple musical instrument
4. Contribute to a group music session by playing an instrument
5. Recognize different types of dances from a given selection
6. Demonstrate movement to different types of sounds
7. Follow instructions to perform a short dance routine
8. Present a dance in own style
9. Contribute to a group dance routine

Suggested assignments/activities

- Group activity – listen to pieces of different types of music, and match a list of names of music types with the music extract.
- Assessment – practical activity, listen to different types of music for the learner to identify.
- Teacher-led discussion on different types of musical instruments.
- Group activity – students are given cards to match the names and pictures of a variety of musical instruments.
- Group activity – students are given the opportunity to try out as many instruments as possible.
- Assessment – practical activity with the learner listening to and identifying the various musical instruments.
- Group activity – students make and play their newly-made instruments.
- Assessment – completed musical instrument which can be played.
- Practical – students work together to create music. This could be around a theme chosen by the teacher or learner. The musical instruments made by students could be used.
- Group activity – look at video clips of different types of dances. Students are encouraged to comment on the dance styles, what they like, what they dislike etc.
- Visits to various dance companies where possible.
- Assessment – students watch and listen to different dance styles which they name. This could be recorded on a worksheet.
- Practical dance sessions with students.
- Activity – students will create their own routine with a suitable prop. Students will need time to learn and perfect their routine. They may also need guidance and support in sourcing and selecting appropriate accompanying music.
- Assessment – practical observation of dance routines, this could be recorded on video, or an observation/witness statement could be written.
- Assessment feedback, review and evaluation of theme.
- **CPEA Project Rubric**

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 3

<b>STRAND: GEOMETRY</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Lines/ Line Segments	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>• Understand basic geometric ideas: point, line, line segments, ray, plane, angle</li> <li>• Recognize and construct horizontal and vertical line segments</li> </ul>
Angles	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the concept of angles by identifying angles in plane figures</li> <li>• Compare and order angles less than, greater than or equal to <math>90^\circ</math> from different orientations</li> </ul>
2- Dimensional / Plane Figures	<ul style="list-style-type: none"> <li>• Understand the concept of 2-dimensions</li> <li>• Explore open and closed figures</li> <li>• Recognize, name and compare two- dimensional figures according to their properties (circles, squares, rectangle and triangles; length, the number of sides, and number and type of angles)</li> <li>• Characterize 2-D geometric figures into appropriate subsets (categories) based characteristics i.e. number of sides, vertices, angles, etc.</li> <li>• Contrast the meaning of a circle as a curve and as a two dimensional region</li> <li>• Explain the concepts of radius, diameter, and centre of a circle</li> <li>• Recognise and draw radii and diameters of a circle</li> </ul>
3- Dimensional Figures/ Solids	<ul style="list-style-type: none"> <li>• Understand the concept of 3-dimensions (3D)</li> <li>• Recognize, name, compare and construct three- dimensional figures according to their properties (cubes, cuboids, cones, cylinders and spheres)</li> <li>• Characterize 3-D geometric figures into appropriate subsets (categories) based characteristics (number of faces, edges and vertices)</li> <li>• Recognise two-dimensional figures that make up the faces of three-dimensional figures</li> </ul>
Transformation	<ul style="list-style-type: none"> <li>• Explore the ideas of symmetry in geometric figures and shapes</li> <li>• Recognize similarities in simple plane figures</li> <li>• Explore and predict with simple transformation (flip, slide)</li> <li>• Compare flat surfaces (tessellation)</li> </ul>

This curriculum serves as a guide for teaching & learning in the Turks and Caicos Islands; teachers have the autonomy to make adjustments where necessary. 71

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 3 STRUCTURE

TERM 3

## STRAND: STATISTICS AND DATA HANDLING

SUB-STANDS	TARGETS
Data Representation	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>• Discuss the concept of data collection and data representation</li><li>• Discuss most suitable methods for collecting and representing data</li><li>• Distinguish between and identify a population and a sample</li><li>• Collect data through observation, interviews and simple questionnaires</li><li>• Demonstrate the use of tally chart and tables to organize data</li><li>• Read and interpret pictographs (including interpreting scales used in pictographs), tables and bar graphs</li><li>• Summarize information presented in pictographs and bar graphs</li><li>• Find and interpret the mode and median of a set of data</li></ul>

GEOMETRY					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Lines/ Line Segments</b>	<ul style="list-style-type: none"> <li>● Understand basic geometric ideas: point, line, line segments, ray, plane, angle</li> <li>● Recognize and construct horizontal and vertical line segments</li> </ul>	<p>Utilizing the Smartboard/Projector, students familiarize themselves with each illustration of basic geometric concepts.</p> <p>Students draw basic geometric concepts such as point, line, line segment, ray, and angle using worksheets, geometry dot paper, or the Smartboard.</p> <p>Introduce students to types of lines using graphical representations such as images on a PowerPoint. Sing song about horizontal and vertical lines with actions.</p> <p>Students show vertical and horizontal lines on objects in the classroom, e.g., doors, windows.</p> <p>Students Identify and outline the types of lines individually.</p> <p>Students use Wikki Stix (yarn coated in wax) to form different types of lines.</p>	<p>Geometric ideas chart</p> <p>Wikki Stix</p> <p>Cartridge paper Geo-strips</p> <p>Ruler</p> <p>Computer</p> <p>Geometry Dot paper</p> <p>Wikki Stix</p> <p>Geometric Shapes</p> <p>Cut-out line segment shapes</p> <p>Worksheets</p> <p>Workbooks</p>	<p><b><u>Social Studies</u></b> Use vertical and horizontal lines to make a four-point compass</p> <p><b><u>Language Arts</u></b> Write sentences distinguishing between vertical and horizontal lines.</p> <p>Opposites - vertical/horizontal</p> <p><b><u>Art and Design</u></b> Paper Weaving</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

GEOMETRY					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Angles	<ul style="list-style-type: none"> <li>Demonstrate an understanding of the concept of angles by identifying angles in plane figures</li> <li>Compare and order angles less than, greater than, or equal to <math>90^\circ</math> from different orientations</li> </ul>	<p>Using the whiteboard, students learn that angles are all around us and how angles are formed, providing visual examples.</p> <p>Go on "walkabout" and engage students in discussing what are angles by providing examples of them in their environment. Ask students to name examples of angles in their classroom.</p> <p>Discuss with students that a right angle is represented by a square corner. Students identify angles that are right angles and angles that are not right angles providing visual representations.</p> <p>Students play an angle based game. Students are provided with images of different angles. Then, they state if the angle is a right angle or not.</p> <p>Teacher Utilizes angle legs to engage students in an activity that requires them to indicate if the angle observed less than, greater than or equal to <math>90^\circ</math></p> <p>Students compare different angles on a worksheet to identify if a given angle is less than, greater than, or equal to <math>90^\circ</math>.</p> <p>Students draw or construct angles using wikki Stix, a geoboard, or geo-strips.</p>	<p>Geostrips</p> <p>Geoboard</p> <p>Wikki Stix</p> <p>Geometric Shapes</p> <p>Analogues</p> <p>Straws, toothpicks, fudge sticks</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Liquids</p>	<p><b>Social Studies</b> Observe different modes of transportation and identify angles on them, e.g., car</p> <p><b>Science</b> Students explore simple machines and the angles formed on them, e.g., scissors, stapler, nail clipper, pliers</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

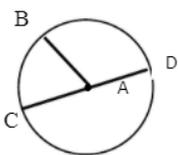
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of 2-dimensions</li> <li>Explore open and closed figures</li> </ul>	<p>Complete a KWL/KWHL chart about Plane Shapes. Using a PowerPoint, assist students with understanding that flat plane shapes have two dimensions for example squares and rectangles has a length and a width.</p> <p>Provide students with examples of plane shapes using tangrams. Allow students to play tangram games.</p> <p>Draw, identify and discuss open and closed figures using Mimio Interactive whiteboard</p> <p>Review lines with students and provide images on the Smartboard with names and examples of types of polygons and engage students in a group discussion on what polygons are. "Polygons are plane closes figures with three or more line segments."</p> <p>Utilize the Smartboard or a PowerPoint to display images of different polygons with up to 10 sides.</p> <p>Use <a href="http://www.geobra.com">www.geobra.com</a> and engages students in online games and activities.</p> <p>Students use geo-strips or a geoboard to construct each polygon in small groups.</p>	<p>Tangrams</p> <p>Geometric shapes</p> <p>Geoboard</p> <p>Smartboard</p> <p>Projector</p> <p>Geo-strips</p> <p>Ruler</p> <p>Computer</p> <p>PowerPoint</p> <p>2-dimensional cut-out shapes</p> <p>MIMIO Interactive Whiteboard</p> <p>Workbooks</p>	<p><b>Science</b> Use various shapes to construct structures</p> <p><b>Art and Design</b> Cut and design shapes to make bookmarks</p> <p><b>Language Arts</b> Display clarity of speech, ease, and confidence when speaking</p> <p><b>Social Studies</b> Use 2-D shapes to create images of accommodations used by tourist</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognize, name, and compare two-dimensional figures according to their properties (circles, squares, rectangle, and triangles; length, the number of sides, and number and type of angles)</li> <li>Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics, i.e., number of sides, vertices, angles, etc.</li> </ul>	<p>Students create 2-D Shapes using a geoboard or draw each utilizing the Smartboard.</p> <p>Students compare various shapes based on the length, the number of sides, and the number and type of angles.</p> <p>Show students the three types of triangles on the Smartboard and explain how they are characterized by 3, 2, or no equal sides/angles.</p> <p>Students measure the line segment of each triangle to determine which has 3, 2, or no equal sides/angles.</p> <p>Students name and distinguish between triangles by measuring and drawing the segment lines to create triangles on worksheets individually.</p> <p>Divide students into groups and assign each group a 2-dimensional shape to explore and make a presentation to the class.</p> <p>In groups, students are assigned a set of 2-dimensional shapes. Allow students to classify based on the number of sides, vertices, angles, etc.</p>	<p>Tangrams</p> <p>Geometric shapes</p> <p>Geoboard</p> <p>Smartboard</p> <p>Projector</p> <p>Geo-strips</p> <p>Ruler</p> <p>Computer</p> <p>2-dimensional cut-out shapes</p> <p>MIMIO Interactive Whiteboard</p> <p>Workbooks</p>	<p>I N T E G R A T E A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>• Contrast the meaning of a circle as a curve and as a two-dimensional region</li> <li>• Explain the concepts of radius, diameter, and centre of a circle</li> <li>• Recognize and draw radii and diameters of a circle</li> </ul>	<p>Teacher demonstrates and discusses the meaning of a circle as a curve and two-dimensional shape using videos and manipulatives. Guide students to understand a circle has a 2-D cure shape with each point on the curve an equal distance from the centre.</p> <p>Allow students to use a compass or any other approved circular shapes to create circles on hard papers.</p> <p>Students watch a YouTube video about parts of a circle and record fact phrases.</p> <p>Using the Smartboard, label a circle on the board and discuss the concept of each part.</p> <p>Students use created circles and cords to label the parts of a circle.</p>  <p>Students draw and label the circle. (radius, diameter, and centre)</p>	<p>Cut-out circles, Video on circle parts Workbooks Online Activities YouTube Worksheets Computer Whiteboard Smartboard</p>	<p><b>Science</b> Students explore shapes, wheels, and movement.</p> <p><b>ICT</b> Students use the computer to create a circle and label the parts.</p> <p><b>Language Arts</b> Students develop a poem about a circle.</p> <p><b>Art and Design</b> Design a circle using craft items.</p>	<p>Demonstration Analysis of student work Peer Assessment Exit/Entrance slips Teacher made test 3-2-1 Strategy Think-Pair-Share Presentation Quiz Observation Pre-assessment Project</p>

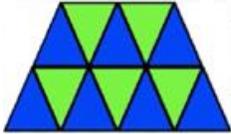
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of 3-dimensions (3D)</li> <li>Recognize, name, compare and construct three- dimensional figures according to their properties (cubes, cuboids, cones, cylinders, and spheres)</li> </ul>	<p>Help students understand the concept of solids/3-D figures as figures with three dimensions: length, width, and height.</p> <p>During a discussion on 3-D figures, utilize graphical representations and geometric shapes to help students recognize and give examples of solids.</p> <p>Provide students with examples of solid shapes within groups. Have students analyse the figures' length, width, and height.</p> <p>Utilizing the Smartboard, play a 'who am I' game with students that require them to identify the solid figures presented on the board.</p> <p>Allow students to complete worksheets that require them to identify and compare cubes, cuboids, cones, spheres, and cylinders independently.</p> <p>Engage students in an interactive school tour where they identify solid shapes in the environment.</p>	<p>3-D shapes in the environment</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Polydron Magnetic</p> <p>Smartboard</p> <p>Tangrams</p> <p>Geometric shapes</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p>	<p><b>Science</b> The types and shapes of magnets</p>  <p><b>Art and Design</b> Use shapes to create origami designs</p> <p><b>Language Arts</b> Spell the names of 2 D &amp; 3 D shapes</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES						
<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Characterize 3-D geometric figures into appropriate subsets (categories) based on characteristics (number of faces, edges, and vertices)</li> <li>Recognise two-dimensional figures that make up the faces of three-dimensional figures</li> </ul>	<p>Support students with describing figures base on the number of faces.</p> <p>Students describe three-dimensional figures by allowing them to complete the table below.</p> <table border="1"> <thead> <tr> <th>Picture</th> <th>Name</th> <th># of faces</th> </tr> </thead> <tbody> <tr> <td></td> <td>Cone</td> <td>2 face</td> </tr> </tbody> </table> <p>Students manipulate 3-D shapes and utilize the problem-based approach to identify characteristics such as the shape of faces, number of faces, edges, vertices.</p> <p>Students draw solid figures while indicating the number of faces observed.</p> <p>Students make 3-D figures using modeling materials such as Polydron Magnetic or chickpeas and toothpicks.</p> <p>Provide opportunities using the Smartboard and worksheets for students to be exposed to 3-D shapes of different sizes and orientations than usual.</p> <p>Provide opportunities for students to understand how 2-D shapes and 3-D figures are related by identifying and counting 2-D shapes found on 3-D figures.</p>	Picture	Name	# of faces		Cone	2 face	<p>Pictures</p> <p>Geometric shapes</p> <p>Polydron Magnetic</p> <p>Chickpeas and toothpicks</p> <p>Smartboard</p> <p>Worksheets</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p>	<p><b>Social Studies</b> Use 2 &amp; 3 D shapes to make different modes of transportation</p> <p><b>Science/STEM</b> Make a solar system using spheres</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>
Picture	Name	# of faces									
	Cone	2 face									

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Explore the ideas of symmetry in geometric figures and shapes</li> <li>Recognize similarities in simple plane figures</li> <li>Explore and predict with simple transformation (flip, slide)</li> <li>Compare flat surfaces (tessellation)</li> </ul>	<p>Students use mirrors, paper folding, and paint blobbing to construct figures having various lines of symmetry.</p> <p>students use geoboards to create shapes and show lines of symmetry</p> <p>Use the geoboard to create congruent shapes.</p> <p>Use online transformational games to engage in predictions.</p> <p>Watch a video on tessellations and then discuss their understanding.</p> <p>Use shapes to form tessellations.</p>  <p>Complete online tessellation activities.</p> <p>Complete MIMIO Whiteboard exercises.</p>	<p>Mirrors, papers, paint</p> <p>Geoboards</p> <p>Elastic bands</p> <p>Tessellations puzzles</p> <p>Online tessellations creator</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b> Engage in Paint blobbing and Face Mask making for maskanoo using concept learnt.</p> <p><b>Science</b> Lines of symmetry in nature, e.g., leaf, butterfly, apple</p> <p><b>Science</b> Rotation of the Earth</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Performance-Based Assessment</p>

STATISTICS AND DATA HANDLING					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Data Representation</b>	<ul style="list-style-type: none"> <li>Discuss the concept of data collection and data representation</li> <li>Discuss most suitable methods for collecting and representing data</li> <li>Distinguish between and identify a population and a sample</li> </ul>	<p>Watch a video on data collection and representation and then discuss the different methods data can be useful.</p> <p>Using a PowerPoint and images of examples, the teacher exposes students to data collection methods and how data can be represented.</p> <p>Provide students with a simple questionnaire to collect data within their schools. "Favourite Soft drink questionnaire" Students learn to present data in a variety of ways using the computer.</p> <p>Place students in small groups to distinguish between a population and a sample using scenarios, e.g., The Department of Education wants to know the opinions of TCI students on "Online Learning." They survey 150 students. Identify the population and the sample.</p> <ul style="list-style-type: none"> <li>Population - All TCI students</li> <li>Sample - 150 students</li> </ul>	<p>Videos on data collection and representation</p> <p>hand-outs</p> <p>PowerPoint</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b> Research and discussion on the collection of data in a Census</p> <p><b>ICT</b> Using computer software's to represent data. "Excel"</p> <p><b>Art and Design</b> Representation of data using drawings</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p> <p>Performance-Based Assessment</p>

**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>● Collect data through observation, interviews, and simple questionnaires</li> <li>● Demonstrate the use of tally chart and tables to organize data</li> <li>● Read and interpret pictographs (including interpreting scales used in pictographs), tables, and bar graphs</li> <li>● Summarize information presented in pictographs and bar graphs</li> <li>● Find and interpret the mode, and median of a set of data</li> </ul>	<p>Model how data is collected through observation, interviews, and straightforward questionnaires, allow students to demonstrate their understanding.</p> <p>Conduct simple surveys in class, i.e., leisure time activities, favourite colour, sports, etc.</p> <p>Organize interviews with students, teachers, and community persons and help students create simple questionnaires using modern methods.</p> <p>Engage students in an interactive activity as they represent data collected from class surveys using tally marks and tables.</p> <p>Utilize the Think-Pair-Share method and allow students to answer questions relating to graphs.</p> <p>Students analyse graphs to develop written summaries.</p> <p>Give each student a set of 7 cards. Students use cards to find mode and median.</p> <p>Students take a survey of the class in groups to find the mode, and median of shoe size, age, height</p>	<p>Paper, crayons</p> <p>Videos on data collection and representation</p> <p>hand-outs</p> <p>PowerPoint</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b>                  Develop interview questions.</p> <p><b>Social Studies</b>                  Use data collected on topics in S.S to create tables, pictographs, bar graphs.</p> <p><b>Science</b>                  Tally the numbers and types of garbage in the schoolyard, e.g., juice boxes, chips bag.</p> <p><b>Language Arts</b>                  Summarize information presented in pictographs and bar graphs.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p>

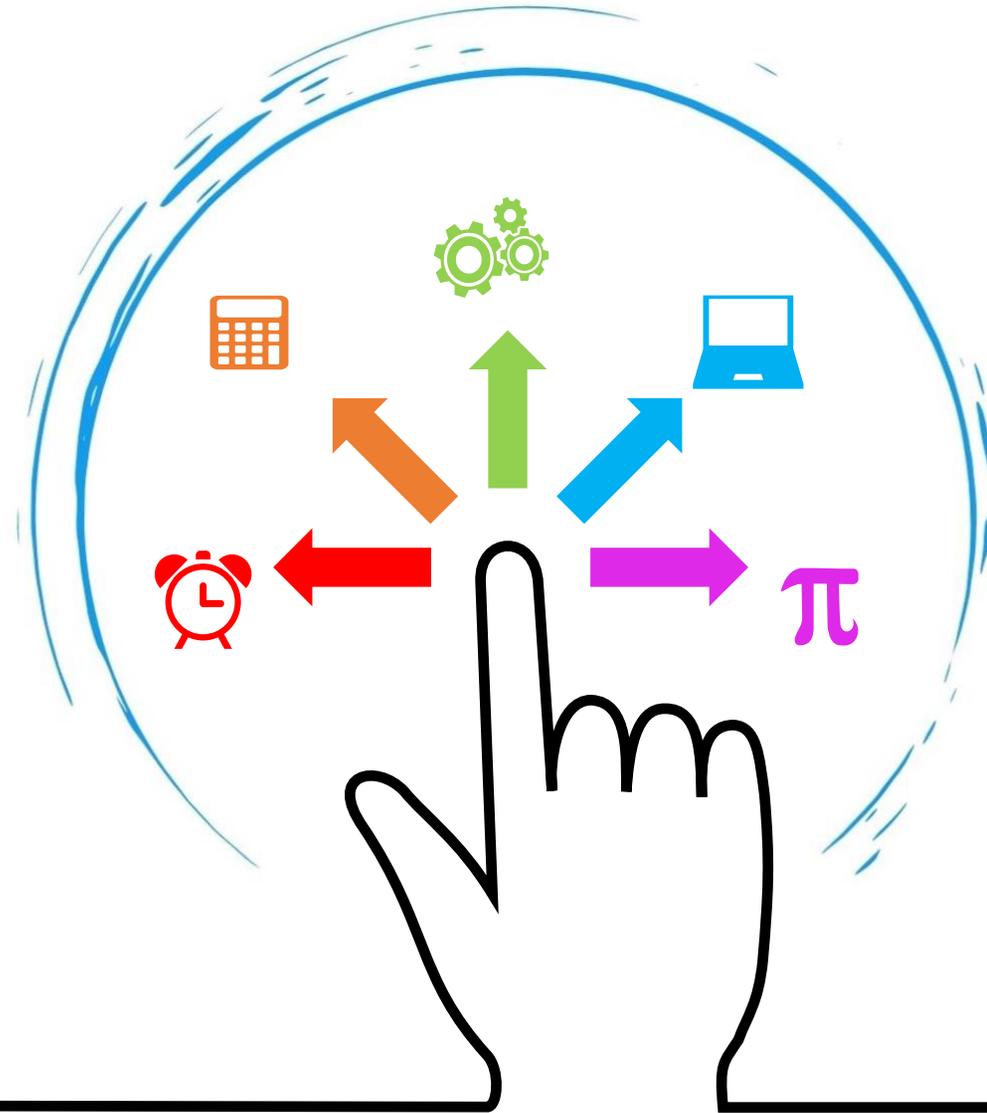
	Term 1	Term 2	Term 3
<b>G R A D E  4</b>	<p>NUMBER CONCEPTS:</p> <ul style="list-style-type: none"> <li>• Number and Number Sense</li> <li>• Number Relationships and Sets</li> <li>• Place Value and Rounding</li> <li>• Number Patterns</li> <li>• Factors and Multiples</li> </ul>	<p>NUMERATION AND COMPUTATION</p> <ul style="list-style-type: none"> <li>• Decimals</li> </ul>	<p>MEASUREMENT:</p> <ul style="list-style-type: none"> <li>• Volume</li> </ul>
	<p>NUMERATION AND COMPUTATION</p> <ul style="list-style-type: none"> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> <li>• Fractions</li> </ul>	<p>CONSUMER MATH:</p> <ul style="list-style-type: none"> <li>• Money</li> </ul> <p>MEASUREMENT:</p> <ul style="list-style-type: none"> <li>• Time</li> <li>• Temperature</li> <li>• Length</li> <li>• Area and Perimeter</li> <li>• Mass/Weight</li> <li>• Capacity</li> </ul>	<p>GEOMETRY:</p> <ul style="list-style-type: none"> <li>• Lines/ Line Segments</li> <li>• Angles</li> <li>• 2- Dimensional / Plane Figures</li> <li>• 3- Dimensional Figures/ Solids</li> <li>• Transformation</li> </ul> <p>STATISTICS &amp; DATA HANDLING:</p> <ul style="list-style-type: none"> <li>• Data Representation</li> </ul>

# GRADE 4

## Term 1

Strands: Number Concepts; Numeration and Computation

Themes: Managing Money, Travel



Term: 1

Curriculum Theme: **Managing Money**

Aim: This theme aims to give students simple knowledge and practical skills in budget planning and carrying out transactions to help them manage their personal finances.

Project Criteria:

1. Identify their weekly income
2. Identify items they need to spend money on
3. Prepare a simple personal weekly budget
4. Demonstrate paying for an item
5. Make simple calculations when paying for an item

Suggested assignments/activities

- Activity – calculate weekly personal expenditure. 'What do I need to buy each day?' 'How much will these items cost me every week?' Record information using a simple budget template.
- Assessment – students present a personal budget template.
- Student-led discussion – different ways to pay for items: cash, debit card, cheques.
- Practical – visits to shops, canteen etc. to practice transactions involving paying for two items with cash and calculating the change required.
- Group activity – fundraising activity, for example, bake sale. Students take turns selling and giving change.
- Teacher-led discussion: using a debit card – 'What is a PIN?' 'How to remember your PIN.'
- Practical – posters – how to use a debit card (online/ in-store)
- Teacher demonstration – on the board or flip chart: how to fill out a cheque.
- Role-play – using invalid cheque books, using cheques to pay for items.
- Assessment – rubric assessing students paying for an item and making simple calculations.
- Assessment feedback, review, and evaluation of theme.
- **CPEA Project Rubric**

Term: 1

Curriculum Theme: **Travel**

Aim: The aim of this theme is to enable students to carry out research to select a destination for travel, to prepare for and participate in travel, and to assess their contribution to the success of the travel. This theme will enable them to practice their personal skills in time management, planning, and behaviour.

Project Criteria:

1. Carry out research to find out about a chosen destination
2. Plan a visit to a travel and tourism destination
3. Plan the cost of the travel
4. Wear appropriate clothing
5. Carry out health and safety preparations
6. Behave appropriately
7. Describe how own actions contributed to the success of the travel.

Suggested assignments/activities

- Teacher-led discussion – factors to think of when deciding a destination for a day trip and where to find the necessary information.
- Practical – interview friends, family and other students about destinations they would recommend for a visit.
- Small-group research – different destinations. Present findings and select destination.
- Assessment – using a prepared checklist, provide evidence of research on chosen destination.
- Teacher-led discussion – what factors do you need to consider when planning to travel?
- Practical activities – plan a group trip using same worksheet/ forms.
- Case studies and group discussion to identify health and safety considerations for a day trip. Create poster listing considerations.
- Assessment – plan trip using teacher -prepared worksheet/ form; plan cost of trip using teacher -prepared worksheet/ form for list of costs; students will complete simple calculations for the total cost.
- Teacher-led discussion – ‘How to take part in a trip’ -Outline ground rules.
- Practical – visit to decided location.
- Assessment – evidence of appropriate personal skills shown during a trip.
- Group discussion – evaluation of the trip. Complete logbooks.
- Assessment – one-on-one with teacher – respond to straightforward questions on how their actions contributed to the outcome of the trip.
- Assessment evaluation, theme review and feedback.
- **CPEA Project Rubric**

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 4 STRUCTURE

TERM 1

<b>STRAND: NUMBER CONCEPTS</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Number and Number Sense	<b>STUDENTS SHOULD BE ABLE TO:</b> <ul style="list-style-type: none"> <li>• Count by 2's, 5's, 10's, 20's, and 25's, and 100 and beyond, using starting points that are multiples of 2, 5, 10, 20, 25 and 100 respectively</li> <li>• Count in sequence within 10,000 in ascending and descending order</li> <li>• Skip count in ascending and descending order within a specified amount.</li> <li>• Read and write numbers to 10,000,000</li> <li>• Outline the position using an ordinal number up to the 100th position</li> <li>• Solve problems related to ordinal numbers up to 100th position</li> <li>• Order and compare a set of numbers with up to five-digits in order of magnitude</li> </ul>
Number Relationships And Sets	<ul style="list-style-type: none"> <li>• Calculate the unknown in number sentences involving addition, subtraction, multiplication and division of whole numbers</li> <li>• Understand the concept of a set</li> <li>• Describe a set</li> <li>• Identify the number and name of elements/members in a set.</li> <li>• Outline a sets using curly brackets</li> <li>• Compare sets that are equal, unequal and equivalent (same as, less than, more than, equal) using =, &gt; and &lt; signs</li> </ul>
Place Value and Rounding	<ul style="list-style-type: none"> <li>• Develop an understanding of place value up to 1 000 000 (concretely, pictorially and symbolically)</li> <li>• Distinguish between the value, place value and face value of a digit</li> <li>• Identify the place value, face value and total value of each digit in a 5-,6- and 7- digit number</li> <li>• Compose (expanded notation) and decompose 5 digit numbers</li> <li>• Round a whole number up to 10,000 to the nearest tens, hundred or thousand</li> <li>• Round a 2-digit and 3-digit number to the nearest ten and/or hundred</li> <li>• Round to the nearest dollar (e.g. \$5 and 35c is close to \$5)</li> </ul>
Number Patterns	<ul style="list-style-type: none"> <li>• Explore increasing and decreasing patterns up to 1000</li> </ul>

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	<ul style="list-style-type: none"> <li>• Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> </ul>
Factors and Multiples	<ul style="list-style-type: none"> <li>• Use arithmetic skills to complete fact families using addition and subtraction/multiplication and division</li> <li>• List factors of a given number and explain what they are</li> <li>• List all the factors of numbers up to 100</li> <li>• Determine if a 1-digit whole number is a factor of a given whole number</li> <li>• List multiples of a given number</li> <li>• List the first ten multiples of whole numbers up to 10.</li> <li>• Relate factors to multiples</li> <li>• Find out if a whole number is a multiple of a given whole number</li> <li>• Understand mathematical language prime numbers, prime factors and composite (non-prime) numbers</li> <li>• Explain the concept of prime numbers and composite numbers</li> <li>• Distinguish between prime and composite numbers</li> <li>• Understand the concept of L.C.M and H.C. F</li> <li>• Find the LCF of 2 or 3 numbers by listing factors</li> <li>• Generate numbers in a variety of ways e.g. as primes, composite, odd, and or even, common factors, multiples, common multiples</li> <li>• Find the HCM of 2 or 3 numbers, by listing</li> <li>• Identify multiples of 2, 5 and 10 from sight</li> <li>• Show application of factoring skills in practical situations</li> </ul>

## STRAND: NUMERATION AND COMPUTATION

Addition

### STUDENTS SHOULD BE ABLE TO:

- Understand mathematical language associated with addition (sum, total)
- Apply mental mathematics strategies and number properties, (such as using doubles, making 10, using addition to subtract, using the commutative property, using the property of zero) for basic addition facts to 18.
- Know and use addition facts up to 100
- Utilize expanded form to solve problems in addition
- Show addition involving numbers with up to three digits with and without regrouping
- Show addition involving numbers with up to four digits with and without regrouping
- Show addition of up to 4 digit numbers with up to 3 or more addends with and without regrouping
- Estimate an answer to a calculation in addition
- Determine the reasonableness of an answer in addition based on estimation
- Utilize inverse operations to check answers in addition
- Use rounding to check answers to calculations in addition and determine, in the context of a problem levels of accuracy
- Solve problems with missing digits in addition
- Mentally add whole numbers
- Check accuracy of answers using a calculator
- Use knowledge of the order of operations to carry out calculations involving the four operations
- Solve one step and two steps word problems involving addition
- Solve one step word problems involving four operations
- Show application of addition skills in practical situations

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Subtraction	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with subtraction (difference)</li> <li>• Apply mental mathematics strategies and number properties, (such as using doubles, making 10, using subtraction to add, using the commutative property, using the property of zero) for basic related subtraction facts to 18</li> <li>• Know and use subtraction facts up to 100</li> <li>• Utilize expanded form to solve problems in subtraction</li> <li>• Compute subtractions involving numbers with up to four digits, with and without regrouping in three places</li> <li>• Estimate an answer to a calculation in subtraction</li> <li>• Determine the reasonableness of an answer in subtraction based on estimation</li> <li>• Utilize inverse operations to check answers in subtraction</li> <li>• Solve problems with missing digits in subtraction</li> <li>• Mentally subtract whole numbers</li> <li>• Solve one step and two steps word problems involving subtraction</li> <li>• Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>• Show application of subtraction skills in practical situations</li> </ul>
Multiplication	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with multiplication (Product, multiply, factor, By, Times, Lots Of, four 3's)</li> <li>• Understand properties of multiplication (commutative, and distributive, identity)</li> <li>• Representing and explaining multiplication using equal grouping and arrays</li> <li>• Modelling multiplication using concrete and visual representations, and recording the process symbolically</li> <li>• Know multiplication facts for 3,4 and 8 multiplication tables</li> <li>• Use multiplication facts to find the unknown factor</li> <li>• Multiply a three-digit number by a one-digit number without and with regrouping</li> <li>• Multiply a three-digit number by a two-digit number without and with regrouping</li> <li>• Estimate an answer to a calculation in multiplication</li> <li>• Determine the reasonableness of an answer in multiplication based on estimation</li> <li>• Utilize inverse operations to check answers in multiplication</li> <li>• Mentally multiply 10's and 100's by a 1-digit whole number</li> <li>• Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>• Solve one step and two steps word problems involving multiplication</li> <li>• Show application of multiplication skills in practical situations</li> </ul>

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TERM 1

Division	<ul style="list-style-type: none"> <li>• Use appropriate division vocabulary such as number of groups, number of objects in each group, etc.</li> <li>• Understand mathematical terms “quotient” and “remainder” with division.</li> <li>• Know division facts for 3,4 and 8 multiplication tables</li> <li>• Use division facts to find the unknown factor</li> <li>• Divide a two-digit number by a one-digit number, without and with a remainder</li> <li>• Divide a three-digit number by a one-digit number without and with a remainder</li> <li>• Estimate an answer to a calculation in subtraction</li> <li>• Determine the reasonableness of an answer in subtraction based on estimation</li> <li>• Utilize inverse operations to check answers in division</li> <li>• Mentally divide 10's and 100's by a 1-digit whole number</li> <li>• Solve one step and two steps word problems involving division</li> <li>• Solve mixed operations involving division with or without parentheses (Order of operations)</li> <li>• Show application of division skills in practical situations</li> </ul>
Fractions	<ul style="list-style-type: none"> <li>• Understand mathematical language associated with fractions (e.g. Numerator, denominator)</li> <li>• Represent fraction as a part of a region, set, or linear model</li> <li>• Express a fraction in its simplest form</li> <li>• Understand an improper fraction as a multiple of a unit fraction</li> <li>• Compare unit fractions and other proper fractions using the symbols ‘=’, ‘&lt;’, and ‘&gt;’</li> <li>• Order unit fractions and other proper fractions (same numerator, same denominator)</li> <li>• Express a whole number or a mixed number as an improper fraction, and vice versa</li> <li>• Show addition of a whole number to a proper fraction</li> <li>• Show the addition and subtraction of two proper fractions with the same denominators, using concrete objects and pictures/diagrams and symbolically</li> <li>• Subtract a proper fraction from a whole number</li> <li>• Find the value of a fractional part of a quantity</li> <li>• Recognize, find and write fractions of a discrete set of objects; unit fractions and non- unit fractions with small denominators</li> <li>• Show multiplication of a fraction by a whole number using concrete objects and pictures/diagrams</li> <li>• Recognize and name equivalent fractions of a given fraction</li> <li>• Solve up to 1 to 2-step word problems involving fractions</li> <li>• Show application of fraction and proportional reasoning skills in practical situations</li> </ul>

NUMBER CONCEPTS					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Number and Number Sense</b>	<ul style="list-style-type: none"> <li>Count by 2's, 5's, 10's, 20's, and 25's, and 100 and beyond, using starting points that are multiples of 2, 5, 10, 20, 25, and 100, respectively.</li> <li>Count in sequence within 10,000 in ascending and descending order</li> <li>Skip count in ascending and descending order within a specified amount.</li> <li>Read and write numbers to 10,000,000</li> </ul>	<p>Use counters or abacus to help in grouping.</p> <p>Use place value table as a reference for identifying the value of numbers.</p> <p>Arrange number cards within 10,000 in ascending and descending order.</p> <p>Use hopscotch games with numbers for students to skip count.</p> <p>Students write numerals for numbers shown on an abacus.</p> <p>Students engage in skip counting, and complete sequences in 2's, 3's, 5's, 10's, 25's, '50s, 100, and 1000's on a hundred grid, a number line, or an abacus (both forward and backward)</p> <p>Present flashcards with numbers for students to identify and write the value of the digit shown and use place value table to identify the value of numbers.</p> <p>Make flashcards to represent 10000, 100,000 100,0000 etc.</p> <p>Say numbers up to 1,000,000 and ask students to write in numerical and word form.</p>	<p>Abacus</p> <p>Flashcards</p> <p>Whiteboard</p> <p>Hopscotch</p> <p>Games</p> <p>Youtube video <a href="https://www.youtube.com/watch?v=U8hZae6hYpw">https://www.youtube.com/watch?v=U8hZae6hYpw</a></p> <p>Manipulatives</p> <ul style="list-style-type: none"> <li>Cut-out number cards</li> <li>Hundred board</li> <li>Place value blocks,</li> </ul>	<p><b>Language Arts</b> Vocabulary- Students identify the meaning of the following terms: sequence, ascending, descending, thousand, hundred, multiples</p> <p><b>Physical Education</b> Students play Hopscotch and count by 2's, 5s</p> <p><b>ICT</b> Students create videos/slides that show the sequencing of numbers.</p>	<p>Performance-Based Assessment</p> <p>Oral presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

NUMBER CONCEPTS					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Number and Number Sense</b>	<ul style="list-style-type: none"> <li>Outline the position using an ordinal number up to the 100th position</li> <li>Solve problems related to ordinal numbers up to 100th position</li> <li>Order and compare a set of numbers with up to five digits in order of magnitude</li> </ul>	<p>Students stand in line and identify their ordinal position.</p> <p>Students complete word problems involving ordinal problems using real-life situations. For example: "In the Delano Williams Foundation 10 k run my friend came 8 places behind the woman who came 40th. What position did my friend get?"</p> <p>Through direct instruction, students learn the value of numerals, associate them with their names, numbers, ordinals, and use concrete objects to model patterns and expressions.</p>	<p>Place Value chart</p> <p>Flashcards</p> <p>Manipulatives</p> <p>Work cards</p> <p>Smartboard</p> <p>Hundred chart</p> <p>Number lines</p> <p>Counters</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Social Studies</b> Research population of New Zealand, England, Canada, etc.</p> <p><b>Language Arts</b> Vocabulary ordinal, compare, digit, position, magnitude</p> <p>Students listen to stories and answer questions that lead to ordinal numbers</p> <p><b>Social Studies</b> Students organize timetables discuss events using ordinal numbers</p> <p><b>Physical Education</b> Students run races and use results to highlight both cardinal and ordinal positions</p>	<p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Performance-Based Assessment</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number Relationships and Sets</b></p>	<ul style="list-style-type: none"> <li>Calculate the unknown in number sentences involving addition, subtraction, multiplication, and division of whole numbers</li> <li>Understand the concept of a set</li> <li>Describe a set</li> <li>Identify the number and name of elements/members in a set</li> </ul>	<p>Students insert prepared mathematical symbols and numerals in number sentences.</p> <p>Students use cutouts to calculate the unknown in number sentences.</p> <p>Students solve addition problems that involve filling in missing numbers on worksheets and using the Smartboard.</p> <p>Define the word set as a group of things that are related.</p> <p>Define a finite and an infinite set.</p> <p>Describe a finite set of numbers, e.g., Set A= { a, e, i, o, u}-The set of vowels in the alphabet A set of tools</p> <p>Provide opportunities for students to describe what they see within each set and name each set constructed.</p> <p>Provide students with groups of numbers e.g. even numbers between 1 and 10 etc.</p>	<p>Cards with Mathematical signs and numerals</p> <p>Flashcards with mathematical sentences</p> <p>Whiteboard</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p>	<p><b>Art and Design</b> Draw a set of shapes and define them. Make cards with mathematical symbols and numbers from 1-10</p> <p><b>Social Studies</b> Organizing Caicos Islands and Turks Islands in sets.</p> <p><b>Language Arts</b> Follow oral directions or instructions on how to calculate the unknown.</p> <p>Recall details about specific things heard e, g. <i>When, How, Where, What, Why?</i> Organize sets based on their starting letter, e.g., Set of people names beginning with A.</p> <p><b>Music</b> Create musical instruments and let them group them according to their types wind, percussion, string etc.</p>	<p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Performance-Based Assessment</p> <p>Problem Based Assessment</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number Relationships and Sets</b></p>	<ul style="list-style-type: none"> <li>Outline sets using curly brackets</li> <li>Compare sets that are equal, unequal, and equivalent (same as, less than, more than, equal) using =, &gt; and &lt; signs</li> </ul>	<p>Students outline elements of sets using prime, odd and even numbers. Allow them to use curly brackets Set A :{ 2,4,6,8,10} Set B: {3,5,7,9,11}</p> <p>Show sets of numbers and discuss the following questions with students: "Which set has more?" "Which set has less?" "Are the sets the same or equal?"</p> <p>Students will:</p> <ul style="list-style-type: none"> <li>list the members of a given set</li> <li>Compare &amp; contrast between a finite &amp; an infinite set</li> <li>Use math signs from cardboard to state if two sets are =, &gt; or &lt;</li> <li>Use Paper Plates or cardboard to display drawings of sets of fruits etc.</li> </ul> <p>Provide students with ungrouped numbers (1-20) and ask students to group them into even and uneven numbers.</p>	<p>Maps</p> <p>Paper plates</p> <p>Cardboard</p> <p>Designed math signs</p> <p>Whiteboard</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p>	<p><b>Social Studies</b> Use a map of the Caribbean to display countries. List sets of countries in the Greater Antilles</p> <p><b>Art and Design</b> Use paper plates or cardboard to display drawings of sets of fruits</p> <p><b>Language Arts</b> Students write descriptive messages describing and comparing sets.</p> <p><b>Science</b> Classify animals in the environment as vertebrates or invertebrates</p> <p><b>Physical Education</b> Form team for different events. Place students in groups of 4 or 5 for a soccer or basketball game</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Place Value and Rounding</b></p>	<ul style="list-style-type: none"> <li>Develop an understanding of place value up to 1 000 000 (concretely, pictorially, and symbolically)</li> <li>Distinguish between the value, place value, and face value of a digit</li> <li>Identify the place value, face value and total value of each digit in a 5-, 6-, and 7- digit number</li> </ul>	<p>Use place value table to identify the value of digits up to 1 million.</p> <p>Students match numerals with words to help understand the place value of a given number.</p> <p>Students use a place value abacus to help write the value of each number given.</p> <p>Students research &amp; write the population of given countries</p> <p>Present five, six &amp; seven-digit numbers on flashcards for students to call.</p> <p>Teacher uses a video to label the place value and face value of digits within a number on work cards.</p> <p>Provide opportunities for students to use arrow cards to show the value of each digit in numbers up to tens of thousands.</p> <p>Students play games on the Smart/Whiteboard and identify the place value and total value of a digit.</p>	<p>YouTube <a href="https://www.youtube.com/watch?v=-dOxcTeLPrE">https://www.youtube.com/watch?v=-dOxcTeLPrE</a></p> <p>Flashcards</p> <p>Place value table</p> <p>Manipulatives</p> <p>Work cards</p> <p>Smartboard</p> <p>Hundred chart</p> <p>Number lines</p> <p>Place value blocks</p> <p>Place value abacus</p>	<p><b>ICT</b> Using videos and smartboard to highlight the concept of place value.</p> <p><b>Art and Design</b> Use reusable materials to make their own flash cards.</p> <p><b>Science</b> Use COVID-19 statistics of different countries for students to identify the value of different numbers within each total e.g. USA: 567853. What is the value of the 7?</p> <p><b>Language Arts</b> Match numbers with their names.</p>	<p>Reflections</p> <p>3-2-1 Strategy</p> <p>Analysis of students' work</p> <p>Think-Pair-Share</p> <p>Teacher made test</p> <p>Pre-assessment</p> <p>Quiz</p> <p>Project</p> <p>Observation</p> <p>Oral Presentation</p> <p>Writing Portfolio</p> <p>Performance-Based Assessment</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Place Value and Rounding</b></p>	<ul style="list-style-type: none"> <li>● Compose (expanded notation) and decompose 5 digit numbers</li> <li>● Round a whole number up to 10,000 to the nearest tens, hundred or thousand</li> <li>● Round a 2-digit and 3-digit number to the nearest ten or hundred</li> <li>● Round to the nearest dollar (e.g., \$5 and 35c is close to \$5)</li> </ul>	<p>Teacher uses direct instruction to explain how to compose and decompose five-digit numbers.</p> <p>Provide students with numbers to compose and decompose. Students use Think – Pair- Share strategy to complete the activity,</p> <p>Students play a game where they are provided with numbers and asked to round up to 10,000 to the nearest tens, hundreds, or thousand.</p> <p style="text-align: center;">48 _____ 232 _____ 89 _____ 955 _____</p> <p>Use a number line to show rounding with numbers.</p> <p>Provide students with a series of numbers and ask students to round to the nearest whole number. Teacher Uses the Smartboard for the activity.</p> <p>Use real-life situations like shopping to help students round off to the nearest dollar etc.</p>	<p>Number line</p> <p>Model items for shopping</p> <p>Manipulatives</p> <p>Work cards</p> <p>Charts</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p>	<p><b>Art and Design</b> Make number lines from cardboards</p> <p><b>Social Studies</b> Round- off numbers related to small population size, e.g., number of students in the school</p> <p>Round up/down the population of various communities in the Turks and Caicos Islands.</p> <p>Students play games involving rounding numbers and place value</p>	<p>3-2-1 Strategy</p> <p>Analysis of students' work</p> <p>Think-Pair-Share</p> <p>Teacher made test</p> <p>Pre-assessment</p> <p>Quiz</p> <p>Project</p> <p>Observation</p> <p>Oral Presentation</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p>

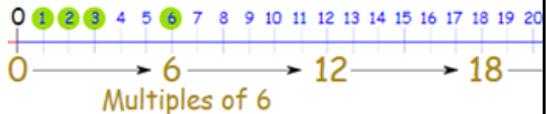
**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number Patterns</b></p>	<ul style="list-style-type: none"> <li>Explore increasing and decreasing patterns up to 1000</li> <li>Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> </ul>	<p>Students understand increasing and decreasing patterns by describing extending patterns, comparing patterns, and creating numerical (numbers to 1000) and non-numerical patterns through manipulatives, diagrams, sounds, and actions.</p> <p>Use "Pattern Rule Robot" and present different repeating patterns for students to increase and decrease while outlining the pattern rule.</p> <ul style="list-style-type: none"> <li>"Robot says 4, 8, 12, 16} What is the pattern? The robot says 3, 6, 12, 24. What is the pattern?"</li> <li>Ask students to recognize the pattern and state the next numbers in the series, e.g., 4, 6, 10, 12, 16, ____, ____</li> </ul> <p>Use a display board to show the commutative property of addition. For example, the rule for addition is "<math>a + b = b + a</math>" this means <math>2 + 3 = 3 + 2</math>. For multiplication, the rule is "<math>ab = ba</math>"; in this means <math>2 \times 3 = 3 \times 2</math>.</p> <p>Use the Flip-Flop card game where students select a card with an addition problem and then search to find its pair by flipping another card and use flashcards with missing numbers in an associative property for individual students and give the correct response.</p>	<p>Number line</p> <p>Paper bags Crayons, Beads, Strings, Paint</p> <p>Manipulatives</p> <p>Work cards</p> <p>Charts</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Art and Design</b> Make model necklaces with beads and strings, creating various patterns.</p> <p>Use decorative patterns on objects.</p> <p><b>Language Arts</b> <i>Vocabulary</i> Associative Commutative Property Double Facts</p> <p>Writing Math sentences</p> <p>Verbal responses regarding number patterns</p> <p>Use newly taught vocabulary in language sentences.</p>	<p>3-2-1 Strategy</p> <p>Analysis of students' work</p> <p>Think-Pair-Share</p> <p>Teacher made test</p> <p>Pre-assessment</p> <p>Quiz</p> <p>Project</p> <p>Observation</p> <p>Oral Presentation</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Factors and Multiples</b></p>	<ul style="list-style-type: none"> <li>● Use arithmetic skills to complete fact families using addition and subtraction/multiplication and division</li> <li>● List factors of a given number and explain what they are</li> <li>● List all the factors of numbers up to 100</li> <li>● Determine if a 1-digit whole number is a factor of a given whole number</li> <li>● List multiples of a given number</li> <li>● List the first ten multiples of whole numbers up to 10</li> </ul>	<p>Make a factor family mascot or tree. Students ascertain and write the factors of a number on each strand or leaf of the tree.</p> <p>Use the timetables chart to engage students in an interactive session that requires them to identify factors of a number.</p> <p>Identify and write factors of given numbers using concrete materials, e.g., use bingo chips to find the factors of 5, 4, 6, 17, and 20.</p> <p>Use a factor tree to reinforce concepts of factors and multiples.</p> <p>Students select a flashcard with a number &amp; state the multiples and create a flow chart to depict multiples of a particular number.</p> <p>Students watch a video about multiples.</p> <p>Use cards with multiples and let students pair and share ideas to match correct sets of multiples to the number drawn from the box.</p>	<p>Chart paper</p> <p>Dry plant</p> <p>Whiteboard</p> <p>Markers</p> <p>Strings</p> <p>Factor tree</p> <p>Flashcards</p> <p>Cardboard for flow chart</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Art and Design</b> Make flashcards</p> <p>Make flow chart</p> <p><b>Games</b> Students play games involving listing factors of given numbers.</p> <p><b>Language Arts</b> Use mathematical terms in sentences e.g., "is a factor of" and "product of factors."</p> <p><b>Science</b> Students shown cell branching of the virus</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

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<b>Factors and Multiples</b>	<ul style="list-style-type: none"> <li>Relate factors to multiples</li> <li>Find out if a whole number is a multiple of a given whole number.</li> <li>Understand mathematical language prime numbers, prime factors, and composite (non-prime) numbers</li> </ul>	<p>Explain the difference between a factor and a multiple with students.</p> <p>Teacher uses direct instruction to share the concept of factors being what we can multiply to get the number while multiples being what we get after multiplying the number by another number.</p> <p>Using the following pictorial representation, students learn to relate factors and multiples.</p>  <p>Students complete tables of multiples of a given whole number.</p> <table border="1"> <thead> <tr> <th>Table of</th> <th>1<sup>st</sup> Place</th> <th>2<sup>nd</sup> Place</th> <th>3<sup>rd</sup> Place</th> <th>4<sup>th</sup> Place</th> <th>5<sup>th</sup> Place</th> <th>6<sup>th</sup> Place</th> <th>7<sup>th</sup> Place</th> <th>Till</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td></td> <td>6<sup>th</sup> Place</td> </tr> <tr> <td>3</td> <td>3</td> <td>6</td> <td>9</td> <td>12</td> <td></td> <td></td> <td></td> <td>4<sup>th</sup> Place</td> </tr> <tr> <td>4</td> <td>4</td> <td>8</td> <td>12</td> <td>16</td> <td>20</td> <td>24</td> <td>28</td> <td>7<sup>th</sup> Place</td> </tr> <tr> <td>5</td> <td>5</td> <td>10</td> <td>16</td> <td></td> <td></td> <td></td> <td></td> <td>3<sup>rd</sup> Place</td> </tr> </tbody> </table> <p>Using the Smart/Whiteboard, the teacher explains prime numbers, prime factors, and composite (non-prime) numbers. Teacher uses examples and pictorial representations.</p>	Table of	1 <sup>st</sup> Place	2 <sup>nd</sup> Place	3 <sup>rd</sup> Place	4 <sup>th</sup> Place	5 <sup>th</sup> Place	6 <sup>th</sup> Place	7 <sup>th</sup> Place	Till	2	2	4	6	8	10	12		6 <sup>th</sup> Place	3	3	6	9	12				4 <sup>th</sup> Place	4	4	8	12	16	20	24	28	7 <sup>th</sup> Place	5	5	10	16					3 <sup>rd</sup> Place	<p>Appletree with multiples</p> <p>Factor tree</p> <p>YouTube</p> <p>Cardboard</p> <p>Chart paper</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Physical Education</b> Students play Hop Scotch game to depict factors and multiplities.</p> <p><b>Language Arts</b> Students use task cards and follow given instructions</p> <p><b>Art and Design</b> Students shade factors of different multiples given using different colours for each set of factor.</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>
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<p><b>Factors and Multiples</b></p>	<ul style="list-style-type: none"> <li>● Explain the concept of prime numbers and composite numbers</li> <li>● Distinguish between prime and composite numbers</li> <li>● Understand the concept of L.C.M and H.C. F</li> </ul>	<p>Students watch YouTube video on the concept of Prime &amp; Composite Numbers <a href="https://www.youtube.com/watch?v=2hVQLG-QTfi">https://www.youtube.com/watch?v=2hVQLG-QTfi</a></p> <p>Students discuss and list prime numbers from 1-100.</p> <p>Create a number bank and ask students to pick numbers &amp; state if they are composite or prime numbers.</p> <p>In groups, students use Venn diagrams to show the relationship between the composite and prime numbers chosen.</p> <p>Use the method of listing to find the LCM and the HCF of different sets of numbers <a href="https://www.youtube.com/watch?v=Z6-LksV08qU">https://www.youtube.com/watch?v=Z6-LksV08qU</a></p> <p>Provide shapes with numbers for students to work in groups colouring the HCF and the LCM in different colours, e.g., HCF - Green LCM – Red.</p>	<p>YouTube</p> <p>Numbers bank</p> <p>Cut out shapes</p> <p>Blank Venn diagram</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Art and Design</b> Students make outline of different objects and insert multiples and factors e.g outline of hand using palm for the multiple and the fingers for the factors.</p> <p><b>ICT</b> Students create powerpoint on Anchor chart to show factors and multiplies.</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

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<b>Factors And Multiples</b>	<ul style="list-style-type: none"> <li>Find the LCM of 2 or 3 numbers by listing factors</li> <li>Generate numbers in various ways, e.g., as primes, composite, odd, and or even, common factors, multiples, common multiples</li> <li>Find the HCF of 2 or 3 numbers by listing</li> </ul>	<p>Engage students in a discussion on different strategies, such as listing out the multiples for each number or using prime factorization.</p> <p>Create a column chart on the Smartboard using the names odd, even, composite, prime. Students drag and drop different numbers in the correct column.</p> <p>Using cards with more than two numbers listed. List the LCMs for the cards created. Students pick the LCM of the numbers on the card shown to them.</p> <p>Create vocabulary cards using the words: Prime, Composite, Multiples. Odd, Even, Highest, Lowest, common.</p> <div style="text-align: center;"> <p><b>HCF and LCM</b></p> <p>Find the HCF and LCM of 24 and 36 using Repeated Division</p> </div>	<p>Number Cards Cardboard</p> <p>Number chart</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p>	<p><b>Language Arts</b> Students spell new words learnt from vocabulary cards</p> <p><b>Physical Education</b> Relay game of H.C.F versus L.C.M with each member working a sum.</p> <p>Tresure hunt game e.g hunt for a card with a number, then give all the factors of the multiple formed.</p>	<p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

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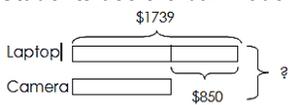
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<p><b>Factors And Multiples</b></p>	<ul style="list-style-type: none"> <li>Identify multiples of 2, 5, and 10 from sight</li> <li>Show application of factoring skills in practical situations</li> </ul>	<p>Teacher use examples as discussion prompt on:</p> <ul style="list-style-type: none"> <li>multiples of 2 as any number which ends with 0 or an even number</li> <li>multiples of 5 as any number which ends with 5 or 0</li> <li>multiples of 10 as any number which ends with 0</li> </ul> <p>Use a spin chart with multiples of 2, 5, and 10. Students spin and identify whether the number is a multiple of 2, 5, or 10.</p> <p>Create a Venn diagram to show the intersection of all three sets of multiples (2, 5, or 10).</p> <p>Students observe the importance of factoring as a valuable skill in real life. For example, dividing something into equal pieces, exchanging money, comparing prices, understanding time, and making calculations during travel.</p>	<p>Spin chart</p> <p>Venn diagram</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

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<b>Addition</b>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with addition, i.e., sum, total, etc.)</li> <li>Apply mental mathematics strategies and number properties (such as using doubles, making 10, using addition to subtract, using the commutative property, using the property of zero) for basic addition facts to 18</li> </ul>	<p>List words that denote addition: sum, total, altogether, and engage students in a questioning exercise where the words are repeatedly used.</p> <p>Students complete word problems using the words sum/total to ensure understanding of the mathematical language.</p> <p>Students use concrete materials and the addition table to memorize facts. Examine tables and finding patterns. Discuss patterns, and make generalizations:</p> <ul style="list-style-type: none"> <li>zero added to any number is the number itself</li> <li>The order in which two numbers are added does not alter the answer.</li> <li>Addition and subtraction are inverse operations</li> </ul> <p>Use the whiteboard and allow students to insert the correct number in the missing space for problems involving the commutative property of addition.</p> <p>Students create chant for commutative property</p>	<p>Hopscotch game</p> <p>Class shop</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Scenario</p> <p>Worksheets</p>	<p><b><u>Physical Education</u></b> Students play Hopscotch game</p> <p><b><u>Music</u></b> Chant Addition sentences</p> <p><b><u>Social Studies</u></b> Create a class shop</p> <p><b><u>Language Arts</u></b> Write story sentences based on the numbers chosen from the blocks</p>	<p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<b>Addition</b>	<ul style="list-style-type: none"> <li>Know and use addition facts up to 100</li> <li>Utilize expanded form to solve problems in addition</li> <li>Show addition involving numbers with up to three digits with and without regrouping</li> <li>Show addition involving numbers with up to four digits with and without regrouping</li> <li>Show addition of up to 4 digit numbers with up to 3 or more addends with and without regrouping</li> </ul>	<p>Use concrete materials and the addition table to memorize facts.</p> <p>Students complete the addition table in small groups.</p> <table border="1" style="font-size: small;"> <tr><td>+</td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td>4</td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td>7</td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td>9</td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td></tr> </table> <p>Students use the expanded form to solve problems.</p> <table style="font-size: small;"> <tr><td></td><td></td><td>tens</td><td>ones</td></tr> <tr><td>addends</td><td>&lt;</td><td>32 = 30 + 2</td><td></td></tr> <tr><td></td><td></td><td>31 = 30 + 1</td><td></td></tr> <tr><td></td><td></td><td>24 = 20 + 4</td><td></td></tr> <tr><td></td><td></td><td>80 + 7</td><td></td></tr> <tr><td>sum</td><td>→</td><td>= 87</td><td></td></tr> </table> <p>Students model steps in addition without regrouping using columnar formal written method on the Smartboard and worksheets.</p> <table style="font-size: small; margin-left: 20px;"> <tr><td>TH</td><td>HT</td><td>O</td><td>TH</td><td>HT</td><td>O</td></tr> <tr><td>1</td><td>4</td><td>4</td><td>3</td><td>2</td><td>3</td><td>9</td><td>1</td></tr> <tr><td>+</td><td>2</td><td>2</td><td>3</td><td>1</td><td>+</td><td>3</td><td>3</td><td>0</td><td>1</td></tr> <tr><td colspan="4">_____</td><td colspan="4">_____</td></tr> </table> <p>Students demonstrate how to (carry/regroup using worksheets individually and the Smartboard as a class.</p> <table style="font-size: small; margin-left: 20px;"> <tr><td>TH</td><td>HT</td><td>O</td><td>TH</td><td>HT</td><td>O</td></tr> <tr><td>6</td><td>5</td><td>4</td><td>9</td><td>2</td><td>3</td><td>8</td><td>1</td></tr> <tr><td>+</td><td>4</td><td>3</td><td>3</td><td>2</td><td>+</td><td>6</td><td>3</td><td>4</td><td>1</td></tr> <tr><td colspan="4">_____</td><td colspan="4">_____</td></tr> </table>	+	1	2	3	4	1					2		4			3					4			7		5				9	6					7					8					9							tens	ones	addends	<	32 = 30 + 2				31 = 30 + 1				24 = 20 + 4				80 + 7		sum	→	= 87		TH	HT	O	TH	HT	O	1	4	4	3	2	3	9	1	+	2	2	3	1	+	3	3	0	1	_____				_____				TH	HT	O	TH	HT	O	6	5	4	9	2	3	8	1	+	4	3	3	2	+	6	3	4	1	_____				_____				<p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Scenario Worksheets</p>	<p><b>Interactive Games</b></p> <p>Use a deck of cards in groups of 2-4 players. Each player picks up two cards &amp; find the sum of the selected cards.</p> <p>Create dice from the board with bigger numbers. Students roll dice 2 or 3 three times and add the numbers they get together. Students write the answers on their apple tree</p> <p><b>Language Arts</b></p> <p>Students actively listen to a lesson on regrouping and explain the process.</p>	<p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>
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<b>Addition</b>	<ul style="list-style-type: none"> <li>Estimate an answer to a calculation in addition</li> <li>Determine the reasonableness of an answer in addition based on estimation</li> <li>Utilize inverse operations to check answers in addition</li> <li>Use rounding to check answers to calculations in addition and determine, in the context of a problem, levels of accuracy</li> </ul>	<p>Students estimate answers on worksheets using the round and estimate method by rounding the number to the closest ten or hundred.</p> <p>Expose students to various ways to check answers, such as using number lines, bar diagrams, decomposing, compensating, transformation.</p> <p>Students engage in a peer review on classmates' problems based on estimation and check reasonableness by comparing estimations with correct answers.</p> <p>Students use inverse operations (subtraction) to check answers. (e.g., <i>John has calculated <math>2188 + 1130 = 3318</math>. Using the inverse operation, explain how you know he is correct</i> Ans: <math>3318 - 1130 = 2188</math>.)</p> <p>Students review round-off strategies. Students round numbers and play estimations game where students state the total of 2 numbers verbally.</p> <p>Students use the bar model in addition situations.</p> 	<p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Base ten blocks</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p>	I N T E G R A T E  A C R O S S  S U B J E C T S	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p>

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<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Solve problems with missing digits in addition</li> <li>Mentally add whole numbers</li> <li>Check accuracy of answers using a calculator</li> <li>Use knowledge of the order of operations to carry out calculations involving the four operations</li> </ul>	<p>Students solve addition problems that involve filling in missing numbers on worksheets and using the Smartboard.</p> $372 + \square = 589 \quad \square + 96 = 302$ <p>Students fill in missing numbers to add numbers mentally.</p> <p>Students learn the following strategies when adding mentally, reorder numbers and partition: add tens and ones separately, then recombine.</p> <p>Students use a calculator to check answers to problems done on a Performance-Based Assessment or class test.</p> <p>Display calculations that require knowledge of order of operations on the Smartboard and explain to students how they can be solved by simplifying.</p> <p>Students examine examples to complete as a relay race, where students complete each aspect of the problem until it is solved. Simple order operations may include but not limited to:</p> $6 + 16 - 8 + 4$	<p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Base ten blocks</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p>	<p><b>Science</b> Estimate bodyweight and use a scale to compare data.</p> <p>Discussion on correct bodyweight based on your height</p> <p><b>Music</b> Create a PEMDAS rule song.</p> <p><b>Art and Design</b> Create a poster that outlines order of operations.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Solve one-step and two steps word problems involving addition</li> <li>Solve one-step word problems involving four operations</li> <li>Show application of addition skills in practical situations</li> </ul>	<p>Students make one-step or two steps word problems involving addition on cards. Use one-step problems and play a game in groups where students take turns selecting cards. Students solve the problem on the back of the card.</p> <p>Provide each student with scenarios related to their real-life situations. e.g., <i>The girls had 3 weeks to sell tickets for their play. In the first week, they sold 75 tickets. In the second week, they sold 108 tickets, and in the third week, they sold 210 tickets. How many tickets did they sell in all?</i></p> <p>Students complete activities that show the practical application of addition in life, such as visiting a corner shop, buying goods, selling goods, reading a recipe and doubling ingredients for a bigger cake, or doing other household tasks such as hours to complete tasks.</p> <p>Students use the computer to type two-step word problems.</p>	<p>Word problem cards</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Base ten blocks</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p>	<p><b>Social Studies</b> Word problems involving Turks and Caicos Islands" culture and heritage.</p> <p>Students compute the population of TCI from the poupluation on different islands.</p> <p><b>Language Arts</b> Students write word problems using the writing process.</p> <p>Students review classmates' word problems for grammar and mechanisms.</p> <p><b>Science</b> Students develop two-step problems involving different types of animals and plants.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<p><b>Subtraction</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with subtraction, i.e., difference</li> <li>Apply mental mathematics strategies and number properties (such as using doubles, making 10, using subtraction to add, using the commutative property, using the property of zero) for basic related subtraction facts to 18</li> <li>Know and use subtraction facts up to 100</li> </ul>	<p>Use the words relating to subtraction frequently when assigning students word problems. Students discuss vocabulary words related to subtraction and show examples of each keyword used in word problems, e.g., difference, minus, take away, decrease, reduce, how much less.</p> <p>Students discuss the following patterns and generalize.</p> <ul style="list-style-type: none"> <li>Zero taken from any number leaves the number</li> <li>Addition and subtraction are inverse operations</li> </ul> <p>:</p> <p>In groups, students write subtraction facts on cardboard cards up to 100.</p> <p>Teacher shows students flashcards with numbers. Students practice combinations of basic facts.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math display="block">\begin{array}{r} 3 \\ 9 \\ 6 \end{array}</math> </div>	<p>YouTube</p> <p>Cards with vocab words related to subtraction</p> <p>Cardboard</p> <p>Markers</p> <p>FlashCards</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Language Arts</b> Form sentences and spell words using mathematical language associated with subtraction.</p> <p><b>Art and Design</b> Create art pieces that show various subtraction facts.</p> <p><b>Social Studies</b> Dramatize buying and selling goods.</p>	<p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<b>Subtraction</b>	<ul style="list-style-type: none"> <li>Utilize expanded form to solve problems in subtraction</li> <li>Compute subtractions involving numbers with up to four digits, with and without regrouping in three places</li> <li>Estimate an answer to a calculation in subtraction</li> <li>Determine the reasonableness of an answer in subtraction based on estimation</li> </ul>	<p>Students use expanded form to solve problems.</p> $\begin{array}{r} 98 \rightarrow \text{minuend} = 90 + 8 \\ -52 \rightarrow \text{subtrahend} = 50 + 2 \\ \hline \rightarrow \text{difference} = 46 \end{array}$ <p>Using the columnar formal written method, show subtraction of 2, 3, and 4 digit numbers and their combinations</p> <ul style="list-style-type: none"> <li>without regrouping           <math display="block">\begin{array}{r} 695 \\ - 121 \\ \hline \end{array}</math> </li> <li>Regrouping in the ones only.           <math display="block">\begin{array}{r} 756 \\ - 510 \\ \hline \end{array}</math> </li> <li>In the tens, only           <math display="block">\begin{array}{r} 669 \\ - 583 \\ \hline \end{array}</math> </li> <li>In the hundreds, only</li> <li>Regrouping in the ones, tens, and hundreds.</li> </ul> <p>Students estimate calculations on worksheets using the round and estimate method by rounding the number to the closest ten or hundred. When estimating <math>177 - 124</math>, Think 177 as 180 and 124 as 120. Estimation: <math>180 - 120 = 300</math></p> <p>Students review classmates completed estimated problems and determine the reasonableness by comparing estimations with correct answers.</p>	Cardboard Markers FlashCards Manipulatives Number line Work cards Whiteboard Worksheets Desktop/laptop Number line	<p><b>Social Studies</b>            Dissicions in Social Studies e.g. How much is India’s population greate tan the TCI</p> <p><b>Language Arts</b>            Spelling new words learnt e.g minuend, subtrahend.</p> <p><b>Science</b>            Students make estimations during science experiements</p>	Demonstration Pre- Assessment Observations Response Cards Project Teacher-made Test Pupil-made test Exit/Entrance slips Think-Pair-Share

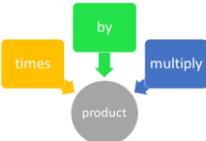
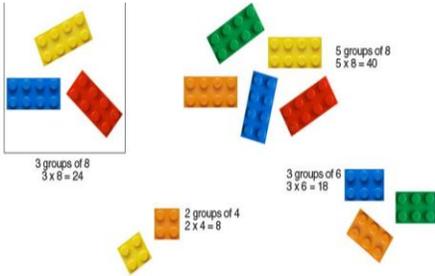
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<p><b>Subtraction</b></p>	<ul style="list-style-type: none"> <li>Utilize inverse operations to check answers in subtraction</li> <li>Solve problems with missing digits in subtraction</li> <li>Mentally subtract whole numbers</li> </ul>	<p>Students solve math problems on a whiteboard and in their books and then use inverse operations to check answers. e.g., add the difference and the subtrahend to get the minuend</p> <p style="text-align: center;"> <b>Addition</b> <math>\rightleftharpoons</math> <b>Subtraction</b>  <math>2 + 4 = 6</math>  <math>6 - 4 = 2</math>   <math>6 - 2 = 4</math> </p> <p>4629 → Minuend          -1213 → Subtrahend          3416 → Difference</p> <p>Teacher shows students the rules to follow when subtracting with missing digits.</p> <p style="text-align: center;"> <math>10 - 3 = \square</math>  <small>Large number subtract smaller number</small> </p> <p style="text-align: center;"> <math>10 - \square = 7</math>  <small>Large number subtract by other smaller number</small> </p> <p style="text-align: center;"> <math>\square - 3 = 7</math>  <small>The sum of the two other numbers</small> </p> <p>Teacher shows students strategies that can be used to subtract numbers mentally: such as subtract in two parts, using known subtraction facts, and reverse calculations. Using the Smartboard/worksheets, students subtract numbers mentally.</p>	<p>FlashCards</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p> <p>e-articles</p> <p>YouTube</p>	<p><b>Language Arts</b> Building flashcards with words like minuend, subtrahend, difference, estimate, calculate, accurate</p> <p>Use words selected in sentences</p> <p>Create a vocabulary word list with new concepts</p> <p><b>Art and Design</b> Students create a wheel of fortune to calculate different subtraction facts where the pointer stops.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

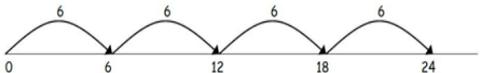
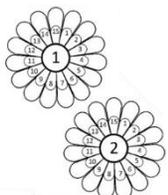
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<p><b>Subtraction</b></p>	<ul style="list-style-type: none"> <li>Solve one-step and two steps word problems involving subtraction</li> <li>Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>Show application of subtraction skills in practical situations</li> </ul>	<p>Students use counters to help solve 2-stem word problems. In small groups/individually, students complete 2-step word problem scenarios related to their real-life situations. Review PEMDAS rules, and students solve problems involving two or more operations along with subtraction.</p> <p>In pairs, students compute two-step problems by deciding which operations to use and why.</p> <p>➤ The bargain bin at the toy store had eighty-nine toys in it. Shoppers came in and bought 38 of the toys. Later, a stock boy dumped fifty-one more toys into the bin. How many toys are now in the bargain bin?</p> <p>Students apply their knowledge of subtraction to solve daily problems such as finance, distance, and food preparation.</p>	<p>FlashCards</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p> <p>e-articles</p> <p>YouTube video on PEMDAS</p>	<p><b>Social Studies</b> Students find the difference in population between to islands in the TCI.</p> <p><b>Langugae Arts</b> Students create word problems base don a given theme e.g. Disease Outbreak.</p> <p><b>Science</b> COVID-19 staticities difference in various Caribbean countries.</p> <p><b>Art and Design</b> Student create attractive number lines to show difference in numbers.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with multiplication (Product, multiply, factor, By, Times, Lots of, four 3's)</li> <li>Understand the properties of multiplication (commutative, and distributive, identity)</li> <li>Representing and explaining multiplication using equal grouping and arrays</li> <li>Modelling multiplication using concrete and visual representations and recording the process symbolically</li> </ul>	<p>Display a flow chart showing the different words associated with multiplication. Students partake in a whole-class discussion.</p>  <p>Teacher uses the Smartboard or whiteboard to demonstrate the properties of multiplication.</p> <table border="1"> <thead> <tr> <th colspan="2">Multiplication Properties</th> </tr> </thead> <tbody> <tr> <td> <b>Commutative Property</b>                      You can multiply in any order.  <math>a \times b = b \times a</math>  <math>3 \times 4 = 4 \times 3 = 12</math> </td> <td> <b>Associative Property</b>                      You can group the numbers in any combination.  <math>a \times (b \times c) = (a \times b) \times c</math>  <math>2 \times (4 \times 5) = (2 \times 4) \times 5</math> </td> </tr> <tr> <td> <b>Identity Property</b>                      The product of 1 and any number is the number.  <math>a \times 1 = a</math>  <math>6 \times 1 = 6</math> </td> <td> <b>Zero Property</b>                      The product of 0 and any number is 0.  <math>a \times 0 = 0</math>  <math>9 \times 0 = 0</math> </td> </tr> </tbody> </table> <p>Use manipulatives to explain multiplication, showing equal groups and arrays. Students show multiplication problems using manipulatives or images/drawings.</p> 	Multiplication Properties		<b>Commutative Property</b> You can multiply in any order. $a \times b = b \times a$ $3 \times 4 = 4 \times 3 = 12$	<b>Associative Property</b> You can group the numbers in any combination. $a \times (b \times c) = (a \times b) \times c$ $2 \times (4 \times 5) = (2 \times 4) \times 5$	<b>Identity Property</b> The product of 1 and any number is the number. $a \times 1 = a$ $6 \times 1 = 6$	<b>Zero Property</b> The product of 0 and any number is 0. $a \times 0 = 0$ $9 \times 0 = 0$	<p>Flow chart Legos Smartboard Whiteboard Commercial Manipulatives Teacher- made manipulatives Work cards Worksheets Desktop/laptop Number line</p>	<p><b>Language Arts</b> Students create a math word tree of new words learned. Students research the meaning of various words using various resources.</p> <p><b>Science</b> Students utilize their environment using beads, seeds and stones and create manipulatives to use in class.</p> <p><b>Art and Design</b> Students create a visual poster that summarizes properties of multiplication</p>	<p>Analysis of Student work Online Discussion Demonstration Pre- Assessment Observations Response Cards Project Teacher-made Test Pupil-made test</p>
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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Know multiplication facts for 3,4 and 8 multiplication tables</li> <li>Use multiplication facts to find the unknown factor</li> </ul>	<p>Students use a number line to show known facts and commit to memory.</p> <p><small>4 times 6 is 6 + 6 + 6 + 6 = 24 or 4 lots of 6 or 6 x 4</small></p>  <p>Students complete activities where they use mental strategies involving table facts.</p> <p>Students practice recalling using the Smartboard to display multiplications and using multiplication tables.</p> <p>Students practice mental methods through doubling as they connect the 3,4, and 8 multiplications.</p> <p>Students to use the Smartboard to complete number problems by writing in missing numbers for 3,4, and 8-time table facts.</p> <p>Make math cards with missing numbers in mathematical sentences. In pairs, students share and solve each problem.</p>	<p>Multiplication flowers</p> <p>Math cards</p> <p>Bingo cards</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Number line</p> <p>Internet access</p> <p>Manipulatives</p>	<p><b>Art &amp; Design</b></p> <p>Create multiplication flowers with students for time-tables e.g.</p>  <p><b>Physical Education</b></p> <p>Students play a factor relay to find the unknown factor.</p> <p>Students play bowling with pins indicating multiplication sums to solve.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

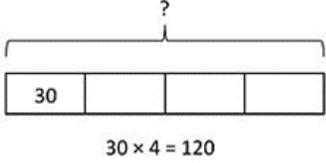
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<b>Multiplication</b>	<ul style="list-style-type: none"> <li>Multiply a three-digit number by a one-digit number without and with regrouping</li> <li>Multiply a three-digit number by a two-digit number without and with regrouping</li> </ul>	<p>Students to work in pairs to complete multiplication problems using place value counters to help them visualize.</p> <p>TH H T O 4 3 2 X 3 <u>1 2 9 6</u></p> <p>Using the Smartboard, students complete multiplication questions that require regrouping.</p> <p>Use a similar procedure to multiply up to 3 digit numbers by other 2 digit multipliers.</p> <p><math display="block">\begin{array}{r} 374 \\ \times 26 \\ \hline \end{array}</math></p> <p><math display="block">\begin{array}{r} 621 \\ \times 13 \\ \hline \end{array}</math></p> <p>Students practice long multiplication.</p> <p><b>Parts of Long Multiplication</b></p> <p>2 5 6 Multiplicand × 3 2 Multiplier + 5 1 2 Partial Product + 7 6 8 Partial Product = 8 1 9 2 Product</p>	<p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Flashcards</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Estimate an answer to a calculation in multiplication</li> <li>Determine the reasonableness of an answer in multiplication based on estimation</li> <li>Utilize inverse operations to check answers in multiplication</li> </ul>	<p>Students estimate multiplication by rounding up or down.  <b>Estimate the products of 34 and 86.</b>            34 → 30 34 is rounded <b>down</b> to 30            86 → 90 86 rounded <b>up</b> to 90            34 → 30            86 → 90</p> <p>Calculate mentally <math>30 \times 90 = 2700</math>            The estimated product is 2700.</p> <p>Students play estimation games using flashcards, showing students two numbers for them to estimate the product. Students check reasonableness by comparing the estimations with correct answers.</p> <p>Use the knowledge of division to prove answers in multiplication by dividing the product by the factor.</p> <p style="text-align: center;"> <b>Multiplication</b>    <math>\longrightarrow</math>    <b>Division</b>  <math>\longleftarrow</math> </p> <p style="text-align: center;"><math>2 \times 4 = 8</math></p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px;"><math>8 \div 4 = 2</math></div> <div style="border: 1px solid black; padding: 2px;"><math>8 \div 2 = 4</math></div> </div>	<p>Manipulatives            Number line            Work cards            Counters            Flashcards            Facts Worksheets            Worksheets            Desktop/laptop            Number line            Smartboard            Whiteboard            Internet</p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Pre- Assessment            Observations            Response Cards            Project            Teacher-made Test            Pupil-made test            Demonstration            Quizzes</p>

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<b>Multiplication</b>	<ul style="list-style-type: none"> <li>Mentally multiply 10's and 100's by a 1-digit whole number</li> <li>Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving multiplication</li> <li>Show application of multiplication skills in practical situations</li> </ul>	<p>Students multiply 1-digit whole numbers by 10 and 100 during oral discussions and probing. Review PEMDAS rules and let students solve problems based on the order of operations.</p> <p>With parentheses  <math>2 \times (9 \times 4 - 35) + 27 =</math>  <math>(8 \times 5) + 21 + 9 \times 6 +</math></p> <p>Without parentheses  <math>12 \times 3 + 2 =</math>    <math>20 \times 4 - 18 =</math></p> <p>Students make comparisons and explain results using the bar model in multiplication situations.</p>  <p>Students engage in a scavenger hunt and solve word problems involving multiplication</p> <p>Students apply multiplication skills to build a model, grocery shopping, baking, save money, manage time.</p>	<p>PEMDAS chart</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Flashcards</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p><b>Physical Education</b> Scavenger Hunt: Students search for worded problem, solve and run to the finish line.</p> <p><b>Languauge Arts</b> Students create problems for the scavenger hunt.</p> <p><b>Social Studies</b> Students engage in grocery shopping activities that require multiplying sums of money.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Division</b>	<ul style="list-style-type: none"> <li>Use appropriate division vocabulary such as number of groups, number of objects in each group, etc.</li> <li>Understand mathematical terms "quotient" and "remainder" with division</li> <li>Know division facts for 3,4 and 8 multiplication tables</li> </ul>	<p>Use the Smartboard to depict related terms for division such as sharing, grouping, quotient, can go into, how many times</p> <p>Engage in a discussion of the term quotient as the answer after dividing two numbers and the remainder as the number left, which cannot be divided by the divisor.</p> <p>Utilizing examples of a division table, label the parts such as dividend, divisor, quotient, the remainder with students</p> $  \begin{array}{r}  \text{(Quotient)} \\  5 \\  \hline  \text{(Divisor)} 5 \overline{) 27} \text{ (Dividend)} \\  \underline{25} \\  2 \text{ (Reminder)}  \end{array}  $ <p><i>The answer of a division operation can be verified in the following manner:</i>          Quotient × Divisor + Remainder = Dividend</p> <p>Memorize 3, 4 &amp; 8 times table in the division format, e.g., 4 goes into 4 one time, 4 goes into 4 two times, etc.</p>	<p>Words cards with division terms</p> <p>Labelled diagram of division table</p> <p>Time table chart Smartboard</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Blocks</p>	<p><b>Language Arts</b> Word card with terms of division for students to study.</p> <p><b>Social Studies</b> Students discuss issues that divide a country.</p> <p><b>Science</b> Students divide living things into groups.</p> <p><b>Art and Design</b> Students explain division using art.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Division</b></p>	<ul style="list-style-type: none"> <li>Use division facts to find the unknown factor</li> <li>Divide a two-digit number by a one-digit number, without and with a remainder</li> <li>Divide a three-digit number by a one-digit number without and with a remainder</li> </ul>	<p>Students practice examples of regrouping on the board and then individually using manipulatives. Provide students with several sentences to complete and find the missing factor by dividing the product by the known factor. e.g.</p> <p><math>21 \div \square = 3</math></p> <p><math>\square \div 7 = 4</math></p> <p>Create math sentence strips with missing factors for students to determine the unknown factor mentally.</p> <p>Students use a division table to divide 2 and 3 digit numbers by one digit with or without remainder.</p> <p><math>7 \overline{)87}</math>    <math>8 \overline{)29}</math>    <math>9 \overline{)360}</math></p> <p><math>8 \overline{)168}</math></p> <p>Create snake &amp; ladder game with students in groups where they give the correct answers for the problem given to move up the ladder.</p>	<p>Smartboard</p> <p>Math sentence strips</p> <p>Marbles</p> <p>Stones</p> <p>Snake and ladder game</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Blocks</p>	<p><b>Drama</b> Play snake and ladder division game</p> <p><b>Science</b> Collect stones to use in groupings.</p> <p><b>Art &amp; Design</b> Make math sentence strips</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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Division	<ul style="list-style-type: none"> <li>Estimate an answer to a calculation in division</li> <li>Determine the reasonableness of an answer in division based on estimation</li> <li>Utilize inverse operations to check answers in division</li> </ul>	<p>Play a game similar to "Green Light," where students get to move one step closer to a prize by estimating the answer for division problems called by the announcer (student or teacher).</p> <p>Students use rounding to estimate and decide the reasonableness of a division problem by comparing the answer with an estimate.</p> <p>Students watch a video to prove reasonableness in division.</p> <p>Students check division answers using the inverse operation of multiplication.</p> <p>Explain the method of multiplying the quotient by the divisor to get the dividend in a division problem.</p> <p>Students separate marbles, beads, or stones into groups to determine the reasonableness of a division problem by setting the marbles in groups and adding the groups.</p>	<p>Math cards</p> <p>YouTube</p> <p>Beads</p> <p>Marbles</p> <p>Stones</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Blocks</p>	<p><b>Drama</b> Play the "Green Light" game</p> <p><b>ICT</b> Watch a video to learn to determine reasonableness in division</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<b>Division</b>	<ul style="list-style-type: none"> <li>Mentally divide 10's and 100's by a 1-digit whole number</li> <li>Solve one-step and two steps word problems involving division</li> <li>Solve mixed operations involving division with or without parentheses (Order of operations)</li> <li>Show application of division skills in practical situations</li> </ul>	<p>Create a division anchor chart to support learning in division.</p> <p>Students learn the concept of division by ten. E.g. <math>10 \times 5 = 50</math> so <math>50 \div 10 = 5</math>. Simple drop the zero</p> <p>Using the Think-Pair-Share method, engage students in an activity using mental methods to solve division problems.</p> <p>Use PEMDAS theory to reinforce order of operations. And allow students to solve problems given using PEMDAS.</p> <p>Display story problems on the Smartboard, and students solve word problems involving the four operations.</p> <p>Create a jeopardy game by putting cards with division problems in boxes numbered 1-10. Then create a spin wheel with the numbers 1-10 for students to spin and choose a card from the box which the wheel lands on. Students answer the questions on the card they choose.</p> <p>Use play money from monopoly to prove the reasonableness of sharing equally among students</p>	<p>Multiplication table</p> <p>Spin wheel</p> <p>Cards with division problems</p> <p>Anchor chart</p> <p>PEMDAS rule chart</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with fractions (e.g., Numerator, denominator)</li> <li>Represent fraction as a part of a region, set, or linear model</li> <li>Express a fraction in its simplest form</li> </ul>	<p>Use the whiteboard to point the difference between the numerator and the denominator in fractions</p> <p>Engage students in a discussion on types of fractions. Use a fraction chart to point to the creation of fractions.</p> <p>Cut and share fruits or other tangibles in parts to bring out the concept of fractions.</p> <p>Using fractional number stories, students determine the fractional part of a quantity. Students practice solving fraction number stories independently. E.g., <i>I had 25 cherries. I gave away <math>\frac{1}{4}</math> cherries; how many cherries do I have remaining?</i></p> <p>In pairs, students divide a group of objects into fractional parts such as <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, etc and use cancelling to explain the process of reducing fractions in the simplest forms.</p> <p>Students use shapes to help them simplify fractions. Remind students to find the common factor by dividing both numerator and denominator by the common factor and repeat the process until there are no more common factors.</p>	<p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Online Games</p> <p>Counters, blocks, straws.</p> <p>Dictionary</p> <p>Worksheets</p> <p>Workbook</p> <p>Number cards</p> <p>Fraction squares</p>	<p><b>Language Arts</b> Research the meaning of a numerator and a dominator</p> <p><b>Music</b> Students learn to create rhythm, with a partition (subdivide) an amount of time (a whole bar) into "beats."</p> <p><b>Language Arts</b> Game; Students "count up" using unit fractions</p> <p><b>Art and Design</b> Create and colour shapes</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

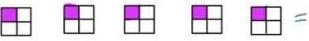
**NUMERATION**

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Understand an improper fraction as a multiple of a unit fraction</li> <li>Compare unit fractions and other proper fractions using the symbols '=', '&lt;', and '&gt;'.</li> <li>Order unit fractions and other proper fractions (same numerator, same denominator)</li> <li>Express a whole number or a mixed number as an improper fraction, and vice versa</li> </ul>	<p>Create cardboard shapes for students to manipulate by cutting them into fractions. Students use these shapes to represent different fractions given by the leader, such as <math>1\frac{1}{2}</math>. E.g., Use shapes created to show the similarity or equality of a mixed number and an improper fraction.</p> <p>Fold, shade, label, and cut strips of cardboard of the same size to show halves, quarters, eighths, and sixteenths. Match these strips of cardboard to compare these fractions</p> <p>Write number sentences to show these relationships using comparison symbols &gt; is greater than &lt; is less than = is equal to e.g. <math>\frac{1}{2} &gt; \frac{1}{4}</math>, <math>\frac{1}{4} &lt; \frac{3}{4}</math>, <math>\frac{4}{8} = \frac{1}{2}</math>.</p> <p>Use the Smartboard to present students with fractions having the same numerator or denominator and problems based on the mixed number to improper and vice versa</p> <p>Using different fraction parts on the Smartboard, students change improper fractions to mixed numbers using the rule: multiply the whole number by the denominator, then add the numerator. E.g., <math>4\frac{1}{3} =</math>  <math display="block">4 \times 3 + 1 = \frac{13}{3}</math></p>	<p>Cardboard shapes</p> <p>Markers</p> <p>Crayons</p> <p>Smartboard</p> <p>Work Cards</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Shapes</p> <p>Fraction charts</p> <p>Number lines</p> <p>Paper cut-outs</p> <p>Strings</p> <p>Fraction cards</p>	<p><b>Language Arts</b> Students create story problems on strips.</p> <p><b>Art and Design</b> Students Paint/color fraction strips.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

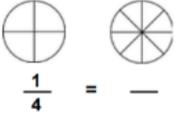
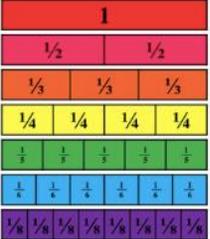
**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Show addition of a whole number to a proper fraction</li> <li>Show the addition and subtraction of two proper fractions with the same denominators using concrete objects and pictures/diagrams and symbolically</li> <li>Subtract a proper fraction from a whole number</li> </ul>	<p>Use tangible objects such as oranges or apples to explain the addition of proper fractions.</p> <p>Cut two or more oranges in the same fraction show the result of adding two parts from both oranges to students.</p> <p>Use concrete objects to show the addition and subtraction of fractions with unlike denominators</p> <p>Students use fractional parts while adding and subtracting fractions with the same denominator e.g.</p> $\frac{9}{10} + \frac{7}{10} = \frac{1}{3} + \frac{1}{3} =$ <p>On the whiteboard, teacher demonstrates how to solve equations that require them to subtract one or two fractions from a whole number. Students rewrite the equation with parts separated.</p> <p>e.g.: <math>9\frac{4}{8} - 5</math>. Solve the whole number parts:</p> $9 + \frac{4}{8} - 5 \quad 9 - 5 = 4$ <p>Combine the whole and fraction parts: <math>4 + \frac{4}{8} = 4\frac{4}{8}</math></p>	<p>Oranges</p> <p>Apples</p> <p>Cardboard</p> <p>YouTube: <a href="https://www.youtube.com/watch?v=J8x0EkWHhUU">https://www.youtube.com/watch?v=J8x0EkWHhUU</a></p> <p>Fraction charts</p> <p>Number lines</p> <p>Fraction Strips</p> <p>Smartboard</p> <p>Work Cards</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Legos</p>	<p><b>Science</b> Manipulating fruits to show <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math> etc.</p> <p><b>Art and Design</b> Students make or cut different shapes</p> <p>Students create word problem cards</p> <p>Students play and manipulate Legos</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made Test</p>

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Find the value of a fractional part of a quantity</li> <li>Recognize, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions with small denominators</li> <li>Show multiplication of a fraction by a whole number using concrete objects and pictures/diagrams</li> </ul>	<p>Using fractional number stories, students determine the fractional part of a quantity. Students practice solving fraction number stories independently. <i>I had 25 cherries. I gave away <math>\frac{1}{4}</math> cherries. How many cherries do I have remaining?</i></p> <p>Use word problems in which students are asked to find half of a certain amount of money spent on items from an original amount of money.</p> <p>Students shade to show fractions.</p> <p><math>\frac{1}{3} = </math>  <math>\frac{2}{4} = </math> </p> <p>Students Use pictorial representation to identify fractions.</p> <p> = ____  = ____</p> <p>Use concrete objects and pictures/diagrams to teach students how to multiply fractions by a whole number.</p> <p><math>\frac{1}{4}</math>  <math>\frac{1}{4} \times 5 = \frac{5}{4}</math></p> <p> =</p> <p>  = <math>1\frac{1}{4}</math></p> <p>Students use a number line to show the multiplication of fractions.</p>	<p>Number line</p> <p>Word problems on cards</p> <p>Fraction charts</p> <p>Fraction Strips</p> <p>Smartboard</p> <p>Work Cards</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Equivalence Cubes</p> <p>Fraction Cubes</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

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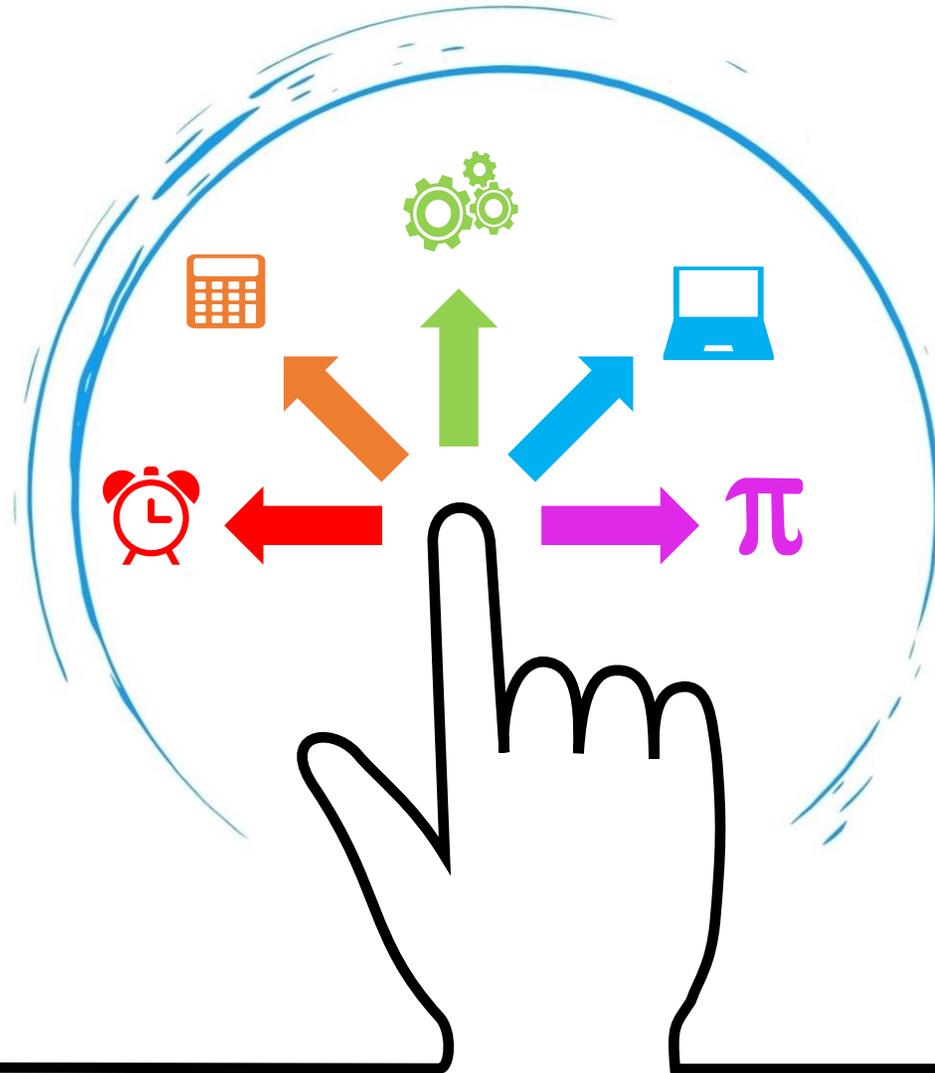
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Recognize and name equivalent fractions of a given fraction</li> <li>Solve up to 1 to 2-step word problems involving fractions.</li> <li>Show application of fraction and proportional reasoning skills in practical situations</li> </ul>	<p>Students practice identifying and writing equivalent fractions using pie charts on the Smartboard.</p>  <p>Students observe using fraction strips to determine fraction equivalents.</p>  <p>Solve word problems on sentence strips. For example:</p> <p>Mrs. Toomer brought 40 cookies to school. Mrs. Toomer's class ate <math>\frac{1}{2}</math> of the cookies, and Mrs. Smith's class ate <math>\frac{1}{4}</math> of the cookies. How many cookies are left?</p> <p>Peter bought 8 hamburgers for his party. At the end of the party, 3 hamburgers were left. What fraction of the hamburgers were eaten?</p> <p>Students engage in projects that require the practical application of fractions finding total discounts, fractions of food items, etc.</p> <p>Provide the class with a pizza cut in 6 slices and allow students to determine how many pizzas the class should buy to ensure everyone gets a slice.</p>	<p>Number line</p> <p>Word problems on cards</p> <p>Fraction charts</p> <p>Fraction Strips</p> <p>Smartboard</p> <p>Work Cards</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Magnetic Fraction Circles</p> <p>PEMDAS chart</p> <p>Equivalence Cubes</p>	<p><b>Language Arts</b> Expository writing using the process approach e.g. How to make a pizza.</p> <p><b>Art and Design</b> Using playdough to make a pizza and cut pizza into fractional parts.</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

# GRADE 4

## Term 2

Strands: Numeration and Computation; Consumer Math; Measurement

Theme: Environmental Awareness



Term: 2

Curriculum Theme: **Environmental Awareness**

Aim: This aims to encourage students to take responsibility for their environment by identifying environmental issues and how they can go about helping the environment.

Project Criteria:

- Recognize human impact on the environment
- Identify an environmental issue which affects their community
- Create a program/campaign to improve the environment in their community

Suggested assignments/activities

- Activity– students create a poster or single PowerPoint slide giving at least two examples of the environmental ill effects caused by human behaviors, e.g., water pollution, air pollution, depletion of water resources
- Activity – students scan local news broadcasts via the internet or local newspapers to find evidence of local environmental issues.
- Activity – group discussion to find out which local environmental issues concern fellow students the most, e.g., litter, wasting of energy, wasting paper, wasting water resources, pollution of air, land, sea or water. Offer the option to name an issue not listed if preferred.
- Activity – establish the most common environmental concerns highlighted by the discussion.
- Activity – students select an issue which they feel affects their own life. Students identify its effect on their life using an appropriate method, e.g., photographs, litter count.
- Activity – students brainstorm ways in which they could personally help the environment, e.g., monitoring water use and reducing it by showering instead of bathing and not leaving taps running, doing litter picks in the learning centre, in the local area such as the town centre or play area, organizing a recycling programme at home or in the learning centre, setting up or helping in a small organic gardening project.
- Activity – students take part in an environmental project such as one of those mentioned above; this might be an established community project or a new project organized by the teacher
- The practical activity should be appropriate for students, taking into account availability of specialist staff, facilities in the local area, cost and transport. It may be necessary to organize more than one activity so that the experience is accessible and appealing to all students
- Assessment activity – students select one of the issues which affects their own lives and develop a program/campaign to rectify the issue.
- Assessment activity – teacher interview in which students say how they can act to help the environment.
- Assessment feedback, review and evaluation of unit.
- **CPEA Project Rubric**

## STRAND: NUMERATION AND COMPUTATION

SUB-STANDS	TARGETS
Decimals	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Understand mathematical language associated with decimals i.e. tenths, hundredths etc.</li><li>● Understand how decimal numbers and whole numbers are related</li><li>● Understand how decimal numbers and fractions are related</li><li>● Explore the place value, face value and total value of digits in a decimal number up to 2 places</li><li>● Represent simple decimal numbers with up to two decimal places using diagrams</li><li>● Read and write decimals in words and figures up to 2 places</li><li>● Compare and order decimal numbers with up to 2 decimal places</li><li>● Round to nearest whole number and tenths</li><li>● Express common fractions (<math>1/2, 1/4, 1/5, 1/10</math>) as decimals and vice versa</li><li>● Solve simple measure and money problems involving decimals up two decimal point</li><li>● Complete number patterns involving decimals.</li><li>● Show addition and subtraction of decimal numbers to 2 decimal places</li><li>● Show application of decimals in practical situations</li></ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 4 STRUCTURE

TERM 2

## STRAND: CONSUMER MATH

SUB-STANDS	TARGETS
Money	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Understand mathematical language associated with consumer math</li><li>● Identify and describe the coins and notes in circulation in the Turks and Caicos</li><li>● Use correct notation to represent the value of a given amount of money (use of the dollar and cent signs)</li><li>● Explore the value of coins and bills (1¢, 5¢, 10¢, \$1, \$5, \$10) and their equivalence</li><li>● Express cents to dollars and cents and dollars and cents to cents</li><li>● Exchange a note or coin for an equivalent set of notes or coins of a smaller denomination</li><li>● Represent values up to \$50 using coins and notes in a variety of combinations</li><li>● Understand how to read, represent and interpret the price of items</li><li>● Compare prices of goods and services for the best value</li><li>● Understand the decimal point in relation to money</li><li>● Read and write sums of money up to \$1000</li><li>● Read and write sums of money up to \$100,000</li><li>● Read and write sum of money up to \$1,000,00</li><li>● Show addition and subtraction of money in dollars and cents not exceeding \$100</li><li>● Find the total bill of a set of items with totals up to \$100 and work out change using notes and coins</li><li>● Understand the concepts of cost price, selling price and profit in descriptions of situations involving buying and selling.</li><li>● Solve word problems involving money</li><li>● Show application of money management skills practical situations</li></ul>

## STRAND: MEASUREMENT

SUB-STANDS	TARGETS
Time	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Use time vocabulary appropriately (a.m., p.m., morning, afternoon, noon and mid-night)</li> <li>● Read and record time using an analogue and digital clock using the appropriate words and notations (12-hour)</li> <li>● Investigate the relationship between units of time (Minutes-hour, Hours-day, Seconds-Minute, Days-week, Days-Month, Weeks-month, Months-year and Days-year)</li> <li>● Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>● Record time to the second</li> <li>● Show and write time with analogue and digital clocks using intervals (on the hour, <math>\frac{1}{2}</math> hour, <math>\frac{1}{4}</math> hour and 5 minutes), using correct vocabulary</li> <li>● Determine the duration of a time interval in hours or minutes, given the start and end time</li> <li>● Determine the start time or the end time of a given interval, given the duration of the event</li> <li>● Determine the length of time elapsed between given time using days, hours or minutes</li> <li>● Solve elapsed time using word problems</li> <li>● Identify time patterns</li> <li>● Demonstrate addition and subtraction of hours and minutes</li> <li>● Demonstrate addition and subtraction of weeks and days</li> <li>● Solve one and two step problems in real-life contexts involving time</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>● Estimate, measure and record temperature using standard metric unit using the appropriate symbols</li> <li>● Indicate the difference between two temperatures both above zero degree Celsius</li> <li>● Indicate the temperature which is a given number of degrees warmer or cooler than a given temperature</li> <li>● Solve word problems involving changes in temperature</li> </ul>
Length	<ul style="list-style-type: none"> <li>● Understand mathematical language associated with length (taller than, shorter than, etc.)</li> <li>● Explore the meanings of the prefix deci-, centi-, milli-, and kilo-</li> <li>● Distinguish between standard and non-standard units of measure (for length)</li> <li>● Know the relationships between kilometre and metre, metre and centimetre</li> <li>● Select and justify appropriate instruments and units of measurement for length</li> <li>● Measure and record standard units and nonstandard units of length</li> </ul>

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 MATHEMATICS  
 GRADE 4 STRUCTURE

TERM 2

	<ul style="list-style-type: none"> <li>● Measure, record, compare and order standard units of length (i.e., centimetre, metre, kilometre) (e.g., centimetres are smaller than metres)</li> <li>● Demonstrate an understanding of the relationship between estimated and precise measurements</li> <li>● Estimate a reference measure of 1 kilometre</li> <li>● Estimate and measure lengths, heights and distances using the meter and centimetres as units of measure</li> <li>● Demonstrate how to use a ruler to measure the length of objects (with zero as the starting point; with other starting points)</li> <li>● Demonstrate how to draw line segment of a given length in centimetres and millimetres</li> <li>● Add and subtract linear measurements</li> <li>● Measure line segments and curves using the centimetre and millimetres as the unit of measure</li> <li>● Demonstrate an understanding of the concept of conversion of measurements between meters and centimetres</li> <li>● Compare the length or height of objects given their measurement in the same or different unit</li> <li>● Convert between units of length (larger to smaller unit and vice versa) including fractional units (e.g. Convert 6 1/2 m to cm)</li> <li>● Convert between units of length (larger to smaller unit and vice versa) including decimal units (e.g. Convert 6.45 m to cm)</li> <li>● Approximate lengths to the nearest metre and centimetre</li> <li>● Approximate distances to the nearest kilometre or metre</li> <li>● Multiply a measure of length in compound units</li> <li>● Know how to use a scale to present distance (e.g. map)</li> <li>● Solve problems requiring conversion from larger to smaller metric units</li> <li>● Solve problems requiring conversion from smaller to larger metric units</li> <li>● Solve problems in real-life situations involving length</li> </ul>
Area and Perimeter	<ul style="list-style-type: none"> <li>● Understand the concept of perimeter</li> <li>● Find the total distance around an object (perimeter)</li> <li>● Estimate, measure, compare and order the perimeter of regular polygons by measuring sides and given measurements</li> <li>● Determine the perimeter of a figure made up of 1cm<sup>2</sup>, or 1m<sup>2</sup></li> <li>● Differentiate between area and perimeter</li> <li>● Estimate, measure and compare the area of regular polygons by counting unit squares</li> </ul>
Mass/Weight	<ul style="list-style-type: none"> <li>● Distinguish between standard and non-standard units of measure of mass</li> <li>● Investigate the mass of objects using phrases such as 'heavier', 'lighter', 'lightest'</li> <li>● State the relationship between the kilogram and gram</li> <li>● Select and justify the most appropriate standard unit for measuring mass/weight (kilogram, gram)</li> <li>● Measure, record, compare and order mass/weight, using standard and non-standard units</li> <li>● Show estimation, measurement, recording and comparison of the mass of objects using standard units (kilogram)</li> </ul>

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
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 GRADE 4 STRUCTURE

TERM 2

	<ul style="list-style-type: none"> <li>● Show estimation, measurement, recording and comparison of the mass of objects using standard units (gram and milligram)</li> <li>● Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram or <math>\frac{1}{4}</math> kilogram.</li> <li>● Convert between units of mass (larger to smaller unit and vice versa) including fractional and decimal units</li> <li>● Generate equivalent measures between kilogram and pounds</li> <li>● Solve problems in real-life situations involving mass</li> </ul>
Capacity	<ul style="list-style-type: none"> <li>● Understand the concept of capacity</li> <li>● Distinguish between standard and non-standard units of measure of capacity</li> <li>● Know the relationships between the millilitre, litre, and kilolitre</li> <li>● Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres)</li> <li>● Demonstrate an understanding of the concept of conversion of measurements between litres and millilitres</li> <li>● Estimate, measure and record the capacity of containers using the litre as a unit of measure</li> <li>● Estimate, measure and record the capacity of containers using the millilitre as a unit of measure</li> <li>● Approximate measures to the nearest litre</li> <li>● Compare similar capacity of liquids given in various standard units of capacity</li> <li>● Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li> <li>● Solve problems in real-life situations involving volume</li> </ul>

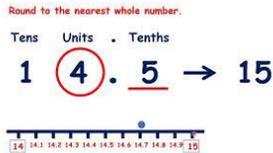
**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with decimals, i.e., tenths, hundredths, etc.</li> <li>Understand how decimal numbers and whole numbers are related</li> <li>Understand how decimal numbers and fractions are related</li> </ul>	<p>Use place value table to introduce the concept of tenths, hundredths, etc.</p> <p>Use a Smartboard and allow students to place the number in line with the value given.</p> <p>Display a place value table on a Smartboard and allow students to pick from a deck of cards. Students place their numbers on the decimal section of the place value table starting from the tenths.</p> <p>Use the place value table to point out the difference between the whole number and the decimal numbers.</p> <p>Teacher uses pictorial representation and the place value table to demonstrate the relationship between a decimal and a fraction.</p> <p>Students use concrete objects such as money to relate decimals and fractions.</p> <p>Use the number line to write the fraction and decimal shown on the point of a number line.</p>	<p>Decimal place value chart</p> <p>Place Value Chart</p> <p>Decimal Number line</p> <p>Manipulatives</p> <p>Decimal Marching Cards</p> <p>FlashCards</p> <p>Magnetic Decimal Builders</p> <p>Equivalence Cubes</p> <p>Worksheets</p> <p>Smartboard</p> <p>White Board</p>	<p><b>Language Arts</b> Learn the spelling of words associated with decimals.</p> <p><b>Art and Design</b> Students create fraction Art. <a href="https://www.teacherspayteachers.com/Product/Fraction-Art-Project-Digital-and-Printable-2977691">https://www.teacherspayteachers.com/Product/Fraction-Art-Project-Digital-and-Printable-2977691</a></p> <p><b>ICT</b> Create a flip gram explaining the relationship between decimals and whole numbers, and fractions.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES																								
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Explore the place value, face value and total value of digits in a decimal number up to 2 places</li> <li>Represent simple decimal numbers with up to two decimal places using diagrams</li> <li>Read and write decimals in words and figures up to 2 places</li> <li>Compare and order decimal numbers with up to 2 decimal places</li> </ul>	<p>Provide students with place value cards to determine the place value, face value and total value.</p> <p style="text-align: center;">0.<u>6</u>7</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">ones</td> <td style="text-align: center;">tenshs</td> <td style="text-align: center;">hundredths</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </table> <p>What is the place value of the underlined digit? Ansa: tenths</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">ones</td> <td style="text-align: center;">tenshs</td> <td style="text-align: center;">hundredths</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•••</td> <td style="text-align: center;">•</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•••</td> <td style="text-align: center;">•</td> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•••</td> <td style="text-align: center;">•</td> </tr> </table> <p>There is 1 one, 3 tenths and 1 hundredth.</p> <p>Create a place value model for reinforcing the place value of decimals</p> <p>Students observe and write decimals given in words and figures up to two decimal places</p> <p>Create worksheets for students to complete by writing the value of each digit circled in a particular number</p> <p>Teach students to compare and order decimals by lining up the decimal places, starting with the largest and comparing each value. Using the &lt;, &gt; and = sign when comparing. Provide students with a set of decimal numbers on the whiteboard or worksheet to compare and order.</p>	ones	tenshs	hundredths	•	•	•	•	•	•	•	•	•	ones	tenshs	hundredths	•	•••	•	•	•••	•	•	•••	•	<p>Decimal place value chart</p> <p>Place Value Chart</p> <p>Decimal Number line</p> <p>Manipulatives</p> <p>Decimal Marching Cards</p> <p>FlashCards</p> <p>Magnetic Decimal Builders</p> <p>Equivalence Cubes</p> <p>Worksheets</p> <p>Smartboard</p> <p>White Board</p> <p>Textbook</p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>
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**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>● Round to nearest whole number and tenths</li> <li>● Express common fractions (1/2, 1/4, 1/5, 1/10) as decimals and vice versa</li> <li>● Solve simple measure and money problems involving decimals up to two decimal point</li> <li>● Complete number patterns involving decimals</li> </ul>	<p>Use a whiteboard to show students the process of rounding decimals to the nearest whole number and tenths.</p>  <p>Students use number lines to illustrate how to round decimal numbers.</p> <p>Introduce conversion from fraction to decimals with conversion song. Students watch a to demonstrate the conversion from a fraction to decimal.</p> <p>Students play games where they find a partner with the equivalent to the card they are given. Using the Smartboard displaying <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math>, show students decimal equivalents of each. Create problem cards involving measure and money. Students provide the correct answers. E.g., let students select an item from their class shop and round the price to the nearest ten cents or dollar.</p> <p>Cut paper plates into pieces with number patterns and let students work to rearrange the cut pieces to reform each plate with the correct number pattern</p>	<p><b>YouTube</b></p> <p><a href="https://www.youtube.com/watch?v=32gDF10ZXOA">https://www.youtube.com/watch?v=32gDF10ZXOA</a></p> <p><a href="https://www.youtube.com/watch?v=WV5VY76Pf5U">https://www.youtube.com/watch?v=WV5VY76Pf5U</a></p> <p><a href="https://www.youtube.com/watch?v=mtX8mhHtqrc&amp;t=140s">https://www.youtube.com/watch?v=mtX8mhHtqrc&amp;t=140s</a></p> <p>Equivalence Cubes</p> <p>Worksheets</p> <p>Smartboard</p> <p>White Board</p> <p>Decimal Marching Cards</p>	<p><b>Music</b> Sing conversion song</p> <p><b>ICT</b> Watch YouTube video</p> <p><b>Art and Design</b> Make paper plates pattern</p> <p><b>Social Studies</b> Create a functioning Budget and shopping list.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Show addition and subtraction of decimal numbers to 2 decimal places</li> <li>Show application of decimals in practical situations</li> </ul>	<p>Using the Smartboard explain to students how to add and subtract decimals by lining the decimals up, putting in zeros to ensure numbers have the same length, and using the column method for adding and subtracting.</p> <p>Students complete equations that require the addition and subtraction of money.</p> <p>(a) To find <math>102.8 + 15.21</math>, line up the decimal points:</p> $\begin{array}{r} 102.80 \\ + 15.21 \\ \hline 118.01 \end{array}$ <p>(b) To find <math>92.69 - 10.4</math>, line up the decimal points:</p> $\begin{array}{r} 92.69 \\ - 10.40 \\ \hline 82.29 \end{array}$ <p>Students measure different items in their environment using metric units and then add or subtract the lengths.</p> <p>Students learn ways to apply decimals for everyday life in dealing with money, weight, length, etc.</p>	<p>Board games</p> <p>Menu chart</p> <p>Class shop</p> <p>Rulers</p> <p>Measuring tape</p> <p>Equivalence Cubes</p> <p>Worksheets</p> <p>Smartboard</p> <p>White Board</p> <p>Manipulatives</p> <p>FlashCards</p>	<p><b>Science</b> Students find the temperature, mass and height of individual students, write them in decimal form before adding them.</p> <p><b>Language Arts</b> Students create story problems using children's temperature mass and height.</p> <p><b>Social Studies</b> Students create a bill for items bought and find change from given amount.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with consumer math</li> <li>Identify and describe the coins and notes in circulation in the Turks and Caicos.</li> <li>Use correct notation to represent the value of a given amount of money (use of the dollar and cent signs)</li> </ul>	<p>Create word cards associated with consumer math such as discount, increase, sale, reduce, decrease, etc.</p> <p>Students observe and draw the different types of currency used in their country.</p> <p>Students write the value of each currency in decimal form (use the dollar and the cents signs).</p> <p>Create a display board to show the different currencies.</p> <p>Provide students with various sums of money. Students use the correct notation to represent each value. E.g.</p> <p>0.60 = \$0.60c</p> <p>5.00 = \$5.00</p>	<p>Coins and paper notes used in the Turks and Caicos Islands</p> <p>Word cards</p> <p>Display currency board</p> <p>Online interactive activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Manipulatives</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b> Discuss regional currencies used in the Turks and Caicos Islands</p> <p><b>Language Arts</b> Create and study word cards relating to regional currencies</p> <p>Write sentences with vocab words</p> <p><b>Art and Design</b> Design local and regional currencies. Use markers to test money</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

**CONSUMER MATH**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Explore the value of coins and bills (1¢, 5¢, 10¢, \$1, \$5, \$10) and their equivalence</li> <li>Express cents to dollars and cents and dollars and cents to cents</li> <li>Exchange a note or coin for an equivalent set of notes or coins of a smaller denomination</li> <li>Represent values up to \$50 using coins and notes in a variety of combinations</li> </ul>	<p>Engage students in a show and tell exercise where notes and coins of students' denomination are distributed from 1 cent to \$100.</p> <p>Using the Smartboard, engage students in an interactive pictorial exercise that requires students to find the total amount of money express as coins and bills.</p>  <p>Teacher tells students how many of each coin will make another. E.g., 4 quarters equal to 1 dollar.</p>  <p>Four quarters in a dollar</p> <p>Students sequence different coins and notes in order of value. Example: 5 cents, 10 cents, 20 cents, 50 cents, \$1, \$2, \$5, \$10, \$20, \$50 and \$100</p> <p>Dramatize storefront and role-play grocery shopping from the classroom store to show the exchange of a note or coin for an equivalent set of notes or coins of a smaller denomination.</p>	<p>Money of various denominations</p> <p>Cash register</p> <p>Classroom shop</p> <p>Price list</p> <p>Paper</p> <p>Pencil</p> <p>Price gun</p> <p>Smartboard</p> <p>Computer</p> <p>Play coins or notes</p> <p>Word cards</p> <p>Worksheet</p>	<p><b>Science</b>              Teacher use different types of coins to teach comparison between silver and copper in terms of their durability, texture and cost.</p> <p><b>Language Arts</b>              Reading cards with money written in words</p> <p><b>Social Studies</b>              Expose students to bills of different denominations to help students understand that notes differ based on country.</p>	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Money	<ul style="list-style-type: none"> <li>Understand how to read, represent and interpret the price of items</li> <li>Compare prices of goods and services for the best value</li> <li>Understand the decimal point in relation to money</li> </ul>	<p>Priced various items on display and allow students to read and interpret the price items.</p> <p>Provide students with various items and allow students to use the price gun/ sticky notes to price various items.</p> <p>Engage students in a dramatization of a corner store to help students read and compare prices of items and determine the best value.</p> <p>Create scenarios to show who would be thrifter in spending.</p> <p>Utilize a local bill e.g. gas bill,light bill etc to help students compare and contrast the prices.</p> <p>Review the definition of a decimal point.</p> <p>Students engage in an "Are we equal" game. Students will have 3 different numbers \$ written in either word form, standard form, or expanded form. The purpose of the activity is to have students be able to recognize their numbers in any form.</p>	<p>Class shop</p> <p>Worksheets</p> <p>Play money</p> <p>Price Gun</p> <p>Priced Items</p> <p>Sticky Notes</p> <p>Smartboard</p> <p>Computer</p> <p>Play coins or notes</p> <p>Word cards</p> <p>Worksheet</p>	<p><b>Social Studies</b>                      Compare prices of various items of different islands in the Turks and Caicos Islands.</p> <p><b>Drama</b>                      Role plays about the corner store.</p> <p><b>Art and Design</b>                      Students create a money tree mobile.</p>	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

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<b>Money</b>	<ul style="list-style-type: none"> <li>● Read and write the sum of money up to \$1000</li> <li>● Read and write the sum of money up to \$100,000</li> <li>● Read and write the sum of money up to \$1,000.00</li> <li>● Show addition and subtraction of money in dollars and cents not exceeding \$100</li> <li>● Find the total bill of a set of items with totals up to \$100 and work out a change using notes and coins</li> </ul>	<p>Use the whiteboard to point out the use of the decimal point when writing money, including cents.</p> <p>Give students different sums of money, up to a thousand dollars, and write the amount in figures and vice versa.</p> <p>Using class shop, students go shopping for the items given to them on a grocery list. Students calculate the total to be paid for all the items.</p> <p>Students calculate the change they would receive from \$100.</p> <p>Students dramatize shopping in a clothing or electronic store and ask students to purchase items and outline the amount of change they receive from up to the sum of \$1,000.00.</p> <p>Teacher and students plant vegetables in pots and let students label them with different prices. This can be used for future reference to allow students to select the different pots, totaling \$20, \$50, etc.</p> <p>Roleplay: Students act as cashiers to create a bill for customers based on the items bought.</p>	<p>Class shop</p> <p>Worksheets</p> <p>Play money</p> <p>Price Gun</p> <p>Priced Items</p> <p>Sticky Notes</p> <p>Smartboard</p> <p>Computer</p> <p>Play coins or notes</p> <p>Word cards</p> <p>Worksheet</p>	<p><b>Science</b> Students plant and nurture vegetable in a school garden, package and Price grown vegetables.</p> <p><b>Language Arts</b> Describe and compare items bought using adjectives.</p>	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Understand the concepts of cost price, selling price, and profit in descriptions of situations involving buying and selling</li> <li>Solve word problems involving money</li> <li>Show application of money management skills in practical situations</li> </ul>	<p>Students discuss the cost price as the amount to buy the item, selling price as the amount the item is sold for, and profit as the amount gained if the selling price is greater than the cost price.</p> <p>Students brainstorm various business ideas, discuss the cost price of the items they want to sell, how much they will sell them, and the profit.</p> <p>Students use all four operations using word problems.</p> <ul style="list-style-type: none"> <li><u>Example 1:</u> Jack had \$10.00. He bought a pair of socks for \$2.30 and a pair of gloves for \$5.50. How much money did he have left?</li> <li><u>Example 2:</u> A music store is having its "Black Friday" sale. The store will give \$5.00 off for the second item a customer purchases. Emma wants to buy a pair of headphones for \$25.00 and a CD for \$18.50. How much does she need to pay in total?</li> </ul> <p>Create word cards with cost and selling prices and show students to work out profit by taking the cost price from the selling price.</p> <p>Students attend a tour to a supermarket to engage in transactions of money.</p>	<p>Display of items and cost</p> <p>Math cards</p> <p>Class shop</p> <p>Worksheets</p> <p>Play money</p> <p>Price Gun</p> <p>Priced Items</p> <p>Sticky Notes</p> <p>Smartboard</p> <p>Computer</p> <p>Play coins or notes</p> <p>Word cards</p> <p>Worksheet</p>	I N T E G R A T E  A C R O S S  S U B J E C T S	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

**MEASUREMENT**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>● Use time vocabulary appropriately (a.m., p.m., morning, afternoon, noon, and midnight)</li> <li>● Read and record time using an analogue and digital clock using the appropriate words and notations (12-hour)</li> <li>● Investigate the relationship between units of time (Minutes-hour, Hours-day, Seconds-Minute, Days-week, Days-Month, Weeks-month, Months-year, and Days-year)</li> </ul>	<p>As a class, create a word tree with vocabulary relating to time: morning, daylight, afternoon, evening, midnight, sunrise, sunset, noon.</p> <p>Using visual representation, explain the difference between the terms a.m. and p.m.</p> <p>Students construct 24-hour clocks with rotating hands. Provide opportunities for students to read and record times in hours and minutes using a.m. and p.m.</p> <p>Students construct analogue and digital watches in class using 12-hour clocks. Ask students to position times on their watches and record said times.</p> <p>Use an interactive clock to show students how to tell and record the time (see link) <a href="https://toytheater.com/clock/">https://toytheater.com/clock/</a></p> <p>Students work in groups to create charts to show the relationship between units of time. eg. 60 seconds = 1 minute, 60 minutes 1 hour etc. (see objective)</p>	<p>Words cards</p> <p>Interactive clock</p> <p>Paper plates</p> <p>Chart with time units</p> <p>Clock</p> <p>Watch</p> <p>A table on units of time. E.g., 1 day=24 hours</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Word cards</p> <p>Worksheet</p>	<p><b>Language Arts</b> Create word cards for vocabulary</p> <p><b>ICT</b> Use Interactive clock online to play telling time games.</p> <p><b>Art and Design</b> Make paper plate clocks.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<b>Time</b>	<ul style="list-style-type: none"> <li>Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>Record time to the second</li> <li>Show and write time with analogue and digital clocks using intervals (on the hour, ½ hour, ¼ hour, and 5 minutes), using correct vocabulary</li> </ul>	<p>Using a time chart, students discover the process of conversion from minutes to seconds, hours to minutes, etc., by multiplying the amount it takes to make the bigger units.</p> <table border="1"> <thead> <tr> <th rowspan="2">Name</th> <th colspan="3">Arrival the Beach</th> </tr> <tr> <th>Minutes</th> <th>Seconds</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>Thomas Family</td> <td>120mins</td> <td></td> <td></td> </tr> <tr> <td>Adams Family</td> <td></td> <td>720sec.</td> <td></td> </tr> <tr> <td>Delancy Family</td> <td></td> <td></td> <td>1hr:20 mins.</td> </tr> </tbody> </table> <p>Introduce students to the use of the stopwatch to tell time to the second.</p> <p>Use a stopwatch to record students' speed over a 50 metre dash to the second</p> <p>Provide students with digital clocks in groups and allow students to tell and record the time shown. Students should change the time and continue the process of reading and recording the time to the second.</p> <p>Use appropriate vocabulary to help students write the time in intervals such as 4:45 or a quarter to 5, 4:05, or 5 minutes past 4</p> <p>Create worksheets for students to complete by writing the times on the clocks given.</p>	Name	Arrival the Beach			Minutes	Seconds	Hours	Thomas Family	120mins			Adams Family		720sec.		Delancy Family			1hr:20 mins.	<p>Stopwatch</p> <p>Time chart</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Worksheet</p> <p>Interactive clock</p> <p>Paper plates</p> <p>Chart with time units</p> <p>Clock</p> <p>Watch</p> <p>A table on units of time. E.g., 1day=24 hours</p>	<p><b>Physical Education</b> Students record the times for each student in a race using a stop watch.</p> <p><b>Science</b> Students observe and record the times it takes for plants to move from one stage to another.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>
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Time	<ul style="list-style-type: none"> <li>Determine the duration of a time interval in hours or minutes, given the start and end time</li> <li>Determine the start time or the end time of a given interval, given the duration of the event</li> <li>Determine the length of time elapsed between given time using days, hours, or minutes</li> <li>Solve elapsed time using word problems</li> </ul>	<p>Using the Think-Pair-Share strategy, ask students to formulate word problems that require them to find the duration of time intervals.</p> <p>Students use individual clocks with rotating hands to find the duration of a time interval.</p> <table border="1"> <thead> <tr> <th>TV Programme</th> <th>Start Time</th> <th>Finish Time</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>Pals</td> <td>06:30</td> <td>07:30</td> <td></td> </tr> <tr> <td>Dennis the explorer</td> <td>15:15</td> <td>18:15</td> <td></td> </tr> <tr> <td>The football show</td> <td>12:00</td> <td>14:00</td> <td></td> </tr> <tr> <td>An adventure</td> <td>10:40</td> <td>12:40</td> <td></td> </tr> </tbody> </table> <p>Use flight scenario to help students work out the time from departure to landing (embarkation &amp; disembarkation)</p> <p>Pose scenarios to students regarding elapsed time and engage in a discussion.</p> <p>Students measure elapsed time in minutes from starting points using a number line, analogue clock, or subtraction to count the minutes to the ending time.</p> <p>Use the Smartboard to display word problems that include elapsed time to solve:  <u>Example 1:</u> The ferry leaves North Caicos at 11:05 am and docks on the islands of South Caicos at 1:15 pm. How long was the ride?  <u>Example 2:</u> Sandra's dance class starts at 10:40 a.m. and ends at 1:20 p.m. How long does it last?</p>	TV Programme	Start Time	Finish Time	Duration	Pals	06:30	07:30		Dennis the explorer	15:15	18:15		The football show	12:00	14:00		An adventure	10:40	12:40		<p>YouTube</p> <p>Stopwatch</p> <p>Time chart</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Word cards</p> <p>Worksheet</p> <p>Interactive clock</p> <p>Paper plates</p> <p>Chart with time units</p> <p>Clock</p> <p>Watch</p>	<p><b>Science</b> Discuss digestive system and duration of digestion.</p> <p><b>Music</b> Use recorder and stopwatch to record the length of musical beats. e.g. crochet, quover, minim.</p> <p><b>Social Studies</b> Discuss modes of transportation and elapsed time.  Discuss time zones and elapsed of time</p> <p><b>Physical Education</b> Students run various distances and discuss elapsed time.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>
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Time	<ul style="list-style-type: none"> <li>Identify time patterns</li> <li>Demonstrate addition and subtraction of hours and minutes</li> <li>Demonstrate addition and subtraction of weeks and days</li> <li>Solve one and two-step problems in real-life contexts involving time</li> </ul>	<p>Using the Smartboard, display various timelines of students' morning routine - before school. Help students identify time patterns among them.</p> <p>Use globe or world map to show the time zones of 15° for each zone which amounts to 1 hour in difference</p> <p>Students add and subtract hours and minutes by reinforcing that there are 60 minutes (min) in a 1 hour (h).</p> $\begin{array}{r} 5 \text{ h } 45 \text{ min} & 10 \text{ h } 20 \text{ min} \\ + 4 \text{ h } 34 \text{ min} & - 7 \text{ h } 47 \text{ min} \\ \hline \end{array}$ <p><u>Example 1:</u> Mr. Larson put a roast in the oven at 2:45 P.M. He cooked the roast for 3 hours 48 minutes. What time did Mr. Larson take the roast out of the oven?</p> <p>Engage students in a storytelling exercise and provide students with scenarios that require them to add and subtract in weeks and days.</p> <p>Expose students to word problems involving time in 24-hour clock rotation.</p> <p><u>Example 1:</u> If I woke up at 7:15 and left the house at 8:05, how long did it take me to take a bath and have breakfast?</p> <p><u>Example 2:</u> If I got home at 17:30 and went to bed at 21:30, how long was I at home before I went to bed?</p>	<p>Globe or world map YouTube</p> <p>Time chart Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Word cards</p> <p>Worksheet</p> <p>Interactive clock</p> <p>Paper plates</p> <p>Chart with time units</p> <p>Clock</p>	<p>I N T E G R A T E A C R O S S U B J E C T S</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

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Temperature	<ul style="list-style-type: none"> <li>Estimate, measure, and record temperature using standard metric unit using the appropriate symbols</li> <li>Indicate the difference between two temperatures both above zero degree Celsius</li> <li>Indicate the temperature which is a given number of degrees warmer or cooler than a given temperature</li> <li>Solve word problems involving temperature changes</li> </ul>	<p>Engage students in a discussion on the names (Celsius and Fahrenheit) and the use of the symbol for temperature along with the two units used C° &amp; F°)</p> <p>Students feel outside at different times of day or items at various temperatures, e.g., in the class, Refrigerator, freezer, in a car, a pot, a warm towel. Students estimate, measure, and record temperatures.</p> <p>Use a thermometer to test the temperature of students in the class.</p> <p>State scenarios where students are given the temperature of a particular place and then ask them to tell how cooler or how hotter another country is based on its temperature.</p> <p>In groups, allow students to record the daily temperatures for one week at school and create a bar graph or line graph showing the daily temperatures of the week.</p> <p>Demonstrate to students how to set the various temperature on an oven. Then, give students problems based on cooking temperatures.</p>	<p>Thermometers</p> <p>Word cards</p> <p>Interactive games</p> <p>Whiteboard</p> <p>Thermometer</p> <p>Line graph</p> <p>Bar graph</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p>	<p><b>ICT</b> Manipulating interactive games using a digital thermometer.</p> <p><b>Science</b> Use thermometers accurately</p> <p>Estimate temperatures in various climate zones.</p> <p><b>Language Arts</b> Make word cards</p> <p><b>Social Studies</b> Make temperature graphs</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment graphs</p>

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TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with length (taller than, shorter than, etc.)</li> <li>Explore the meanings of the prefix deci-, centi-, milli-, and kilo-</li> <li>Distinguish between standard and non-standard units of measure (for length)</li> <li>Know the relationships between kilometre and metre, metre and centimetre</li> </ul>	<p>Create word cards with words related to length, e.g., longer, shorter, wider, narrower, higher, lower, extended, shortened. Use word cards for vocabulary development.</p> <p>Engage in a discussion on the meanings and use of the prefix deci-, centi-, milli-, kilo-, hecto-, deca-.</p> <p>Use metric table to show the relationship between the kilometre and the metre, and the metre and the centimetre</p> <p>Engage students in a discussion about kilometre being 10 times the metre and the metre being 10 times the centimetre; in other words, each preceding unit is 10 times greater than the previous unit</p> <p>Create challenges for them to find out how many mms in a metre etc.</p> <p>Students estimate the length of specific objects in the classroom or their surroundings</p>	<p>Word cards</p> <p>Rulers</p> <p>Measuring tape</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p><b>Language Arts</b> Expose students to measurement words and their meanings</p> <p><b>Science</b> Students measure the length of various body parts in non-standard units of measure (for length).</p> <p><b>Physical Education</b> Students set and run various distances.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

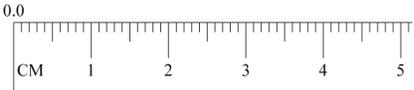
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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Select and justify appropriate instruments and units of measurement for length</li> <li>Measure and record standard units and nonstandard units of length</li> <li>Measure, record, compare and order standard units of length (i.e., centimetre, metre, kilometre) (e.g., centimetres are smaller than metres)</li> </ul>	<p>Display different types of measuring instruments such as rulers, metre rulers, measuring tape.</p> <p>Discuss the length of various units of the metric system and allow students to identify the appropriate instrument for measuring different lengths.</p> <p>Students measure the lengths of different objects in their surroundings using the standard units of length.</p> <p>Students create and complete three columns on a whiteboard labelled: <b>Item, Prediction, Measurement.</b></p> <p>Students measure and compare length and heights using the vocabulary greater than, less than, or equal to.</p> <p>Utilizing their environment, students estimate lengths of objects then measure and record lengths using a meter stick and ruler. My estimated length _____ My actual Length. _____</p> <p>Students play games and order standards of length on the Smartboard.</p>	<p>Measuring tape</p> <p>Ruler</p> <p>Long jump pit</p> <p>Meter ruler</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p><b>Physical Education</b> Practice long jump exercises using a sandpit or sponge and allow students to measure and record jumps.</p> <p><b>Science</b> Students discuss how the position of the sun affects the length and position of shadows</p> <p><b>Language Arts</b> Expository Writing: How to Measure your height.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

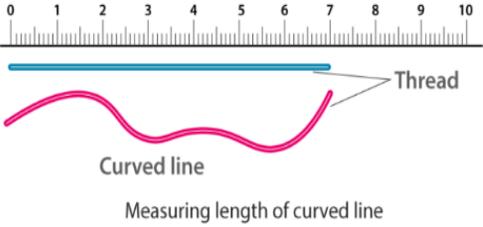
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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the relationship between estimated and precise measurements</li> <li>• Estimate a reference measure of 1kilometre</li> <li>• Estimate and measure lengths, heights, and distances using the meter and centimetres as units of measure</li> </ul>	<p>Students predict and measure objects in the environment, such as the length of a school block, the length of the corridor, the length of the entire school, etc., to develop an understanding of estimation and precision.</p> <p>Students participate in a discussion. Teacher explains that km is used to measure longer distances, such as a 5k race.</p> <p>Students to estimate how far a kilometre is from their school.</p> <p>Students race distance of 100 meter and 1 km then compare the distance to determine which is longer and shorter.</p> <p>Students estimate and measure the heights of classmates and the lengths of objects presented to them.</p> <p>Expedite a jogging exercise for students to jog at intervals, gradually increasing their distance each time on different days. Students estimate and measure each distance. E.g. ½ kilometre, then ¾ kilometre, then 1 kilometre.</p>	<p>Measuring tape</p> <p>Ruler</p> <p>Long jump pit</p> <p>Meter ruler</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p><b><u>Physical Education</u></b> Students measure the length of throws and jumps during sporting activities.</p> <p><b><u>Science</u></b> Students discuss the various running/jogging exercise on their body systems after various distances.</p> <p><b><u>Language Arts</u></b> Poem about walking a mile in someone's shoes.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

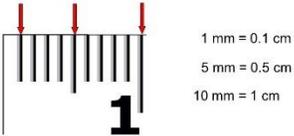
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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate how to use a ruler to measure the length of objects (with zero as the starting point; with other starting points)</li> <li>• Demonstrate how to draw a line segment of a given length in centimetres and millimetres</li> <li>• Add and subtract linear measurements</li> </ul>	<p>Students use a ruler to measure and draw given lengths in their books.</p> <p>Students practice using the meter ruler to measure the height of each student individually and then determine who is the tallest and who is the shortest person in the class.</p> <p>Use a ruler to demonstrate measurement in centimetres and millimetre.</p> <p>Use a ruler to draw a line of a given length (in centimetres)</p> <p>Provide students with various lengths in cm and mm. Students draw line segments based on given measurements.</p>  <p>Students watch a video on adding and subtracting linear measurements <a href="https://www.youtube.com/watch?v=Zkk7-waKTI">https://www.youtube.com/watch?v=Zkk7-waKTI</a></p>	<p>Rulers</p> <p>Meter ruler</p> <p>Bingo cards</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Measure line segments and curves using the centimetre and millimetres as the unit of measure</li> <li>Demonstrate an understanding of the concept of conversion of measurements between meters and centimetres</li> </ul>	<p>Students measure curves by placing a thread or string along the edge of the line and then remove it and place the entire length of the string on a ruler to find the actual measurement of the curve.</p>  <p>Students watch a video on the process of conversion from metres to centimetres and vice versa <a href="https://www.youtube.com/watch?v=-OzQePSbD5c">https://www.youtube.com/watch?v=-OzQePSbD5c</a></p> <p>Using the Smartboard, students convert metre to centimetre and vice versa by outlining examples to complete. Reinforce the following with students:</p> <p style="text-align: center;"> <math>1 \text{ km} = 1000\text{m}</math>  <math>1 \text{ m} = 100\text{cm}</math>  <math>1 \text{ cm} = 10 \text{ mm}</math> </p>	<p>YouTube</p> <p>Table with an acronym for metric system</p> <p>Strings</p> <p>Threads</p> <p>Ruler</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Compare the length or height of objects given their measurement in the same or different unit</li> <li>Convert between units of length (larger to a smaller unit and vice versa) including fractional units (e.g., Convert 6 1/2 m to cm)</li> <li>Convert between units of length (larger to a smaller unit and vice versa) including decimal units (e.g., Convert 6.45 m to cm)</li> </ul>	<p>Students measure the height of each other in pairs and compare who is shorter or taller in different units of measurement.</p> <p>Watch a video on conversion from metres to centimetres and vice versa <a href="https://www.youtube.com/watch?v=-OzQePSbD5c">https://www.youtube.com/watch?v=-OzQePSbD5c</a></p> <p>Using a ruler, students express measurements of length as a fraction. Discuss how <math>\frac{16}{16}</math> is equal to 2.54 cm and other expressions of measurements of length as a fraction.</p> <p>Use a whiteboard to show an example of conversion with fraction units and provide students with worksheets for them to complete based on fraction units of measurement, e.g., <math>\frac{1}{2}</math> m = 50cm; therefore <math>2\frac{1}{2}</math> m = 200 + 50 = 250 cm</p> <p>Metric System International System of Units (SI) Millimeters and Centimeters      Decimals</p> 	<p>YouTube</p> <p>Rulers</p> <p>Metre stick</p> <p>Measuring tape</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Computer</p> <p>White Board</p> <p>Internet</p> <p>Worksheet</p> <p>Measurement Chart</p>	<p><b>Religious Education</b> Teach the flood and Noah's Ark</p> <p>How long was the ark, and how tall was the ark?</p> <p>How tall was the Jericho wall?</p> <p><b>Art and Design</b> Create a measuring height chart</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**MEASUREMENT**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Approximate lengths to the nearest metre and centimetre</li> <li>Approximate distances to the nearest kilometre or metre</li> <li>Multiply a measure of length in compound units</li> <li>Know how to use a scale to present distance (e.g., map)</li> </ul>	<p>Students find the measurements of things in their surroundings, such as basketball court, school blocks, classroom, books, pencils, pens, whiteboard, etc., and approximate measurements to the nearest metre or centimetre.</p> <p>Students write statements giving the approximate distance from one point of town to the other in kilometres or metres, e.g., The school is approximately 1.5 km from the Baptist Church. (2) I am sitting approximately 1 metre away from Peter.</p> <p>Students watch video on the process of multiplication with compound units.</p> <p>Use math races with math cards that contain word problems for students to pick randomly from a box and run to their partner at the finish line, where they collaborate to work the problem, and the runner runs back to the starting line. The person who finishes first and gets it right is the winner.</p> <p>Students use a ruler and string in small groups to measure the distance on the map accurately in centimetres.</p> <p>Students use their ruler to measure the distance between two countries on the map. Student use the scale given on the map and would multiply to find the actual distance on land</p>	<p>Measuring tape</p> <p>Rulers</p> <p>Metre stick</p> <p>YouTube:</p> <p><a href="https://www.youtube.com/watch?v=jzoF41pT3l8">https://www.youtube.com/watch?v=jzoF41pT3l8</a></p> <p><a href="https://www.youtube.com/watch?v=bBVNyRU0iAA">https://www.youtube.com/watch?v=bBVNyRU0iAA</a> &amp; <a href="https://www.youtube.com/watch?v=wzncwjKrz5Y">https://www.youtube.com/watch?v=wzncwjKrz5Y</a></p> <p>Math cards</p> <p>Race track</p> <p>Map of the Caribbean or the world</p> <p>Strings</p>	<p><b>Social Studies</b> Use the key or legend of a map for scale drawing.</p> <p><b>Science</b> Experiments involving sounds; sounds get fainter as the distance from the sound source increases.</p> <p><b>Language Arts</b> Reviewing abbreviations of terms.</p> <p><b>ICT</b> The use of google maps</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**MEASUREMENT**

TOPIC/ CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Length	<ul style="list-style-type: none"> <li>Solve problems requiring conversion from larger to smaller metric units</li> <li>Solve problems requiring conversion from smaller to larger metric units</li> <li>Solve problems in real-life situations involving length</li> </ul>	<p>Students watch videos on the concept of conversion from smaller to bigger units</p> <p>Create word problems for students to solve based on the conversion of metric units</p> <p>Provide work cards for students to solve problems involving the conversion of units from small to bigger units</p> <p>Allow students to use practical situations to solve up to 2-step word problems.  <u>Example 1:</u> Josh is building a fence around the farm. The total length of the fence is 48 m. If he can finish building 8 m of fence in a day, how long will it take him to finish the fence?  <math>48 \div 8 = 6</math> It takes him 6 days to finish the fence.</p> <p><u>Example 2:</u> The distance between the school entrance to the library is 4.5 m, and the distance between the school entrance to the school office is 288 cm. Is the school entrance closer to the library or the school office?          6. <math>288 \text{ cm} = 2.88 \text{ m}</math> The school entrance is closer to the school office.</p>	<p>Measuring tape</p> <p>Rulers</p> <p>Whiteboard</p> <p>Math cards</p> <p>YouTube</p> <p>Work cards</p> <p>Laptop/Desktop</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Sentence Strips</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment</p> <p>Analysis of Student Work</p> <p>Strategic Questioning Strategies</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>One-Minute Papers</p>

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<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of perimeter</li> <li>Find the total distance around an object (perimeter)</li> <li>Estimate, measure, compare, and order the perimeter of regular polygons by measuring sides and given measurements</li> </ul>	<p>Introduce the concept of perimeter by having students walk around the classroom or quadrangle area of the schoolyard and count their steps as they go along. Engage students in a discussion on the number of steps taken would be the perimeter of the classroom.</p> <p>Students use rulers, metre sticks, or measuring tape to measure the distance around their books, desktops, tables, etc. Use these measurements to expose students to the formula for finding the perimeter of a square or rectangle, i.e., two lengths + two widths.</p> <p>Provide shapes of polygons cut from cardboard for students to measure and find the perimeter</p> <p>Create a perimeter lab with objects of different polygon shapes and sizes. Allow students to observe various polygons and make estimations regarding the perimeter.</p> <p>Students measure and record the perimeter of polygons. Using results, students compare and order measurements.</p> <p>Students use grid paper to draw, estimate, measure, compare and order polygons.</p>	<p>Polygon objects (books, boxes, etc.)</p> <p>Measuring tools. (rulers etc.)</p> <p>Polygons Template</p> <p>Game Cards</p> <p>Grid sheets</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Worksheet</p>	<p><b>Science</b> Measure the perimeter of a school garden.</p> <p><b>Art and Design</b> Draw various polygons on a grid and determine the perimeter.</p>	<p>Demonstration</p> <p>Observation</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p>

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<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Determine the perimeter of a figure made up of <math>1\text{cm}^2</math>, or <math>1\text{m}^2</math></li> <li>Differentiate between area and perimeter</li> <li>Estimate, measure, and compare the area of regular polygons by counting unit squares</li> </ul>	<p>Students use graph sheets with objects printed and compare the number of square units that make up the outline of each figure.</p> <p>Students construct shapes measuring 1 cm square and 1 m square to help visualize the perimeter of each.</p> <p>Through direct instruction, the teacher informs students that the Perimeter is the distance around the outside of a shape. Area measures the space inside a shape</p> <p>Students construct regular polygons shapes on a grid paper and estimate by counting unit squares. Students count squares and compare regular polygons on a grid paper or geo-board and determine the area of figures made of unit squares.</p> <p>Find the area for the rectangles</p> <p>■ = 1 square unit</p>  <p>Find the area of the shapes made on the geo-board by counting the number of squares in the shape.</p>	<p>Cut-out of Polygons</p> <p>Grid Paper</p> <p>Worksheet</p> <p>Geo-Board (nail, coloured rubber bands, and a block of wood.</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Worksheet</p>	<p><b>Social Studies</b> Discuss area of the TCI or other countries</p> <p><b>Art and Design</b> Students construct a model of a house using square units.</p> <p>Students use form and push pins to create a geoboard.</p>	<p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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<b>Mass/Weight</b>	<ul style="list-style-type: none"> <li>Distinguish between standard and non-standard units of measure of mass</li> <li>Investigate the mass of objects using phrases such as 'heavier,' 'lighter,' 'lightest.'</li> <li>State the relationship between the kilogram and gram</li> </ul>	<p>Engage students in a discussion on the difference between standard and non-standard units of measures in Mass.</p> <p>Students work in pairs and estimate, measure, and compare the mass of objects using improvised balance and non-standard units.</p> <p>Students work in small groups and compare the mass of objects using phrases such as light and heavy.</p> <table border="1"> <thead> <tr> <th rowspan="2">Objects</th> <th colspan="2">Non-standard (Mass)</th> </tr> <tr> <th>Light</th> <th>Heavy</th> </tr> </thead> <tbody> <tr> <td>Conch Shell</td> <td></td> <td></td> </tr> <tr> <td>Textbook</td> <td></td> <td></td> </tr> <tr> <td>Ruler</td> <td></td> <td></td> </tr> <tr> <td>Whiteboard Marker</td> <td></td> <td></td> </tr> <tr> <td>Pencil</td> <td></td> <td></td> </tr> </tbody> </table> <p>Use a kitchen scale to demonstrate how to measure an object. Students measure and compare objects and use phrases like heavier', 'lighter,' 'lightest.'</p> <p>Use the metric table and a video to help students understand the standard units of mass as kilogram &amp; gram.</p> <p>Use metric table to help students understand the relationship between the gram and the kilogram i.e. 1 kilo = 1 x 1000 = 1000g and 1 gram ÷ 1000 = .001 kilogram.</p> <p>Students use comparison (&lt;, &gt;, =) symbols to write number sentences.</p>	Objects	Non-standard (Mass)		Light	Heavy	Conch Shell			Textbook			Ruler			Whiteboard Marker			Pencil			<p>Beam balance</p> <p>Spring balance</p> <p>Objects</p> <p>Standard and non-standard units (scale, beam balance, cups, marbles)</p> <p>Worksheets</p> <p>YouTube</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b> Make improvised balance.</p> <p><b>Games</b> Use a see-saw to compare the mass of self with others.</p> <p><b>Language Arts</b> Comparison of adjectives e.g. light, lighter and lightest.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>
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<p><b>Mass/Weight</b></p>	<ul style="list-style-type: none"> <li>Select and justify the most appropriate standard unit for measuring mass/weight (kilogram, gram)</li> <li>Measure, record, compare, and order mass/weight using standard and non-standard units</li> <li>Show estimation, measurement, recording, and comparison of the mass of objects using standard units (kilogram)</li> </ul>	<p>Engage students in a discussion on the metric system of weight and let students identify the best unit for measuring the weight of given items.</p> <p>Students measure the weight of different objects in their environment and record the weights in standard unit order, e.g., a bag of sand weighs 3 kg 50g</p> <p>Students give an estimation of weights of different objects and then measure the weight to prove their accuracy.</p> <p>Students create a table for students to estimate the weight and then measure to find the actual weight.</p> <p>Students compare the estimated mass with the measured mass. Students use comparison symbols to write number sentences.</p> <p>Engage students in an activity that allows them to measure the mass of small objects using 100-gram and 10-gram masses.</p>	<p>Beam balance</p> <p>Spring balance</p> <p>Objects</p> <p>Standard and non-standard units (scale, beam balance, cups, marbles)</p> <p>Worksheets</p> <p>YouTube</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b> Students make balance beams using reusable materials e.g. a hanger to make a balance.</p> <p><b>Language Arts</b> Expository writing to compare and contrast mass.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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<p><b>Mass/Weight</b></p>	<ul style="list-style-type: none"> <li>Show estimation, measurement, recording, and comparison of the mass of objects using standard units (gram and milligram)</li> <li>Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram, or <math>\frac{1}{4}</math> kilogram</li> <li>Convert between units of mass (larger to smaller unit and vice versa), including fractional and decimal units</li> </ul>	<p>Students create a T-chart and include columns for estimation and measurement.</p> <p>Using different objects of different weights allows students to estimate, measure, record, and compare the weights of the objects.</p> <p>Weigh a set of objects with varying mass for students to get an idea of the weight of each to make approximations.</p> <p>Ask students to pick other weights provided and use their knowledge of the weights already weighed to estimate the mass of these objects before weighing them.</p> <p>Use a metric table to explain the process of conversion from one unit to the next. (see video) <a href="https://www.youtube.com/watch?v=eD2N4bh-JTw&amp;t=133s">https://www.youtube.com/watch?v=eD2N4bh-JTw&amp;t=133s</a></p> <p>Students cut out ads from magazines or newspapers containing items and their weights - and paste them onto sheets provided. Then write the weights in a column beside the object and convert the weight to a different unit.</p>	<p>Ads from Newspaper or magazines with weights</p> <p>YouTube</p> <p>Beam balance</p> <p>Spring balance</p> <p>Objects to weigh</p> <p>Worksheets</p> <p>YouTube</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Weights</p>	<p><b>Art and Design</b> Creating a collage with ads from magazines or newspaper</p> <p><b>Social Studies</b> Field trip to a supermarket/Vendor market to observe weighing of food items.</p> <p><b>Religious Education</b> Students discuss the meaning of "Leviticus 19:35-36"</p> <p><b>Science/STEM</b> Discuss weight and mass in relation to force.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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Mass/Weight	<ul style="list-style-type: none"> <li>Generate equivalent measures between kilogram and pounds</li> <li>Solve problems in real-life situations involving mass</li> </ul>	<p>Use whiteboard to explain that 1 kg = approximately 2.2 lbs. and 1 lb. = approximately 0.45 kg.</p> <p>Students complete worksheets that require them to make equivalent measures between kilograms and pounds.</p> <p>Students watch video on the process of conversion from pounds to kilograms and vice versa <a href="https://www.youtube.com/watch?v=Tuzq_ZpS4hM">https://www.youtube.com/watch?v=Tuzq_ZpS4hM</a></p> <p>Students collect items or pictures showing the weights of different items from the grocery store. Students find the total in pounds or kilograms and then try to convert the sum from lbs to kgs or kgs to pounds.</p> <p>Students attend a field trip to a farmer's market to estimate, measure, record, compare and purchase food items.</p> <p>Students solve word problems based on real-life situations involving mass.</p> <p>Students measure and read the mass of items from an analogue scale.</p>	<p>Ads from Newspaper or magazines with weights</p> <p>YouTube</p> <p>Beam balance</p> <p>Spring balance</p> <p>Objects to weigh</p> <p>Worksheets</p> <p>YouTube</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Weights</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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<p><b>Capacity</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of capacity</li> <li>Distinguish between standard and non-standard units of measure of capacity</li> <li>Know the relationships between the millilitre, litre, and kilolitre</li> <li>Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres)</li> </ul>	<p>Fill bottles or other containers for a display to demonstrate the concept of capacity.</p> <p>Using handful, scoops, and other non-standard units, students demonstrate how to measure water, juices, flour, or rice to determine the capacity of containers. Teacher Questions students using to compare estimate and measure rice, peas, beans, and corn. For example, how many 'handful' would I need to fill this container?</p> <p>Use metric system to show the standard units of capacity millilitre, litre, and kilolitre and their relation to each other.</p> <p>Students arrange containers in ascending and descending order according to their capacity.</p> <p>Set up a display of various containers that measure in both litres and millilitres for the student to observe. Show students various amounts of liquid and allow students to select and justify the appropriate standard unit for the capacity of liquids.</p> <p>Fill containers with liquid that vary in size. Students choose the appropriate standard unit for capacity using litres and millilitres.</p>	<p>Measuring cylinder</p> <p>Household containers. E.g., teaspoon, tablespoon, measuring cups</p> <p>Liquids and Solids.</p> <p>Teaspoons, tablespoons</p> <p>Labels from liquids: juice, milk, water</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Physical Education</b>                      Compete in water races to fill containers correctly.</p> <p><b>Science</b>                      Use measuring cylinders of different sizes to measure water correctly with respect to the meniscus</p> <p><b>Art and Design</b>                      Students to use materials of choice to creates scoops that can be used for measuring.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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<p><b>Capacity</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the concept of conversion of measurements between litres and millilitres</li> <li>• Estimate, measure, and record the capacity of containers using the litre as a unit of measure</li> <li>• Estimate, measure, and record the capacity of containers using the millilitre as a unit of measure</li> </ul>	<p>Students discuss the relationship between the litre, a half litre, and millilitre by using half-liter measures to fill a 1litre container.</p> <p>Students watch videos on capacity from litre to millimetre <a href="https://www.youtube.com/watch?v=b3rc1j-geuY">https://www.youtube.com/watch?v=b3rc1j-geuY</a></p> <p>Students write '&gt;' is greater than '&lt;' is less than '=' is equal to on statements.</p> <p>Students complete worksheets or problems on the board that requires students to convert between litres and millilitres.</p> <p>Create a T-Chart for students to fill out by first estimating the capacity of each container in litres and millilitres. Then, using measuring beakers, students prove their estimates and record the data.</p> <p>Students fill containers of different capacities and line up in front of the class. Students estimate, measure, and compare the contains of each container.</p> <p>Students use appropriate measuring equipment and tools to measure the capacity.</p>	<p>Measuring cylinder</p> <p>Household containers. E.g., teaspoon, tablespoon, measuring cups</p> <p>Liquids and Solids.</p> <p>Teaspoons, tablespoons</p> <p>Labels from liquids: juice, milk, water</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Music</b> Fill bottles with different quantities to create a modulation table.</p> <p><b>Science</b> Disucss different frequencies.</p> <p>Student engage in wáter purification experiments.</p> <p><b>Language Arts</b> Students create a questionirre to interview the personal at the wáter plant.</p>	<p>Demonstration</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

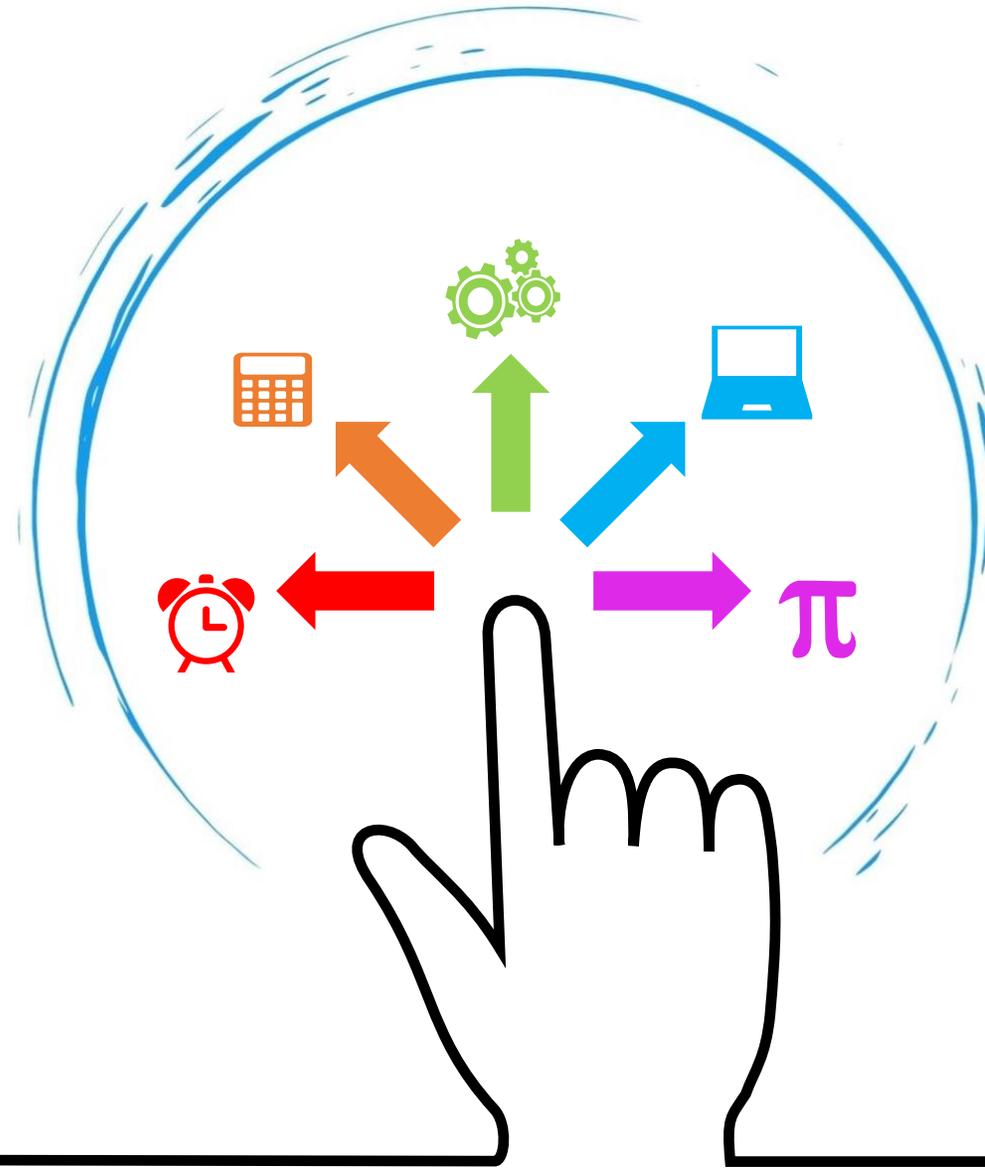
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Capacity</b>	<ul style="list-style-type: none"> <li>Approximate measures to the nearest litre</li> <li>Compare similar capacity of liquids given in various standard units of capacity</li> <li>Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li> <li>Solve problems in real-life situations involving capacity</li> </ul>	<p>Students estimate and prove measures in capacity.</p> <p>Demonstrate how one litre of water can fill smaller bottles to determine how many small bottles equal 1 litre. Allow students to compare similar situations using various standard units of capacity.</p> <p>Create math cards for students to pick randomly and convert from litres to ml and vice versa.</p> <p>Use the class shop to allow students to work out the cost of items when given the price of one unit. Example: 4.5 litres of gas = \$4.99, approximately how much gas can \$20 provide? Ansa: 18 Litres of gas</p> <p>Plan a class trip to the service. Students see how gasoline or diesel oil is pumped and sold.</p> <p>Students determine the cost for a fill-up at the gas station given the cost of one litre of gasoline</p> <p>Calculate water bills based on price per litre and consumption.</p>	<p>Math cards</p> <p>Class shop</p> <p>Water</p> <p>Varying sizes containers</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Equivalent Chart</p>	<p><b>Social Studies</b> Field trip to water treatment plant to observe and find out the amount of water pumped into various communities weekly.</p> <p><b>Art and Design</b> Create a model of water treatment plant.</p> <p><b>Science</b> Students apply the knowledge and thinking skills of capacity to engage in experiments</p>	<p>Demonstration</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

# GRADE 4

## Term 3

**Strands:** Measurement; Geometry; Statistics and Data Handling

**Theme:** Introduction to Fishing



Term: 3

Curriculum Theme: **Introduction to Fishing**

Aim: The aim of this theme is to equip students with basic skills in fishing

Project Criteria:

1. Select appropriate bait, tools and materials needed for fishing
2. Assembly basic gear for fishing
3. Demonstrate one simple fishing knot
4. Perform one fishing technique
5. Follow all health and safety tips for fishing

Suggested assignments/activities

- Teacher-led discussion on types of bait used in fishing.
- Visual display of tools and materials - discussion on purpose of them.
- Matching exercise on tools and materials using images and their names.
- In groups, students list the tools and materials needed
- Teacher-led demonstration on assembling fishing gear.
- Special guest (fisherman) to discuss basic skills/techniques used when fishing
- Show video on how to assemble basic gear
- Visual activity involving various types of lines and hooks (Displays, Images and videos)
- Scrapbook of tools and materials needed for fishing
- Fieldtrip to various fishing location/hotspots and fishing plants
- Practical: Assemble fishing gear, demonstrate fishing knot and fishing techniques
- Group discussion on health and safety tips to follow when fishing.
- Role-play activities for students to practice fishing techniques.
- Teacher-led discussion on cleaning, packaging and storing fish.
- Assessment – one-on-one discussion with the teacher, through completing a worksheet and student demonstrations
- Assessment feedback, review and evaluation of theme.
- **CPEA Project Rubric**

## STRAND: MEASUREMENT

SUB-STANDS	TARGETS
Volume	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Understand the concept of volume</li><li>● Investigate the relationship and differences between volume and capacity</li><li>● Measure, record, compare and order the volume of objects using non-standard units.</li><li>● Understand that cubic centimetre and cubic metre (cm<sup>3</sup> and m<sup>3</sup>) as the standard units for measuring volume.</li><li>● Explore the concept of volume, using centimetre cubes (cm<sup>3</sup>)</li><li>● Visualize a solid that is made up of unit cubes and state its volume in cubic units</li><li>● Visualize the sizes of 1 cubic centimetre, 1 cubic decimetre and 1 cubic metre</li><li>● Determine the volume of a solid made up of 1 centimetre or 1 meter cubes</li></ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 4 STRUCTURE

TERM 3

## STRAND: GEOMETRY

SUB-STANDS	TARGETS
Lines/ Line Segments	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Understand basic geometric ideas: point, line, line segments, ray, plane, angle.</li> <li>● Recognize and construct horizontal, vertical line segments and curves</li> </ul>
Angles	<ul style="list-style-type: none"> <li>● Understand the concept of an angle</li> <li>● Recognize and construct acute, right, obtuse (reflex) angles</li> <li>● Compare and order angles less than, greater than or equal to <math>90^\circ</math> from different orientations.</li> <li>● Demonstrate an understanding of the concept of angles by identifying angles in plane figures</li> <li>● Solve problems involving angles</li> </ul>
2- Dimensional / Plane Figures	<ul style="list-style-type: none"> <li>● Recognize and compare two- dimensional figures (polygons up to 10 sides) and explore their properties</li> <li>● Characterize 2-D geometric figures into appropriate subsets (categories) based characteristics (number of sides, vertices, angles, etc.)</li> <li>● Use the properties of squares and rectangles to find unknown lengths</li> <li>● Contrast the meaning of a circle as a curve and as a two dimensional region</li> <li>● Investigate the parts of a circle and identify the relationships that exist between them</li> <li>● Explain the concept of 'circumference of a circle'</li> <li>● Developing an understanding on how to construct circles</li> <li>● Recognize, create and complete patterns using plane shapes (repeating, growing or increasing and decreasing patterns).</li> </ul>
3- Dimensional Figures/ Solids	<ul style="list-style-type: none"> <li>● Understand the concept of 3-dimensions (3D)</li> <li>● Recognize, name, compare and construct three- dimensional figures according to their properties (cubes, cuboids, cones, cylinders and spheres)</li> <li>● Characterize 3-D geometric figures into appropriate subsets (categories) based characteristics (number of faces, edges and vertices)</li> <li>● Recognise two-dimensional figures the make up the faces of three-dimensional figures</li> <li>● Explore and construct prisms (cubes and cuboids) by outlining their properties and nets.</li> <li>● Create and solve problems based on the properties of 3D shapes and their nets</li> <li>● Recognize, create and complete patterns using solids (repeating, growing or increasing and decreasing patterns).</li> </ul>
Transformation	<ul style="list-style-type: none"> <li>● Explore the ideas of symmetry in geometric figures and shapes</li> <li>● Develop an understanding of line symmetry</li> <li>● Recognize and construct a line of symmetry in plane figures</li> <li>● Recognize congruence in simple plane figures</li> <li>● Describe the location and properties of geometric shapes after a slide, flip or turn</li> <li>● Understand how to use tessellation to create new shapes and pattern</li> </ul>

This curriculum serves as a guide for teaching & learning in the Turks and Caicos Islands; teachers have the autonomy to make adjustments where necessary. 168

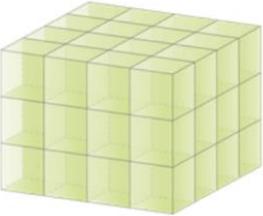
## STRAND: STATISTICS AND DATA HANDLING

SUB-STANDS	TARGETS
Data Representation	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Discuss the concept of data collection and data representation</li><li>● Discuss most suitable methods for collecting and representing data</li><li>● Discuss characteristics of sampling techniques</li><li>● Collect data through observation, interviews and simple questionnaires</li><li>● Demonstrate the use of tally chart and tables to organize data</li><li>● Present data in pictographs, bar graphs, line graphs, pictographs and pie charts.</li><li>● Convert a pictograph into a bar graph or vice versa</li><li>● Read and interpret pictographs (including interpreting scales used in pictographs), tables, Pie charts, line graphs and bar graphs</li><li>● Make informed decisions based on data analysed.</li><li>● Identify patterns, describe and predict outcomes from data collected.</li><li>● Find and interpret the mode and median of a set of data</li></ul>

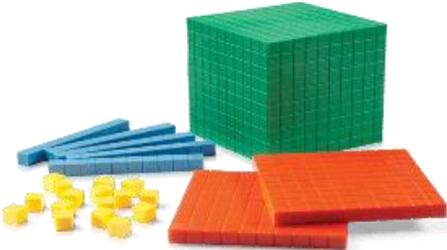
**MEASUREMENT**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of volume</li> <li>Investigate the relationship and differences between volume and capacity</li> <li>Measure, record, compare, and order the volume of objects using non-standard units.</li> </ul>	<p>Teacher uses measuring cups or beakers to show the relationship between capacity and volume. Teacher explains capacity as the amount a container can hold and volume as the amount of space a liquid takes up.</p> <p>Students watch a video on the difference between the volume and the capacity. <a href="https://www.youtube.com/watch?v=GKCE8ohIBqE">https://www.youtube.com/watch?v=GKCE8ohIBqE</a></p> <p>Students use a graphic organizer, i.e., Venn diagram, to compare and contrast capacity and volume.</p> <p>Use various sizes of glasses, bowls, and bottles to determine the volume of a selected container.</p> <p>Arrange containers in ascending and descending order according to the container's volume.</p> <p>Using images of containers projected on the Whiteboard, compare the volume of each using non-standard units. CIRCLE THE ONE WITH THE LESS VOLUME.</p> 	<p>Water</p> <p>Varying sizes containers</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Equivalent Chart</p>	<p><b>Language Arts</b> Utilizing semantic mapping, students expand their vocabulary of capacity and volume.</p> <p><b>Science/ Language Arts</b> Students describe the physical properties of objects in their surrounding e.g water bottles.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Understand that cubic centimetre and cubic metre (cm<sup>3</sup> and m<sup>3</sup>) as the standard units for measuring volume</li> <li>Explore the concept of volume using centimetre cubes (cm<sup>3</sup>)</li> <li>Visualize a solid that is made up of unit cubes and state its volume in cubic units</li> </ul>	<p>Use the whiteboard to explain the formula for finding the volume of different shaped containers such as cuboids or cubes.</p> <p>Engage students in a discussion on the concept of three-dimensional objects such as height, width, length, and why volume is given in cube units, e.g., cm<sup>3</sup>, m<sup>3</sup>, etc.</p> <p>Demonstrate ways to determine volume.</p> <p>Students copy notes into their books on volume. E.g. find the volume of a cuboid with length 10cm, height 7cm and width of 8 cm: volume of cylinder = l x w x h = 10 x 8 x 7 = 560cm<sup>3</sup></p> <p>Students watch an appropriate video about volume and discuss.</p> <p>Provide students with various figures to find the volume using identify measurements.</p> 	<p>Whiteboard</p> <p>Cuboid containers or objects</p> <p>YouTube</p> <p>Ruler</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Science</b> Research the average volume of blood in the human body</p> <p><b>Art and Design</b> Draw and make 3-D shapes and determine the volume based on given measurements.</p>	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p>

**MEASUREMENT**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Visualize the sizes of 1 cubic centimetre, 1 cubic decimetre, and 1 cubic metre</li> <li>Determine the volume of a solid made up of 1 centimetre or 1-meter cubes</li> </ul>	<p>Students measure concrete objects such as board blocks, boxes, cupboards to get a visual understanding of cubic centimetre, cubic decimetre, or cubic metre.</p> <p>Students use the concept of cubic units to estimate and determine the volume of different solids provided.</p> <p>Provide picture cards with word problems for students to work out the volume of each object presented on the cards they are given.</p> <p>In groups, allow students to use building blocks of similar sizes to create bigger boxes and count the number of blocks to determine the volume of the new solid formed.</p> 	<p>Building blocks</p> <p>Concrete objects such as concrete blocks, boxes, cupboards, etc.</p> <p>Picture cards</p> <p>Fold geometric shapes</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b>                  Create and design picture cards</p> <p><b>Language Arts</b>                  Create word problems for picture cards</p>	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p>

**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Lines/ Line Segments</b></p>	<ul style="list-style-type: none"> <li>Understand basic geometric ideas: point, line, line segments, ray, plane, angle</li> <li>Recognize and construct horizontal and vertical line segments</li> </ul>	<p>Use geometrics to introduce geometric ideas: point, line, line segments, ray, plane, angle.</p> <p>Engage students in a matching exercise to identify basic geometric ideas: point, line, line segment, ray, plane, angle.</p> <p>Using Mimio, students draw and explain basic geometric ideas/concepts. Students discuss types of lines. Students label worksheets outlining types of lines (horizontal, vertical, oblique, parallel, perpendicular) to help identify each.</p> <p>In pairs, students use the Think-Pair-Share strategy to think and draw types of lines. Students describe each type in pairs and share the comparison to different lines with classmates.</p> <p>Students use Wikki Stix (yarn coated in wax) to form different types of lines.</p> <p>Students combine geometric ideas to draw shapes and present them to the class, outlining the ideas/ concepts used.</p>	<p>Shapes</p> <p>Tangrams</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>MIMIO</p> <p>YouTube</p> <p>Wikki Stix</p> <p>Worksheets</p> <p>Workbook</p> <p>Internet Access</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b>                  Draw selected geometric symbols</p> <p>Draw scenes from the environment, making use of points and line segments.</p> <p><b>Social Studies</b>                  Discuss vertical and horizontal lines (Latitude and longitude) on a Map of the world.</p> <p><b>Science</b>                  Understand that light travels in straight lines                  Discuss horizontal and vertical motions.</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Angles</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of an angle</li> <li>Recognize and construct acute, right, obtuse (reflex) angles</li> <li>Compare and order angles less than, greater than or equal to 90° from different orientations</li> </ul>	<p>Engage students in a discussion on the term angles and types of angles.</p> <p>Help students understand degrees (°) as the term used in measuring angles. Use the geometric chart already established to remind students how an angle is formed.</p> <p>Teacher uses the whiteboard to show them different types of angles such as acute, obtuse, and reflex angles while outlining their features. Using the Smartboard, students name angles within shapes or objects.</p> <p>Provide students with tangrams and ask students to identify and name different types of angles (acute, right, obtuse, straight, reflex) within each shape.</p> <p>Using the Smartboard, show students the correct use of rulers and protractors to form angles. In pairs, students use rulers and protractors to draw types of angles.</p> <p>Students compare angles to 90° angles from different orientations using comparative signs &lt;, &gt; or =.</p> <p>Use two strips of cardboard joined by a paper fastener to show right angles. Students pinpoint right angles, angles more than a right angle and angles less than a right angle from a given set of angles.</p>	<p>Fudge sticks</p> <p>Whiteboard</p> <p>Geometric chart</p> <p>Cardboard</p> <p>Paper Fasteners</p> <p>YouTube</p> <p>Wikki Stix</p> <p>Worksheets</p> <p>Workbook</p> <p>Internet Access</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b></p> <p>Use popsicle sticks to create each type of angle and display it on a poster.</p> <p>Create clocks and form angles using the hands.</p> <p><b>Physical Education/ Science</b></p> <p>Use arms to demonstrate a right angle, an angle greater than and less than a right angle.</p> <p>Students engage in nature walks and identify and name different angles in the environment.</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

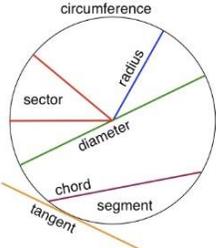
**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES																
<p><b>Angles</b></p>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of the concept of angles by identifying angles in plane figures</li> <li>Solve problems involving angles</li> </ul>	<p>Show students how to manipulate angles to create various shapes.</p> <p>Construct right angles by paper folding and tracing lines. Using the paper right angle to identify right angles from objects in the environment</p> <p>Allow students to observe plain figures in the classroom and point out different angles formed on each figure e.g.</p> <table border="1"> <thead> <tr> <th>Shape</th> <th>Number of Angles</th> </tr> </thead> <tbody> <tr> <td> Circle</td> <td>0</td> </tr> <tr> <td> Triangle</td> <td>3</td> </tr> <tr> <td> Square</td> <td>4</td> </tr> <tr> <td> Rectangle</td> <td>4</td> </tr> <tr> <td> Rhombus</td> <td>4</td> </tr> <tr> <td> Pentagon</td> <td>5</td> </tr> <tr> <td> Hexagon</td> <td>6</td> </tr> </tbody> </table> <p>Create word problems for students to solve based on angles using the different operations.</p> <p>Students complete tables that require the number of angles found in various shapes.</p>	Shape	Number of Angles	 Circle	0	 Triangle	3	 Square	4	 Rectangle	4	 Rhombus	4	 Pentagon	5	 Hexagon	6	<p>Plane figures cut-out</p> <p>YouTube</p> <p>Wikki Stix</p> <p>Worksheets</p> <p>Workbook</p> <p>Internet Access</p> <p>Whiteboard</p> <p>Smartboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>
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**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognize and compare two-dimensional figures (polygons up to 10 sides) and explore their properties</li> <li>Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics (number of sides, vertices, angles, etc.)</li> <li>Use the properties of squares and rectangles to find unknown lengths</li> </ul>	<p>During round table talk, discuss polygons and the meaning of a 2-dimensional figure as any figure with length and width.</p> <p>Display a chart with polygons and allow students to identify the names and point out different properties about them. i.e., such as the # of sides and # of angles.</p> <p>Students use popsicle sticks to create polygons up to twelve sides</p> <p>Engage students in a discussion on the term vertex as the point where two lines meet to form an angle and the corners of polygons and polyhedral. Students point out different vertices on each figure given.</p> <p>Engage students in a discussion while utilizing the Smartboard, where each type of triangle's properties is examined.</p> <p>Students take part in field trips and identify triangles (scalene, isosceles, equilateral, and right-angle triangles) in their environment.</p> <p>In pairs, students create columns and characterize 2-D shapes based on # of sides, # of angles, # of vertices. Students complete problems with given perimeters and unknown lengths by adding the known sides, subtracting the lengths from the perimeter, and dividing the difference by 2.</p>	<p>Polygons Chart</p> <p>Shapes</p> <p>Tangrams</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>Geoboard</p> <p>Rubber bands</p> <p>Cardboard</p> <p>Worksheets</p> <p>Workbook</p> <p>Internet Access</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b>                  Allow students to analyse 2-D figures and write at least three sentences describing their features.</p> <p>Match each triangle to its description picture</p> <p><b>Art and Design</b>                  Draw and cut out polygons from cardboard.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>● Contrast the meaning of a circle as a curve and as a two-dimensional region</li> <li>● Investigate the parts of a circle and identify the relationships that exist between them</li> <li>● Explain the concept of 'circumference of a circle.'</li> <li>● Developing an understanding of how to construct circles</li> <li>● Recognize, create and complete patterns using plane shapes (repeating, growing, or increasing and decreasing patterns)</li> </ul>	<p>Students discuss the meaning of the circle as a closed curve. They use strings to demonstrate on a Geo-board.</p> <p>Use diagrams to show the different parts of the circle and explain the relationship between them. E.g., the diameter = 2 of the radius, so we can use the radius to find the diameter by multiplying by 2.</p>  <p>Students watch videos to help them label the part of a circle.</p> <p>Use strings to demonstrate the circumference of a circle. Students to practice tracing and labelling the parts of a circle.</p> <p>Student watch YouTube videos on how to construct a circle without using a compass</p> <p>Demonstrate the process of using plain shapes to create patterns using cloth material or paper. Allow students to create patterns using repeated rectangles or squares.</p>	<p>Diagrams of triangle, rectangle, square, trapezium</p> <p>Diagram showing parts of a circle</p> <p>Strings</p> <p>YouTube</p> <p>Cloth material</p> <p>Plain paper</p> <p>Pencils</p> <p>Crayons</p> <p>Markers</p> <p>Geometric shapes</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b> Using strings and beads, create a friendship bracelet</p> <p>Make designs with strings.</p> <p>Design patterns using repeated shapes</p> <p><b>Science/STEM</b> Students discuss the effects of forces (including magnetic) on the motion and shape of objects</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

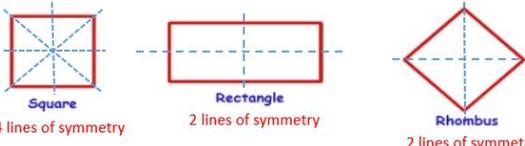
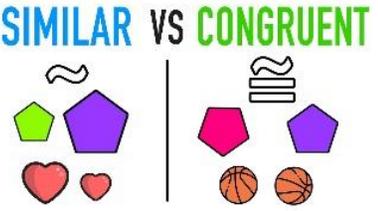
**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of 3-dimensions (3D)</li> <li>Recognize, name, compare and construct three- dimensional figures according to their properties (cubes, cuboids, cones, cylinders, and spheres)</li> <li>Characterize 3-D geometric figures into appropriate subsets (categories) based on characteristics (number of faces, edges, and vertices)</li> </ul>	<p>Students review the concept of 3-dimensions.</p> <p>Engage in discussion on 3 - D shapes with three different measurements such as height, length, and width. Display various 3-D figures around the class. Students pinpoint, name, and compare figures based on their properties.</p> <p>Students complete a solid figures (cube, rectangular prism, cuboid, cone, sphere, cylinder) matching exercise on the Smartboard.</p> <p>Students watch a video to show a demonstration of 3D drawing and create drawings and models of figures</p> <p>Students work in pairs and use rulers to construct 3-D figures such as cubes, cuboids, cones, cylinders, and spheres.</p> <p>Using the Smartboard complete a table that summaries properties of 3D figures Provide students with a T-chart to determine the number of faces, edges, and vertices present on 3- D figures.</p> <p>Students take a tour of the school and identify solid figures in the environment. Students make models of solids and describe the faces, edges, vertices, and shapes in the model.</p>	<p>YouTube: <a href="https://www.youtube.com/watch?v=W4t8ZxczCQ">https://www.youtube.com/watch?v=W4t8ZxczCQ</a></p> <p>Rulers</p> <p>Display boards</p> <p>Tangrams</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>Nets of solid</p> <p>Magnetic blocks</p> <p>Magnetic sticks</p> <p>Magnetic shape</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Art and Design</b> Draw and design 3 -D shapes.</p> <p><b>Social Studies</b> Review landmarks and identify various 3- D shapes.</p> <p><b>Science/STEM</b> Engage in a science project that requires building 3d structures and shapes.</p> <p><b>Language Arts</b> Students deliver an oral presentation on one of the 3D shapes.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

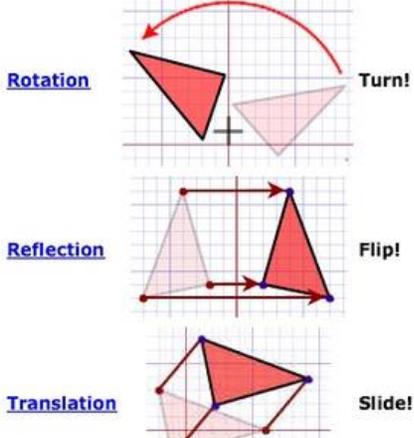
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognise two-dimensional figures that make up the faces of three-dimensional figures</li> <li>Explore and construct prisms (cubes and cuboids) by outlining their properties and nets</li> <li>Create and solve problems based on the properties of 3D shapes and their nets</li> <li>Recognize, create and complete patterns using solids (repeating, growing, or increasing and decreasing patterns)</li> </ul>	<p>Display chart with 3-D objects and ask students to study each figure and try to identify the 2-D shape found on each of the faces of the 3-D objects.</p> <p>Allow students to play games in pairs and name the different shapes found in a cube, cuboid, cone, and cylinders.</p> <p>Use interactive video to show students how a net is formed from a 3-D object <a href="https://www.geogebra.org/m/pCv2EvwD">https://www.geogebra.org/m/pCv2EvwD</a> Cut open cardboard boxes to demonstrate to students the concept of finding the net of 3-D objects.</p> <p>Provide students with blank sheets for them to draw nets and close them to form a 3-D shape.</p> <p>Allow students to review various nets and select the correct net that matches the shape and vice versa.</p> <p>Allow students to use building blocks or Legos to create patterns forming 3-D solids of different shapes and sizes. Eg.</p> <p>Students create, continue or complete incomplete patterns using solids.</p>	<p>Display chart with 3-D objects</p> <p>Cardboard boxes</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>Nets of solid</p> <p>Magnetic blocks</p> <p>Magnetic sticks</p> <p>Magnetic shape</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>ICT</b> Watching and manipulating interactive video</p> <p>Allow students to generate patterns and share them with classmates to complete.</p> <p><b>Art and Design</b> Create or complete patterns using 3D shapes.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Explore the ideas of symmetry in geometric figures and shapes</li> <li>Develop an understanding of line symmetry</li> <li>Recognize and construct a line of symmetry in plane figures</li> <li>Recognize congruence in simple plane figures</li> </ul>	<p>Use plain sheets of paper/ cut-outs to show students the concept of a line of symmetry by folding the paper. Using geo-shapes and whiteboard markers allows students to work in small groups to locate the lines of symmetry.</p>  <p>Allow students to complete worksheets of different plane shapes for students to manipulate by drawing the lines of symmetry.</p> <p>Engage students in a discussion on the difference between congruence and similarity.</p>  <p>Using the Smartboard, display various shapes and congruent of those shapes. Discuss how to recognize congruence by comparing each side and angle of two figures to see if all aspects of both are the same.</p>	<p>Sheets of paper</p> <p>Worksheets with shapes</p> <p>Pairs of Solid shapes</p> <p>Whiteboard</p> <p>Workbooks</p> <p>Online Activities</p> <p>YouTube</p> <p>Smartboard</p> <p>Computer</p> <p>Ruler</p> <p>Pencil</p>	<p><b>Religious Education</b> Use the story of Moses parting the Red Sea as a prerequisite to teaching lines of symmetry.</p> <p><b>Science</b> Discuss with students the correspondence of body parts, size, shape, and relative position on opposite sides of a dividing line or distributed around a central point or axis in plants and animals.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**GEOMETRY**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Describe the location and properties of geometric shapes after a slide, flip or turn</li> <li>Understand how to use tessellation to create new shapes and pattern</li> </ul>	<p>Students place pairs of shapes symmetrically on each other.</p> <p>Demonstrate how to perform transformation moves by flipping at point, sliding, or turning the object on top to bring concepts such as rotate, translate reflection.</p>  <p><b>Rotation</b> Turn!</p> <p><b>Reflection</b> Flip!</p> <p><b>Translation</b> Slide!</p> <p>Students make similar shapes from cardboard and demonstrate the process of flip, slide, and turn.</p> <p>Students brainstorm and discuss the new location of the objects moved, e.g., a flip gives a reflection with a line of symmetry.</p> <p>In groups, students draw and cut shapes of similar sizes and paste them to create a pattern of tessellation</p>	<p>Sheets of paper</p> <p>Worksheets with shapes</p> <p>Pairs of Solid shapes</p> <p>Whiteboard</p> <p>Workbooks</p> <p>Online Activities</p> <p>YouTube</p> <p>Smartboard</p> <p>Computer</p> <p>Ruler</p> <p>Pencil</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**STATISTICS AND DATA HANDLING**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>Discuss the concept of data collection and data representation</li> <li>Discuss most suitable methods for collecting and representing data</li> <li>Discuss characteristics of sampling techniques</li> </ul>	<p>Open a class discussion on how data is collected through different methods (interviews, questionnaires, archives, etc.) and how it is represented. Provide students with examples on the White Board.</p> <p>Display to students some ways in which data can be represented. E.g., using tables and graphs such as pie graph, bar graph, line graph, tally, etc.</p> <p>Pose various scenarios to students on the needed data and discuss the most suitable method for collecting and representing that data.</p> <p>Engage students in a discussion on the difference between population and sample.</p> <p>Use direct instruction to teach students sampling techniques. Refer to the process of gaining information about the population without necessarily surveying or interviewing the entire population.</p> <p>Using the school as an example, discuss sampling suggestions with students based on the data to be collected.</p> <p>Students watch videos on data collection.</p> <p>Teacher explains to students how data is collected and organized.</p>	<p>Pictures or chart with different types of graph</p> <p>Videos on data collection and representation</p> <p>hand-outs</p> <p>PowerPoint</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b></p> <p>Select an appropriate method for data collection and representation based on the data needed from a topic in Social Studies.</p> <p><b>ICT</b></p> <p>Students taught to use computer software's to represent data. "Excel"</p> <p><b>Art and Design</b></p> <p>Use drawing to Represent data using drawings</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p>

**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES																		
<b>Data Representation</b>	<ul style="list-style-type: none"> <li>Collect data through observation, interviews, and simple questionnaires</li> <li>Demonstrate the use of tally chart and tables to organize data</li> </ul>	<p>Students formulate questions that require data collection, e.g., What is the favorite subject of each student in the class? Help students prepare questionnaires to conduct interviews using Google or Microsoft forms, monkey survey, etc.</p> <p>Students participate in a field trip inside and outside of school to collect data.</p> <p>Demonstrate to students how to represent the data in tally form, tables, or organized lists. In pairs, students organize data.</p> <table border="1"> <thead> <tr> <th>Method of Travel</th> <th>Tally</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Walk</td> <td>    </td> <td>9</td> </tr> <tr> <td>Bike</td> <td>   </td> <td>3</td> </tr> <tr> <td>Car</td> <td>      </td> <td>6</td> </tr> <tr> <td>Bus</td> <td>           </td> <td>12</td> </tr> <tr> <td colspan="2">TOTAL</td> <td>30</td> </tr> </tbody> </table> <p>Students use the information given on table and tally charts to complete pictographs and bar charts.</p> <p>Assist students in selecting the appropriate scales for constructing their graphs, i.e., a scale of 1 cm apart for each number.</p>	Method of Travel	Tally	Frequency	Walk		9	Bike		3	Car		6	Bus		12	TOTAL		30	<p>Tally table</p> <p>Questionnaire</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Internet</p> <p>Images</p>	<p><b>Language Arts</b></p> <p>Formulate questions for interviews</p> <p>Use line graphs to tell stories.</p> <p><b>Science</b></p> <p>Collect data and record information on a table.</p> <p><b>Social Studies</b></p> <p>Collect data and present information using tally charts and tables.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p>
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**STATISTICS AND DATA HANDLING**

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<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>Present data in pictographs, bar graphs, line graphs, pictographs, and pie charts.</li> <li>Convert a pictograph into a bar graph or vice versa</li> <li>Read and interpret pictographs (including interpreting scales used in pictographs), tables, Pie charts, line graphs, and bar graphs</li> </ul>	<p>Use the whiteboard to help students understand how to construct different types of graphs.</p> <p>Students use different types of graphs to present data on a particular topic.</p> <p>Students collect data and display information on simple pictographs and bar graphs.</p>  <p>Demonstrate on the Smartboard/Whiteboard how to transform a pictograph into a bar graph and vice versa.</p> <p>Using the Think-Pair-Share strategy, students interpret presented data in pictographs, tables, Pie charts, line graphs, and bar graphs</p> <p>Read and interpret data on simple pictographs, bar graphs (horizontal and vertical), line graphs, and pie charts.</p> <p>Students read and interpret data on pictographs and bar graphs where a single picture or bar represents two objects.</p>	<p>Diagrams of bar graphs and pictographs</p> <p>Whiteboard</p> <p>Work cards</p> <p>Tally table</p> <p>Questionnaire</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b> Present Data collected during social studies class.</p> <p><b>Language Arts</b> Report findings to the class using the technical language of mathematics.</p> <p><b>Science</b> Use images of animals, body parts, or plants in pictographs.</p> <p><b>ICT</b> Use spreadsheet software to generate data in graphs.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p> <p>Writing Portfolio</p>

**STATISTICS AND DATA HANDLING**

TOPIC/ CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>● Make informed decisions based on data analysed</li> <li>● Identify patterns, describe and predict outcomes from data collected</li> <li>● Find and interpret the mode and median of a set of data</li> </ul>	<p>Students formulate questions for their classmates to complete from bar charts, pictograms, and tables to include ‘How many more’ and ‘how many fewer?’</p> <p>Provide students with a list of questions to complete from a graph.</p> <p>Students solve comparison, sum, and difference problems using information presented in bar charts, pictograms, tables, and other graphs. Double bar graphs can be used to compare two sets of data.</p> <p>Engage students in a discussion about predicting outcomes using a pattern of events to decide what happens next.</p> <p>Students represent this information on a bar graph and use the pattern to predict whether rain will fall the next day.</p> <p>Engage students in a table talk discussion the mean as the average of a set of numbers, the mode is the number that occurs most often, and the median is the middle number of the list of numbers in a data</p> <p>Create math cards with problems based on the mean, mode, and median of a data set for students to complete in groups</p>	<p>Diagrams of bar graphs and pictographs</p> <p>Whiteboard</p> <p>Work cards</p> <p>Tally table</p> <p>Questionnaire</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Writing portfolio</p> <p>Pre-assessment</p> <p>Project (Research)</p>

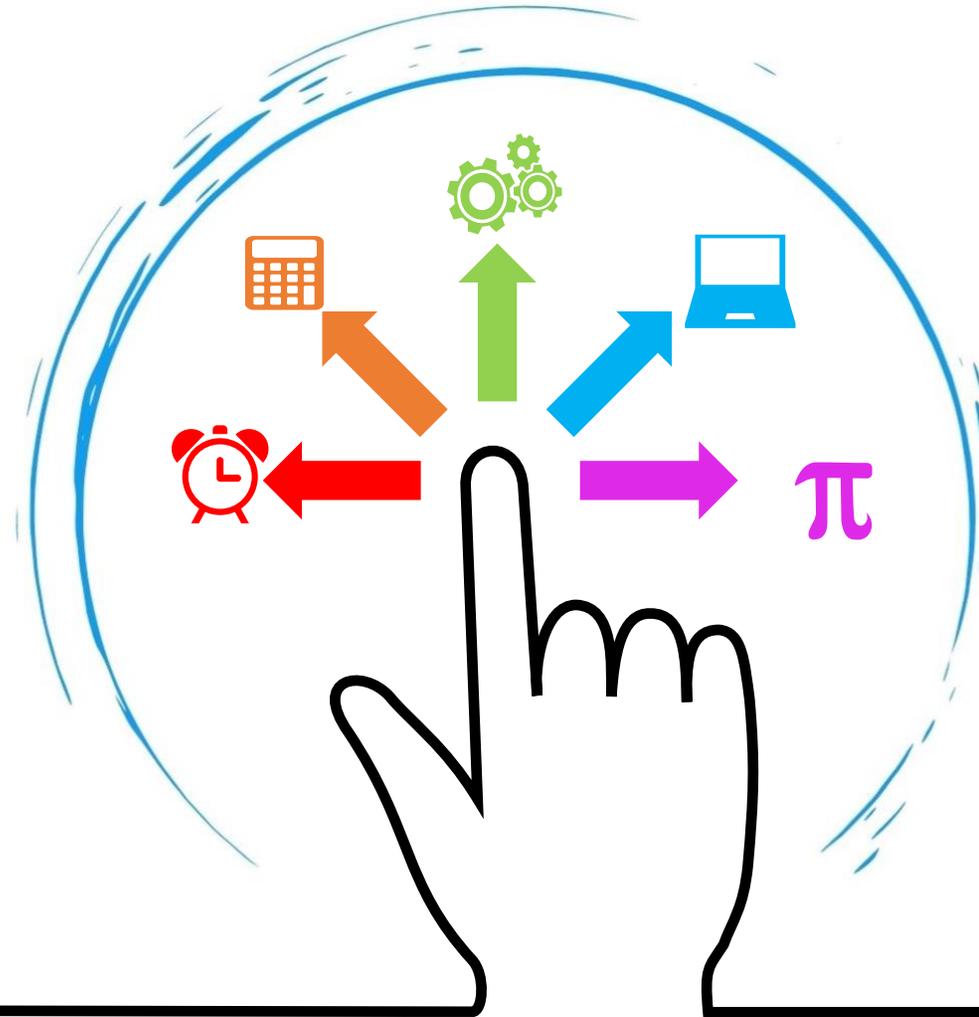
	Term 1	Term 2	Term 3
<b>G R A D E  5</b>	<b>NUMBER CONCEPTS:</b> <ul style="list-style-type: none"> <li>• Number and Number Sense</li> <li>• Place Value and Rounding</li> <li>• Factors and Multiples</li> <li>• Number Relationships and Sets</li> <li>• Number Patterns</li> <li>• Exponential / Scientific Form</li> <li>• Algebraic Expressions</li> <li>• Roman Numerals</li> </ul>	<b>NUMERATION AND COMPUTATION</b> <ul style="list-style-type: none"> <li>• Decimals</li> </ul>	<b>MEASUREMENT:</b> <ul style="list-style-type: none"> <li>• Volume</li> </ul>
	<b>NUMERATION AND COMPUTATION</b> <ul style="list-style-type: none"> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> <li>• Average</li> <li>• Fractions</li> </ul>	<b>CONSUMER MATH:</b> <ul style="list-style-type: none"> <li>• Money</li> </ul>	<b>GEOMETRY:</b> <ul style="list-style-type: none"> <li>• Lines/ Line Segments</li> <li>• Angles</li> <li>• 2- Dimensional / Plane Figures</li> <li>• 3- Dimensional Figures/ Solids</li> <li>• Transformation</li> </ul>
		<b>MEASUREMENT:</b> <ul style="list-style-type: none"> <li>• Time</li> <li>• Temperature</li> <li>• Length</li> <li>• Area and Perimeter</li> <li>• Mass/Weight</li> <li>• Capacity</li> </ul>	<b>STATISTICS &amp; DATA HANDLING:</b> <ul style="list-style-type: none"> <li>• Data Representation</li> <li>• Statistics</li> <li>• Probability</li> </ul>

# GRADE 5

## Term 1

Strands: Number Concepts; Numeration and Computation

Themes: Tourist Destinations; Growing Food



Term: 1

Curriculum Theme: **Tourist Destinations**

Aim: In this theme, students will research Turks and Caicos Islands as a tourist destination and gain an understanding of the facilities and attractions.

Project Criteria:

1. Identify the Turks and Caicos Islands as the tourist destination to research
2. Identify different methods of transport in the area and accommodations
3. Identify areas of interest, attractions and facilities of the chosen tourist destination
4. Identify the advantages and disadvantages of the tourist destination
5. Provide evidence of the research methods used to collect information on the chosen destination
6. Present information on Turks and Caicos as a tourist destination using visual aids
7. Answer questions about Turks and Caicos as a tourist destination
8. Ask questions about other students' presentations

Suggested assignments/activities

- Teacher-led activity – who has been where? Create map of destinations visited.
- Teacher-led discussion – ‘What are tourist destinations?’ Factors to think of when deciding a tourist destination and where to find the necessary information. Introduction to holiday brochures, leaflets, websites etc. as a source of information.
- Practical – game to match locations in the TCI with resort names.
- Brainstorming what destinations offer: accommodation, attractions, facilities, transport with Teacher-led, follow-up discussion.
- Video – TV travel programmes about TCI as a tourist destinations and complete teacher -prepared worksheet/ form.
- Guest speaker – give presentation, with visual aids, to promote Turks and Caicos as a tourist destination.
- Local research or visit Tourist Information Centre. Discuss findings.
- Small group research – research a tourist destination.
- Assessment – present research on TCI as a tourist destination, for example, TripAdvisor, leaflets, printouts, notes, transcripts of interviews.
- Student-led discussion on how to improve tourist attractions.
- Practical – prepare information marketing TCI as a destination to present to others for example, PowerPoint/Video
- Assessment – present information on TCI as destination including visual aid, ask and respond to questions on TCI as a destination
- Assessment evaluation, theme review and feedback.
- **CPEA Project Rubric**

Term: 1

Curriculum Theme: **Growing Food**

Aim: The aim of this theme is to provide students with skills needed for growing simple fruits and vegetables.

Project Criteria:

1. Select the best soil for growing food.
2. Create a compost bin
3. Select the appropriate tools and materials needed for planting
4. Choose seeds for growing fruits and vegetables
5. Plant and sow fruits or vegetables

Suggested assignments/activities

- Sensory activity – types of soil: feel, texture, colour, reaction to water etc.
- Teacher-led discussion – ‘What is the best soil for fruits and vegetables?’ Factors to consider when selecting soil.
- Video– creating a compost bin
- Teacher-led discussion/demonstration:
  - Creating a compost bin- reusing food scraps
  - Tools and materials needed for planting.
  - The best conditions needed for planting.
- Field trip: Visit local farm, farmers market etc.
- Student-led collection of seeds i.e., zip locked bags, containers etc.
- Teacher-led visual presentation of seeds and their fruits
- Scrapbook of seeds and their names
- Students match seeds with their fruit or names.
- Practical - students create a school/community garden by selecting the best soil, tool and materials etc.
- Small group project – plant and sow fruits and vegetables
- Assessment evaluation, theme review and feedback.
- **CPEA Project Rubric**

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 1

## STRAND: NUMBER CONCEPTS

SUB-STANDS	TARGETS
Number And Number Sense	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Count in sequence within 100,000 in ascending and descending order</li> <li>● Read and write numbers to 100,000,000</li> <li>● Outline the position using an ordinal number up to the 100th position</li> <li>● Solve problems related to ordinal numbers up to 100th position</li> <li>● Order and compare a set of numbers with up to six-digits in order of magnitude</li> </ul>
Place Value and Rounding	<ul style="list-style-type: none"> <li>● Develop an understanding of place value up to 1 000 000 (concretely, pictorially and symbolically).</li> <li>● Identify the place value, face value and total value of each digit in an 8- digit number</li> <li>● Compose (expanded notation) and decompose 6 digit numbers</li> <li>● Round a whole number up to 10,000 to the nearest tens, hundred or thousand</li> </ul>
Factors And Multiples	<ul style="list-style-type: none"> <li>● Express a number as a product of its prime factors</li> <li>● Calculate the least Common Multiple of two or three numbers</li> <li>● Generate numbers in a variety of ways e.g. as primes, composite, odd, and or even, common factors, multiples, common multiples</li> <li>● Generate numbers using several number concepts: prime, odd, prime and even, prime and odd, composite and odd</li> <li>● Outline a number as a product of its prime factors</li> <li>● Find the HCM of 2 or 3 numbers, by listing</li> <li>● Recognize and use square numbers and cube numbers and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>
Number Relationships And Sets	<ul style="list-style-type: none"> <li>● Describe a set</li> <li>● Describe a set as being finite, infinite or empty</li> <li>● Utilize the symbol for “is a subset of”</li> </ul>
Number Patterns	<ul style="list-style-type: none"> <li>● Explore number patterns involving the four operations using whole numbers</li> <li>● Use pattern recognition to solve problems</li> <li>● Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> <li>● Predict numerical patterns</li> </ul>
Exponential/ Scientific Form	<ul style="list-style-type: none"> <li>● Understand what is an Exponent</li> <li>● Use whole number exponents to denote powers of 10</li> </ul>

This curriculum serves as a guide for teaching & learning in the Turks and Caicos Islands; teachers have the autonomy to make adjustments where necessary. 190

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 1

Algebraic Expressions	<ul style="list-style-type: none"> <li>● Write, read, and evaluate expressions in which letters stand for numbers</li> <li>● Apply the properties of operations to generate equivalent expressions</li> </ul>
Roman Numerals	<ul style="list-style-type: none"> <li>● Explain the history of numbers, roman numerals, Arabic, Egyptian ...etc.</li> <li>● Convert between whole numbers 1-50 to roman numerals and vice versa</li> </ul>
<b>STRAND: NUMERATION AND COMPUTATION</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Addition	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for addition of whole numbers</li> <li>● Show addition involving numbers with up to four digits with and without regrouping</li> <li>● Show addition involving numbers with totals up to 100,000 with and without regrouping</li> <li>● Determine the reasonableness of an answer in addition based on estimation</li> <li>● Check accuracy of answers using a calculator</li> <li>● Use knowledge of the order of operations to carry out calculations involving the four operations</li> <li>● Solve one step and two steps word problems involving addition</li> <li>● Solve three steps word problems involving four operations</li> <li>● Show application of addition skills in practical situations</li> </ul>
Subtraction	<ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for subtraction of whole numbers</li> <li>● Compute subtraction involving whole numbers with up to four digits, without and with regrouping</li> <li>● Determine the reasonableness of an answer in subtraction based on estimation</li> <li>● Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>● Solve one step and two steps word problems involving subtraction</li> <li>● Show application of subtraction skills in practical situations</li> </ul>
Multiplication	<ul style="list-style-type: none"> <li>● Recall multiplication facts for multiplication tables up to 12</li> <li>● Use several strategies to develop and recall the basic facts for multiplication of whole numbers</li> <li>● Multiply two and three-digit numbers by one- and two-digit numbers using an efficient written method including long multiplication for digit numbers</li> <li>● Determine the reasonableness of an answer in multiplication based on estimation</li> <li>● Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>● Solve one step and two steps word problems involving multiplication</li> <li>● Show application of multiplication skills in practical situations</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 1

Division	<ul style="list-style-type: none"> <li>● Recall division facts for multiplication tables up to 12</li> <li>● Use several strategies to develop and recall the basic facts for division of whole numbers</li> <li>● Divide whole numbers with up to four digits by one- and two-digit numbers, without and with remainder</li> <li>● Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>● Solve one step and two steps word problems involving division</li> <li>● Show application of division skills in practical situations</li> </ul>
Average	<ul style="list-style-type: none"> <li>● Know how to find the average of a set of data</li> </ul>
Fractions	<ul style="list-style-type: none"> <li>● Associate a fraction with division</li> <li>● Compare mixed numbers, improper fractions and proper fractions</li> <li>● Show the conversion of an improper fraction to a mixed number and vice versa</li> <li>● Compare and order fractions with a different numerator and denominator</li> <li>● Discuss the concept of 'lowest terms' and its relationship to equivalent fractions</li> <li>● Express fractions in their lowest terms</li> <li>● Recognize equivalent fractions, and use to simplify to lowest terms or cancel (LCM)</li> <li>● Show addition of a proper fractions with like or unlike but related denominators</li> <li>● Show addition of a whole number to a proper fraction</li> <li>● Show addition of a proper fraction and a mixed number with like and unlike but related denominators</li> <li>● Show subtraction involving proper fractions with like and unlike but related denominators</li> <li>● Show subtraction of a proper fraction from a mixed number with like denominator, without regrouping</li> <li>● Show subtraction of a proper fraction from a whole number</li> </ul>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number and Number Sense</b></p>	<ul style="list-style-type: none"> <li>Count in sequence within 100,000 in ascending and descending order</li> <li>Read and write numbers to 100,000,000</li> <li>Outline the position using an ordinal number up to the 100th position</li> <li>Solve problems related to ordinal numbers up to 100th position</li> <li>Order and compare a set of numbers with up to six digits in order of magnitude</li> </ul>	<p>Students observe a set of pictures/objects in a row. Students identify the position by colouring /circling the position seen. E.g., the truck is in the 100th position.</p> <p>Allow students to use cut-out number cards and form numbers of 6-9 digits, then read them aloud.</p> <p>Students read various 6- and 9-digit numerals shown on abacuses/place value charts/coloured number strips/notation cards. Students use the place value chart and abacus to read and write numerals up to one hundred million.</p> <p>Students can identify the number before, after, and between using a number line to determine position. E.g., Triangle symbol = 30<sup>th</sup>. Arranging given numerals (up to hundreds) in order from largest to smallest and vice-versa</p> <p>Given a worded problem/a list of objects/pictures, students identify the new position in problems statements.</p> <p>Students compare and complete number sentences using symbols =, &gt;, &lt; to show that one number is equal to, greater than, or less than another.</p>	<p>Picture cards, objects, crayons, pencils, paper</p> <p>Number lines</p> <p>cut -out number cards</p> <p>Manipulatives</p> <p>Worksheets</p> <p>Whiteboard</p> <p>SMART Board</p> <p>Interactive Games</p> <p>Problem cards, flashcards</p>	<p><b>Language Arts</b> Students spell and write numbers</p> <p><b>Creative Writing -</b> Sequencing- using pictures to write a story</p> <p><b>Social Studies</b> Students place countries in order of size etc.</p> <p>Religious Education Discuss the order in which God sent the plagues to Egypt.</p> <p><b>Science</b> Engage students in the scientific method. (ordinal thinking)</p>	<p>Quizzes</p> <p>Oral Presentation</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Place Value and Rounding</b></p>	<ul style="list-style-type: none"> <li>Develop an understanding of place value up to 1 000 000 (concretely, pictorially, and symbolically)</li> <li>Compose (expanded notation) and decompose 6 digit numbers</li> <li>Round a whole number up to 10,000 to the nearest tens, hundred or thousand</li> <li>Identify the place value, face value and total value of each digit in an 8- digit number</li> </ul>	<p>Students use a place value chart to identify the position of numbers using words) e.g., which digit is in the tens of thousands position etc</p> <p>Engage students in activities using the whiteboard/smartboard or worksheets to compose and decompose numbers</p> <p>Students draw a place value, face value and value chart. Students asked to give the place value (always words) and value (specific number), e.g., 12346781 a. What is the place value of the 3? Ans. Hundreds of thousands What is the value of the 6? Ans, 6 x 1000=6000</p> <p>Using cardinal position, number line, and place value knowledge, students round up/down the target digit to the nearest value given by increasing the target digit by adding zeros or keeping the target digit the same and adding zeros. E.g., round 19465 to nearest hundreds</p> <p>Provide students numbers on a worksheet, whiteboard, or Smartboard to state each digit's place and total value in these numbers.</p>	<p>Map</p> <p>Flashcards</p> <p>Interactive board</p> <p>Work Cards</p> <p>Paper, pencil/pens</p> <p>Number lines</p> <p>Place value chart</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Worksheets</p> <p>Manipulatives</p> <p>Online Game</p>	<p><b>Language Arts</b> vocabulary words, e.g., more than, less than</p> <p>Spelling, e.g., hundreds, thousand</p> <p>Vocabulary: word meaning of Terms</p> <p><b>Social Studies</b> Arranging continents according to sizes</p> <p>Project to research continents/ countries in the world according to size</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Peer Assessment</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Factors and Multiples</b></p>	<ul style="list-style-type: none"> <li>Express a number as a product of its prime factors</li> <li>Calculate the least Common Multiple of two or three numbers</li> <li>Generate numbers in various ways, e.g., as primes, composite, odd, and or even, common factors, multiples, common multiples</li> <li>Find the H.C.F. of 2 or 3 numbers by listing</li> <li>Recognise and use square numbers and cube numbers and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>	<p>Using the factor tree method and an appropriate video, teach students to use the smallest prime number and another number until all prime numbers are found.</p> <p>Using knowledge of multiples/prime factorisation and an appropriate video help students find the L.C.M</p> <ul style="list-style-type: none"> <li>- Listing multiples of given numbers (not more than 3 numbers at a time).</li> <li>- Stating which multiples are multiples of all the numbers given and describing these multiples as Common Multiples</li> <li>- Identify the Lowest of the Common Multiples and describing it as L.C.M</li> </ul> <p>Given different numbers, students identify ways that number can be described, e.g., 40, i.e., even, composite, multiple, etc.</p> <p>Using the factor tree method and an appropriate video, find the H.C.F by:</p> <ul style="list-style-type: none"> <li>- Prime factorisation of the two numbers</li> <li>- Finding the common factors and multiply them to find the H.C.F.</li> <li>- Students build square and cube numbers and, from the result, rewrite in shorten notation form.</li> <li>- <math>1 \times 1 = 1 = 1^2</math>   <math>3 \times 3 = 9 = 3^2</math>   <math>4 \times 4 = 16 = 4^2</math></li> </ul>	<p>Interactive board, markers</p> <p>YouTube</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Smartboard</p> <p>Computer/Laptop</p> <p>Math Cards</p> <p>FlashCards</p> <p>Game: Jenga Review on Factors and Multiples</p>	<p>I N T E G R A T E A C T I V I T I E S</p>	<p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

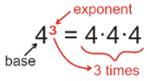
**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Number Relationships and Sets</b>	<ul style="list-style-type: none"> <li>Describe a set</li> <li>Describe a set as being finite, infinite, or empty</li> <li>Utilise the symbol for "is a subset of"</li> </ul>	<p>Using a PowerPoint, video, and examples helps students understand sets as a collection of things or objects that are related/well defined and objects in a set as elements or members. Students are given a different collection of things or facts to determine if it is set or not.</p> <p>Allow students to form and describe examples of the following sets:</p> <ul style="list-style-type: none"> <li>Finite set as having a finite number of elements, i.e., you can count it, e.g., set of an odd number less than 10 = 1,3,5,7,9</li> <li>Infinite set as having an infinite number of elements, i.e., impossible to say how many it contains .eg. a set of whole numbers= 0,1,2,3,4,5.....</li> <li>Empty set has no elements /members, e.g., a set of 4, 9 16, and a set of prime numbers</li> <li>Equal sets when 2 sets are equal if the members in one set are identical to the members in another set</li> </ul> <p>Engage students in activities that require them to make smaller sets from given sets and name these "subsets." of the given sets e.g. <b>(a)</b> { i, o, a } is a subset of { a, e, i, o, u } <b>(b)</b> {1,2,3 } is a subset of {1,2,3,4,5} Use the symbol <math>\subset</math> for " is a subset of." e.g. {1,2,3}<math>\subset</math> ...</p>	<p>Worksheets</p> <p>Coloured blocks</p> <p>Cut-out shapes</p> <p>Workbooks</p> <p>Computer</p> <p>Projector</p> <p>Manipulatives</p> <p>YouTube</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Objects</p> <p>Cut-out Number cards</p>	<p><b>Language Arts</b> Students are given different elements in a set to describe, i.e., describe what the set contains that has a common property, e.g., July, June, January, ans. Months of year that start with J.</p> <p><b>Art and Design</b> Draw sets of objects from the environment.</p> <p><b>Science</b> Use Venn diagram to compare vertebrates e.g, amphibians, and reptiles.</p> <p><b>Religious Education</b> Compare way of worship between Christians and Jews.</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Peer Assessment</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number Patterns</b></p>	<ul style="list-style-type: none"> <li>Explore number patterns involving the four operations using whole numbers</li> <li>Use pattern recognition to solve problems</li> <li>Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> <li>Predict numerical patterns</li> </ul>	<p>Students work individually or in groups to complete an activity. Students are given a hundreds chart and asked to shade different whole numbers involving: e.g., 1, 6, 11, 16, etc. students should find a pattern of +5, e.g., 12, 24 36, etc. students should find a pattern of x2</p> <p>Divide students in different groups, give each group patterns to complete e.g. 0, 3, 6, 9, 12 and 0, 12, 24, 36, 48.</p> <p>Allow students to examine addition and subtraction tables and find patterns. Discuss these patterns and make generalisations for: -adding zero to a number -taking zero from a number -adding two numbers in any order</p> <p>Using a hundred chart, ask students to circle all numbers ending with the digit 5 and 0, e.g., 5, 10, 15, 20, etc.</p> <p>Students predict the relationship in the corresponding numbers, i.e., a pattern formed from the numbers. They should see in rows they find a +5, i.e., 5 to 10 pattern, and in columns, they find a +10 pattern, i.e., 5, all the way to 15.</p>	<p>Hundred charts, pencils /crayons Number line</p> <p>Paper bags Crayons, Beads, Strings, Paint</p> <p>Manipulatives</p> <p>Work cards</p> <p>Charts</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p>	<p><b>Language Arts Comprehension</b> e.g. Sequencing sentences, predicting exercises</p> <p>Predicting what is next based on pictures seen</p> <p><b>Creative Writing</b> Sequencing stories</p> <p><b>Physical Education:</b> Catch and Toss Say What Number game</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES																
<p><b>Exponential/ Scientific Form</b></p> <p><b>Algebraic Expressions</b></p>	<ul style="list-style-type: none"> <li>Understand what is an Exponent</li> <li>Use whole-number exponents to denote powers of 10</li> <li>Write, read, and evaluate expressions in which letters stand for numbers</li> <li>Apply the properties of operations to generate equivalent expressions</li> </ul>	<p>Display a prepared PowerPoint with examples that explain what an exponent is. "An exponent tells you how many times its base is used as a factor. Exponents are used to write repeated multiplication." Allow students to watch a YouTube video and practice examples.</p>  <p>Using previous knowledge of exponents, students write numbers to denote powers of 10 on the whiteboard and worksheet.</p> <p>In pairs, students solve 4-word problems that require them to use the orders of operations to solve.</p> <p>Review the properties of operation using the following chart.</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" style="text-align: center;"><u>Properties of Real Numbers</u></td> </tr> <tr> <td style="text-align: center;"><u>Addition</u></td> <td style="text-align: center;"><u>Multiplication</u></td> </tr> <tr> <td style="text-align: center;"><u>Commutative Property</u></td> <td style="text-align: center;"><u>Commutative Property</u></td> </tr> <tr> <td style="text-align: center;"><math>a + b = b + a</math></td> <td style="text-align: center;"><math>a \cdot b = b \cdot a</math></td> </tr> <tr> <td style="text-align: center;"><math>3 + 5 = 5 + 3</math></td> <td style="text-align: center;"><math>3 \cdot 5 = 5 \cdot 3</math></td> </tr> <tr> <td style="text-align: center;"><u>Associative Property</u></td> <td style="text-align: center;"><u>Associative Property</u></td> </tr> <tr> <td style="text-align: center;"><math>a + (b + c) = (a + b) + c</math></td> <td style="text-align: center;"><math>a \cdot (b \cdot c) = (a \cdot b) \cdot c</math></td> </tr> <tr> <td style="text-align: center;"><math>3 + (5 + 7) = (3 + 5) + 7</math></td> <td style="text-align: center;"><math>3 \cdot (5 \cdot 7) = (3 \cdot 5) \cdot 7</math></td> </tr> </table> <p>Show students how the value of an algebraic expression can be found by replacing the variables with given numbers and applying the order of operations to simplify the expression. What is <math>12n</math>, when <math>n = 4</math>. Ansa: <math>12(4) = 12</math></p>	<u>Properties of Real Numbers</u>		<u>Addition</u>	<u>Multiplication</u>	<u>Commutative Property</u>	<u>Commutative Property</u>	$a + b = b + a$	$a \cdot b = b \cdot a$	$3 + 5 = 5 + 3$	$3 \cdot 5 = 5 \cdot 3$	<u>Associative Property</u>	<u>Associative Property</u>	$a + (b + c) = (a + b) + c$	$a \cdot (b \cdot c) = (a \cdot b) \cdot c$	$3 + (5 + 7) = (3 + 5) + 7$	$3 \cdot (5 \cdot 7) = (3 \cdot 5) \cdot 7$	<p>Whiteboard</p> <p>Smartboard</p> <p>Flash Card</p> <p>Work cards</p> <p>Projector</p> <p>PowerPoint</p> <p>Desktop/laptop</p> <p>YouTube</p> <p>Online Games</p> <p>Worksheets</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>
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**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Roman Numerals</b></p>	<ul style="list-style-type: none"> <li>● Explain the history of numbers, roman numerals, Arabic, Egyptian ...etc.</li> <li>● Convert between whole numbers 1-50 to roman numerals and vice versa</li> </ul>	<p>Using a PowerPoint, explain to students the history of numbers.</p> <p>Engage students in a discussion on the basic symbols from 1-100.</p> <p>Students engage in a matching exercise of Hindu-Arabic numerals and Roman Numerals to 50.</p> <p>In pairs, calculate and discuss how the basic symbols affect the meaning of the numerals i.e.</p> <ul style="list-style-type: none"> <li>- If a numeral is written to the right of one with greater value, the two must be added together, e.g., XI is <math>10 + 1 = 11</math>.</li> <li>- If the numeral is written to the left of one with a greater value, it must be subtracted, e.g., IX is <math>10 - 1 = 9</math>. XL is <math>50 - 10 = 40</math></li> </ul>	<p>Display board</p> <p>Task cards</p> <p>Chart</p> <p>YouTube</p> <p>Chart</p> <p>Spinning wheel</p> <p>Pocket chart</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Flash Card</p> <p>Work cards</p> <p>Online Games</p> <p>Worksheets</p>	<p><b>Art and Design</b>                      Matchstick craft of Roman letters</p> <p><b>Language Arts</b>                      Pinpoint and note the Roman numerals used in books to number the chapters.</p> <p><b>Mathematics (Time)</b>                      Read Roman numerals on fancy clocks and watches.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

NUMERATION					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Addition</b>	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for the addition of whole numbers</li> <li>Show addition involving numbers with up to four digits with and without regrouping</li> <li>Show addition involving numbers with totals up to 100,000 with and without regrouping</li> </ul>	<p>In groups, students use the addition tables to recall addition facts. Students complete flashcards with incomplete addition facts.</p> <p>In pairs, students examine number bonds and find patterns.</p> <p>Students note and discuss patterns and make generalisations through whole-class discussion.</p> <p>Solve simple addition problems based on addition facts</p> <p>Allow students to use expanded notation and place value to add numbers with up to four digits with and without regrouping and numbers with up to five digits with and without regrouping</p> $\begin{array}{r} 6278 \\ + 495 \\ \hline \end{array} \qquad \begin{array}{r} 4965 \\ + 7238 \\ \hline \end{array}$	<p>Word problem cards</p> <p>Manipulatives</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Base ten blocks</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>FlashCards</p>	<p><b>Social Studies</b> Number of Tourist Arrivals over a period</p> <p><b>Science</b> Investigations that require calculations.</p> <p>Pose worded problems and seek answers.</p> <p><b>Physical Education</b> Estimating total Times in Races</p> <p><b>Social Studies</b> Total Historical sites on all Inhabited islands Of T.C.I.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<b>Addition</b>	<ul style="list-style-type: none"> <li>Determine the reasonableness of an answer in addition based on estimation</li> <li>Check accuracy of answers using a calculator</li> <li>Use knowledge of the order of operations to carry out calculations involving the four operations</li> <li>Solve one-step and two steps word problems involving addition</li> <li>Solve three steps word problems involving four operations</li> <li>Show application of addition skills in practical situations</li> </ul>	<p>Students round -off numbers to the nearest 10, 100, 10000, etc. to simplify a problem and approximate answers. e.g., when adding <math>63 + 82 + 44</math>, round-off each number to the nearest 10 by thinking of 63 as 60 82 as 80 44 as 40 and add <math>60 + 80 + 40</math>. Ansa: 180.</p> <p>Allow students to calculate the actual numbers <math>63 + 82 + 44 = 189</math>. Compare the estimated answer with the actual answer and indicate if the estimated answer is reasonable or not.</p> <p>Students work in pairs and use calculators to check answers in a peer review.</p> <p>Display a chart showing PEMDAS and used it to develop a quescussion to review the order of operations.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>P</td> <td>Parenthesis, ( )</td> </tr> <tr> <td>E</td> <td>Exponents, <math>a^n</math></td> </tr> <tr> <td>M</td> <td>Multiplication or Division (Left to right)</td> </tr> <tr> <td>A</td> <td>Addition or Subtraction (Left to Right)</td> </tr> </table> <p>Provide students with concrete materials and diagrams to solve one- three-step word problems involving 4 operations.</p> <p>Engage students in practical experiences that require addition, measuring and adding length, shopping, measuring liquid for cooking.</p>	P	Parenthesis, ( )	E	Exponents, $a^n$	M	Multiplication or Division (Left to right)	A	Addition or Subtraction (Left to Right)	<p>Word cards</p> <p>Flashcards</p> <p>Worksheets</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Laptop</p> <p>Manipulatives</p> <p>Counters</p> <p>YouTube</p>	I N T E G R A T E  A C R O S S  S U B J E C T S	<p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>
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<b>Subtraction</b>	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for the subtraction of whole numbers</li> <li>Compute subtraction involving whole numbers with up to four digits, without and with regrouping</li> <li>Determine the reasonableness of an answer in subtraction based on estimation</li> </ul>	<p>In groups, students use the subtraction tables to recall subtraction facts.</p> <p>Students complete flashcards with incomplete subtraction facts.</p> <p>In pairs, students examine subtraction tables and find patterns.</p> <p>Students work individually, note patterns, and make generalisations in whole-class discussions.</p> <p>Use an appropriate video and guide students in subtracting up to 5 digits with and without regrouping</p> $\begin{array}{r} 7 \ 5 \ 6 \\ - 5 \ 8 \ 3 \\ \hline 3 \end{array}$ <p style="margin-left: 100px;">Subtract the ones digits <math>6 - 3 = 3</math></p> $\begin{array}{r} 6 \ 15 \\ 7 \ 5 \ 6 \\ - 5 \ 8 \ 3 \\ \hline 3 \ 9 \end{array}$ <p style="margin-left: 100px;">Subtract the tens digits Borrow from the hundreds place <math>15 - 8 = 7</math></p> $\begin{array}{r} 6 \ 15 \\ 7 \ 5 \ 6 \\ - 5 \ 8 \ 3 \\ \hline 1 \ 7 \ 3 \end{array}$ <p style="margin-left: 100px;">Subtract the hundreds digits <math>6 - 5 = 1</math></p> <p>Allow students to use knowledge of determining the reasonableness of an answer in subtraction based on estimation done by rounding.</p>	<p>Subtraction Facts Table</p> <p>FlashCards</p> <p>Work Cards</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Online Games</p> <p>YouTube</p> <p>Computer/Laptop</p> <p>Worksheets</p> <p>Manipulatives</p> <p>Number Line</p>	<p><b>Language Arts</b> Students create word problems relating to subtraction</p> <p><b>Science</b> Students were encouraged to use vocabulary relating to subtraction in experiments. I.e. Take away, subtract, remove, etc.</p> <p><b>Art and Design</b> Students create anchor charts for concepts learn in subtraction.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<b>Subtraction</b>	<ul style="list-style-type: none"> <li>Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving subtraction</li> <li>Show application of addition skills in practical situations</li> </ul>	<p>Engage students in timed games that require them to work individually, in groups, or in pairs to complete order of operation problems involving subtraction.</p> <p>Allow students to use concrete materials and diagrams to solve one- three-step word problems involving 4 operations.</p> <p>Provide students with word problems on the board or a worksheet to complete individually, in groups, or pairs.</p> <p>280 planes take off from the airport during a typical day, but the airport is busier during Christmas. During the Christmas holidays, about 336 planes take off every day from the airport.</p> <ul style="list-style-type: none"> <li>- During the Christmas holidays, the airport opens 12 hours each day; how many planes take off from this airport each hour?</li> <li>- Compared with an average day, how many more passengers depart from the airport in a day during the Christmas holidays?</li> </ul> <p>Engage students in practical experiences that require subtraction, measuring and subtracting length, shopping, and calculating change, cooking, adjusting, and decreasing recipes.</p>	<p>Online Games</p> <p>e-articles</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Flashcards</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p>I N T E G R A T E D  A C T I V I T I E S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Performance Task</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Response Cards</p>

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Multiplication	<ul style="list-style-type: none"> <li>Recall multiplication facts for multiplication tables up to 12</li> <li>Use several strategies to develop and recall the basic facts for the multiplication of whole numbers</li> <li>Multiply two and three-digit numbers by one- and two-digit numbers using an efficient written method, including long multiplication for digit numbers</li> </ul>	<p>Engage students in multiplication facts drills using flashcards.</p> <p>Allow students to identify patterns and relationships in the multiplication table (grid) for up to 12 times tables and make generalisations. e.g.</p> <ul style="list-style-type: none"> <li>Any number multiplied by 0 is 0, and any number multiplied by 1 is the number itself.</li> <li>The order in which a number is multiplied does not alter the answer, and multiplication and division are inverse operations.</li> </ul> <p>Provide students with multiplication cards with missing digits to complete from a digit bag.</p> <p>Students are given 4 dice to roll, must then form the digits of 4 dice and multiply by 1-2 digit numbers provided. Use calculators to check answers.</p> <p>Allow students to work on the board or worksheets and show students to use expanded notation and the distributive property to multiply 2-, 3-, and 4 - digit numbers by 1 and 2 digit numbers. e.g.  <math>598 \times 9 = (500 + 90 + 8) \times 9 = (500 \times 9) + (90 \times 9) + (8 \times 9) = 4500 + 810 + 72 = 5382.</math></p>	<p>Multiplication cards</p> <p>Digit bag</p> <p>Dice</p> <p>FlashCards</p> <p>Whiteboard</p> <p>Smartboard</p> <p>YouTube</p> <p>Work cards</p> <p>Worksheets</p> <p>Computer</p> <p>Online Games</p> <p>Manipulatives</p>	<p><u>Language Arts</u></p> <p>Follow instructions on by to do long multiplication</p> <p>Students create word problems and pair and swap.</p> <p><u>Everyday Life Application:</u></p> <p>Bake some tasty treats or cook a meal and learn about doubling recipes.</p>	<p>Performance Task</p> <p>Analysis of Student work</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Response Cards</p> <p>Exit/ Entrance Sheets</p> <p>Demonstration</p> <p>Presentation</p>

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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Multiply two and three-digit numbers by one- and two-digit numbers using an efficient written method, including long multiplication for digit numbers. <b>Cont'd</b></li> <li>Determine the reasonableness of an answer in multiplication based on estimation</li> <li>Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving multiplication</li> <li>Show application of multiplication skills in practical situations</li> </ul>	<p>Allow students to practice long multiplication following the steps below.</p> <table border="1"> <caption>Parts of Long Multiplication</caption> <tr> <td></td> <td></td> <td>2</td> <td>5</td> <td>6</td> <td>Multiplicand</td> </tr> <tr> <td>x</td> <td></td> <td>3</td> <td>2</td> <td></td> <td>Multiplier</td> </tr> <tr> <td>+</td> <td></td> <td>5</td> <td>1</td> <td>2</td> <td>Partial Product</td> </tr> <tr> <td>+</td> <td>7</td> <td>6</td> <td>8</td> <td></td> <td>Partial Product</td> </tr> <tr> <td>=</td> <td>8</td> <td>1</td> <td>9</td> <td>2</td> <td>Product</td> </tr> </table> <p>Using the Smartboard allow students to work in groups and estimate answer in multiplication by rounding and computing then compute actual problem and compare the estimation with the actual answer to determine reasonableness.</p> <p>Provide students with mixed operation problems to complete.</p> <p style="text-align: center;"><math>6 \times 3 + 3 =</math>      <math>7 \times 2 - 4 =</math></p> <p>As a whole class, students create a sample word problem that utilises multiplication and completes it individually.</p> <p>Play a multiplication kaboom game where students pick a popsicle stick from a jar with written story problems to solve</p>			2	5	6	Multiplicand	x		3	2		Multiplier	+		5	1	2	Partial Product	+	7	6	8		Partial Product	=	8	1	9	2	Product	<p>Multiplication cards</p> <p>FlashCards</p> <p>Whiteboard</p> <p>Smartboard</p> <p>YouTube</p> <p>Work cards</p> <p>Worksheets</p> <p>Computer</p> <p>Online Games</p> <p>Manipulatives</p> <p>Popsicle</p> <p>Jar</p> <p>Paper, pencils</p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Performance Task</p> <p>Analysis of Student work</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Response Cards</p> <p>Exit/ Entrance Sheets</p> <p>Demonstration</p> <p>Presentation</p>
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<b>Division</b>	<ul style="list-style-type: none"> <li>● Recall division facts for multiplication tables up to 12</li> <li>● Use several strategies to develop and recall the basic facts for the division of whole numbers</li> <li>● Divide whole numbers with up to four digits by one- and two-digit numbers, without and with remainders</li> </ul>	<p>Allow students to brainstorm and think of the related multiplication fact for an unknown division fact (e.g., Solve <math>24 \div 6</math>, by thinking 'How many 6s in 24?' <math>6 \times 4 = 24</math>... So, <math>24 \div 6 = 4</math>)</p> <p>Engage students in activities that require them to: Use arrays, Use fact families, Skip count, Use repeated multiplication.</p> <p>Display a chart that outlines the divisibility rules and engage students in a discussion as they examine the chart</p> <ul style="list-style-type: none"> <li>- Examining the ending of numbers that are exactly divisible by 2, 3, 5, 9, by 10 and stating the rule for each.</li> <li>- Examining the sums of the digits of numbers precisely divisible by 3 and by 9</li> </ul> <p>Using the whole-class approach, students use round-robin multiplication for facts of 12. Then, using the whiteboard, students solve division facts with 3 to 5 digits with 1 or 2 digits as divisor thrown from a die/dice</p> <p>Allow students to complete division problems with up to four digits by one- and two-digit numbers, without and with the remainder.</p>	<p>Work Cards</p> <p>Whiteboard</p> <p>Smartboard</p> <p>FlashCards</p> <p>Worksheets</p> <p>Counters</p> <p>Division Flower</p> <p>Manipulatives</p> <p>YouTube</p> <p>Online Games</p> <p>Music instruments</p>	<p><b>Language Arts</b> Students create word problems/ cards.</p> <p>Create a math journal. Write an explanation of long divisibility.</p> <p><b>Art and Design</b> Students complete division flowers to aid understanding of division facts.</p> <p><b>Music</b> Engage students in songs that reinforce concepts in division.</p>	<p>Performance Task</p> <p>Analysis of Student work</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Response Cards</p> <p>Exit/ Entrance Sheets</p> <p>Demonstration</p> <p>Presentation</p>



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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Associate a fraction with division</li> <li>Compare mixed numbers, improper fractions and proper fractions</li> <li>Show the conversion of an improper fraction to a mixed number and vice versa</li> </ul>	<p>Engage students in a Table Talk on sharing to relate fractions to division. "If I had 4 apples and I gave my sister 1 apple, what fraction of the apples was given, Ansa= <math>\frac{1}{4}</math>."</p> <p>Using previous knowledge of fractions, students compare the difference of each using diagrams and a number line.</p> <div style="border: 1px solid orange; padding: 5px; text-align: center;"> <math display="block">\frac{3}{5} \qquad 2\frac{3}{5} \qquad \frac{5}{3}</math> <p>Proper fraction    Mixed fraction    Improper fraction</p> <p><b>Types of fractions</b></p> </div> <p>Using the board demonstrate how to convert an improper fraction to a mixed number and vice versa by</p> <p><i>Multiply the whole number by the denominator and add the numerator.</i></p> <p><i>Keep the same denominator.</i></p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <math display="block">\begin{array}{r} 3 \times 3 \\ \hline 4 \end{array} =</math> </div> <div> <p>Then add.</p> <math display="block">4\frac{1}{3} = \frac{13}{3}</math> <p>Multiply.</p> </div> </div> <p>Improper fraction is <math>\frac{15}{4}</math></p>	<p>Number lines</p> <p>Diagrams</p> <p>Fraction charts</p> <p>YouTube</p> <p>Fraction Strips</p> <p>Manipulatives</p> <p>YouTube</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b> Students refer to distances using fractions. "<math>\frac{1}{2}</math> mile."</p> <p><b>Physical Education:</b> - Students jump in squares of fractions named.</p> <p><b>Games</b> Play bingo fraction games</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

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Fractions	<ul style="list-style-type: none"> <li>Compare and order fractions with a different numerator and denominator</li> <li>Discuss the concept of 'lowest terms' and its relationship to equivalent fractions</li> <li>Express fractions in their lowest terms</li> <li>Recognise equivalent fractions, and use to simplify to lowest terms or cancel (L.C.M.)</li> </ul>	<p>Using comparison symbols <math>&gt;</math>, <math>&lt;</math>, <math>=</math>, allow students to use the Think- Pair- Share strategy to compare and order fractions with a different numerator and denominator. Engage students in fraction charts, diagrams, number lines to compare fractions with the same denominator.</p> <p>Guide students to understand that fractions can be written in the lowest terms and is reflected in their lowest terms when the numerator and denominator cannot be divided by a common number other than 1.</p> <p>Allow students to engage in games that require them to:</p> <ul style="list-style-type: none"> <li>find common factors (know from factors) to divide fraction to its lowest</li> <li>reduce/cancel fractions using a common factor.</li> <li>Add numerators and cancel where necessary to the lowest term).</li> </ul> <p>Use charts and diagram to review a set of equivalent fractions for a given fraction.</p> <p>Allow students to use information from the chart and work in groups to simplify fractions to the lowest terms.</p>	<p>Fraction cards</p> <table border="1"> <caption>Equivalent Fractions Chart</caption> <thead> <tr> <th>Unit Fraction</th> <th>Equivalent Fractions</th> </tr> </thead> <tbody> <tr> <td>1/2</td> <td>2/4, 3/6, 4/8,</td> </tr> <tr> <td>1/3</td> <td>2/6, 3/9, 4/12,</td> </tr> <tr> <td>1/4</td> <td>2/8, 3/12, 4/16,</td> </tr> <tr> <td>1/5</td> <td>2/10, 3/15, 4/20,</td> </tr> <tr> <td>1/6</td> <td>2/12, 3/18, 4/24,</td> </tr> <tr> <td>1/7</td> <td>2/14, 3/21, 4/28,</td> </tr> <tr> <td>1/8</td> <td>2/16, 3/24, 4/32,</td> </tr> <tr> <td>1/9</td> <td>2/18, 3/27, 4/36,</td> </tr> </tbody> </table> <p>Number lines</p> <p>Diagrams</p> <p>Fraction charts</p> <p>YouTube</p> <p>Fraction Strips</p> <p>Worksheets</p> <p>YouTube</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p>	Unit Fraction	Equivalent Fractions	1/2	2/4, 3/6, 4/8,	1/3	2/6, 3/9, 4/12,	1/4	2/8, 3/12, 4/16,	1/5	2/10, 3/15, 4/20,	1/6	2/12, 3/18, 4/24,	1/7	2/14, 3/21, 4/28,	1/8	2/16, 3/24, 4/32,	1/9	2/18, 3/27, 4/36,	<p><b>Everyday Life Application:</b> Bake some tasty treats or cook a meal and learn about fractions.</p> <p><b>Language Arts:</b> Use the language of mathematics in communicating e.g. I spent one fifth of my money on icicles.</p> <p><b>Science</b> Students observe nature and create fractions about their findings. For example, investigate the kinds of flowers/ insects and create a fraction representing the percentage of each kind.</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>
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Fractions	<ul style="list-style-type: none"> <li>Show addition of proper fractions with like or unlike but related denominators</li> <li>Show addition of a whole number to a proper fraction</li> </ul>	<p>Allow students to watch videos, play games, complete problems on worksheets, the Smartboard or whiteboard in groups, individually or in pairs on the following:</p> <p><u>Adding fractions with like denominators:</u></p> <ul style="list-style-type: none"> <li>Determine the denominator</li> <li>Locate the numerators and add all</li> <li>Rewrite the fraction with the new numerator.</li> <li>reduce if necessary</li> </ul> <p><u>Adding fractions with unlike but related denominators:</u></p> <ul style="list-style-type: none"> <li>What is <math>\frac{1}{2} + \frac{1}{4} =</math></li> <li>Find the equivalent of <math>\frac{1}{2}</math> with a similar denominator as <math>\frac{1}{4}</math>.</li> <li><math>\frac{1}{2}</math> equivalent <math>\frac{2}{4}</math></li> <li><math>\frac{2}{4} + \frac{1}{4} =</math> Follow steps in adding fractions with like denominators</li> </ul> <p><u>Adding proper fractions and whole numbers:</u></p> $3 + \frac{2}{3} = 3\frac{2}{3}$ <p>Simply combine 3 and <math>\frac{2}{3}</math> to make <math>3\frac{2}{3}</math></p> $\frac{5}{2} + 3 = \frac{5 + 6}{2} = \frac{11}{2}$ <ul style="list-style-type: none"> <li>Multiply the denominator and whole number.</li> <li>After having multiplied the denominator and the whole number, take the denominator as a common denominator.</li> <li>Simplify the numbers in the numerator.</li> </ul>	<p>Fraction charts</p> <p>YouTube</p> <p>Fraction Strips</p> <p>Worksheets</p> <p>YouTube</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Online Games</p> <p>Worksheet</p> <p>Number line</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

NUMERATION					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Show addition of a proper fraction and a mixed number with like and unlike but related denominators</li> <li>Show subtraction involving proper fractions with like and unlike but related denominators</li> </ul>	<p>Students use previous knowledge of adding a proper fraction to apply new knowledge; follow steps Add whole numbers, find L.C.M., find an equivalent, add numerators, reduce if necessary.</p> $4\frac{1}{2} + \frac{1}{2} = 4\frac{1}{2} + \frac{1}{2} = 5$ <p>Allow students to subtract involving proper fractions with like and unlike but related denominators using Think- Pair- Share strategy.</p> <div style="text-align: center;"> <p>SUBTRACT the numerators</p> <math display="block">\frac{a}{d} - \frac{b}{d} = \frac{a-b}{d}</math> <p>Same denominators</p> </div> <div style="text-align: center;"> <p>SUBTRACT</p> <math display="block">\frac{5}{5} - \frac{2}{5} = \frac{5-2}{5} = \frac{3}{5}</math> <p>Copy common denominator</p> </div> <p>Ensure students always reduce the final answer to its lowest term. Provide opportunities for students to practice problems in groups, in pairs and individually.</p>	<p>Fraction charts</p> <p>YouTube</p> <p>Fraction Strips</p> <p>Worksheets</p> <p>YouTube</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Online Games</p> <p>Worksheet</p> <p>Number line</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

**NUMERATION**

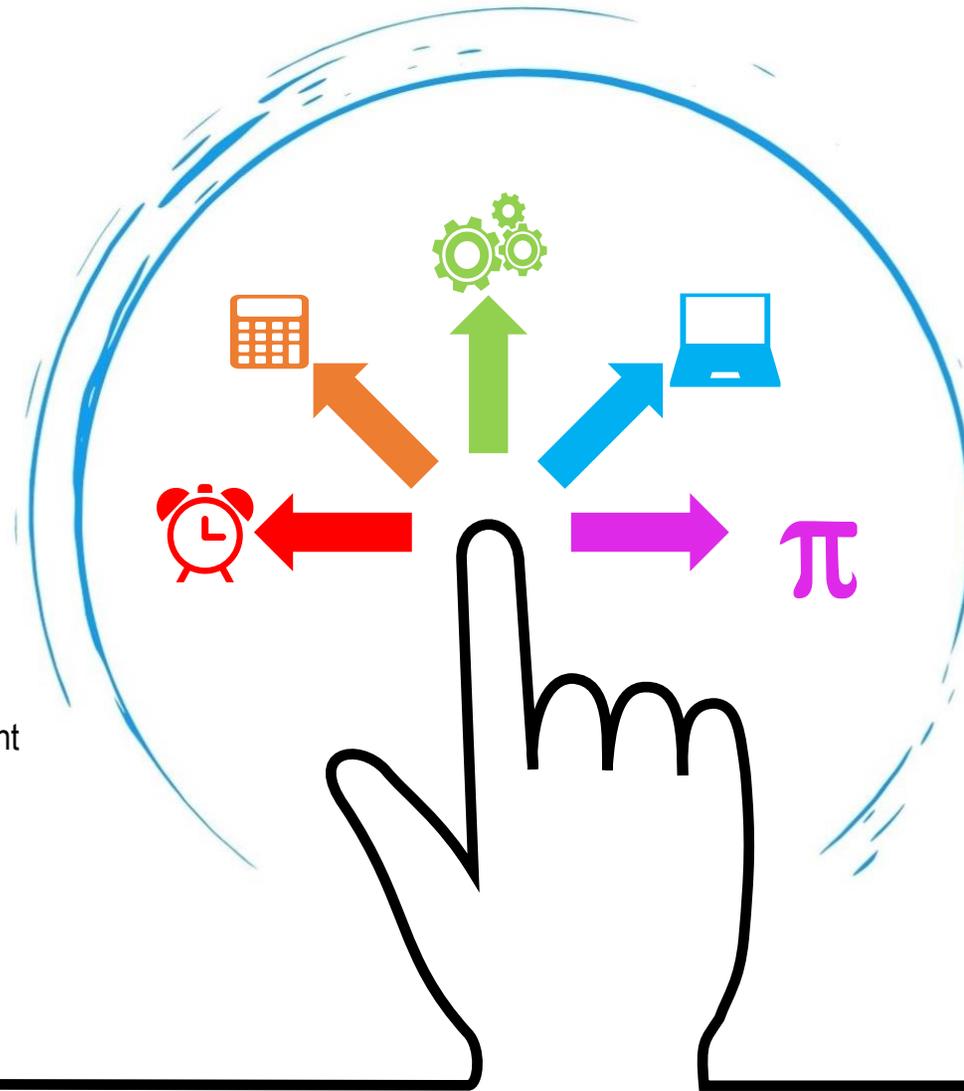
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Fractions	<ul style="list-style-type: none"> <li>Show subtraction of a proper fraction from a mixed number with like denominator, without regrouping</li> <li>Show subtraction of a proper fraction from a whole number</li> </ul>	<p><i>Practice Subtracting Proper Fractions from Mixed Number on the whiteboard/smartboard in pairs and groups.</i></p> $2\frac{4}{5} - \frac{2}{5} = 2\frac{4}{5} - \frac{2}{5} = 2\frac{2}{5}$ <p>- Write down the whole number without changing it. - Carry out the subtraction of the fractions. - Add the result to the whole number you wrote earlier:</p> <p>Engage students in the practice of subtracting proper fractions from whole numbers using the whiteboard, Smartboard or worksheets individually, in pairs or groups.</p> $8 - \frac{4}{5} = 7\frac{5}{5} - \frac{4}{5} = 7\frac{1}{5}$ <p><i>Convert the whole number to a fraction.</i></p> $8 - \frac{4}{5} = \frac{8}{1} - \frac{4}{5}$ <p><i>Convert to fractions of like denominators.</i></p> $\frac{8}{1} - \frac{4}{5} = \frac{8 \times 5}{1 \times 5} - \frac{4}{5} = \frac{40}{5} - \frac{4}{5}$ <p><i>Subtract the numerators</i></p> $\frac{40}{5} - \frac{4}{5} = \frac{40-4}{5} = \frac{36}{5}$	<p>Fraction charts</p> <p>YouTube</p> <p>Fraction Strips</p> <p>Worksheets</p> <p>YouTube</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Online Games</p> <p>Worksheet</p> <p>Number line</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

# GRADE 5

## Term 2

Strands: Numeration and Computation, Consumer Math; Measurement

Theme: Sports Involvement



Term: 2

Curriculum Theme: **Sports Involvement**

Aim: The aim of this theme is for students to participate in a range of different types of sports so that they can gain experience in the necessary skills and requirements.

Project Criteria:

1. Take part in team/Individual sports by:
  - i. dressing appropriately for the team/individual sport
  - ii. following the rules of the team/individual sport
  - iii. using skills and techniques in different team/individual sports
  - iv. using sports equipment in different team/individual sports
  - v. demonstrating safe practices
2. Identify own strengths and weaknesses outlining areas for improvement

Suggested assignments/activities

- Teacher-led sports tutorials
- Practice sporting activities (this could be a sport in which they are already participating). Discussion of how this will be assessed, e.g., by checklist, witness statement.
- Individual tutorials will be held throughout the theme to check how students are progressing in their performance.
- 'Team games' quiz covering:
  - rules
  - winners
  - losers
  - dates
  - players.
- Group game (any sport).
- Task – students research an athlete that inspires them.
- Small group discussion sharing reasons for choice of athlete that inspires them.
- Students rank good team player attributes.
- Practical – students take turns to be a team captain in a sports activity.
- Task – students list protective clothing including what area of the body it protects why it is required.
- Study task – students research rules of soccer/basketball.
- Soccer/basketball practical (skills and techniques).
- Home study task – students review own performance.
- Netball practical (skills and techniques).
- **CPEA Project Rubric**

## STRAND: NUMERATION AND COMPUTATION

SUB-STANDS	TARGETS
Decimals	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Understand mathematical language associated with decimals (Fractional part, Whole number part, decimal point, place value, etc. )</li><li>● Understand how decimal numbers and whole numbers are related</li><li>● Understand how decimal numbers and fractions are related</li><li>● Complete number patterns involving decimals</li><li>● Explore the place value, face value and total value of digits in a decimal number up to 3 places</li><li>● Read and write decimals in words and figures up to 3 places</li><li>● Express a decimal as an improper fraction or mixed number in its simplest form</li><li>● Compare and order decimal numbers with up to 3 decimal places</li><li>● Round a decimal number to the nearest hundredth</li><li>● Show addition and subtraction of decimal numbers to 3 decimal places</li><li>● Show multiplication and division of decimal numbers by 10, 100, 1000</li></ul>

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 MATHEMATICS  
 GRADE 5 STRUCTURE

TERM 2

## STRAND: CONSUMER MATH

SUB-STANDS	TARGETS
Money	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Understand how to read, represent and interpret the price of items</li> <li>● Read and write money values in decimals</li> <li>● Read and write sums of money up to 1 million dollars</li> <li>● Show addition and subtraction of money in dollars and cents not exceeding \$1,000</li> <li>● Calculate the cost of a set of items given the cost of one item</li> <li>● Show rounding amounts to the nearest \$1, \$10, \$100 or \$1000</li> <li>● Understand the concepts of cost price, selling price and profit in descriptions of situations involving buying and selling</li> <li>● Discuss types of financial institutions and roles their roles</li> <li>● Solve up to 2-step word problems involving money</li> <li>● Show application of money management skills practical situations</li> </ul>

## STRAND: MEASUREMENT

SUB-STANDS	TARGETS
Time	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Read, record and convert time between 12 and 24 hr. analogue and digital clocks</li> <li>● Read and record time using the 24-hour clock using the appropriate words and notations</li> <li>● Record time in hours and minutes, and vice versa with 24-hour clocks</li> <li>● Convert between units of time from larger to smaller unit and vice versa including fractional units</li> <li>● Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>● Record time to the second</li> <li>● Determine the duration of a time interval, start time and end time</li> <li>● Determine the length of time elapsed between given time using days, hours or minutes</li> <li>● Solve elapsed time using word problems</li> <li>● Understand the meaning of decade, century and millennium</li> <li>● Determine the decade or century in which an event took place given the year of the event</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 2

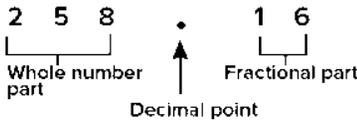
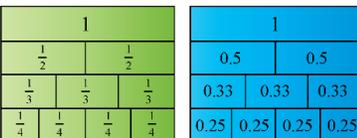
	<ul style="list-style-type: none"> <li>● Interpret and use the letters A.D. and B.C. after a year</li> <li>● Identify time patterns</li> <li>● Demonstrate addition and subtraction of hours and minutes</li> <li>● Demonstrate addition and subtraction of weeks and days</li> <li>● Solve one and two step problems in real-life contexts involving time</li> </ul>
Length	<ul style="list-style-type: none"> <li>● Compare the length or height of objects given their measurement in the same or different unit</li> <li>● Convert between units of length (larger to smaller unit and vice versa) including fractional units (e.g. Convert 6 <math>\frac{1}{2}</math> m to cm)</li> <li>● Convert between units of length (larger to smaller unit and vice versa) including decimal units (e.g. Convert 6.45 m to cm)</li> <li>● Approximate lengths to the nearest metre and centimetre</li> <li>● Approximate distances to the nearest kilometre or metre</li> <li>● Multiply a measure of length in compound units</li> <li>● Approximate measures to the nearest cm or mm</li> <li>● Know how to use a scale to present distance (e.g. map)</li> <li>● Solve problems requiring conversion from larger to smaller metric units</li> <li>● Solve problems requiring conversion from smaller to larger metric units</li> <li>● Solve problems in real-life situations involving length</li> </ul>
Area and Perimeter	<ul style="list-style-type: none"> <li>● Estimate, measure, compare and order the perimeter of irregular and regular polygons by measuring sides</li> <li>● Determine the measurement of one side of a polygon given the perimeter and the lengths of the other side</li> <li>● Solve problems involving the perimeter of compound shapes</li> <li>● Differentiate between area and perimeter</li> <li>● Estimate, measure and compare area of various shapes by counting centimetre squares</li> <li>● Estimate, measure and compare the area of irregular polygons by counting squares</li> <li>● Determine the total area of compound shapes by counting unit squares</li> <li>● Determine the area of right angled triangles by counting unit squares</li> <li>● Determine the area of rectangles and squares using a given formula</li> <li>● Solve problems involving rectangles with same perimeter but different area</li> <li>● Solve one step and two step problems involving area of surfaces</li> <li>● Solve one step problems based on area of squares and rectangles</li> </ul>

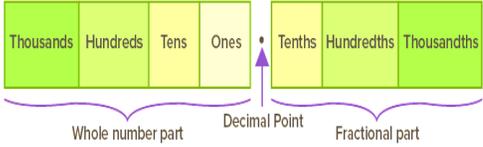
TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 2

Mass/Weight	<ul style="list-style-type: none"><li>● Show estimation, measurement, recording and comparison of the mass of objects using standard units (kg, gram and milligram)</li><li>● Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram or <math>\frac{1}{4}</math> kilogram.</li><li>● Convert between units of mass (larger to smaller unit and vice versa) including fractional and decimal units.</li><li>● Generate equivalent measures between kilogram and pounds</li><li>● Solve problems in real-life situations involving mass</li></ul>
Capacity	<ul style="list-style-type: none"><li>● Know the relationships between the millilitre, litre, and kilolitre</li><li>● Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres).</li><li>● Estimate, measure and record the capacity of containers using the millilitre as a unit of measure</li><li>● Estimate capacity and determine the reasonableness of the answers or estimation.</li><li>● Approximate measures to the nearest litre.</li><li>● Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li><li>● Solve problems in real-life situations involving volume</li></ul>

**NUMERATION**

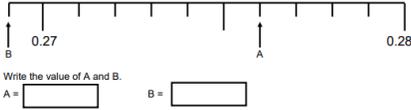
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with decimals (Fractional part, Whole number part, decimal point, place value, etc.)</li> <li>Understand how decimal numbers and whole numbers are related</li> <li>Understand how decimal numbers and fractions are related</li> </ul>	<p>Use visual aids to help students understand the mathematical language associated with decimals.</p>  <p>Engage students in a discussion on how fractions and decimals represent the relationship of part by whole. In both fractions and decimals, we represent whole by 1</p> <p>Using T chart guide students to understand the relationship between decimal numbers and whole numbers and decimal numbers and fractions using place value and number lines, fractions and decimal chart.</p>  <p style="text-align: center;"><b>Fraction and Decimal chart</b></p>	<p>Place value charts</p> <p>Mini whiteboards</p> <p>Number lines, graph lines</p> <p>Fraction strips</p> <p>Fractions and Decimal chart.</p> <p>Worksheets</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b> Make a word wall mathematical language associated with decimals.</p> <p><b>Physical Education</b> Students wear numbers, and one person acts as the decimal point. Students create various numbers repositioning the decimal point.</p> <p><b>Social Studies</b> Students engage in field trips to the supermarket and analyse various shopping receipt. Students call the numbers making mention to the decimal point.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

NUMERATION					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Decimals</b>	<ul style="list-style-type: none"> <li>Complete number patterns involving decimals</li> <li>Explore the place value, face value and total value of digits in a decimal number up to 3 places</li> </ul>	<p>Guide students to complete number patterns involving decimals by reviewing patterns and observing various patterns in whole numbers, fractions and decimals. Guide students to look at patterns of fractions as a pattern of decimals.</p> <p>Engage students in a demonstration on the whiteboard using visual aids.</p> <p>- What is the next decimal in the pattern? 1.0, 0.9, 0.8, 0.7, ...</p> <p style="text-align: center;">Amount of Pizza Left After Each Slice is Taken</p> <div style="text-align: center;">  <p>Fraction Pattern 10/10, 9/10, 8/10, 7/10, ...</p> <p>Decimal Pattern 1.0, 0.9, 0.8, 0.7, ...</p> </div> <p>Using the decimal place value chart, allow students to discuss the place value of numbers up to 3 places.</p> <div style="text-align: center;">  <p>Thousands Hundreds Tens Ones <b>•</b> Tenths Hundredths Thousandths</p> <p>Whole number part      Decimal Point      Fractional part</p> </div>	<p>Place value chart</p> <p>Mini whiteboard</p> <p>Online games</p> <p>Worksheets</p> <p>Laptop/Tablet</p> <p>Whiteboard</p> <p>Smartboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Read and write decimals in words and figures up to 3 places</li> <li>Express a decimal as an improper fraction or mixed number in its simplest form</li> </ul>	<p>Expose students to the vocabulary words tenths, hundredths and thousandths and discuss their meaning.</p> <p>Copy the following visual aid of the whiteboard or an aid similar and engage students in the following steps:</p> <ul style="list-style-type: none"> <li>Read and write the digits to the left of the decimal point as a whole number.</li> <li>Say &amp; Write <i>and</i> for the decimal point</li> <li>Read and write the digits to the right of the decimal point as a whole number.</li> <li>Say &amp; write the place name of the last digit on the right (hundredths, thousandths etc.)</li> </ul> <p style="text-align: center;">Writing decimals in words</p> <div style="text-align: center;"> <math display="block">85.64</math> <math display="block">2.452</math> </div> <p>Engage students in an activity using strips of paper divided into tenths to express tenths into improper and mixed numbers.</p> <p>Allow students to express given decimal numbers as an improper fraction or mixed number.</p>	<p>Decimal work cards</p> <p>YouTube</p> <p>Worksheets</p> <p>Place Value Chart</p> <p>Decimal Place Value Chart</p> <p>Online Games</p> <p>Laptop/Tablet</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b> Teach students the following poem: <i>Reading decimals is easy, you'll see. They have two names like you and me. First, you say the name as if there were no dot. Then you say the name of the last place value spot.</i></p> <p><b>Art and Design</b> Complete fraction art colouring activities to reveal a picture.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Compare and order decimal numbers with up to 3 decimal places</li> <li>Round a decimal number to the nearest hundredth</li> </ul>	<p>Allow students to watch an appropriate video to help them understand how to compare, order and round decimal numbers.</p> <p>Provide students with decimal numbers to order smallest to largest or vice versa. 0.61, 0.58, 0.42, 0.2, 0.81</p> <p>Show students how to draw and use the number line to compare and order decimal numbers with up to 3 decimal places.</p>  <p>Write the value of A and B. A = <input type="text"/> B = <input type="text"/></p> <p>Guide students to understand that rounding to the nearest hundredth is the same as rounding two decimal places</p> <p>Engage student in a demonstration of rounding decimal numbers using the whiteboard or Smartboard.</p> <ul style="list-style-type: none"> <li>Consider the number 8.254 <b>8.254 rounded to two decimal places is 8.25. Because 5 is followed by 4 and 4 is less than 5.</b></li> <li>Consider the number 4.738 4.738 rounded to the nearest hundredth (two decimal places) is 4.74. Because 3 is followed by 8, and 8 is greater than 5.</li> </ul>	<p>Decimal work cards</p> <p>Number line</p> <p>YouTube</p> <p>Online Game</p> <p>Whiteboard</p> <p>Tablet</p> <p>Smartboard</p> <p>Website links</p> <p>Place Value Chart</p>	<p><b>Language Arts</b> Students learn the meaning and spelling of vocabulary related to decimal numbers (tenths, hundredths, thousandths).</p> <p><b>Physical Education</b> Project solve who won races in 100m dash by comparing/ordering race times of athletes from different houses</p> <p><b>Social Studies</b> Compare and order sizes of different islands in T.C.I. or countries in the Caribbean. (TCI 366.02 sq. miles)</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

NUMERATION					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Decimals	<ul style="list-style-type: none"> <li>Show addition and subtraction of decimal numbers to 3 decimal places</li> <li>Show multiplication and division of decimal numbers by 10, 100, 1000</li> </ul>	<p>Allow students to work in groups, play math games, work individually or in pairs to complete addition and subtract decimal numbers involving tenth, hundredths and thousandth using the columnar method.</p> <p>Engage students in the following steps: Calculate: <math>3.6 + 14.73</math>, <math>4 - 2.3</math></p> <ul style="list-style-type: none"> <li>Ensure the units are lineup.</li> <li>add zeros to the end of a decimal without affecting its value, so 0.6 is the same as 0.60</li> <li>all whole numbers have decimal places at the end of them; they are just not usually used</li> </ul> $\begin{array}{r} 03.60 \\ + 14.73 \\ \hline 18.33 \end{array}$ $\begin{array}{r} 4.0 \\ - 2.3 \\ \hline 1.7 \end{array}$ <p>Using a PowerPoint and/or video presentation as a guide to help students understand that when we multiply by 10, 100 and 1000, we shift all the digits to the left. One place left for 10, two places left for 100 and three places left for 1000. When we divide by 10, 100 and 1000, we do the opposite and shift all the digits to the right instead.</p> <p>Example:</p> <ul style="list-style-type: none"> <li>5.7 times by 10 = 57</li> <li>64.8 divided by 10 = 6.48</li> </ul>	<p>Work cards</p> <p>Online Games</p> <p>YouTube</p> <p>PowerPoint</p> <p>Projector</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Tablet</p> <p>Laptop</p> <p>Place Value Chart</p> <p>Worksheets</p>	<p><b>Music</b> (<a href="https://www.youtube.com/watch?v=9Bx-8aLZVbg">https://www.youtube.com/watch?v=9Bx-8aLZVbg</a>). Play the video up until 1:36. Invite the students to sing and dance along. Play the video twice so students can take away the main points.</p> <p><b>Art and Design</b> Allow students to shade grid paper to show the multiplication of decimal numbers</p> <p><b>Language Arts</b> Students asked to make a journal entry on ways to multiply decimal numbers by powers of 10, 100 and 1000.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Understand how to read, represent and interpret the price of items</li> <li>Read and write money values in decimals</li> <li>Read and write sums of money up to 1 million dollars</li> </ul>	<p>Engage students in a field trip to a supermarket and allow the student to interpret prices.</p> <p>Set up a mini electronic shop in the class, engage students in a discussion on pricing items using a price gun. Allow students to read the prices.</p> <p>Guide students to understand that decimals are used to describe fractional amounts of dollars.</p> <p>For example, 4 dollars and 50 cents can be written as the decimal \$4.50.</p> <p>Write decimal amounts for the following</p> <ul style="list-style-type: none"> <li>five hundred and twenty-eight dollars and sixteen cents</li> <li>sixty-nine cents</li> <li>fifteen thousand dollars three hundred and eighty-seven cents</li> <li>seven thousand dollars ninety-eight thousand dollars four hundred and seven cents</li> </ul>	<p>Resource Person</p> <p>Price Gun</p> <p>Priced Goods</p> <p>Notes</p> <p>Coins</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Printed Money</p> <p>Manipulatives</p> <p>YouTube</p> <p>Worksheets</p>	<p><b>Social Studies</b>                      Discuss buying and selling good/ Import and export</p> <p>Project: Field Trip to Supermarket Shopping/Store</p> <p>Students learn basic money management skills such as paying a bill.</p> <p><b>Language Arts</b>                      Students write a letter to a friend on the importance of spending money wisely.</p> <p><b>Art and Design</b>                      Students create their own money for their made-up countries.</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>

**CONSUMER MATH**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Money	<ul style="list-style-type: none"> <li>Show addition and subtraction of money in dollars and cents not exceeding \$1,000</li> <li>Calculate the cost of a set of items given the cost of one item</li> <li>Show rounding amounts to the nearest \$1, \$10, \$100 or \$1000</li> </ul>	<p>Provide students with the opportunities to add and subtract money in dollars and cents.  <b>\$13.62 + \$12.34.</b>  <b>Solution</b>  <math display="block">\begin{array}{r} 13.62 \\ + 12.34 \\ \hline 25.96 \end{array}</math></p> <p><b>\$5.46 + \$22.81.</b>  <b>Solution</b>  <math display="block">\begin{array}{r} 5.46 \\ + 22.81 \\ \hline 28.27 \end{array}</math></p> <p>Using monopoly game money/ mini-whiteboards, students use the Think-Pair-Share method to add and subtract the items given, then share the answers with the class.</p> <p>Using the mini fishbowl method, students calculate the cost of items from a class shop to arrive at answers. Selected persons verify if the answer is correct.</p> <p>Students are given sums of money in pairs and instructions to buy/sell and give change. Allow students to use rounding skills and knowledge to round money amount to the nearest \$1, \$10, \$100 or \$1000.</p>	<p>Mini whiteboards</p> <p>Monopoly money</p> <p>YouTube</p> <p>Work problem cards</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Online Activities</p> <p>Manipulatives</p> <p>Tablet/Computer</p> <p>Worksheet</p> <p>Sticky Note</p> <p>Price Gun</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p>

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<b>Money</b>	<ul style="list-style-type: none"> <li>Understand the concepts of cost price, selling price and profit in descriptions of situations involving buying and selling</li> <li>Discuss types of financial institutions and their roles</li> </ul>	<p>Introduce students to the concepts of cost price, selling price and profit using the formula below, arranging students in groups, and providing story problems for them to solve.</p> <p><b><u>Profit = Selling Price – Cost Price</u></b> <b><u>Loss = Cost Price – Selling price</u></b></p> <p><i>John is a shopkeeper. He buys goods from the wholesaler and sells them in his shop at a higher price to earn profit.</i></p> <ul style="list-style-type: none"> <li>The price at which John buys sugar is the Cost Price. Therefore, the cost price is the price at which an item is purchased.</li> <li>The price at which John sells sugar is the Selling Price. Therefore, the selling price is the price at which an item is sold.</li> </ul> <p>Using PowerPoint, quecussion strategy, and 'table talk', guide students to find out information on financial institutions and the role of each, e.g. central banks, credit unions, commercial banks etc.</p>	<p>Resource Person</p> <p>White Board</p> <p>Work cards</p> <p>Manipulatives</p> <p>Worksheet</p> <p>Tablet/Computer</p> <p>Worksheet</p> <p>Sticky Note</p> <p>YouTube</p> <p>e-articles</p> <p>PowerPoint</p> <p>Projector</p>	<p><b>Science</b> Students practice measuring goods and pricing goods</p> <p><b>Social Studies</b> Field trip to some Financial institutions</p> <p><b>ICT</b> Powerpoint display different types of financial institutions</p> <p><b>Language Arts</b> Creative Writing, e.g. persuasive writing on the best financial institutions.</p>	<p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p>

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<p><b>Money</b></p>	<ul style="list-style-type: none"> <li>Solve up to 2-step word problems involving money</li> <li>Show application of money management skills in practical situations</li> </ul>	<p>Display word problems on the white/Smartboard for students to complete in pairs.</p> <p>Use story problem cards from peers, form groups of 4 or 6 to solve questions asked. For example:</p> <p>"After paying \$6.25 for a salad, Ella has \$45.56. How much money did she have before buying the salad?"</p> <p>"Last Friday, Jacob had \$32.52. Over the weekend, he received some money for cleaning the attic. He now has \$44. How much money did he receive?"</p> <p>"After paying \$10.12 for a sandwich, Amelia has \$35.50. How much money did she have before buying the sandwich?"</p> <p>Students apply previous knowledge on problem-solving to solve an authentic problem for a business idea, e.g. raising funds for a trip, buying an item etc.</p> <p>Play store, shop or business. Practice counting money, writing invoices/estimates and more</p>	<p>Problem story</p> <p>Survey questions</p> <p>Worksheet</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Coins/Notes</p> <p>YouTube</p> <p>Manipulatives</p> <p>Tablet/Laptop</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p>

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Time	<ul style="list-style-type: none"> <li>Read, record and convert time between 12 and 24 hr. analogue and digital clocks</li> <li>Read and record time using the 24-hour clock using the appropriate words and notations</li> <li>Record time in hours and minutes, and vice versa with 24-hour clocks</li> </ul>	<p>Allow students to visit 'The World Clock' website and convert between the 12 and 24hr clocks for different countries. (see link)  <a href="https://www.timeanddate.com/worldclock/">https://www.timeanddate.com/worldclock/</a></p> <p>Allows students to create personal 24-hour analogue clocks that depict different important time during the day for them (e.g. going over to a friend's house, tv time etc.)</p> <p>As a class, using 12hr clocks allow students to read and record times using the 24-hour format in their time logbooks.</p> <p>Students work in pairs to convert time for varying units of time in a given table using their personal devices.</p> <p>Students work in groups and record the different times for the different subjects taught in a day using a 24-hour format.</p>	<p>Mini Clocks</p> <p>Work Cards</p> <p>Digital and Analogue watch</p> <p>Conversion charts</p> <p>YouTube</p> <p>Time logbooks</p> <p>Smartboard</p> <p>Worksheet</p> <p>Computer</p>	<p><b>Social Studies</b>                      Discovering the time zones of other countries within the Caribbean.</p> <p><b>ICT</b>                      Research and record using the 'The World Clock' website, time for different countries.</p> <p><b>Science</b>                      Discuss respiratory system and breath-holding duration.</p>	<p>Problem Based Assessment</p> <p>Online Discussion</p> <p>Response Cards</p> <p>Project</p> <p>Think-Square-Share</p> <p>Demonstration</p> <p>Observation</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p>

**MEASUREMENT**

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<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>Convert between units of time from larger to smaller unit and vice versa, including fractional units</li> <li>Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>Record time to the second</li> </ul>	<p>Allow students to use mini clocks to convert to fractional units.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; color: red;"><b>Converting Units of Time</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">60 seconds = 1 minute</td> <td style="padding: 2px;">24 hours = 1 day</td> </tr> <tr> <td style="padding: 2px;">60 minutes = 1 hour</td> <td style="padding: 2px;">7 days = 1 week</td> </tr> </table> <table style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="padding: 2px;">12 months = 1 year</td> <td style="padding: 2px;">10 years = 1 decade</td> </tr> <tr> <td style="padding: 2px;">52 weeks = 1 year</td> <td style="padding: 2px;">100 years = 1 century</td> </tr> <tr> <td style="padding: 2px;">365 days = 1 year</td> <td style="padding: 2px;">1000 years = 1 millennium</td> </tr> </table> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; color: blue;"><b>Fractional Units of Time:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">1/4 hour = 15 minutes</td> </tr> <tr> <td style="padding: 2px;">1/2 hour = 30 minutes</td> </tr> <tr> <td style="padding: 2px;">3/4 hour = 45 minutes</td> </tr> </table> </div> <p>Allow students to create problems that another student solve involving conversion based on real-life events. (For example, how long was physical education class into hours and minutes?)</p> <p>Using the Smartboard display problems involving conversions from different time units.</p> <p>Allow students to report on their finding by calculating the time that tasks are completed in different jobs.</p> <p>Allow students to use a stopwatch to record their speed over a 50 - 100 metre dash to the second. This can be recorded in their time logbook.</p>	60 seconds = 1 minute	24 hours = 1 day	60 minutes = 1 hour	7 days = 1 week	12 months = 1 year	10 years = 1 decade	52 weeks = 1 year	100 years = 1 century	365 days = 1 year	1000 years = 1 millennium	1/4 hour = 15 minutes	1/2 hour = 30 minutes	3/4 hour = 45 minutes	<p>Interactive clock</p> <p>YouTube</p> <p>FlashCards</p> <p>Computer</p> <p>Stopwatch</p> <p>Smartboard</p> <p>Time Chart</p> <p>Table on units of time. E.g., 1 day = 24 hours</p> <p>Units of Time activity sheet</p> <p>Logbook</p>	<p><b><u>Language Arts</u></b></p> <ul style="list-style-type: none"> <li>Using words correctly in sentences</li> <li>Homophones/ Homonyms words like hour/our, minute/minute etc</li> </ul> <p><b><u>Physical Education</u></b></p> <p>Training for 100m dashes, throwing javelin etc.</p> <p><b><u>Science</u></b></p> <p>Growth of mould on items such as bread, seedling etc.</p>	<p>Think-Pair-Share</p> <p>Project</p> <p>Demonstration</p> <p>Class Discussion</p> <p>Portfolio</p> <p>Observation</p> <p>Pre-Assessment</p> <p>Pupil-made test</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p>
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MEASUREMENT											
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Time	<ul style="list-style-type: none"> <li>Determine the duration of a time interval, start time and end time</li> <li>Determine the length of time elapsed between given time using days, hours or minutes</li> <li>Solve elapsed time using word problems</li> </ul>	<p>Provide students with a copy of the T.C.I. airport flight board to determine the time intervals for different flight and durations.</p> <p>Using the Think-Pair-Share strategy asks students to formulate word problems that require them to find the duration of time intervals.</p> <p>Memorise time facts song from video then calculate elapsed time for everyday situations using different work cards, e.g. time taken to babysit, to watch a movie.</p> <p>Pose scenarios to students regarding elapsed time and engage in a discussion based on their responses.</p> <p><b>school starts 8:30 a.m. and ends 3 p.m.</b></p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">time before noon</td> <td style="text-align: center;">time after noon</td> </tr> <tr> <td style="text-align: center;"> <math display="block">\begin{array}{r} 12:00 \\ -8:30 \\ \hline 3:30 \end{array}</math> </td> <td style="text-align: center;"> <b>noon to 3:00 = 3:00</b> </td> </tr> <tr> <td colspan="2" style="text-align: center;"> <b>3:30 + 3:00 = 6:30</b> </td> </tr> </table>	time before noon	time after noon	$\begin{array}{r} 12:00 \\ -8:30 \\ \hline 3:30 \end{array}$	<b>noon to 3:00 = 3:00</b>	<b>3:30 + 3:00 = 6:30</b>		Time facts Cards YouTube Smartboard Word Wall Number lines Computer Scenario Cards Worksheets	I N T E G R A T E  A C R O S S  S U B J E C T S	Minute to Win Games Pre-Assessment Pupil-made test Portfolio Observation Jeopardy Discussion Exit/Entrance slips
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<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>Understand the meaning of decade, century and millennium</li> <li>Determine the decade or century in which an event took place, given the year of the event</li> <li>Interpret and use the letters A.D. and B.C. after a year</li> <li>Identify time patterns</li> </ul>	<p>Allow students to create a word wall containing vocabularies such as century and decade.</p> <p>In pairs, students look at worksheets of a range of years and identify if it is a decade or a century.</p> <p>Using the Quecussion method, students discuss events in T.C.I.s history that span a decade or century by creating timelines.</p> <p>Using a K-W-L chart, ask students questions about B.C. and A.D. to find out what they know about the concept. ⇒ Sometimes you see Years written like 2000 A.D. or 550 BC</p> <div style="text-align: center;">  AD is AFTER Jesus was born   BC is BEFORE Jesus was born         </div> <p>Provide students with worksheets to place given years written in A.D or B.C in chronological order.</p> <p>Using the SMART Board display various timelines of students' after-school routine and help students identify time patterns.</p>	<p>K-W-L Organizer</p> <p>Number lines</p> <p>YouTube</p> <p>Computer</p> <p>Worksheet</p> <p>Work cards</p> <p>SmartBoard</p> <p>Clocks</p>	<p><b>Language Arts</b> Write an essay about a time when you time travelled and remember to include vocabulary such as minutes, hour, decade, century etc.</p> <p><b>Science/ICT.</b> Create a timeline of the date of births of the persons in your home.</p> <p><b>Social Studies</b> Timeline Project of essential events in T.C.I. in last 10 or 100yrs</p>	<p>Pre-Assessment</p> <p>Discussions</p> <p>Observations</p> <p>Teacher- made test</p> <p>Analysis of Student work</p> <p>Performance-Based Assessment</p> <p>Project Based Assessment</p>

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<p><b>Time</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate addition and subtraction of hours and minutes</li> <li>• Demonstrate addition and subtraction of weeks and days</li> <li>• Solve one and two-step problems in real-life contexts involving time</li> </ul>	<p>Using previous knowledge on converting time, allow students to form groups to apply the Think-Pair-Share method to add and subtract time and days of the week.</p> <p>Provide students with work cards to add and subtract hours and minutes by reinforcing that there are 60 minutes (min) in a 1 hour (h).</p> <p><b>Example:</b> Jimmy started taking his math test at 11:03 AM, and he finished at 12:29 PM. How many minutes did it take Jimmy to finish the test?</p> <p>In pairs, allow students to solve everyday situations involving time, e.g. time school starts and dismissed, duration of chores done over a week etc</p> <p>Students work independently to solve word problems that involve calculating time. (Example: Marcus met Max at the movies at 7:00 p.m. The movie started at 7:10 and lasted 1 hour and 35 minutes. What time did the movie end? (8:45 p.m.)</p>	<p>YouTube</p> <p>Work cards</p> <p>Math is Fun Website</p> <p>Worksheet</p> <p>Khan Academy</p> <p>Conversion Chart</p> <p>Computer</p> <p>Watch</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

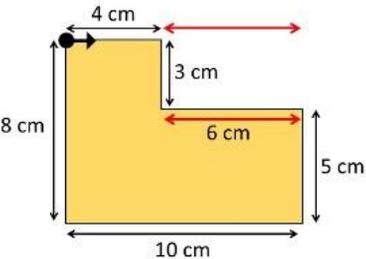
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Length	<ul style="list-style-type: none"> <li>Compare the length or height of objects given their measurement in the same or different unit</li> <li>Convert between units of length (larger to a smaller unit and vice versa) including fractional units (e.g. Convert 6 1/2 m to cm)</li> <li>Convert between units of length (larger to smaller unit and vice versa) including decimal units (e.g. Convert 6.45 m to cm)</li> <li>Approximate lengths to the nearest metre and centimetre</li> </ul>	<p>Allow students to use prior knowledge of metric measurements to collect items in the classroom, use a ruler or tape measure, and measure their length or height and record in their books.</p> <p>In their groups, provide students with a jar of task cards with conversion problems to convert length units.</p> <div style="text-align: center;"> </div> <p>Allow students to use ruler/tape measure to measure and draw given lengths in their books nearest metre and centimetre.</p> <p>In pairs, provide students with different objects in which they first predict their lengths to the nearest metre or centimetre, after which they measure and record the actual length.</p>	<p>YouTube</p> <p>Conversion Chart</p> <p>Computer</p> <p>Math is Fun</p> <p><a href="https://www.mathsisfun.com/measurement/index.html">https://www.mathsisfun.com/measurement/index.html</a></p> <p>Ruler / Tape Measure</p> <p>Worksheet</p> <p>Task cards</p>	<p><b>Science</b> Measure the height of seedlings at 1-week intervals</p> <p><b>Art and Design</b> Create a sketchbook with drawings of items in the class or at home categorised according to the smallest length to the largest. Measurements also included</p> <p><b>Language Arts</b> Expository Writing: How to Measure your friend's height.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Square-Share</p> <p>Analysis of Student work</p> <p>Class Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Approximate distances to the nearest kilometre or metre</li> <li>Multiply a measure of length in compound units</li> <li>Approximate measures to the nearest cm or mm</li> </ul>	<p>Using a map, allow students to determine the approximate distance to the nearest kilometre or metre to get to the following places such as their homes, school, grocery store.</p> <p>Engage students in a jogging exercise where they plan their running route on google map, which help them determine the distance and time covered. E.g. 2.2 kilometre, 1 kilometre, 100 metre etc.</p> <p>Provide students with practical questions to measure objects to the nearest cm or mm. <b>Example:</b> Find the length of the following object to the nearest centimetre.</p>  <p><b>Step 1:</b> The reading is closer to 72 cm than to 73 cm.</p> <p><b>Step 2:</b> So, the length of the given object to the nearest centimetre is 72 cm.</p>	<p>YouTube</p> <p>Smartboard</p> <p>Worksheet</p> <p>Ruler</p> <p>Meter Stick</p> <p>Measuring Tape</p> <p>Google Map</p> <p>Measurement Chart</p> <p>Computer</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

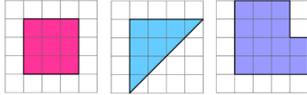
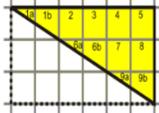
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<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Know how to use a scale to present distance (e.g., map)</li> <li>Solve problems requiring conversion from larger to smaller metric units</li> <li>Solve problems requiring conversion from smaller to larger metric units</li> <li>Solve problems in real-life situations involving length</li> </ul>	<p>Students work in pairs to measure different distances on a T.C.I. map and convert distances</p> <p>Use videos to help students understand the concept of conversion from larger to smaller units and vice versa.</p> <p><b>Bigger unit to Smaller unit</b> -----&gt; <b>Multiply</b></p> <p><b>Smaller unit to Bigger unit</b> -----&gt; <b>Divide</b></p> <p><u>Example:</u></p> <p><b>1 meter &gt; 1 centimeter</b></p> <p><b>Meter to Centimeter</b> -----&gt; <b>Multiply by 100</b></p> <p><b>Centimeter to Meter</b> -----&gt; <b>Divide by 100</b></p> <p>Create word problems for students to solve based on the conversion of metric units</p> <p>Allow students to use the mini fishbowl strategy to help solve problems given on work cards in groups.</p> <p><u>Example:</u> Peter swam 4 lengths in the swimming pool race. If the distance from one end to the other is 75m. Calculate the length he swam in the competition in a) m b) km</p>	<p>YouTube</p> <p>T.C.I. Map</p> <p>Sentence Strips</p> <p>Work Cards</p> <p>Markers,</p> <p>Mini whiteboards</p> <p>Laptop</p> <p>Smartboard</p> <p>Conversion Chart</p>	<p><b>Physical Education</b></p> <p>Relay distances of different athletes, javelin throws</p> <p><b>ICT</b></p> <p>The use of Google maps to determine distances of crucial areas.</p> <p><b>Social Studies</b></p> <p>Understanding how to use the key or legend of a map</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment</p> <p>Analysis of Student Work</p> <p>Fishbowl</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>One-Minute Papers</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Area and Perimeter</b>	<ul style="list-style-type: none"> <li>Estimate, measure, compare and order the perimeter of irregular and regular polygons</li> <li>Determine the measurement of one side of a polygon given the perimeter and the lengths of the other side</li> <li>Solve problems involving the perimeter of compound shapes</li> </ul>	<p>Given diagrams and objects of regular and irregular polygons, allow students to find the length of each then the perimeter.</p> <p>In pairs, allow students to design a dream house, store Playground, or Any Place and find its Perimeter.</p>  <p>Develop and use formulas for finding the perimeter of squares and rectangles.</p> <p>Students work in pairs to find the missing sides of the polygon, then solve the perimeter of compound shapes and highlight the various combinations of cutting the shape.</p> <p>In groups of 4, allow students to use Lego pieces and work cards to solve problems on the perimeter of compound shapes.</p>	<p>Graph paper</p> <p>K-W-L Organizer</p> <p>Measuring tools. (rulers etc.)</p> <p>Work cards</p> <p>Computer</p> <p>Regular and irregular shapes</p> <p>YouTube</p> <p>Ruler</p> <p>Coloured pencils or crayons</p> <p>Reading Book</p> <p>Lego pieces</p>	<p><b>Art and Design</b> Drawing, painting and creating models of polygons shapes</p> <p><b>Physical Education</b> Measure the perimeter of a school basketball court or soccer goal post.</p>	<p>Demonstration</p> <p>Observation</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Differentiate between area and perimeter</li> <li>Estimate, measure and compare the area of various figures by counting centimetre squares</li> </ul>	<p>In groups of 4, provide students with large paper to create an area and perimeter anchor chart which lays out the differences and similarities between area and perimeter measurements.</p> <p>Provide students with the opportunity to differentiate between the use of cm<sup>2</sup> and m<sup>2</sup> measurement in everyday situations such as</p> <p>Allow students to create shapes on geoboard then trade geoboards with a partner, who solves the perimeter and area of the other person's shapes.</p> <p><b>Explanation:</b> The area of a square with sides of length 1cm is 1cm<sup>2</sup>.</p> <p>On the Smartboard, provide questions for students to complete and have the class judge if they are correct.</p> <p>Provide students with work cards to use the formula for the area of a rectangle and solve rectangular regions. Once completed, partners grade each other's worksheets.</p>	<p>YouTube video</p> <p>Grid paper pencils, crayons</p> <p>Work cards</p> <p>Geoboards</p> <p>Anchor chart</p> <p>Smartboard</p> <p>Computer</p>	<p><b><u>Social Studies</u></b>                      Determine the area of other Caribbean countries.</p> <p><b><u>Art and Design</u></b>                      Design a dream house, store Playground, or Any Place and find its area and perimeter.</p> <p><b><u>Language Arts</u></b>                      Spaghetti and Meatballs for All: A Mathematical Story by Marilyn Burns to get kids thinking about the perimeter and area of tables etc.</p>	<p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Area and Perimeter	<ul style="list-style-type: none"> <li>Estimate, measure and compare the area of irregular polygons by counting squares</li> <li>Determine the total area of compound shapes by counting unit squares</li> <li>Determine the area of right-angled triangles but counting unit squares</li> </ul>	<p>Provide students with cut-outs of irregular and regular polygons created on grid sheets and allow them to find the areas. Working out conducted on sticky notes.</p>  <p>Allow students to create different compound shapes on grid paper and switch with a partner to find the area of the shapes by counting the unit squares.</p> <p>Using work cards and video presentation, students find the area of shapes by counting the unit squares.</p> <p>Allow students to construct right-angled triangles on a geoboard and find the areas by counting the number of unit squares.</p> <p>⇒ Finding the area of the right-angled triangle</p> <p>Help students to understand that to confirm that its area is 9 square units, they must count the little squares in the triangle. Some parts do not cover a complete square, but we can make whole squares and then count them.</p> 	<p>Cut-out of Polygons</p> <p>Grid Paper</p> <p>Sticky Notes</p> <p>Worksheet</p> <p>Work cards</p> <p>Geo-Board (nail, coloured rubber bands and a block of wood.</p> <p>Whiteboard</p> <p>Smartboard</p> <p>YouTube</p>	I N T E G R A T E  A C R O S S  S U B J E C T S	<p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Demonstration</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Determine the area of rectangles and squares using a given formula</li> <li>Solve problems involving rectangles with the same perimeter but different area</li> <li>Solve one-step and two-step problems involving area of surfaces</li> <li>Solve one-step problems based on the area of squares and rectangles</li> </ul>	<p>Use K-W-L sheets on rectangles. Allow students to find the area of rectangles and squares, then work in groups of 4 to solve other questions from provided examples.</p> <p><i>Area of rectangle = Length x Width</i> <math>A = lw</math></p> <p><i>Area of Square = Length x Length</i> <math>A = l^2</math></p> <p>Provide students in groups with different objects to find perimeter and area using unit squares blocks, formulas, counting squares etc.</p> <p>On the Smartboard, allow students to relate the area of right angles triangle to its corresponding rectangle.</p> <div> <p style="text-align: center;"><b>Area</b></p> <p style="text-align: center;"><math>A = l \times w</math> <math>A = 4 \times 2</math> <math>A = 8 \text{ units sq}</math></p> </div> <p>In pairs, students use the Think-Pair-Share strategy to solve the area of shapes given on work cards.</p>	<p>YouTube</p> <p>K-W-L Organizer</p> <p>Word cards</p> <p>Worksheet</p> <p>Computer</p> <p>Grid sheets</p> <p>Smartboard</p>	<p><b>Art and Design</b> Use square blocks to make models of different shapes</p> <p><b>Social Studies</b> Create Model of Historical Buildings/ sites in T.C.I.</p> <p><b>Language Arts</b> Write a story about designing a community garden.</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment</p> <p>Analysis of Student Work</p> <p>Strategic Questioning Strategies</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>One-Minute Papers</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES						
<b>Mass/Weight</b>	<ul style="list-style-type: none"> <li>Show estimation, measurement, recording and comparison of the mass of objects using standard units (kg, gram and milligram)</li> <li>Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram or <math>\frac{1}{4}</math> kilogram</li> <li>Convert between units of mass (larger to smaller unit and vice versa), including fractional and decimal units</li> </ul>	<p>Place students in groups. Each group is given objects to estimate the weight of each object and compare answers.</p> <p>In groups with different lunch box contents, allow students to measure in grams items and compare total items, then convert such items to kg after discussing conversion rules.</p> <p>Using a weight scale, provide students with items to measure to the nearest kilogram, such as a bag of flour, pound of cheese, banana etc.</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Mass in Kg</th> <th>Mass in g</th> </tr> </thead> <tbody> <tr> <td></td> <td>1.215kg</td> <td>1215g</td> </tr> </tbody> </table> <p>In their groups, provide students with a jar of task cards with conversion problems to convert mass units.</p>	Name	Mass in Kg	Mass in g		1.215kg	1215g	<p>Objects</p> <p>YouTube</p> <p>Weight scale/ Balance scale</p> <p>Mini whiteboards</p> <p>Conversion Chart</p> <p>Computer</p> <p>Items in lunch bag</p> <p>Task cards</p> <p>Logbook</p>	<p><b>Science</b> Measure the weight of selected items when creating a balanced meal.</p> <p><b>Language Arts</b> A story about the day I weight a tonne.</p> <p><b>ICT/ Research</b> Research the following:</p> <ol style="list-style-type: none"> <li>What is mass and weight?</li> <li>How is mass and weight measured?</li> <li>How are mass and weight-related, or are they?</li> <li>Would you weigh the same on the moon as you do on the earth?</li> </ol>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Pre-assessment</p> <p>Project</p>
Name	Mass in Kg	Mass in g									
	1.215kg	1215g									

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES												
<p><b>Mass/Weight</b></p>	<ul style="list-style-type: none"> <li>• Generate equivalent measures between kilogram and pounds</li> <li>• Solve problems in real-life situations involving mass</li> </ul>	<p>Allow students to use word cards, objects etc. given using think pair and share strategy to find the equivalent of objects</p> <p>Using a whiteboard, explain the concept of kilogram to pounds so that students can understand.</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">Quantity</td> <td style="text-align: center;">English</td> <td style="text-align: center;">=</td> <td style="text-align: center;">Metric</td> </tr> <tr> <td style="text-align: right;">Mass</td> <td style="text-align: center;">1 pound (lb)</td> <td style="text-align: center;">=</td> <td style="text-align: center;">453.6 grams or 0.4546 kg</td> </tr> <tr> <td></td> <td style="text-align: center;">2.2 pounds</td> <td style="text-align: center;">=</td> <td style="text-align: center;">1 kilograms</td> </tr> </table> <p>In pairs, allow students to complete worksheets that require them to make equivalent measures between kilogram and pounds.</p> <p>Visit a supermarket and weigh items interested in purchasing, record the weight of the items in their logbook and the prices.</p> <p>Solve word problems based on real-life situations involving mass.</p> <p>Ask students to collect items or pictures showing the weights of different items from home. Students add to find the total in pounds or kilograms and then convert the sum from lbs to kgs or kgs to pounds.</p>	Quantity	English	=	Metric	Mass	1 pound (lb)	=	453.6 grams or 0.4546 kg		2.2 pounds	=	1 kilograms	<p>Pictures of objects</p> <p>Work cards</p> <p>Mini whiteboards</p> <p>Youtube</p> <p>Computer</p> <p>Electronic balance scale</p> <p>Whiteboard</p> <p>Worksheet</p> <p>Logbook</p>	<p><b>Science</b> Weigh objects in lbs/kg</p> <p><b>Religious Education</b> Explore the story of Samson and investigate the weights of the pillars.</p> <p><b>ICT</b> Research different places that have items of different mass/weight and how they are measured, such as the gym, hardware store, grocery store, airport etc</p>	<p>Analysis of student work</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Demonstration</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>
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MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Capacity	<ul style="list-style-type: none"> <li>Know the relationships between the millilitre and litre</li> <li>Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres)</li> <li>Estimate, measure and record the capacity of containers using the millilitre as a unit of measure</li> <li>Estimate capacity and determine the reasonableness of the answers or estimation</li> </ul>	<p>Provide students with different objects to note the capacity of each in their logbooks</p> <p style="text-align: center;"><b>Capacity</b></p> <p style="text-align: center;">is a measure of how much a container can hold.</p>  <p style="text-align: center;">Measuring spoons or measuring jugs can be used to measure capacity</p> <p style="text-align: center;">Capacity is measured in millilitres (ml) and litres (l). 1l = 1000 ml</p> <p>Use the metric system to show the standard units of capacity millilitre, litre, and kilolitre and their relation. Students arrange containers in ascending and descending order according to their capacity.</p> <p>Allow students to make estimations of other liquid measure objects/pictures in groups.</p> <p>Assemble various empty containers from the school's kitchen in standard sizes, such as milk cartons, and less-known shapes, like cylinder cans, in standard units of capacity millilitre, litre, and kilolitre. Using water or sand, have students fill smaller containers, then see how many successive fillings are needed to equal the larger container.</p>	<p>YouTube</p> <p>Logbook</p> <p>Measuring Instruments (cylinder, cups, tablespoon, teaspoon)</p> <p>Smartboard</p> <p>Computer</p> <p>Worksheets</p> <p>Measurement conversion chart</p>	<p><b>Science</b> Calculate how many litres of water required to fill up a fish tank.</p> <p><b>Physical Education</b> Competing in team water races to fill containers correctly and race to the finish line.</p> <p><b>Social Studies</b> Research water reservoirs around the world and their capacity.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

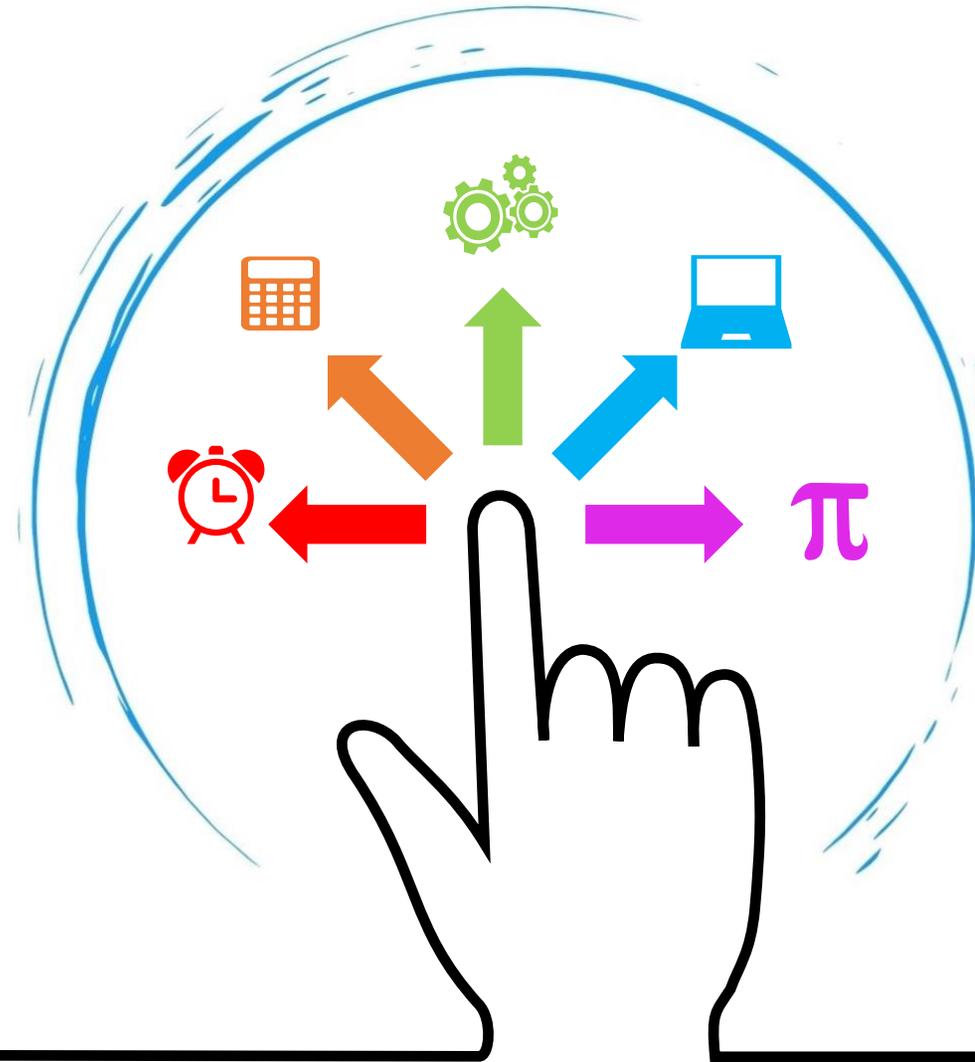
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Capacity</b></p>	<ul style="list-style-type: none"> <li>Approximate measures to the nearest litre</li> <li>Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li> <li>Solve problems in real-life situations involving capacity</li> </ul>	<p>Students watch a video presentation then form groups to convert the capacity provided on work cards. <a href="https://www.youtube.com/watch?v=ToGNq7Tf3GY">https://www.youtube.com/watch?v=ToGNq7Tf3GY</a></p> <p>Provide students with work cards of simple story problems to solve using the think-pair and share method, after which they present their calculations on the whiteboard.</p> <p>In pairs, allow students to work out conversion questions provided on work cards. Example: Mrs. Jackson bought 2 cartons of milk which are 2.4 L each. Her three children finished 1.2 L on Monday and 950 ml on Tuesday. How much milk is left?</p> <p>Plan a class trip to the service station for students to see how gasoline or diesel oil are pumped and allow them to determine the cost for a fill-up given the cost of one litre of gasoline.</p> <p>Ask students to bring a copy of their home's water bills for the class to compare the bills based on the consumptions.</p>	<p>Youtube Work cards Computer Whiteboard Equivalent Chart Water Bills Worksheets Smartboard Varying sizes containers</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration Oral Presentation Exit/Entrance slips Teacher made test Analysis of student work 3-2-1 Strategy Think-Pair-Share Oral Discussion Quiz Observation Pre-assessment Project</p>

# GRADE 5

## Term 3

Strands: Measurement; Geometry; Statistics and Handling

Themes: Basic Food Preparation



Term: 3

Curriculum Theme: **Basic Food Preparation**

Aim: The aim of this theme is to introduce students to preparing food and cooking safely and hygienically.

Project Criteria:

1. Identify ways to store food safely
2. State why food needs to be stored safely
3. Select small equipment for preparation and cooking tasks for a given recipe
4. Follow instructions to cook food using an electric or gas cooker for a given recipe
5. Demonstrate safe and hygienic practices
6. Store equipment safely

Suggested assignments/activities

- Student-led discussion – 'Why is it important to eat fresh food?'
- Activity – paired work – simulation – students choose where to store different food followed by a whole-class discussion to agree on correct storage places.
- Activity – worksheet to consolidate knowledge.
- Activity – use-by dates – students work in pairs to identify correct use-by dates on different items.
- Activity – students make 'warning' posters to display in a kitchen about proper storage and use-by dates.
- Assessment – students record ways to store food safely and why food needs to be stored safely.
- Activity – quiz – display small equipment for students to handle/use – 'What would you use this for?' multiple-choice questions.
- Teacher-led question and answer session to establish knowledge of kitchen hygiene and safety. Safe practice agreed and safety rules displayed for students to refer to during practical tasks.
- Activity – demonstration of the use of small equipment.
- Activity – practical – using small equipment to practice food preparation tasks, e.g., peel a potato, weigh pasta, measure milk.
- Activity – question and answer session. 'Why is it important to clear up after preparing and cooking food?'
- Activity – teacher-supported research of recipes using books and the internet and students choose food to cook from the teacher's recipes. Whole-class discussion to agree on food to cook in practical sessions.
- Activity – practical sessions – Teacher demonstrates food preparation followed by students preparing food following instructions. Teacher demonstrates cooking, followed by students cooking food, following instructions. Students clear up and replace equipment after each session.
- Classes to provide feedback, log achievements, and identify skills that could be developed.
- Assessment – Portfolio outlining activities completed in selecting small equipment for preparation and cooking tasks, preparing food, cooking food, safe and hygienic practices, cleaning equipment used during cooking; storing equipment safely; cleaning kitchen area.
- Assessment feedback, review, and evaluation of theme./**CPEA Project Rubric**

<b>STRAND: MEASUREMENT</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Volume	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Understand the concept of volume</li> <li>● Investigate the relationship and differences between volume and capacity</li> <li>● Determine the volume of a solid made up of 1 centimetre or 1-meter cubes</li> <li>● Show comparison of volumes of solids made up of 1-cm or 1-m cubes</li> <li>● Convert between units of capacity (larger to smaller unit and vice versa), including decimal units</li> <li>● Investigate to find the relationship between the length, breadth, height and volume of cubes and cuboids.</li> <li>● Determine the volume of a cuboid given its length, breadth and height</li> </ul>
<b>STRAND: GEOMETRY</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Lines/ Line Segments	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Understand basic geometric ideas: point, line, line segments, ray, plane, angle</li> <li>● Recognize and construct horizontal and vertical line segments</li> <li>● Understand the concept of zero and one dimensional</li> </ul>
Angles	<ul style="list-style-type: none"> <li>● Understand the concept of an angle</li> <li>● Recognize and construct acute, right, obtuse (reflex) angles</li> <li>● Recognize angles in two-dimensional and three- dimensional figures</li> <li>● Estimate and calculate missing angles by apply knowledge of the angular properties of triangles, squares and rectangles</li> <li>● Solve problems involving angles</li> </ul>
2- Dimensional / Plane Figures	<ul style="list-style-type: none"> <li>● Recognize and compare two- dimensional figures (polygons up to 10 sides) and explore their properties</li> <li>● Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics (number of sides, vertices, angles, etc.)</li> <li>● Use the properties of squares and rectangles to find unknown lengths</li> <li>● Explain the concept of 'congruent figures'</li> <li>● Recognize congruent angles in polygons</li> <li>● Solve challenging problems involving triangles and four-sided figures</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 3

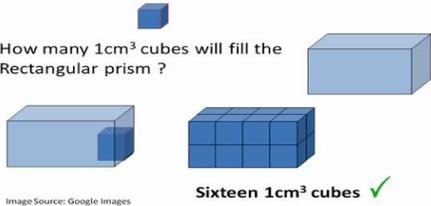
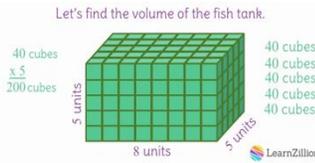
	<ul style="list-style-type: none"> <li>● Solve word problems involving circumference and area of a circle semicircle and quadrant</li> <li>● Solve problems involving the estimation and calculation of the circumference, diameter and radius of a circle</li> </ul>
3- Dimensional Figures/ Solids	<ul style="list-style-type: none"> <li>● Use mathematics language to accurately describe 3D shapes (curved surface, flat face, square face, circular face, curved edge)</li> <li>● Explore and construct prisms (cubes and cuboids) by outlining their properties and nets</li> <li>● Explore and construct pyramids (triangular and square base) by outlining their properties and nets</li> <li>● Create and solve problems based on the properties of 3D shapes and their nets</li> </ul>
Transformation	<ul style="list-style-type: none"> <li>● Explore the ideas of symmetry in geometric figures and shapes</li> <li>● Develop an understanding of line symmetry</li> <li>● Recognize and construct a line of symmetry in plane figures</li> <li>● Recognize rotational symmetry in simple shapes</li> <li>● Recognize congruence in simple plane figures</li> <li>● Describe the location and properties of geometric shapes after a slide, flip or turn</li> <li>● Understand and use the concept of reflection within the Cartesian plane</li> <li>● Recognize, describe and represent the position of points within the first quadrant of the Cartesian plane</li> <li>● Explore and predict patterns and shapes with simple transformation</li> <li>● Compare flat surfaces, recognize and use tessellation to create new shapes and pattern</li> </ul>
<b>STRAND: STATISTICS AND DATA HANDLING</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Data Representation	<b>STUDENTS SHOULD BE ABLE TO:</b> <ul style="list-style-type: none"> <li>● Construct pictographs, line graphs, bar graphs to show given data</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>● Interpret data presented in bar graphs, line graphs, pictographs and pie charts.</li> <li>● Estimate, calculate and interpret the mean, mode, median and range of a set of discrete data</li> <li>● Recognize patterns in a set of data</li> <li>● Make predictions from a set of data</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 5 STRUCTURE

TERM 3

Probability	<b>STUDENTS SHOULD BE ABLE TO:</b> <ul style="list-style-type: none"><li>● Understand mathematical language associated with probability (i.e. event, outcome etc.)</li><li>● Understand the concept of probability</li><li>● Find the probability of an event</li><li>● Make predictions of the probability of an event.</li><li>● Connect to probability as prediction in determining if outcomes are likely, impossible or unlikely</li><li>● Show application of predicting skills in practical situations</li></ul>
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**MEASUREMENT**

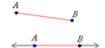
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of volume</li> <li>Investigate the relationship and differences between volume and capacity</li> <li>Determine the volume of a solid made up of 1 centimetre or 1-meter cubes</li> </ul>	<p><b>Explanation:</b> Volume is the amount of space that a solid, three-dimensional figure takes up.</p> <p>The Volume of a 3D Shape is the number of cubes needed to fill the inside of the shape.</p>  <p>Image Source: Google Images</p> <p>Allow students to research and create an anchor chart that presents the differences between volume and capacity.</p> <p>Model for students how to find the volume of a few rectangular prisms with simple dimensions by drawing simple prisms, labelling the length, width, and height, or using centimetre cubes to build a rectangular prism.</p>  <p>LearnZillion</p> <p>Allow students to measure the volume of some figures by counting unit cubes.</p>	<p>Youtube</p> <p>Volume Song</p> <p>Computer</p> <p>Solid shapes</p> <p>Word Wall</p> <p>Linking Cubes</p> <p>Worksheet</p> <p>Centimetre cubes</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Science</b> Researching the average volume of water in the human body.</p> <p><b>Art and Design</b> Create a visual representation of the volume of water in the human body.</p> <p><b>Language Arts</b> Cause and Effect- Students identify reasons why understanding volume is essential.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Volume	<ul style="list-style-type: none"> <li>Show comparison of volumes of solids made up of 1-cm or 1-m cubes</li> <li>Convert between units of capacity (larger to smaller unit and vice versa), including decimal units</li> </ul>	<p>Provide students with the opportunity to build a variety of prisms based on 1-cm or 1-m cubes and compare their volumes</p> <p>In groups, allow students to discuss and convert between units of capacity from larger to smaller unit and vice versa.</p> <p>Allow students to check and correct each other's work while explaining the process to any member who doesn't fully understand.</p> <p>Use a metric table to explain the process of conversion from one unit to the next. (see video)  <a href="https://www.youtube.com/watch?v=2viB6AFOH7M">https://www.youtube.com/watch?v=2viB6AFOH7M</a></p> <div style="text-align: center;"> <p><b>Volume</b></p> </div> <p>Allow students to create conversion tables in their books and outline different methods to use when converting between them.</p>	<p>Youtube</p> <p>Worksheets</p> <p>Whiteboard</p> <p>Construction Paper</p> <p>Conversion Chart</p> <p>Computer</p> <p>Ruler</p> <p>Smartboard</p>	I N T E G R A T E  A C R O S S  S U B J E C T S	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p>

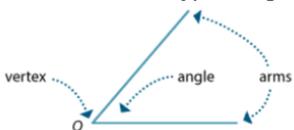
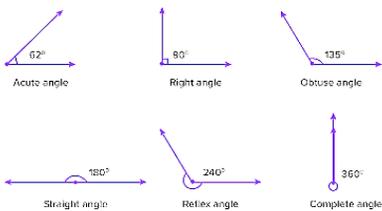
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<b>Volume</b>	<ul style="list-style-type: none"> <li>Investigate to find the relationship between the length, breadth, height and volume of cubes and cuboids</li> <li>Determine the volume of a cuboid given its length, breadth and height</li> </ul>	<p>Allow students to watch the introduction video on Study Jams video on Volume- <a href="https://studyjams.scholastic.com/studyjams/jams/math/measurement/volume.htm">https://studyjams.scholastic.com/studyjams/jams/math/measurement/volume.htm</a></p> <p>Using previous knowledge on volume and cubic units allows students to view a video presentation on calculating the volume of solids. (See video below)- <a href="https://www.youtube.com/watch?v=HZVFRkEDvkQ">https://www.youtube.com/watch?v=HZVFRkEDvkQ</a></p> <p>Allow students to work with a partner, cut out nets for three different sized boxes, fold up the sides and tape them together. Find the volume of each box by packing it with centimetre cubes. Record findings in a chart with the headings shown below.</p> <table border="1"> <thead> <tr> <th>Box</th> <th>Length of base (b)</th> <th>Width of base (w)</th> <th>Height of prism (h)</th> <th>Volume</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Allow students to look closely at their gathered data and describe any patterns or relations they noticed after completing the above activity.</p> <p>Using the What's the volume? Task cards allow students to determine the volume of the cubes/ cuboids</p>	Box	Length of base (b)	Width of base (w)	Height of prism (h)	Volume	A															<p>Youtube</p> <p>Computer</p> <p>Nets for rectangular prisms</p> <p>Scissors</p> <p>Tape</p> <p>Centimetre cubes</p> <p>Worksheets</p> <p>Ruler</p> <p>Word Wall</p> <p>What's the volume? Task card</p>	<p><b>Language Arts</b> Provides students with support in negotiating written word problems through multiple reads and multi-modal interactions with the problem.</p> <p><b>Science</b> Determine the volume of different objects in the science lab/ corner using their length, breadth and height</p>	<p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p>
Box	Length of base (b)	Width of base (w)	Height of prism (h)	Volume																					
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**GEOMETRY**

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<p><b>Lines/ Line Segments</b></p>	<ul style="list-style-type: none"> <li>Understand basic geometric ideas: point, line, line segments, ray, plane, angle</li> <li>Recognize and construct horizontal and vertical line segments</li> <li>Understand the concept of zero and one dimensional</li> </ul>	<p>In their groups, allow students to discuss types of lines, recording their ideas for class discussion.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center; color: red; font-weight: bold;">Lines, Line Segments, and Rays</p> <p>A point has no size or shape, just position.  Point M</p> <p>A line is a straight path of points that has no beginning or end.  Line <math>\overleftrightarrow{XY}</math></p> <p>A line segment is a portion of a line that has two endpoints.  Line segment <math>\overline{AB}</math></p> <p>A ray is a portion of a line which has one endpoint and extends forever in one direction.  Ray <math>\overrightarrow{PQ}</math></p> </div> <p>Allow students to combine geometric ideas and construct angles using horizontal and vertical lines and present them to the class.</p> <p>Provide students with opportunities to use mobile devices/ tablets and identify/photograph lines in everyday life, e.g. socks, window blinds etc. and construct some of their own.</p> <p><b>Explain to students.”</b></p> <ul style="list-style-type: none"> <li>➤ Zero Dimensional- A point is a zero-dimensional object as it has no length, width or height. It has no size. It tells about the location only.</li> <li>➤ One Dimensional- A line segment drawn on a surface is a one-dimensional object with only length and no width.</li> </ul>	<p>Youtube Computer Smartboard Geometry Set Ruler Protractor Internet Access Worksheet Snake and ladders game Mobile devices/ tablets</p>	<p><b>Art and Design</b> Choose a selected place such as the beach, schoolyard, home and draw scenes using points, lines and line segments.</p> <p>Create a booklet of lines to display different lines eg.g perpendicular etc using objects like straws</p> <p><b>Science</b> Explore how a prism works because of the different colours of light travelling at different speeds inside the glass.</p> <p><b>Language Arts</b> Continue after the word dimensional e.g Write a description of each type line in on sentence strips.</p>	<p>Observation Pre-assessment Project Demonstration Peer Assessment Teacher made test Analysis of student work 3-2-1 Strategy Think-Pair-Share Oral Discussion Oral Presentation Exit/Entrance slips</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Angles</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of an angle</li> <li>Recognize and construct acute, right, obtuse (reflex) angles</li> <li>Recognize angles in two-dimensional and three-dimensional figures</li> </ul>	<p>Allow students to construct angles (protractors and compass) using material given, e.g., paper, use time on clocks to form types angles.</p>  <p>Using the Mathisfun website, locate the name of an angle that is exactly 180 degrees (straight angle) and one that is greater than 180 degrees (reflex angle)</p>  <p>Given different shapes, students form groups to find angles in 2D and 3D shapes.</p> <p>Provide an opportunity for students to construct different angles using geometric ideas by drawing them on construction paper using a protractor, then cutting them and pasting them in their books.</p> <p>Allow students to classify two-dimensional figures by the number of equal sides and the number of right angles.</p>	<p>Clocks</p> <p>Protractor</p> <p>Ruler</p> <p>Youtube</p> <p>Computer</p> <p>Stencil Knife</p> <p>Glue</p> <p>Construction Paper</p> <p>Worksheets</p> <p>Angles Poster</p> <p>Internet Access</p> <p>Door showing angles on floor</p>	<p><b>Language Arts</b> Finding the meaning of new words, e.g. acute, obtuse etc.</p> <p><b>Art and Design</b> Create different images using different types of angles.</p> <p><b>ICT</b> Research the following questions:</p> <ul style="list-style-type: none"> <li>How do people in various professions use angles to complete their work?</li> <li>How do all people use angles in their everyday lives?</li> </ul>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

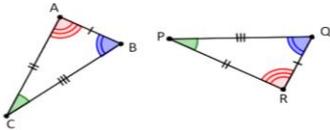
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<p><b>Angles</b></p>	<ul style="list-style-type: none"> <li>Estimate and calculate missing angles by apply knowledge of the angular properties of triangles, squares and rectangles</li> <li>Solve problems involving angles</li> </ul>	<p>Using knowledge of turns in angles, students use work cards to estimate and find missing angles.</p> <p>Allow the class to watch a video on Measuring Angles With a Protractor. Then, students complete problems involving angles with a partner. (See link) <a href="https://www.youtube.com/watch?v=CV3xaGcRTgE">https://www.youtube.com/watch?v=CV3xaGcRTgE</a></p> <p>Observe the numbers below and circle the numbers with right angles.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p><b>Numbers with Right Angles</b></p> <p>1 2 5 6 8</p> <p>4 7 9 0</p> </div> <p>Provide students with opportunities to find the measure of given angles using a protractor.</p> <p>In groups, allow students to calculate and complete tables that require the number of angles found in various shapes.</p>	<p>Youtube</p> <p>Math is Fun Website</p> <p>Worksheet</p> <p>Youtube</p> <p>Protractor</p> <p>Workbook</p> <p>Whiteboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

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<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognize and compare two- dimensional figures (polygons up to 10 sides) and explore their properties</li> <li>Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics (number of sides, vertices, angles, etc.)</li> <li>Use the properties of squares and rectangles to find unknown lengths</li> </ul>	<p>In groups of 4, provide students with blank polygon concept maps to fill out what they know about regular polygons and their properties from the 2D shapes provided.</p>  <p>Allow students to identify different shapes and state their attribute. Once complete, they can categorize the shapes based on their characteristics.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Draw the shape</th> <th>sides</th> <th>angles</th> <th>Other identifying attributes</th> </tr> </thead> <tbody> <tr> <td>Shape</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>circle</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>oval</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Set a timer for two minutes. Allow students to make a list in their notebook of all the shapes they see in their immediate surroundings. They can look around the classroom and record the name of any shape they know. <b>For example</b>, the teacher’s desk is a rectangle.</p> <p>Allow students to complete problems with given perimeters and unknown lengths by adding the know sides, subtracting the lengths from the perimeter and divide the difference by 2.</p>	Attribute	Draw the shape	sides	angles	Other identifying attributes	Shape					circle					oval					<p>2-D Objects Shapes Concept Maps Youtube Computer Timer Camera Worksheet Word Wall</p>	<p><b>Art and Design</b> Use polygons to construct a car, house, plane etc.</p> <p><b>Science/STEM</b> Create a list of different 2D geometric shapes, along with a description and examples of where you can spot them in everyday life.</p> <p><b>Language Arts</b> Match each polygon to its description pictures.</p>	<p>Demonstration Analysis of student work Peer Assessment Exit/Entrance slips Teacher made test 3-2-1 Strategy Think-Pair-Share Presentation Quiz Observation Pre-assessment Project</p>
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<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>● Explain the concept of 'congruent figures'</li> <li>● Recognize congruent angles in polygons</li> <li>● Solve challenging problems involving triangles and four-sided figures</li> </ul>	<p>Provide students with opportunities to use different pictures/ shapes to determine congruency.</p> <p style="text-align: center;"><b>Congruent Figures</b></p> <p>Two figures are <b>congruent</b> if they are the <b>same size and shape</b>. Their corresponding angles and sides are equal.</p>  <p style="text-align: center;">Triangle ABC is congruent to triangle RQP</p> $\triangle ABC \cong \triangle RQP$ $\begin{array}{ll} \angle A = \angle R & \overline{AB} = \overline{QR} \\ \angle B = \angle Q & \overline{BC} = \overline{PQ} \\ \angle C = \angle P & \overline{AC} = \overline{PR} \end{array}$ <p>In pairs, provide students with a polygon, which they must draw a congruent figure for it. Then they must classify the type of polygon.</p> <p>Engage students in a discussion while utilizing the SMARTBoard, where the properties of each type of triangle and four-sided figures are examined.</p> <p>Students allowed to play properties bingo where they score points for discovering properties, not found by the other team or vice versa...</p> <p>On a geoboard, allow students to build a congruent figure based on a figure already provided on a task card. Congruent figures using various colour elastic bands</p>	<p>Youtube</p> <p>Mini Whiteboards</p> <p>Geoboards</p> <p>Worksheets</p> <p>Smartboard</p> <p>Grid sheet</p> <p>Task Card</p> <p>Math is Fun- <a href="https://www.mathsisfun.com/geometry/congruent.html">https://www.mathsisfun.com/geometry/congruent.html</a></p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

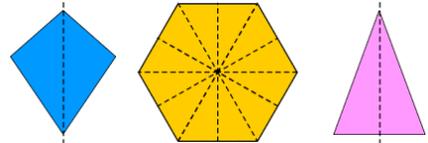
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<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Solve word problems involving circumference and area of a circle semicircle and quadrant</li> <li>Solve problems involving the estimation and calculation of the circumference, diameter and radius of a circle</li> </ul>	<p>Present students with video presentations on the circle and its properties. Then using whole class fishbowl strategy, separate students into mini fishbowl groups, and allow them to attempt word problems on work cards involving circumference and area of a circle semicircle etc.</p> <p><a href="https://www.youtube.com/watch?v=QfwF7EJqsPc">https://www.youtube.com/watch?v=QfwF7EJqsPc</a></p> <div> <p>The Area and Perimeter of a Circle</p> <p>A circle is defined by its diameter or radius</p> <p>The perimeter or circumference of a circle is the distance around the outside</p> <p>The area of a circle is the space inside it</p> <p>The ratio of <math>\frac{\text{circumference}}{\text{diameter}} = \pi</math> (pi)</p> <p><math>\pi</math> is an irrational number whose value to 15 decimal places is <math>\pi = 3.14159265358979\dots</math> We usually say <math>\pi \approx 3.14</math></p> </div> <p>Provide students with task cards with word problems to solve involving circumference and area of a circle semicircle and quadrant using pi as 22/7, making the divisions completely divisible the denominator of 7</p> <p>As reinforcement, use YouTube videos to show students how to calculate the circumference, diameter and radius of a circle using pi as 22/7.</p> <p>On the smartboard, provide students with problems involving the estimation and calculation of the circumference, diameter and radius of a circle to solve.</p>	<p>Youtube</p> <p>Computer</p> <p>Smartboard</p> <p>Task Cards</p> <p>Work Cards</p> <p>Cutouts of circle and semicircle</p> <p>Pencil</p> <p>Markers</p> <p>Scissors</p> <p>Area/Perimeter Chart</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

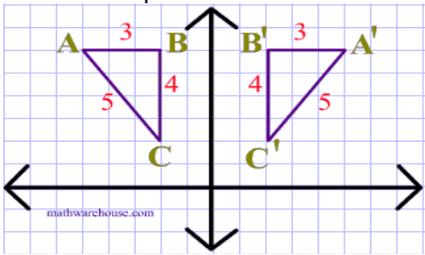
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<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Use mathematics language to accurately describe 3D shapes (curved surface, flat face, square face, circular face, curved edge)</li> <li>Explore and construct prisms (cubes and cuboids) by outlining their properties and nets</li> <li>Explore and construct pyramids (triangular and square base) by outlining their properties and nets</li> <li>Create and solve problems based on the properties of 3D shapes and their nets</li> </ul>	<p>As a class, allow students to explore and identify the 3D shapes in the environment. Students examine several 3D shapes to determine the number of faces, edges and vertices after a walk around their school.</p> <p>Use interactive video to show students how a net is formed from a 3-D object <a href="https://www.mathsisfun.com/platonic_solids.html">https://www.mathsisfun.com/platonic_solids.html</a></p> <p>Provide opportunities for students to construct prisms (cubes and cuboids) using two rectangles or two squares and joining the vertices and outlining their properties and nets.</p> <p>Demonstrate to students the concept of finding the net of 3-D objects by using cardboard boxes.</p> <p>Allow students to review various prisms and pyramid nets and select the correct net that matches the shape and vice versa.</p> <p>Allow students to investigate all the unique nets for prisms and pyramids.</p> <p>Provide students with opportunities to construct a net to scale for any regular prisms/ pyramids.</p>	<p>Geometric shapes</p> <p>Youtube</p> <p>Computer</p> <p>3D Shapes Song</p> <p>Construction Paper</p> <p>Word Wall</p> <p>Scissors</p> <p>Smartboard</p> <p>Printable nets of solids</p> <p>Worksheets</p>	<p><b>Social Studies</b> Finding 3D shapes in the environment.</p> <p><b>Art and Design</b> Create a birdhouse using the different 3-D shapes.</p> <p><b>ICT</b> Watching and manipulating interactive videos.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

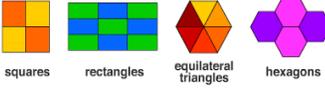
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Explore the ideas of symmetry in geometric figures and shapes</li> <li>Develop an understanding of line symmetry</li> <li>Recognize and construct a line of symmetry in plane figures</li> <li>Recognize rotational symmetry in simple shapes</li> </ul>	<p>Given several graphical objects or images, allow students to use the Think-Pair and Share strategy and a mirror to find lines of symmetry on different objects.</p> <p>Engage students in a discussion on the importance of line symmetry and record responses on an anchor chart.</p> <p>Allow students to construct/ recognize a line of symmetry using mini-whiteboards for different plane shapes given from work cards.</p> <div style="text-align: center;"> <p><b>line symmetry</b></p> <p>Each side of the line of symmetry mirrors the other side. An object may have more than one line of symmetry.</p> <p><b>examples</b></p>  </div> <p>Students complete worksheets of different plane shapes to manipulate by drawing the lines of symmetry.</p> <p>Using KWL/KWHL sheets, students apply previous knowledge to understand new info on rotational symmetry and recognize them in simple shapes.</p> <p>In groups of 4, experiment using simple shapes to find the amount of rotational order.</p>	<p>Objects/picture cards</p> <p>Work cards</p> <p>Youtube</p> <p>Computer</p> <p>Anchor Chart</p> <p>KWL/KWHL sheets</p> <p>PowerPoint video</p> <p>Worksheets</p> <p>Line Symmetry Poster</p> <p>Ruler</p> <p>Cut-outs of plane shapes</p>	<p><b>Art and Design</b> Have students capture an image of their face and use a paint or imaging program to show how one side of their face is slightly different from the other.</p> <p>Painting Symmetrical Objects</p> <p><b>Language Arts</b> Vocabulary building and finding the meaning of words such as symmetry, rotational etc.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

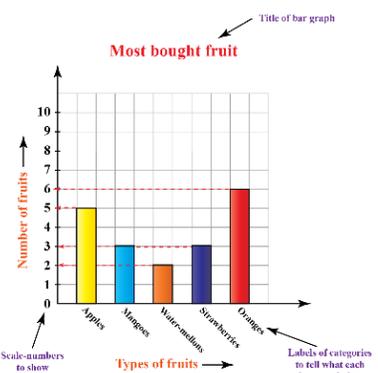
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Recognize congruence in simple plane figures</li> <li>Describe the location and properties of geometric shapes after a slide, flip or turn</li> <li>Understand and use the concept of reflection within the Cartesian plane</li> </ul>	<p>Students use previous knowledge on congruence to practice slides, flips and turns of different plane shapes and state properties.</p> <p>Present the concept using the link below, then demonstrate to students how to perform transformation moves by flipping at point, sliding or turning the object on top to bring concepts such as rotate, translate reflection. <a href="https://tutors.com/math-tutors/geometry-help/congruent-figures-definition-examples">https://tutors.com/math-tutors/geometry-help/congruent-figures-definition-examples</a></p> <p>Ask students to make similar shapes from cardboard and demonstrate the process of flip, slide, and turn, describing the shapes' location and properties after a slide, flip or turn.</p> <p>In groups of 4, allow students to discuss and provide them with coordinated reflection work cards and graph paper to solve the reflection of shapes.</p> 	<p>Youtube Computer Paper Cardboard Tape Work cards Cardboard Graph paper Whiteboard Worksheets Word Wall</p>	<p><b>ICT</b> PowerPoint presentation on flip, slide and turn properties of geometric shapes</p> <p><b>Physical Education</b> Body movement and positions to show tranformation in pairs</p> <p><b>Language Arts</b> Show and tell on the properties of slide, flip, turn, e.g., in song, drama etc</p>	<p>Demonstration Analysis of student work Peer Assessment Exit/Entrance slips Teacher made test 3-2-1 Strategy Think-Pair-Share Presentation Quiz Observation Pre-assessment Project</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Recognize, describe and represent the position of points within the first quadrant of the Cartesian plane</li> <li>Explore and predict patterns and shapes with simple transformation</li> <li>Compare flat surfaces, recognize and use tessellation to create new shapes and pattern</li> </ul>	<p>Students take turns plotting points on the cartesian plane using grid paper.</p> <p>As reinforcement, present students with the Coordinate Plane and Ordered Pairs Song after discussing the concept. See link- <a href="https://www.youtube.com/watch?v=d6vhjpnfd3c">https://www.youtube.com/watch?v=d6vhjpnfd3c</a></p> <p>Using interactive geoboards, allow students to use coordinates to explore pattern/shapes.</p> <p>In groups, students take turns creating tessellations shapes from flat shapes made or used patterns provided.</p> <div style="text-align: center;"> <p><b>shapes that will tessellate</b></p> <p>Congruent shapes are shapes of exactly the same shape and size. Congruent shapes that tessellate include:</p>  <p>squares      rectangles      equilateral triangles      hexagons</p> <p><b>shapes that will not tessellate</b></p>  <p>circles      ellipses</p> </div> <p>In pairs, Students draw and cut shapes of similar sizes and paste them to create a pattern of tessellation</p> <p>Students compare flat surfaces and recognize shapes that cannot tessellate based on facts, e.g. has gaps</p>	<p>Grid paper</p> <p>Youtube</p> <p>Geoboards</p> <p>Computer, Tablet</p> <p>Interactive app <a href="https://apps.mathlearningcenter.org/geoboar">https://apps.mathlearningcenter.org/geoboar</a></p> <p>Pattern cards</p> <p>Markers</p> <p>Paper</p> <p>Worksheets</p> <p>Scissors</p> <p>Construction paper</p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>Construct pictographs, line graphs, bar graphs to show given data</li> </ul>	<p>Engage students in a demonstration on how to represent data in tables and graphs using collected data in their school environment.</p>  <p>In groups, allow students to construct different graphs based on their own experiences such as birth months, etc., and display data.</p> <p>After the construction of different graphs, provide students with opportunities to present and explain the data gathered to other groups.</p> <p>As reinforcement, present the video on Analyzing Graphs and Images to students. See link- <a href="https://www.youtube.com/watch?v=62Ljzx-ik50">https://www.youtube.com/watch?v=62Ljzx-ik50</a></p> <p>Students participate in a field trip inside and outside of school to collected data.</p>	<p>Youtube</p> <p>Pictures or chart with different types of graph</p> <p>Videos on data collection and representation</p> <p>Online Activities</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Data sets</p> <p>Task Cards</p>	<p><b>Science/STEM</b> Recording Weather Conditions and making predictions</p> <p><b>Social Studies</b> Identify types of birds found in the T.C.I and the season which they are most likely found here.</p> <p><b>ICT</b> Research tourist visits during Covid to the TCI and Use spreadsheet software to generate data in graphs.</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p>

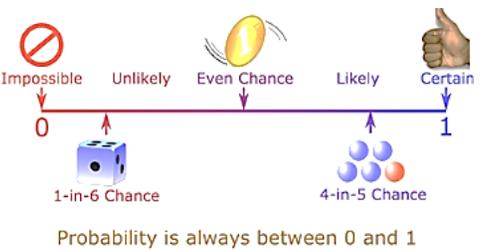
**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Statistics</b></p>	<ul style="list-style-type: none"> <li>Interpret data presented in bar graphs, line graphs, pictographs and pie charts</li> <li>Estimate, calculate and interpret the mean, mode, median and range of a set of discrete data</li> <li>Recognize patterns in a set of data</li> <li>Make predictions from a set of data</li> </ul>	<p>In groups of 4, allow students to survey data/ information on work cards, e.g. students transported to school by different vehicles, students who prefer different sports for PE etc</p> <p>Present students with data in different graphs. Students work with a partner to interpret the data.</p> <p>Students observe different graphs such as a bar, line, pictograph etc., then draw conclusions from them to answer questions and make projections wherever possible.</p> <p>Students estimate the mean, mode, median and range of a set of data provided by the teacher. Students complete a worksheet that requires them to solve mean, median and mode problems using sample datasets.</p> <p>Using the Think-Pair-Share strategy, allow students to describe how they determined the patterns in a set of data and why information is communicated through the graph.</p> <p>Present students with data set and allow them to recognize patterns in a data set, make predictions, and draw conclusions from them to answer questions.</p>	<p>Work cards</p> <p>Youtube</p> <p>Graph Paper</p> <p>Computer</p> <p>Playing Cards</p> <p>Graph paper</p> <p>Worksheets</p> <p>Different graphs</p>	<p><b>Social Studies</b> Survey gathering</p> <p>Project: TCI Tourists Visit for the year 2019 - 2020</p> <p><b>Language Arts</b> Finding word meaning</p> <p><b>Art and Design</b> Display Boards School Compound</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p>

**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Probability</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with probability (i.e. event, outcome etc.)</li> <li>Understand the concept of probability</li> <li>Find the probability of an event</li> </ul>	<p>Students create a concept web where probability is at the centre, and students write words associated with the term such as event, outcome, certain, likely etc.</p> <p>Hold up a die and ask the students how many numbers are on the die. Roll the die a few times and record the numbers rolled on the smartboard.</p> <p>Lead a conversation with students to discuss the probability of how likely the die is to roll a number until students realize the probability of rolling any number on a die is 1/6.</p> <p>Demonstrate examples to students as shown below, then allow them to determine the probability of different events including real life probabilities from their own environments.</p> <p><b>e.g.</b> There are 5 marbles in a bag: 4 are blue, and 1 is red. What is the probability that a blue marble gets picked?</p> <p>⇒ Number of ways it can happen: 4 (there are 4 blues)</p> <p>⇒ Total number of outcomes: 5 (there are 5 marbles in total)</p> <p><i>So the probability = <math>\frac{4}{5} = 0.8</math></i></p>	<p>Work cards</p> <p>Dice</p> <p>Smartboard</p> <p>Probability Poster</p> <p>Whiteboard</p> <p>Youtube</p> <p>Probability &amp; Key Terms Word Wall</p> <p>Worksheets</p> <p>Concept Chart</p>	<p><b>Science</b> Create a weather logbook and write in the probability of an event such as rain, cloudy day etc.</p> <p><b>Physical Education</b> Coin tossing to determine which team race first etc.</p> <p><b>Language Arts</b> Essay titled 'What Are the Chances?'</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project (Research)</p> <p>Writing Portfolio</p>

**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Probability</b></p>	<ul style="list-style-type: none"> <li>Make predictions of the probability of an event</li> <li>Connect to probability as a prediction in determining if outcomes are likely, impossible or unlikely</li> <li>Show application of predicting skills in practical situations</li> </ul>	<p>In groups, students attempt several probability events by making predictions after viewing the attached video  <a href="https://www.youtube.com/watch?v=or_XJRFnfu">https://www.youtube.com/watch?v=or_XJRFnfu</a>  </p> <p>Students predict an outcome for a simple probability experiment and the reason why, to establish the relevance of the possible outcomes (e.g., if there are 5 red marbles and 2 blue marbles in a bag, how likely will it be that a red marble is picked? A blue marble? A green marble?)</p> <p>Students apply predicting skills in situations such as :</p> <ul style="list-style-type: none"> <li>Flipping a coin.</li> <li>Choosing a card from the deck.</li> <li>Throwing a dice.</li> <li>Pulling a green candy from a bag of red candies.</li> </ul>	<p>Youtube Task cards Computer Worksheets Probability Chart Coin Deck of Cards Candy Bag Dice Smartboard Logbook</p>	<p><b>Science</b> Experiment on Weather Forecasting</p> <p><b>Physical Education</b> Predict outcome of games.</p> <p><b>Social Studies</b> Predict outcomes of elections</p>	<p>Analysis of student work Peer Assessment Exit/Entrance slips 3-2-1 Strategy Think-Pair-Share Oral Presentation Observation Pre-assessment Project Writing Portfolio Demonstration</p>

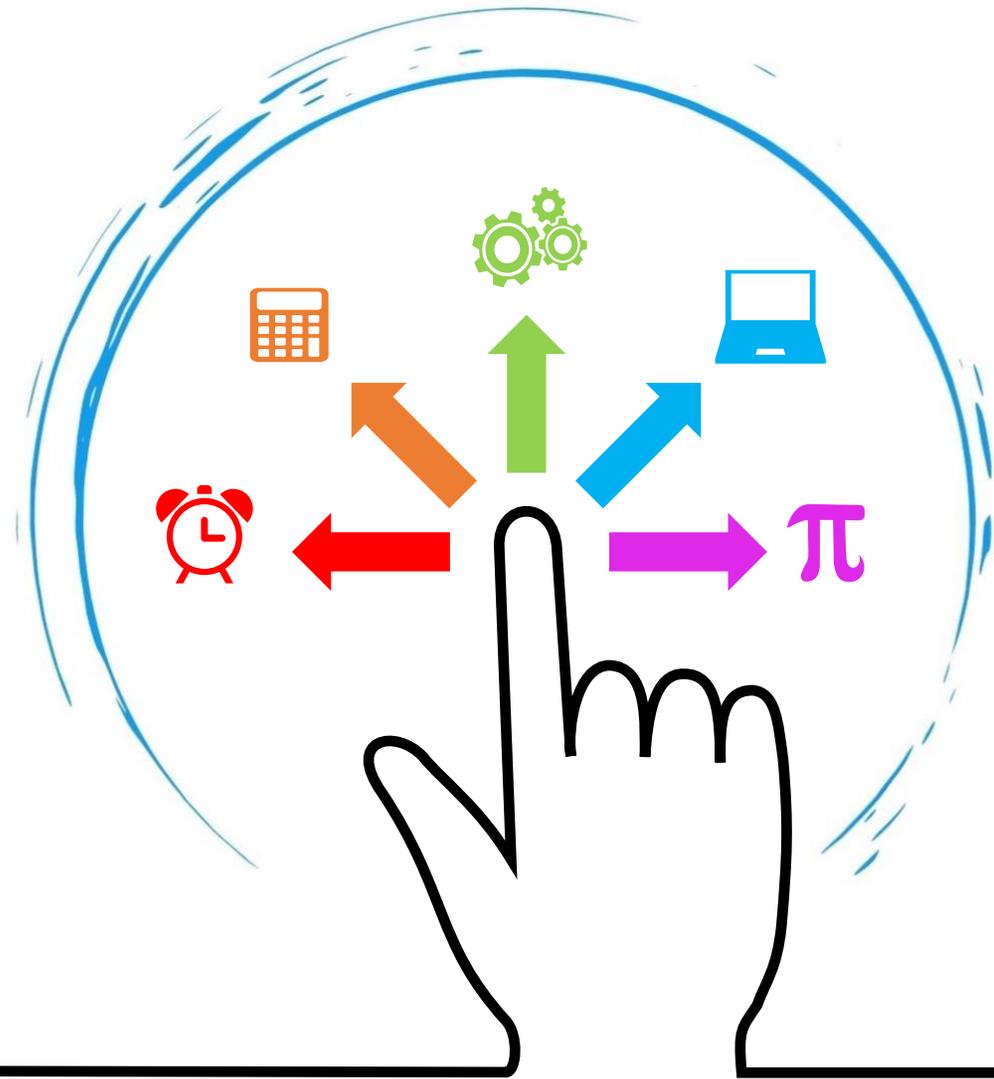
	Term 1	Term 2	Term 3
<b>G R A D E  6</b>	<b>NUMBER CONCEPTS:</b> <ul style="list-style-type: none"> <li>• Number and Number Sense</li> <li>• Place Value</li> <li>• Number Relationships and Sets</li> <li>• Factors and Multiples</li> <li>• Number Patterns</li> <li>• Exponential / Scientific Form</li> <li>• Algebraic Expressions</li> <li>• Roman Numerals</li> </ul>	<b>NUMERATION AND COMPUTATION</b> <ul style="list-style-type: none"> <li>• Decimals</li> </ul>	<b>MEASUREMENT:</b> <ul style="list-style-type: none"> <li>• Volume</li> </ul>
	<b>NUMERATION AND COMPUTATION</b> <ul style="list-style-type: none"> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> <li>• Fractions</li> </ul>	<b>CONSUMER MATH:</b> <ul style="list-style-type: none"> <li>• Money</li> <li>• Ratio/Proportion</li> <li>• Percentage</li> </ul> <b>STATISTICS &amp; DATA HANDLING:</b> <ul style="list-style-type: none"> <li>• Data Representation</li> <li>• Statistics</li> <li>• Probability</li> </ul> <b>MEASUREMENT:</b> <ul style="list-style-type: none"> <li>• Time</li> <li>• Temperature</li> <li>• Length</li> <li>• Area and Perimeter</li> <li>• Mass/Weight</li> <li>• Capacity</li> </ul>	<b>GEOMETRY:</b> <ul style="list-style-type: none"> <li>• Lines/ Line Segments</li> <li>• Angles</li> <li>• 2- Dimensional / Plane Figures</li> <li>• 3- Dimensional Figures/ Solids</li> <li>• Transformation</li> </ul>

# GRADE 6

## Term 1

**Strands:** Number Concept; Numeration and Computation

**Theme:** Producing a Product/Service



Term: 1

Curriculum Theme: **Producing a Product/ Service**

Aim: This theme aims to enhance students' skills in product and service development.

Project Criteria:

1. List suggestions of products or services to sell/promote i.e., greetings cards, soaps, candle, handmade jewelry, dog-walking service, carpet cleaning service
2. List the steps needed to make the product/ provide the service
3. Identify the skills required to make the product/ provide the service
4. Demonstrate appropriate levels of safety when making the product/ providing the service
5. Examine products and services, qualities and faults.
6. Produce a product/ deliver a service

Suggested assignments/activities

- Teacher-led discussion on making a product or providing a service.
- In small groups, students suggest products to make or services to provide, with resources or materials needed.
- Group discussion on skills needed to make product or provide service.
- Assessment – students list steps to make their product or provide service and the skills needed, in one-on-one discussion with the teacher, or on a worksheet/ form.
- Teacher-led discussion on safety when developing product or providing a service.
- Guest speaker (local entrepreneur)
- Workshops to make product.
- Practical activity to provide service.
- Assessment – students observed making the product or providing the service safely.
- Group discussion on examining products and services, qualities and faults.
- Assessment – students list qualities and any faults of product or services, either in a one-on-one discussion with the Teacher, or on a worksheet/ form.
- **CPEA Project Rubric**

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 1

## STRAND: NUMBER CONCEPTS

SUB-STANDS	TARGETS
Number and Number Sense	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Count in sequence within 1,000,000 in ascending and descending order</li> <li>● Read and write numbers to 1 billion</li> <li>● Solve problems related to ordinal numbers up to 100th position.</li> <li>● Order and compare a set of numbers with up to seven-digits in order of magnitude</li> </ul>
Place Value and Expanded Notation	<ul style="list-style-type: none"> <li>● Identify the place value, face value and total value of each digit in a 9-digit number</li> <li>● Compose (expanded notation) and decompose 7 digit numbers</li> </ul>
Number Relationships and Sets	<ul style="list-style-type: none"> <li>● Identify elements/members of a finite and infinite set</li> <li>● Utilize the symbol for “is a subset of”</li> <li>● Use simple Venn diagrams to display commonalities, explain what is represented and how it relates</li> <li>● Construct, Read and interpret Venn diagrams to show intersection or union of two sets</li> <li>● Use symbols associated with intersection or union of two sets</li> </ul>
Factors and Multiples	<ul style="list-style-type: none"> <li>● Generate numbers using several number concepts: prime, odd, prime and even, prime and odd, composite and odd</li> <li>● Outline a number as a product of its prime factors</li> <li>● Recognize and use square numbers and cube numbers and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>
Number Patterns	<ul style="list-style-type: none"> <li>● Explore number patterns involving the four operations using whole numbers</li> <li>● Use pattern recognition to solve problems</li> <li>● Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> <li>● Predict numerical patterns</li> </ul>
Exponential/ Scientific Form	<ul style="list-style-type: none"> <li>● Understand what is an exponent</li> <li>● Use whole-number exponents to denote powers of 10</li> <li>● Write and evaluate numerical expressions involving whole-number exponents</li> </ul>
Algebraic Expressions	<ul style="list-style-type: none"> <li>● Write, read, and evaluate expressions in which letters stand for numbers</li> <li>● Apply the properties of operations to generate equivalent expressions</li> <li>● Recognize when two expressions are equivalent</li> <li>● Solve one- or two-step word problems, then write algebraic sentences and solve the problems</li> </ul>

This curriculum serves as a guide for teaching & learning in the Turks and Caicos Islands; teachers have the autonomy to make adjustments where necessary. 269

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 1

Roman Numerals	<ul style="list-style-type: none"> <li>● Explain the history of numbers, roman numerals, Arabic, Egyptian ...etc.</li> <li>● Convert between whole numbers 1-50 to roman numerals and vice versa</li> </ul>
<b>STRAND: NUMERATION AND COMPUTATION</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Addition	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for addition of whole numbers</li> <li>● Show addition involving numbers with up to five digits with and without regrouping</li> <li>● Show addition involving numbers with totals up to 100,000 with and without regrouping</li> <li>● Check accuracy of answers using a calculator</li> <li>● Use knowledge of the order of operations to carry out calculations involving the four operations</li> <li>● Solve one step and two steps word problems involving addition</li> <li>● Solve three steps word problems involving four operations</li> <li>● Show application of addition skills in practical situations</li> </ul>
Subtraction	<ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for subtraction of whole numbers</li> <li>● Compute subtraction involving whole numbers with up to five digits, without and with regrouping</li> <li>● Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>● Solve one step and two steps word problems involving subtraction</li> <li>● Show application of subtraction skills in practical situations</li> </ul>
Multiplication	<ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for multiplication of whole numbers</li> <li>● Multiply two and three-digit numbers by one- and two-digit numbers</li> <li>● Multiply numbers up to four- digits by a two- digit number using an efficient written method including long multiplication for digit numbers</li> <li>● Check accuracy of answers using a calculator</li> <li>● Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>● Solve one step and two steps word problems involving multiplication</li> <li>● Show application of multiplication skills in practical situations</li> </ul>
Division	<ul style="list-style-type: none"> <li>● Use several strategies to develop and recall the basic facts for division of whole numbers</li> <li>● Divide whole numbers with up to five digits by one- and two-digit numbers, without and with remainder</li> <li>● Solve mixed operations involving division with or without parentheses (Order of operations)</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 1

	<ul style="list-style-type: none"><li>● Solve one step and two steps word problems involving division</li><li>● Show application of division skills in practical situations</li></ul>
Fractions	<ul style="list-style-type: none"><li>● Show addition and subtraction of proper fraction</li><li>● Show addition and subtraction of mixed numbers</li><li>● Show multiplication of two proper fractions</li><li>● Show multiplication of a proper fraction by a whole number and vice versa</li><li>● Show division of a fraction by a fraction</li><li>● Show division of a proper fraction by a whole number and vice versa</li><li>● Show division and multiplication of a mixed number by a whole number, a fraction or a mixed number</li><li>● Round a mixed number to the nearest whole number</li><li>● Use order of operations with fractions</li><li>● Solve up to 3-step word problems involving fractions</li><li>● Show application of fraction and proportional reasoning skills in practical situations</li></ul>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Number and Number Sense</b></p>	<ul style="list-style-type: none"> <li>Count in sequence within 1,000,000 in ascending and descending order</li> <li>Read and write numbers to 1 billion</li> <li>Solve problems related to ordinal numbers up to 100th position</li> <li>Order and compare a set of numbers with up to seven digits in order of magnitude</li> </ul>	<p>Engage students in counting games (Bingo, Race Car, what comes next?).</p> <p>Distribute 'skip counting' sheets and allow students to work in pairs to fill in the missing numbers.</p> <p>Distribute number cards to whole class. Teacher calls numbers, and students arrange their numbers to display the number called.</p> <p>Guide students to read numerals up to one billion shown on an abacus, a place-value chart, coloured number strips or notation cards.</p> <p>Students use an abacus, place-value chart, coloured number strips or notation cards to show numbers up to hundreds of millions.</p> <p>Play the matching game- match numbers to their names.</p> <p>In pairs, students spin a number board (5 tries each), record the numbers they spin then compare and order them.</p> <p>Students re-arrange digits in given numerals to make larger or smaller numbers.</p> <p>Students use the symbols =, &gt;, &lt; to compare numbers.</p>	<p>YouTube</p> <p>Worksheets</p> <p>Number cards</p> <p>Smartboard</p> <p>Place value board</p> <p>Race cars</p> <p>Bowling balls/pins</p> <p>Balls for throwing</p> <p>Game boards</p> <p>Whiteboard</p> <p>Manipulatives</p>	<p><b>Language Arts</b> Spelling- students, spell high-frequency words, e.g., million, billion</p> <p>Adjectives of comparisons-- faster, larger, bigger, more, less, greater.</p> <p><b>Physical Education</b> Students compete in various number sorting activities</p> <p><b>Science</b> Arrange body systems in the order in which they function, e.g., mouth(1st), oesophagus/gullet (2nd), stomach (3rd)...</p>	<p>Quizzes</p> <p>Oral Presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMBER CONCEPTS**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Place Value and Expanded Notation</b></p>	<ul style="list-style-type: none"> <li>Identify the place value, face value and total value of each digit in a 9-digit number</li> <li>Compose (expanded notation) and decompose 7 digit numbers</li> </ul>	<p>Distribute place value mats and number cards. Say numbers up to billions and allow students place/write numbers in their correct places.</p> <p>Play an online "Place Value Millionaire" game</p> <p>Display numbers on Smartboard and allow students to match each digit with its value.</p> <p>Play the huddle game. Divide the class into 4 groups. Choose 1 student from each group and give them cards with 7 digit numbers, e.g., 7,653,219. Teacher distributes number value cards to the others. Students move around to the sound of music to make the number in the expanded form.</p> <p>Students complete worksheets and peer mark.</p> <p>Students practice composing and decomposing numbers using cut-outs.</p>	<p>Place value mats</p> <p>Number cards/markers</p> <p>Number cards</p> <p>Music</p> <p>Worksheets</p> <p>Online Games</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Flashcards</p> <p>Online quizzes</p> <p>e-articles</p>	<p><b>Language Arts</b> Story writing compose stories about numbers</p> <p><b>ICT</b> Students use the internet to research and play games</p> <p>Students manipulate the world wide web to access and complete worksheets.</p> <p><b>Social Studies</b> (i)order T.C.I. islands based on size (ii) order nationalities in T.C.I. based on the amount</p> <p>Calculate the number of years between various events.</p>	<p>Demonstration</p> <p>Oral Presentations</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Peer Assessment</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Number Relationships and Sets</b></p>	<ul style="list-style-type: none"> <li>Identify elements/members of a finite and infinite set</li> <li>Utilize the symbol for "is a subset of"</li> <li>Use simple Venn diagrams to display commonalities, explain what is represented and how it relates</li> <li>Construct, Read and interpret Venn diagrams to show the intersection or union of two sets</li> <li>Use symbols associated with the intersection or union of two sets</li> </ul>	<p>Engage students in a discussion on finite and infinite sets using projected examples.</p> <p>Engage students in activities to use set related words to describe the sets made, e.g. elements/members. Highlight sets that are countable/uncountable.</p> <p>Students note elements of a set after viewing graphical representations. Students analyze each set and note the names particular to each set.</p> <p>Students make smaller sets from given sets and name these "subsets." of the given sets , e.g.. <b>(a)</b> {2,4,6,} is a subset of {1,2,3,4,5,6,7,8,9,10} Use the symbol <math>\subset</math> for " is a subset of." , e.g.. {2,4,6} <math>\subset</math> {1,2,3,4,5,6,7,8,9,10}</p> <p>Using the Smartboard, display a Venn diagram and use a video to guide a Quescussion on what each set represents, noting commonalities using the symbol '<math>\cap</math>', ("is the intersection of.") For example In A = {2, 5, 6,8} and B = {7,5, 6, 9} A <math>\cap</math> B = { 5, 6 }</p>	<p>K.W.L. sheets</p> <p>YouTube</p> <p>Paper strips</p> <p>Smartboard</p> <p>Venn Diagram mats</p> <p>Sheets of papers</p> <p>Markers</p> <p>Whiteboard</p> <p>Objects</p> <p>Cut-out Number cards</p>	<p><b>Science</b> Create sets of living and non-living organisms on the school compound/ vertebrates/invertebrates on the island.</p> <p><b>Social Studies</b> Identify common countries in Caricom and the Commonwealth of Nations.</p> <p><b>Religious Education</b> Create sets of students who are part of various Christian Denominations in the community</p> <p><b>ICT</b> Use the internet to research set related words.</p> <p><b>Reading</b> Use Venn diagrams to compare characters in stories.</p>	<p>Student-made tests</p> <p>Online game</p> <p>Quizzes</p> <p>Peer assessments</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Observations</p> <p>Response Cards</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

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<b>Factors and Multiples</b>	<ul style="list-style-type: none"> <li>Generate numbers using several number concepts: prime, odd, prime and even, prime and odd, composite and odd</li> <li>Outline a number as a product of its prime factors</li> <li>Recognize and use square numbers and cube numbers and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>	<p>Students complete a research project on the types of number and share their findings creatively. Students use PowerPoint presentations to support their findings</p> <p>Students spin a number wheel then generate sets of odd, even, prime and composite numbers based on an instruction from the wheel, e.g. set of prime numbers between 50 and 80.</p> <p>Distribute calendars, hundred charts and number cards and allow students to use coloured markers to highlight odd, even, prime and composite numbers. Use a YouTube video to outline the concept of prime factorization. Distribute worksheets on Prime Factorization and students work in pairs to complete.</p> <p>Students play the squared/cubed number bingo.</p> <div style="text-align: center;"> </div> <p>Teacher/a student will call the products, and others mark the factors, e.g.:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>2<sup>2</sup></td><td>3<sup>2</sup></td><td>5<sup>2</sup></td><td>7<sup>2</sup></td><td>2<sup>3</sup></td><td>6<sup>2</sup></td></tr> <tr><td>10<sup>2</sup></td><td>12<sup>2</sup></td><td>8<sup>2</sup></td><td>9<sup>2</sup></td><td>2<sup>4</sup></td><td>10<sup>3</sup></td></tr> <tr><td>3<sup>3</sup></td><td>2<sup>5</sup></td><td>2<sup>6</sup></td><td>9<sup>3</sup></td><td>5<sup>3</sup></td><td>11<sup>3</sup></td></tr> <tr><td>8<sup>3</sup></td><td>7<sup>3</sup></td><td>12<sup>3</sup></td><td>3<sup>4</sup></td><td>10<sup>4</sup></td><td>5<sup>4</sup></td></tr> <tr><td>2<sup>4</sup></td><td>3<sup>4</sup></td><td>9<sup>4</sup></td><td>10<sup>4</sup></td><td>7<sup>4</sup></td><td>11<sup>4</sup></td></tr> <tr><td>5<sup>4</sup></td><td>10<sup>4</sup></td><td>4<sup>5</sup></td><td>5<sup>5</sup></td><td>12<sup>5</sup></td><td>4<sup>6</sup></td></tr> <tr><td>4<sup>6</sup></td><td>6<sup>6</sup></td><td>2<sup>6</sup></td><td>6<sup>6</sup></td><td>2<sup>7</sup></td><td>10<sup>6</sup></td></tr> <tr><td>11<sup>6</sup></td><td>2<sup>8</sup></td><td>8<sup>6</sup></td><td>10<sup>6</sup></td><td>2<sup>9</sup></td><td>9<sup>6</sup></td></tr> </table> <p>Allow students to take turns to spin the cube wheel and say the product of the cubed number it lands on.</p>	2 <sup>2</sup>	3 <sup>2</sup>	5 <sup>2</sup>	7 <sup>2</sup>	2 <sup>3</sup>	6 <sup>2</sup>	10 <sup>2</sup>	12 <sup>2</sup>	8 <sup>2</sup>	9 <sup>2</sup>	2 <sup>4</sup>	10 <sup>3</sup>	3 <sup>3</sup>	2 <sup>5</sup>	2 <sup>6</sup>	9 <sup>3</sup>	5 <sup>3</sup>	11 <sup>3</sup>	8 <sup>3</sup>	7 <sup>3</sup>	12 <sup>3</sup>	3 <sup>4</sup>	10 <sup>4</sup>	5 <sup>4</sup>	2 <sup>4</sup>	3 <sup>4</sup>	9 <sup>4</sup>	10 <sup>4</sup>	7 <sup>4</sup>	11 <sup>4</sup>	5 <sup>4</sup>	10 <sup>4</sup>	4 <sup>5</sup>	5 <sup>5</sup>	12 <sup>5</sup>	4 <sup>6</sup>	4 <sup>6</sup>	6 <sup>6</sup>	2 <sup>6</sup>	6 <sup>6</sup>	2 <sup>7</sup>	10 <sup>6</sup>	11 <sup>6</sup>	2 <sup>8</sup>	8 <sup>6</sup>	10 <sup>6</sup>	2 <sup>9</sup>	9 <sup>6</sup>	<p>Computer</p> <p>Projector</p> <p>Calendars</p> <p>Hundred charts</p> <p>Number cards</p> <p>Coloured markers</p> <p>Venn diagram placemats</p> <p>YouTube</p> <p>Smartboard</p> <p>projector</p> <p>Bingo cards</p> <p>Spin wheel</p> <p>Online Games</p>	<p><b>Social Studies</b> Students note whether the number of people in their families, on a island in the T.C.I., or number of government members are prime, composite, odd or even.</p> <p>Use pictures to show the structure of families. E.g. Children as a product of parents etc.</p> <p><b>ICT</b> Students research the internet to watch videos about types of numbers.</p> <p><b>Science</b> Students measure rainfall for the week and square/cube the amount to make predictions.</p>	<p>Quizzes</p> <p>Oral Presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>
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<p><b>Number Patterns</b></p>	<ul style="list-style-type: none"> <li>Explore number patterns involving the four operations using whole numbers</li> <li>Use pattern recognition to solve problems</li> <li>Develop an understanding of number patterns involving addition and subtraction facts, add zero or subtract zero, the commutative property for addition, the associative property for addition, add two or subtract two, double facts, ten facts, and odd and even numbers</li> <li>Predict numerical patterns</li> </ul>	<p>Students participate in a scavenger hunt to find number cards and work in pairs to solve them. The first pair to finish correctly wins the challenge. Students share how they arrive at the sequences.</p> <p>1, 4, 7, 10, 13, .....</p> <p>What will be next three terms? 16, 19, 22,</p> <p>Display an example and students analyze the operations/patterns used.</p> <p><b>Increasing repeating pattern:</b></p> <ul style="list-style-type: none"> <li>Addition: 3, 6, 9, 12 (+3)</li> <li>Multiplication: 2, 4, 8, 16 (x2)</li> </ul> <p><b>Decreasing repeating pattern:</b></p> <ul style="list-style-type: none"> <li>Subtracting: 50, 43, 36, 27 (-7)</li> <li>Division: 96, 48, 24, 12 (÷2)</li> </ul> <p><b>Increasing growing pattern:</b></p> <ul style="list-style-type: none"> <li>Addition: 2, 4, 7, 11, 16 (+2 +3 +4 +5)</li> <li>Multiplication: 1, 2, 6, 24 (x2 x3 x4)</li> </ul> <p><b>Decreasing growing pattern:</b></p> <ul style="list-style-type: none"> <li>Subtracting: 43, 41, 38, 34 (-2 -3 -4)</li> <li>Division: 120, 60, 20, 5 (÷2 ÷3 ÷4)</li> </ul> <p>Display number patterns and solve as a whole class.</p> <p>Distribute individual work cards and allow students to complete and share.</p>	<p>Hundred charts</p> <p>Number line</p> <p>Manipulatives</p> <p>Work cards</p> <p>Charts</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Online Games</p>	<p><b>Arts and Design</b> Create patterns using different types of lines</p> <p><b>Language Arts</b> Use story patterns to predict/write additional paragraphs for stories</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p>

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<p><b>Exponential/ Scientific Form</b></p>	<ul style="list-style-type: none"> <li>Understand what is an Exponent</li> <li>Use whole-number exponents to denote powers of 10</li> <li>Write and evaluate numerical expressions involving whole-number exponents</li> </ul>	<p>In pairs, students research and share information on the question 'What is an exponent?'</p> <p>Utilize a video clip presentation to enhance and engage students in a Quescussion on exponent.</p> <div style="text-align: center;"> </div> <p>Revise rules with students using an appropriate video.</p> <p>Play the "Power Bounce". Students pass a beach ball labelled with whole numbers. When a student catches the ball, he/she will say the number his/her thumb touches then use the number as the exponent to a power of 10, e.g., 10<sup>6</sup></p> <p>Play the power of 10 bingo game Students search under their desks to find task cards, swap with friends of choice</p> <p>Students generate expressions and choose peers to explain and solve them.</p>	<p>Whiteboard</p> <p>Smartboard</p> <p>Flash Card</p> <p>Work cards</p> <p>Projector</p> <p>PowerPoint</p> <p>Desktop/laptop</p> <p>YouTube</p> <p>Online Games</p> <p>Worksheets</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Presentation</p> <p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>

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<p><b>Algebraic Expressions</b></p>	<ul style="list-style-type: none"> <li>Write, read, and evaluate expressions in which letters stand for numbers</li> <li>Apply the properties of operations to generate equivalent expressions</li> <li>Recognize when two expressions are equivalent</li> <li>Solve one- or two-step word problems, then write algebraic sentences and solve the problems</li> </ul>	<p>Review order of operations and the rules apply. Display the problem: If <math>n = 4</math>, what is <math>12n</math>, <math>n+15</math>, <math>3n</math>. Students work in pairs to solve and explain.</p> <p>Engage students in a demonstration on how the value of an algebraic expression can be found by replacing the variables with given numbers and applying the order of operations to simplify the expression.</p> <p>Review the properties of operation using QAR.</p> <hr/> <p style="text-align: center;"><u>Properties of Real Numbers</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Addition</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Multiplication</u></th> </tr> </thead> <tbody> <tr> <td><u>Commutative Property</u> <math>a + b = b + a</math> <math>3 + 5 = 5 + 3</math></td> <td><u>Commutative Property</u> <math>a \cdot b = b \cdot a</math> <math>3 \cdot 5 = 5 \cdot 3</math></td> </tr> <tr> <td><u>Associative Property</u> <math>a + (b + c) = (a + b) + c</math> <math>3 + (5 + 7) = (3 + 5) + 7</math></td> <td><u>Associative Property</u> <math>a \cdot (b \cdot c) = (a \cdot b) \cdot c</math> <math>3 \cdot (5 \cdot 7) = (3 \cdot 5) \cdot 7</math></td> </tr> </tbody> </table> <p>Students sort and pair equivalent expressions and paste them to a chart.</p> <p>Students play a game. Students spin a wheel, choose a card, solve word problems, write algebraic sentences, and solve the problems.</p>	<u>Addition</u>	<u>Multiplication</u>	<u>Commutative Property</u> $a + b = b + a$ $3 + 5 = 5 + 3$	<u>Commutative Property</u> $a \cdot b = b \cdot a$ $3 \cdot 5 = 5 \cdot 3$	<u>Associative Property</u> $a + (b + c) = (a + b) + c$ $3 + (5 + 7) = (3 + 5) + 7$	<u>Associative Property</u> $a \cdot (b \cdot c) = (a \cdot b) \cdot c$ $3 \cdot (5 \cdot 7) = (3 \cdot 5) \cdot 7$	<p>Display board</p> <p>Task cards</p> <p>Chart</p> <p>YouTube</p> <p>Chart</p> <p>Spinning wheel</p> <p>Pocket chart</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Flash Card</p> <p>Work cards</p> <p>Online Games</p> <p>Worksheets</p>	<p style="text-align: center;">I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Peer Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Demonstration</p> <p>Oral Presentations</p> <p>Analysis of Student work</p> <p>Response Cards</p> <p>Exit/Entrance slips</p>
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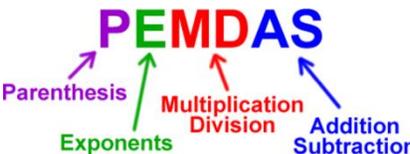
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<b>Roman Numerals</b>	<ul style="list-style-type: none"> <li>Explain the history of numbers, roman numerals, Arabic, Egyptian ...etc.</li> <li>Convert between whole numbers 1-50 to roman numerals and vice versa</li> </ul>	<p>Use the JigSaw strategy to guide students in understanding the history of numbers. Information on numbers (Roman, Hindu - Arabic, Egyptian...) given to students in groups to assemble and share.</p> <p>Review the basic symbols from 1-50 and practice matching numbers applying the following rules.</p> <p>If a numeral is written to the right of one with greater value, the two must be added together, e.g. XI is <math>10 + 1 = 11</math>. If the numeral is written to the left of one of greater value, it must be subtracted, e.g. IX is <math>10 - 1 = 9</math>. XL is <math>50 - 10 = 40</math></p> <p>In groups, students play the roman numeral "I have, Who has" game. Example: One student has a roman numeral and other student has the arabic number to match.</p> <p>Students play the roman numeral maze and bingo games</p>	<p>Internet</p> <p>Puzzle pieces</p> <p>Gamecards</p> <p>Roman numeral maze</p> <p>Bingo cards</p> <p>Dice</p> <p>Toothpicks</p> <p>Fudge sticks</p> <p>Match sticks</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Flash Card</p> <p>Work cards</p>	<p><b>Language Arts</b> Students number their introductions in their projects or writing portfolio with Roman numerals.</p> <p><b>Physical Education</b> Review various Olympic race/ super bowl events and identify the Roman numerals used.</p> <p><b>Social Studies</b> Utilize Roman numerals to show generations of the same name being passed down.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

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<b>Addition</b>	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for addition of whole numbers</li> <li>Show addition involving numbers with up to five digits with and without regrouping</li> <li>Show addition involving numbers with totals up to 100,000 with and without regrouping</li> <li>Check accuracy of answers using a calculator</li> </ul>	<p>Utilize concept mapping to engage students in recalling and developing addition of whole number facts.</p> <p>Within groups, students solve simple addition problems based on addition and subtraction facts.</p> <p>Students practice using the inverse operations between addition and subtraction to solve simple problems.</p> <p>Students write the license plate numbers of cars on their school compound, then add them using expanded notation and place value.</p> $\begin{array}{r} 74755 \\ + 78517 \\ \hline \end{array} \quad \begin{array}{r} 24822 \\ + 81493 \\ \hline \end{array}$ $\begin{array}{r} 99540 \\ + 47322 \\ \hline \end{array} \quad \begin{array}{r} 22863 \\ + 56068 \\ \hline \end{array}$ $\begin{array}{r} 94381 \\ + 20542 \\ \hline \end{array} \quad \begin{array}{r} 44093 \\ + 18647 \\ \hline \end{array}$ <p>Students engage in a peer review of classmates' work using a calculator to check the accuracy of answers.</p>	<p>Concept map</p> <p>Display board</p> <p>Number line</p> <p>Work cards</p> <p>Counters</p> <p>Base ten blocks</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Manipulatives</p> <p>Calculator</p>	<p><b>Social Studies</b> Students make change in a dramatization of shopping activities.</p> <p><b>Games</b> Play online games involving addition of numbers.</p> <p><b>Science</b> Science experiments involving addition</p> <p><b>Language Arts</b> Students create word problems involving addition</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<p><b>Addition</b></p>	<ul style="list-style-type: none"> <li>Use knowledge of the order of operations to carry out calculations involving the four operations</li> <li>Solve one-step and two steps word problems involving addition</li> <li>Solve three steps word problems involving four operations</li> <li>Show application of addition skills in practical situations</li> </ul>	<p>Engage students in a review of the rules of order of operations and work abstract exercises involving addition.</p>  <p>Students recall the order of operations by stating the associated rules.</p> <p>Provide students with practise opportunities to apply the rules to exercises.</p> <p>Students use concrete materials and diagrams to solve 1-step, 2-step and 3-step problems involving any of the four operations.</p> <p>Students engage in projects that require addition to build, grocery shop, bake, travel, save money and manage time.</p>	<p>Manipulatives</p> <p>Work cards</p> <p>Chart</p> <p>Flashcards</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<b>Subtraction</b>	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for the subtraction of whole numbers</li> <li>Compute subtraction involving whole numbers with up to five digits, without and with regrouping</li> <li>Solve mixed operations involving subtraction with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving subtraction</li> <li>Show application of subtraction skills in practical situations</li> </ul>	<p>Utilize concept mapping to engage students in recalling and developing subtraction of whole number facts.</p> <p>Students write down up to 5 digit numbers and allow classmates to subtract them using expanded notation and place value.</p> $\begin{array}{r} 2,367 \\ - 1,308 \\ \hline \end{array} \quad \begin{array}{r} 5,803 \\ - 3,290 \\ \hline \end{array} \quad \begin{array}{r} 4,387 \\ - 3,359 \\ \hline \end{array}$ <p>Review the following with students:  <b>P-</b> Parentheses first  <b>E-</b> Exponents (i.e. Powers and Square Roots, etc.)  <b>M.D.-</b> Multiplication and Division (left-to-right)  <b>AS-</b> Addition and Subtraction (left-to-right)</p> <p>Provide students with mixed operations on a board or worksheet involving subtraction to complete individually, in groups or in pairs.</p> $2 \times 11 - 12 \div 2 \quad (67 - 18) \div 7 \times 3$ <p>Students use concrete materials and diagrams to solve 1-step, 2- problems involving subtraction. Students work in groups and create word problems.</p> <p>Engage students in practical situations to apply skills.</p>	<p>Manipulatives</p> <p>Work cards</p> <p>Chart</p> <p>Flashcards</p> <p>Facts Worksheets</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<b>Multiplication</b>	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for the multiplication of whole numbers</li> <li>Multiply two and three-digit numbers by one- and two-digit numbers</li> <li>Multiply numbers up to four-digits by a two-digit number using an efficient written method, including long multiplication for digit numbers</li> <li>Check accuracy of answers using a calculator</li> </ul>	<p>Engage students in the following strategies to develop and recall facts:</p> <ul style="list-style-type: none"> <li>Use doubles- (2s facts – Think 'addition doubles', , e.g.. 6 x 2 as double 6)</li> <li>Use 10- (10s facts – derived from base ten knowledge (, e.g. 6 x 10 = 60)</li> <li>Use square facts- (Square facts , e.g.. 4 x 4 = 16)</li> <li>Use a rule- <b>0s facts</b>- When a number is multiplied by zero, the answer is always zero.</li> <li><b>1s facts</b> – When a number is multiplied by one, the number is unchanged.</li> <li>Use a known fact- Derive an answer to an unknown fact from a known fact (e.g.. 8 x 6 as 8 x 5 + 8) (48)</li> </ul> <p>Students review steps and practice long multiplication and expanded notation.</p> $\begin{array}{r} 15 \\ \times 5 \\ \hline 75 \end{array}$ $(10 \times 5) + (5 \times 5) 50 + 25 = 75 \quad 50 + 25 = 75$ <table border="1"> <thead> <tr> <th colspan="5">Parts of Long Multiplication</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>2</td> <td>5</td> <td>6</td> <td>Multiplicand</td> </tr> <tr> <td>×</td> <td></td> <td>3</td> <td>2</td> <td></td> <td>Multiplier</td> </tr> <tr> <td>+</td> <td></td> <td>5</td> <td>1</td> <td>2</td> <td>Partial Product</td> </tr> <tr> <td>+</td> <td>7</td> <td>6</td> <td>8</td> <td></td> <td>Partial Product</td> </tr> <tr> <td>=</td> <td>8</td> <td>1</td> <td>9</td> <td>2</td> <td>Product</td> </tr> </tbody> </table> <p>Allow students to engage in peer review using a calculator.</p>	Parts of Long Multiplication							2	5	6	Multiplicand	×		3	2		Multiplier	+		5	1	2	Partial Product	+	7	6	8		Partial Product	=	8	1	9	2	Product	<p>Display board</p> <p>Boardgame</p> <p>Display chart</p> <p>Calculator</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p><b>Social Studies</b> Social Issues- Use multiplication to determine the amount of money community helpers make in a week/month or year.</p> <p><b>Language Arts</b> Students create word problems</p> <p><b>Physical Education</b> Students .recite facts while engaging in various physical activities.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>
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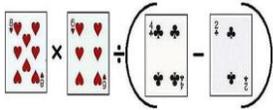
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<p><b>Multiplication</b></p>	<ul style="list-style-type: none"> <li>Solve mixed operation involving multiplication with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving multiplication</li> <li>Show application of multiplication skills in practical situations</li> </ul>	<p>Provide students with mixed operations to complete individually, in groups or in pairs.</p> <p>Use an appropriate YouTube video to outline the concept of solving two-step multiplication problems, allow students to model.</p> <p>Students play a board game using dice and task cards. They roll the dice, then choose a task card from the deck, read and solve the problem, then move along on the board to the number on the dice. If a player solves the problem, he/she must stay in place until the problem is solved.</p> <p>Students compete in teams (Challenge Quiz) to solve given problems, e.g., <i>A carton holds 24 packets of biscuits. Each packet has 12 biscuits. How many biscuits can be packed in 45 cartons?</i></p> <p><i>E.g. # 2: The monthly salary of a man is \$ 2,625. What is his annual income by salary?</i></p> <p>Students learn how to use multiplication, subtraction and addition to create a monthly budget for their family.</p>	<p>Dice</p> <p>Pencils</p> <p>Paper</p> <p>Game board</p> <p>YouTube</p> <p>Budget sheet</p> <p>Worksheets</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES																
Division	<ul style="list-style-type: none"> <li>Use several strategies to develop and recall the basic facts for the division of whole numbers</li> <li>Divide whole numbers with up to five digits by one- and two-digit numbers, without and with the remainder</li> </ul>	<p>Review the concept of division by revising several strategies and rules</p> <p>Divisibility Rules</p> <table border="1"> <tr> <td>2</td> <td>last digit 0, 2, 4, 6, 8?</td> </tr> <tr> <td>3</td> <td>sum of digits ÷ 3?</td> </tr> <tr> <td>4</td> <td>last 2 digits ÷ 4?</td> </tr> <tr> <td>5</td> <td>last digit 0 or 5?</td> </tr> <tr> <td>6</td> <td>✓2 rule <b>and</b> ✓3 rule?</td> </tr> <tr> <td>8</td> <td>last 3 digits ÷ 8?</td> </tr> <tr> <td>9</td> <td>sum of digits ÷ 9?</td> </tr> <tr> <td>10</td> <td>last digit 0?</td> </tr> </table> <p>Use a display chart to revise the concept of long division. , e.g. <math>240 \div 12</math></p> $\begin{array}{r} 020 \\ 12 \overline{)240} \\ \underline{24} \\ 000 \\ \underline{000} \end{array}$	2	last digit 0, 2, 4, 6, 8?	3	sum of digits ÷ 3?	4	last 2 digits ÷ 4?	5	last digit 0 or 5?	6	✓2 rule <b>and</b> ✓3 rule?	8	last 3 digits ÷ 8?	9	sum of digits ÷ 9?	10	last digit 0?	<p>Display board</p> <p>Charts</p> <p>Counters</p> <p>Worksheet</p> <p>Online games</p> <p>Board Games</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p><b>Art and Design</b> Students make division flower learning aids.</p> <p><b>Social Studies</b> Use globe to show how major lines of latitude divides the earth into climatic zones</p> <p><b>Science/STEM</b> Students engage in experiments that require the division or partition of liquid substances.</p>	<p>Oral Presentations</p> <p>Demonstration</p> <p>Discussion</p> <p>Quiz</p> <p>Pre-Assessment</p> <p>Teacher-made test</p> <p>Observation</p> <p>Project</p> <p>Response Cards</p> <p>Exit/Entrance slips</p> <p>Analysis of Student work</p>
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<p><b>Division</b></p>	<ul style="list-style-type: none"> <li>Solve mixed operations involving division with or without parentheses (Order of operations)</li> <li>Solve one-step and two steps word problems involving division</li> <li>Show application of division skills in practical situations</li> </ul>	<p>Students play cards in groups of five. They compute mixed operations based on cards left in after a game of choice using mathematical symbols.</p>  <p>Students throw dice (up to five at once). The numbers they land on will be used to form any number of choice, e.g., dice lands on 2,5, 6 the numbers formed 256/552/562...</p> <p>A single die will be used to determine the divisor. Students write out the division table and divide.</p> <p>In groups, students compose and solve division problems during a show and tell live interaction setting.</p> <p>Students compete to solve questions on worksheets correctly.</p>	<p>Deck of cards</p> <p>Mathematical symbols</p> <p>Task cards</p> <p>Dice</p> <p>Worksheet</p> <p>Online games</p> <p>Board Games</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Interne</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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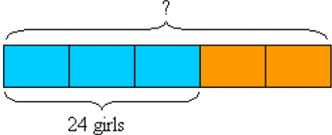
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Fractions	<ul style="list-style-type: none"> <li>Show addition and subtraction of proper fraction</li> <li>Show addition and subtraction of mixed numbers.</li> <li>Show multiplication of two proper fractions</li> <li>Show multiplication of a proper fraction by a whole number and vice versa</li> </ul>	<p>Engage students in a review of addition and subtraction of proper fractions. Students add and subtract proper fractions with similar denominators. Use diagrams to illustrate addition and subtraction.</p> <p>Students add and subtract proper fractions with unlike denominators by re-writing these fractions on the whiteboard using the L.C.D. , e.g. <math>\frac{1}{2} + \frac{3}{8} = \frac{4}{8} + \frac{3}{8} = \frac{7}{8}</math></p> <p>Students watch a video and play online games on multiplying fractions and engage in practice and discussion.</p> <p><i>Multiplying two proper fractions</i></p> <p><b>RULE:</b> Whenever multiplying fractions together:</p> $\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d}$ <p><i>Example:</i> <math>\frac{3}{4} \times \frac{1}{2} =</math></p> <p>Multiply the numerators together, then multiply the denominators together.</p> $\frac{3}{4} \times \frac{1}{2} = \frac{3 \times 1}{4 \times 2} = \frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$ <p>In pairs, students choose random proper fractions and whole numbers from a packet to complete.</p> <p><i>Example 1</i></p> $\frac{2}{7} \times 3 = ? \quad \frac{2}{7} \times \frac{3}{1} = ?$ <p><i>(any number divided by one is equal to itself)</i></p> $\frac{2}{7} \times \frac{3}{1} = \frac{2 \times 3}{7 \times 1} = \frac{2 \times 3}{7} = \frac{6}{7}$ <p><i>Now you can apply the rule!</i></p>	<p>Fraction spinners</p> <p>Dice</p> <p>Deck of cards</p> <p>Pencils</p> <p>Dominoes</p> <p>Online games</p> <p>Board Games</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Internet</p>	<p><b>Language Arts</b></p> <p>Review all vocabulary words/phrases relating to fractions.</p> <ul style="list-style-type: none"> <li>Simplify</li> <li>Subtract</li> <li>Unit fraction</li> <li>Unlike denominator</li> <li>Addition</li> <li>Benchmark Fraction</li> <li>Common denominator</li> <li>Difference</li> <li>Equivalent</li> <li>Improper Fraction</li> <li>Mixed Number</li> <li>Numerator</li> <li>reciprocal</li> </ul>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made</p>

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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Show division of a fraction by a fraction</li> <li>Show division of a proper fraction by a whole number and vice versa</li> <li>Show division and multiplication of a mixed number by a whole number, a fraction or a mixed number</li> </ul>	<p>Use visual examples and demonstrations to guide students to understand the definition of 'reciprocal'.</p> <p>Engage students in a song to help them remember dividing fractions.  <i>♪ "Dividing fractions, as easy as pie, Flip the second fraction, then multiply. And don't forget to simplify, Before it's time to say goodbye." ♪</i></p>  $\frac{1}{2} \div \frac{1}{6} = \frac{1}{2} \times \frac{6}{1} = \frac{1 \times 6}{2 \times 1} = \frac{6}{2} = 3$ <p>Engage students in a demonstration using a video and the whiteboard on how to divide a fraction by a whole number, e.g.: <math>\frac{2}{3} \div 5</math></p> <p>-Turn the second fraction upside down (the reciprocal): 5 becomes <math>\frac{5}{1}</math></p> <p>-Multiply the first fraction by the reciprocal:  <math>\frac{2}{3} \times \frac{1}{5} = \frac{2 \times 1}{3 \times 5} = \frac{2}{15}</math> *Simplify if necessary.</p> <p>Guide students on using cancellation to multiply and divide fractions and mixed numbers.</p> <p>Students work in groups using large charts to practice multiplying mixed numbers and fractions by other mixed numbers and fractions through the process of cancellation.</p>	<p>Dominoes</p> <p>Deck of cards</p> <p>Marbles in bags</p> <p>Bowl</p> <p>Paper cups</p> <p>Music</p> <p>Fraction cards</p> <p>Online games</p> <p>Board Games</p> <p>Desktop/laptop</p> <p>Number line</p> <p>Smartboard</p> <p>Whiteboard</p>	<p>I N T E G R A T E A C R O S S S U B J E C T S</p>	<p>Observation</p> <p>Oral Quiz</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

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<b>Fractions</b>	<ul style="list-style-type: none"> <li>● Round a mixed number to the nearest whole number</li> <li>● Use order of operations with fractions</li> </ul>	<p>Students play the snake and ladder game to round decimal fractions to the nearest whole numbers. They throw dice, solve then move to number on dice. Incorrect answer means stay put until the correct solution is given.</p> <p>Students choose cards and use them to compose mixed numbers, e.g.: Number Line cards distributed, and students use the number line to determine if they round up or down.</p> <p>Display a chart and use it to guide a Quescussion on the order of operations with fractions.</p> <p>Students copy and solve given task cards.</p> <p>Review order of operations: PEMDAS P - Parentheses E - Exponents M &amp; D - Multiplication and Division (left to right) A &amp; S - Addition and Subtraction (left to right)</p> <p>Engage students in discussing the rules associated with order of operations working exercises involving expressions with two or more than two terms.</p> $\frac{1}{3}x\frac{3}{3} + \frac{4}{3} = \frac{1}{3}x\frac{3}{3} = \frac{3}{9} = \frac{3}{9} = \frac{1}{3}$	<p>Fraction cards</p> <p>Number cards</p> <p>Bag</p> <p>Dice</p> <p>Boardgame</p> <p>Deck of cards</p> <p>Number lines</p> <p>Display chart</p> <p>YouTube</p> <p>Task cards</p> $\frac{5}{6} \times \frac{3}{4} - \frac{1}{5}$ $\frac{1}{2} + \frac{3}{4} \div \frac{3}{5}$ $\frac{1}{4} + \frac{3}{4} \times \frac{2}{3}$	<p>I N T E G R A T E S A C R O S S S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Observation</p> <p>Oral Quiz</p>

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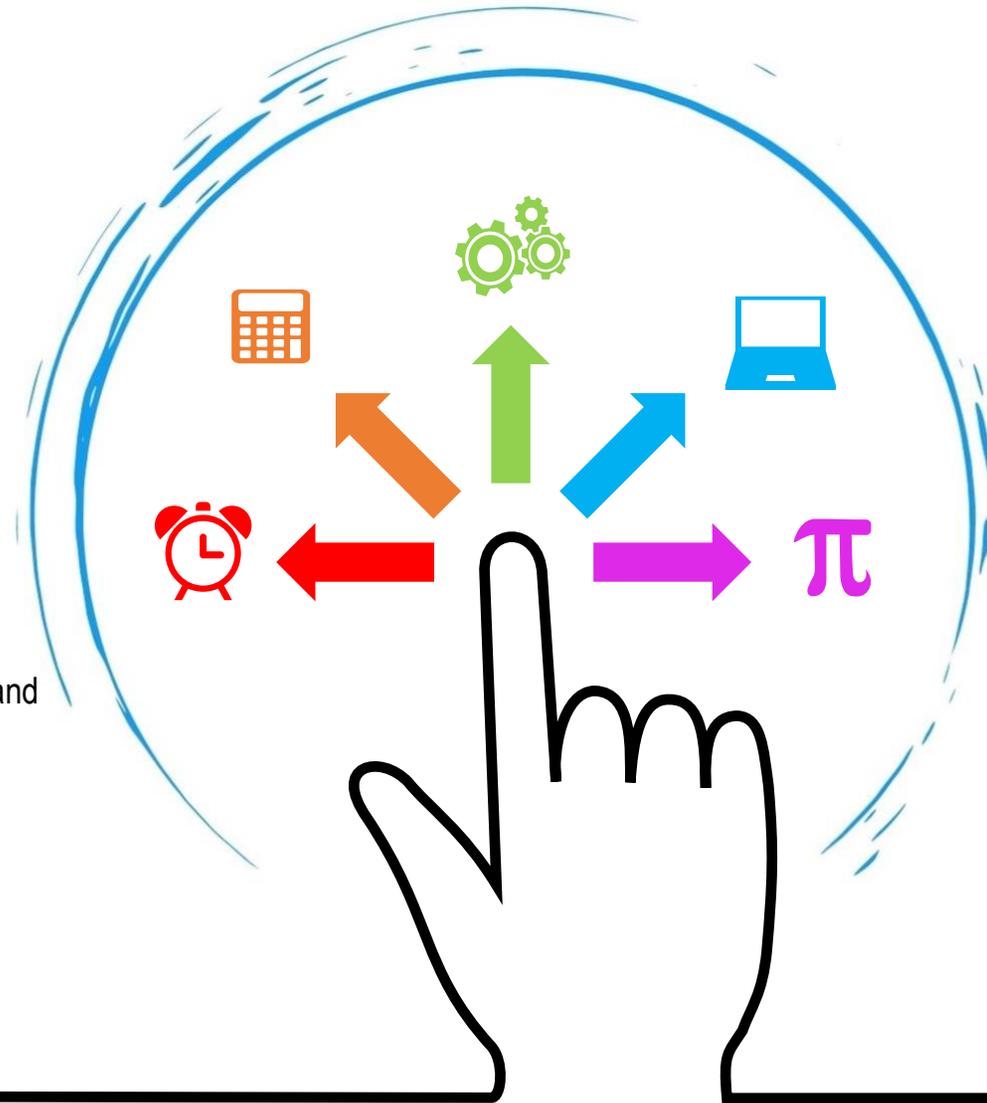
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<p><b>Fractions</b></p>	<ul style="list-style-type: none"> <li>Solve up to 3-step word problems involving fractions</li> <li>Show application of fraction and proportional reasoning skills in practical situations</li> </ul>	<p>Teach students how to solve fraction word problems by using visual methods i.e. bar models or tape diagrams. For example:</p> <p><math>\frac{3}{5}</math> of a group of children were girls. If there were 24 girls, how many children were there in the group?</p> <p><b>Solution:</b></p>  <p>3 units = 24 1 unit = <math>24 \div 3 = 8</math> 5 units = <math>5 \times 8 = 40</math> There were 40 children in the group.</p> <p>Provide students with opportunities to apply fractional skills learned in class to real-life situations using money, time, age etc.</p> <p><b>Example:</b> "A basketball game is 24 minutes per <math>\frac{1}{4}</math>. With a total of 4 quarters. How long is a basketball game? Half-time is 30 minutes long. What time will the game finish if they start at 5 pm?"</p>	<p>Fraction cards Number cards Boardgame Number lines Display chart Word problem cards Online games Desktop/laptop Smartboard Whiteboard YouTube</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work Online Discussion Demonstration Pre- Assessment Observations Response Cards Project Teacher-made Test Pupil-made test Observation Oral Quiz</p>

# GRADE 6

## Term 2

**Strands:** Numeration and Computation; Consumer Math; Statistics and  
Data Handling; Measurement

**Theme:** Planning an Enterprise



Term: 2

Curriculum Theme: **Planning an Enterprise**

Aim: This theme aims to engage students in enterprising activities in an effort to promote their product or service.

Project Criteria:

1. Give reasons for choice of product or service
2. List customers who might buy the product or service
3. List the costs involved in producing the product or service
4. List ways of promoting the product or service
5. Use one basic promotional method to advertise the product or service

Suggested assignments/activities

- Teacher-led discussion on the requirements of an enterprise activity:
  - the product or service to sell/promote
  - who will buy it?
- Group discussion on how to promote the activity. In small groups, students prepare ideas for videos, posters or flyers to promote the activity.
- Teacher-led discussion on possible costs in carrying out the enterprise activity.
- Teacher-led discussion on the skills needed to sell the product or service.
- In groups, students list the skills needed and produce a checklist of skills for selling the product or service.
- Role-play activities for students to practice selling the product or service.
- Assessment – in one-on-one discussion with the teacher or through completing a worksheet/ form, students list:
  - suggestions of products or services to sell
  - customers who might buy the product or service
  - ways of promoting the product or service
  - costs involved in producing the product or service
  - skills needed to sell the product or service.
- Students produce promotional material such as a videos, songs, jingles, poster or flyer to promote the enterprise activity.
- Assessment feedback, review and evaluation of theme.
- **CPEA Project Rubric**

## STRAND: NUMERATION AND COMPUTATION

SUB-STANDS	TARGETS
Decimals	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Show multiplication of a decimal number with up to three decimal places by a one-digit whole number</li><li>● Show multiplication of a decimal number with up to three decimal places by a two-digit whole number</li><li>● Show division of a decimal by a 1-digit whole number and round the quotient to 2 decimal places</li><li>● Show division of a decimal number with up to two decimal places by a one-digit whole number</li><li>● Express a mixed number as a decimal up to 2 decimal places</li><li>● Show addition of a fraction or mixed number and a decimal</li><li>● Solve a multi-step word problem involving the four operations of decimals</li></ul>

TURKS AND CAICOS ISLANDS  
 PRIMARY EDUCATION  
 MATHEMATICS  
 GRADE 6 STRUCTURE

TERM 2

<b>STRAND: CONSUMER MATH</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Money	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Understand how to read, represent and interpret the price of items</li> <li>● Discuss types of financial institutions and their roles</li> <li>● Understand the idea of savings (value)</li> <li>● Convert regional and other foreign currencies to local currency and back, using a rate of exchange</li> <li>● Solve up to 2-step word problems involving money</li> <li>● Understand the terms cost price, selling price, profit and loss as related to buying and selling</li> <li>● Show calculation of profit and loss/profit and loss percent</li> <li>● Show application of money management skills practical situations</li> </ul>
Ratio/ Proportion	<ul style="list-style-type: none"> <li>● Explore the concept of ratio.</li> <li>● Represent ratio using objects, pictures/diagrams and numerals.</li> <li>● Use a ratio to compare quantities</li> <li>● Write a ratio using the formats 1: 5, 1 to 5 or 1/5</li> <li>● Use a ratio to compare the numbers of items in two sets or two parts of a single set</li> <li>● Indicate equivalent ratios for a given ratio</li> <li>● Indicate a ratio in its simplest form</li> <li>● Solve word problems involving ratio</li> <li>● Understand simple problem solving, involving ratio and proportion</li> <li>● Show sharing of a quantity using ratios (partitive proportion) and unequal sharing</li> <li>● Understand proportion, equivalent fraction and scale drawing, understanding the concept of proportion</li> <li>● Explain the relationship that exists among ratio, fraction and decimal and convert from one to the other.</li> </ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 2

Percentage	<ul style="list-style-type: none"><li>● Explain the concept of percentage</li><li>● Understand that 1 whole is 100%</li><li>● Read and interpret the percentages of a whole</li><li>● Explain the relationship between fractions, decimals and percentage</li><li>● Represent a given percent using pictures/diagrams and symbols</li><li>● Calculate a given percentage of a number</li><li>● Express one number as a percentage of another number</li><li>● Express a decimal and fractions as a percent, and vice versa</li><li>● Solve problems involving fractions, decimals and percent</li><li>● Convert between fractions/percent/decimal to simplify problem-solving situations</li><li>● Solve word problem involving percentages</li><li>● Show application of percentages in practical situations</li></ul>
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TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 2

## STRAND: STATISTICS AND DATA HANDLING

SUB-STANDS	TARGETS
Data Representation	<b>STUDENTS SHOULD BE ABLE TO:</b> <ul style="list-style-type: none"><li>● Construct pictographs, line graphs, bar graphs, to show given data</li></ul>
Statistics	<ul style="list-style-type: none"><li>● Interpret data presented in bar graphs, line graphs, pictographs and pie charts</li><li>● Estimate, calculate and interpret the mean, mode, median and range of a set of discrete data</li><li>● Recognize patterns in a set of data</li><li>● Make predictions from a set of data</li></ul>
Probability	<ul style="list-style-type: none"><li>● Understand mathematical language associated with probability (i.e. event, outcome etc.)</li><li>● Understand the concept of probability</li><li>● Find the probability of an event</li><li>● Make predictions of probability of an event</li><li>● Connect to probability as prediction in determining if outcomes are likely, impossible, unlikely.</li><li>● Determine how likely the result of an event is after experimentation</li><li>● Show application of predicting skills in practical situations</li></ul>

TURKS AND CAICOS ISLANDS  
PRIMARY EDUCATION  
MATHEMATICS  
GRADE 6 STRUCTURE

TERM 2

## STRAND: MEASUREMENT

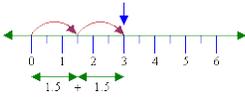
SUB-STANDS	TARGETS
Time	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"> <li>● Read and record time using the 24-hour clock using the appropriate words and notations</li> <li>● Record time in hours and minutes, and vice versa with 24-hour clocks</li> <li>● Convert between units of time from larger to smaller unit and vice versa including fractional units</li> <li>● Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>● Solve problems involving time eg: intervals of time, duration of events, starting and finishing times of events</li> <li>● Determine the length of time elapsed between given time using months, days, hours or minutes</li> <li>● Understand the meaning of decade and century</li> <li>● Determine the decade or century in which an event took place given the year of the event</li> <li>● Interpret and use the letters A.D. and B.C. after a year</li> <li>● Demonstrate addition and subtraction of hours and minutes</li> </ul>
Length	<ul style="list-style-type: none"> <li>● Convert between units of length (larger to smaller unit and vice versa) including fractional units (e.g. Convert 6 1/2 m to cm)</li> <li>● Convert between units of length (larger to smaller unit and vice versa) including decimal units (e.g. Convert 6.45 m to cm)</li> </ul>
Area and Perimeter	<ul style="list-style-type: none"> <li>● Estimate, measure, compare and order the perimeter of irregular and regular polygons by measuring sides</li> <li>● Determine the measurement of one side of a polygon given the perimeter and the lengths of the other side</li> <li>● Solve problems involving perimeter of compound shapes</li> <li>● Differentiate between area and perimeter</li> <li>● Estimate, measure and compare area of various shapes by counting centimetre squares</li> <li>● Estimate, measure and compare the area of irregular polygons by counting squares</li> <li>● Determine the total area of compound shapes by counting unit squares</li> <li>● Determine the area of right angled triangles but counting unit squares</li> <li>● Determine the area of rectangles and squares using a given formula</li> <li>● Determine the area of compound shapes</li> <li>● Solve problems involving rectangles with same perimeter but different area</li> <li>● Solve one step and two step problems involving area of surfaces</li> </ul>

TURKS AND CAICOS ISLANDS  
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TERM 2

Mass/Weight	<ul style="list-style-type: none"><li>● Show estimation, measurement, recording and comparison of the mass of objects using standard units i.e. kg, gram, milligram and tonne</li><li>● Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram or <math>\frac{1}{4}</math> kilogram</li><li>● Convert between units of mass (larger to smaller unit and vice versa) including fractional and decimal units</li><li>● Generate equivalent measures between kilogram and pounds</li><li>● Solve problems in real-life situations involving mass</li></ul>
Capacity	<ul style="list-style-type: none"><li>● Know the relationships between the millilitre, litre, and kilolitre</li><li>● Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres)</li><li>● Estimate, measure and record the capacity of containers using the millilitre as a unit of measure</li><li>● Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li><li>● Estimate capacity and determine the reasonableness of the answers or estimation</li><li>● Solve problems in real-life situations involving volume</li></ul>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Decimals	<ul style="list-style-type: none"> <li>Show multiplication of a decimal number with up to three decimal places by a one-digit whole number</li> <li>Show multiplication of a decimal number with up to three decimal places by a two-digit whole number</li> </ul>	<p>Engage students in a 'table talk session' and review concepts from Grade 5. i.e. decimal place value, conversion of decimals to fractions and addition, subtraction and multiplication of decimals.</p> <p>Students use diagrams and the number line to show multiplication of decimals as repeated addition.</p> <p>So, <math>2 \times 1.5 = 1.5 + 1.5 = 3.0</math></p>  <p>Engage students in practice sessions using the following steps in pairs.</p> <p><i>What is <math>8.3 \times 4</math>.</i>  <i>Ans. = <math>8.3 \times 4 = 33.2</math></i></p> <ul style="list-style-type: none"> <li>Multiply as you would with whole numbers.</li> <li>Place the decimal point in your product. Count the number of decimal places in your factors.</li> <li>8.3 has <b>1</b> decimal place. So, move the decimal point <b>1 place</b> to the left in your product.</li> </ul> <p><i>What is <math>0.14 \times 23</math></i>  <i>Ans. = <math>0.14 \times 23 = 3.22</math></i></p> <ul style="list-style-type: none"> <li>Multiply as you would with whole numbers.</li> <li>Place the decimal point in your product. Count the number of decimal places in your factors.</li> <li>0.14 has 2 decimal places. So, move the decimal point 2 places to the left in your product.</li> </ul>	<p>Work cards</p> <p>Online Games</p> <p>YouTube</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Tablet</p> <p>Laptop</p> <p>Place Value Chart</p> <p>Worksheets</p> $\begin{array}{r} 8.3 \\ \times 4 \\ \hline 33.2 \end{array}$ $\begin{array}{r} 0.14 \\ \times 23 \\ \hline 42 \\ +280 \\ \hline 3.22 \end{array}$ <p>Number Lines</p>	<p><b>Art and Design</b></p> <p>Students create art pieces using knowledge of tenths and hundreds. e.g. 2 tenths of your design is blue.</p> <p><b>Science</b></p> <p>Engage in a nature walk and note at least 10 flowers, insects or leaves. Then, write the corresponding decimals, e.g.. 2 butterflies = 0.20, 3 ladybugs = 0.30, 4 yellow elders = 0.40, 1 bird = 0.10.</p>	<p>Quizzes</p> <p>Oral Presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Exit/Entrance slips</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Show division of a decimal by a 1-digit whole number and round the quotient to 2 decimal places</li> </ul>	<p>Using tables and a number line guide students in rounding a number to a given place. follow the principles:</p> <ul style="list-style-type: none"> <li>If the number is greater than half the unit, round up. If the number is less than half the unit, round down; if the number is exactly half the unit, round to the even digit.</li> </ul> <p>Engage students in a demonstration of division of a decimal by a 1-digit whole number using the following steps:</p> <ul style="list-style-type: none"> <li>Divide the number as you normally would, as if there was no decimal point in the number.</li> <li>When we bring down the digit that comes after the decimal point, we have to place a decimal point in the quotient.</li> </ul> <p>Divide until there is no remainder.</p> $\begin{array}{r} 1.3 \\ 3 \overline{) 3.9} \\ \underline{- 3} \phantom{0} \\ 0 \phantom{9} \\ \underline{- 9} \\ 0 \end{array}$ <p>The quotient is 1.3.</p> <p><b>Group Games</b> Fraction Art Projects, Decimal Dice Games, Play Shop, Soccer decimal game, Fraction golf, Decimal Bingo <u>and</u> Online Games</p>	<p>Charts</p> <p>Task cards</p> <p>Link for multiplication of decimal game</p> <p>Task cards</p> <p>Worksheets</p> <p>Problem cards and strips</p> <p>Decimal maze</p> <p>Worksheets</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Tablet/Desktop</p> <p>Online Games</p>	<p><b>Social Studies</b> Engage students in a play shop. Students sell different craft items made in TCI e.g. straw hat, mats Example 6 hats for \$25.60 how much for one.</p> <p>Importing and Exporting Products Students convert lbs measurement to decimals eg. 1 1/4lbs - 1.25</p> <p><b>Science</b> Record different measurements of students temperature, height liquids, solids etc.</p> <p><b>Physical Education</b> Measurement Jumps Race, record in decimal.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Analysis of Student work</p> <p>Quizzes</p> <p>Exit/Entrance slips</p>

**NUMERATION**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Decimals</b></p>	<ul style="list-style-type: none"> <li>Express a mixed number as a decimal up to 2 decimal places</li> <li>Show addition of a fraction or a mixed number and a decimal.</li> <li>Solve a multi-step word problem involving the four operations of decimals.</li> </ul>	<p>Display an example of expressing mixed numbers as decimals using fractions with base ten denominators and working with the whole class using a step-by-step procedure.</p> <p>Example 1: <math>5\frac{3}{10} = 5.3</math> The fraction <math>\frac{3}{10}</math> is 3 tenths. Place the whole number, 5, to the left of the decimal point and the 3 in the tenths place.</p> <p>Example 2: <math>8\frac{1}{5} = 8.2</math> Find the decimal value of <math>\frac{1}{5}</math> Divide 1 by 5 to get the decimal part of the number.</p> $\begin{array}{r} 0.2 \\ 5 \overline{)1.0} \\ \underline{-1.0} \\ 0 \end{array}$ <p>Place the whole number 8 to the left of the decimal point.</p> <p>Using a video, guide students in adding a fraction/mixed number and a decimal by converting the fraction or mixed number into a decimal or vice versa and computing.</p> <p>Using word problem strips, students complete word problems in small groups. Integrate concepts of money and measurement.</p>	<p>Charts</p> <p>Task cards</p> <p>Link for multiplication of decimal game</p> <p>Task cards</p> <p>Worksheets</p> <p>Problem cards and strips</p> <p>Decimal maze</p> <p>Worksheets</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Tablet/Desktop</p> <p>Online Games</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p> <p>Observation</p> <p>Oral Quiz</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Understand how to read, represent and interpret the price of items</li> <li>Discuss types of financial institutions and their roles</li> <li>Understand the idea of savings (value)</li> </ul>	<p>Students compose a shopping list then go on a field trip to the local supermarket to purchase the items on their list.</p> <p>Students complete research on "Financial Institutions" and their roles in the community and country. They present their information creatively.</p> <p>Students visit a bank virtually or in-person and participate in a 'quescussion' on saving money.</p> <p>Create a class bank and ask students to contribute a fixed amount every day. Discuss what can be done with the total amount at the end of the 5 days.</p> <p>Students go on a virtual shopping trip or visits various shopping sites (e.g., Walmart, Sams, Amazon). They compare prices and explain why they would choose the cheaper item.</p> <p>Discuss the importance of saving while shopping.</p>	<p>Shopping list</p> <p>Coins/Notes</p> <p>Piggybank</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Internet</p> <p>Tablets/Computers</p> <p>Online Games</p> <p>Word Cards</p> <p>Resource Persons</p>	<p><b><u>Social Studies</u></b> Visits to financial Institutions and supermarkets</p> <p><b><u>Art and Design</u></b> Designing a piggy bank</p> <p><b><u>Language Arts</u></b> Expository Writing: Students write on the following prompts: "Importance of saving", "How to save".</p> <p><b><u>Religious Education</u></b> Students discuss Ecclesiastes 5:10. 'He who loves money is never satisfied by money, and he who loves wealth is never satisfied by income'.</p>	<p>Presentation</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Pupil-made test</p>

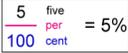
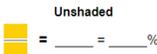
CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Money</b>	<ul style="list-style-type: none"> <li>Convert regional and other foreign currencies to local currency and back, using a rate of exchange</li> <li>Solve up to 2-step word problems involving money</li> <li>Understand the terms cost price, selling price, profit and loss as related to buying and selling</li> <li>Show calculation of profit and loss/profit and loss per cent</li> <li>Show application of money management skills in practical situations</li> </ul>	<p>Engage students in a virtual country tour using the internet. Students analyze the currencies and discuss the exchange rate for their local currency.</p> <p>Students research the exchange rates between various foreign currencies and the locally used currency (US\$), creating a simple chart or table.</p> <p>Students are given sums of money and various scenarios to buy/sell and give change. They role-play buying and selling items and calculating profit or loss.</p> <p>Display and discuss an example of the formula (see below) using the same situations used in profit and loss to calculate profit/loss percentage:</p> <p><b>Profit = Selling Price – Cost Price</b>  <b>Loss = Cost Price – Selling price</b>  <b>Loss % = Loss/ Cost Price x 100</b>  <b>Profit% = Profit / Cost Price x 100</b></p> <p>Distribute task cards and students complete them in pairs, e.g., Jane bought a blue Nissan Bluebird car for \$8765.95. A few months later, she saw an updated model and decided to sell it for \$8436.88. What was her loss percentage?</p> <p>Role play store, shop or business. Practice counting money, writing invoices/estimates etc.</p>	<p>In class 'Cambio with models of money Resource area</p> <p>Coins/Notes</p> <p>Word Wall</p> <p>Charts</p> <p>Task cards</p> <p>Smartboard</p> <p>Whiteboard</p> <p>YouTube</p> <p>e-articles</p> <p>Online Games</p>	<p><b>Language Arts</b> Vocab. Wall Use new vocab. words in spelling e.g. loss, profit, calculating, currency, exchange etc.</p> <p><b>Social Studies</b> Fund Raising Drive Students create a business concept e.g. Lemonade Stand to calculate the loss or profit from items sold.</p> <p><b>ICT</b> Students create a power point presentation on different local financial institution.</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Ratio/Proportion	<ul style="list-style-type: none"> <li>Explore the concept of ratio</li> <li>Represent ratio using objects, pictures/diagrams and numerals</li> <li>Use a ratio to compare quantities</li> </ul>	<p>Guide students to understand that a ratio compares two related quantities.</p> <p>Students dramatically read the ratio and proportion poem and discuss what it means to them.</p> <p><b>Poem</b>  <i>"A ratio compares one thing to another.            A proportion is two ratios, set equal to each other.</i></p> <p><i>Checking for proportions, can be mystifying.            But you can make them simple, by just cross multiplying.</i></p> <p><i>Variables in proportions, make you want to solve 'em.            Cause you can use three methods, to solve each and every problem."</i></p> <p>Students count how many of one thing there is compared to another and express it as a ratio.</p>  <p>The ratio of  to  is _____.</p> <p>Students compare and write ratios using objects in the classroom, including themselves, e.g., number of boys to girls/number of girls wearing braids to bun.</p>	<p>Display board</p> <p>Printed Copy of poem</p> <p>Objects in the classroom</p> <p>Word Wall</p> <p>Square tiles</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Computer/Tablet</p> <p>Worksheets</p>	<p><b>Science</b> Compare measurements of items used in experiments using ratio. e.g 2 parts water to 1 part salt to show solution of salt and water</p> <p><b>Language Arts</b> Create a math journal. Write an explanation of a recently learned concept. Write as many examples of a ratio in five minutes.</p> <p><b>Art and Design</b> Create a piece of artwork using proportion.</p>	<p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Problem Based Learning</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/ OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Ratio/Proportion	<ul style="list-style-type: none"> <li>Write a ratio using the formats 1: 5, 1 to 5 or 1/5.</li> <li>Use a ratio to compare the numbers of items in two sets or two parts of a single set.</li> <li>Indicate equivalent ratios for a given ratio</li> <li>Indicate a ratio in its simplest form</li> <li>Solve word problems involving ratio</li> </ul>	<p>Allow students to write and represent ratios in multiple formats, including each, per, to, each, %, 1:5, 1/5, etc.</p> <p>Students use square tiles to write a ratio for the area of the tiles and a ratio comparing the number of different coloured tiles in the pattern.</p> <p>Guide students to understand that to find equivalent ratio, multiply or divide both quantities by the same number, using the fraction form of the ratio..<math>\frac{3}{2} = \frac{3x2}{2x2} = \frac{6}{4}</math> <i>is the equivalent to</i> <math>\frac{3}{2}</math></p> <p>Using the White/Smartboard, display ratios and their equivalents; then compare ratios in various forms such as objects, pictures/diagrams and numerals using '&lt;', '&gt;' or '=' comparison symbols.</p> <p>Create incomplete tables of equivalent ratios and students find missing values in the tables. Tables used to compare ratios.</p> <p>With the aid of a video, show students how to find patterns in pictures to simplify ratios.</p> <p>Present students with various word problems involving ratios to complete in groups, pairs or individually, e.g. "The ratio of tomatoes to red apples is 2:5. If there are 20 tomatoes, how many red apples are there?"</p>	<p>Spinning wheel</p> <p>Task cards</p> <p>Pegboards</p> <p>Ratio Table</p> <p>Ratio Cards</p> <p>Grid sheets</p> <p>Worksheets</p> <p>Word wall</p> <p>Square tiles</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Computer/Tablet</p> <p>Problem cards</p>	<p><b>Art and Design</b> Show the ratio of water and flour used to make paper- mache.</p> <p><b>Language Arts</b> Create a word wall/bank for students to review and find the meanings of key terms: Convert, divide, dollars, equivalent, ratio, foot, less, multiply, per, rate, ratio, unit, and rate.</p>	<p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Problem Based Learning</p>

CONSUMER MATH					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Ratio/Proportion</b>	<ul style="list-style-type: none"> <li>Show sharing of a quantity using ratios (partitive proportion) and unequal sharing</li> <li>Understand proportion, equivalent fraction and scale drawing, understanding the concept of proportion</li> <li>Explain the relationship between ratio, per cent, fraction and decimal and convert from one to the other</li> </ul>	<p>Engage students in a discussion using graphics and word problems involving unequal sharing.</p> <p>Students given amounts of money to share and explain the amount each gets. <i>E.g., Share \$480 between two girls. One must get 3 times as much as the other.</i> Then, students work in pairs to 1) show the ratio, 2) find the total number of shares into which the money is divided and 3) show the first and second share.</p> <p>Guide students in understanding that proportion is an equation that states two ratios are equal.</p> <p>Review equivalent fractions and engage in a discussion on their relation to proportion. Display examples of scale drawing to explain proportion.</p> <p>Using examples, engage students in a discussion on the relationship between ratio, fraction and decimal.</p> <p>Within groups, students play games that require them to convert between ratio, fraction and decimal.</p>	<p>Task cards</p> <p>Writing cards</p> <p>Ratio Table</p> <p>Ratio Cards</p> <p>Grid sheets</p> <p>Worksheets</p> <p>Word wall</p> <p>Square tiles</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Computer/Tablet</p> <p>Problem cards</p>	<p><b>Langague Arts</b> <i>Vocab Word Wall</i> Students create anchor learning charts on definition of new vocab. words e.g. proportion, equivalent,</p> <p><b>Art and Design</b> <i>Ratio and Proportion Colouring</i> Students use different polygon shapes to colour and create a pattern e.g ratio of orange octagons to blue hexagons</p>	<p>Pre-assessment</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Online Discussion</p> <p>Quiz</p> <p>Problem Based Learning</p> <p>Performance Task</p>

**CONSUMER MATH**

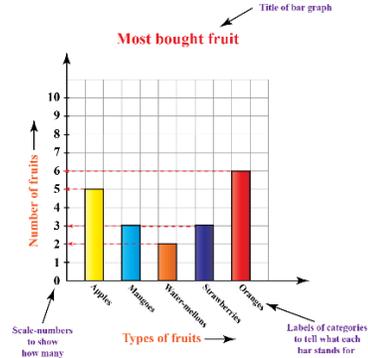
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Percentage</b></p>	<ul style="list-style-type: none"> <li>Explain the concept of percentage</li> <li>Understand that 1 whole is 100%</li> <li>Read and interpret the percentages of a whole.</li> <li>Explain the relationship between fractions, decimals and percentage</li> <li>Represent a given per cent using pictures/diagrams and symbols</li> </ul>	<p>Engage students in a ‘table talk’ session on per cent meaning one hundredth and therefore, 1% means 1/100 or one hundredth, and 7% means 7/100 or seven hundredths. Also, since percentages are just hundredth parts (which means they are FRACTIONS), we can easily write them as fractions and decimals. Use visual representations to reinforce concept of percentages.</p>  <p>Teacher shares the relationship between fractions, percentage and decimal using numerals and visual representations.</p> $28\% = \frac{28}{100} = 0.28$ <p>Students work in pairs and write the shaded part and the unshaded part as fractions, decimals, and percentages.</p> <p>a.</p>  <p>Unshaded</p>  <p>Students use a pizza cut –out or grids to show a given per cent.</p>  <div style="border: 1px solid black; padding: 5px;"> <p><b>A Half</b> can be written...</p> <p>... as a fraction: <math>\frac{1}{2}</math></p> <p>... as a decimal: 0.5</p> <p>... as a percentage: 50%</p> </div>	<p>Flashcards</p> <p>Word Wall</p> <p>Visual Aids (charts, graphics etc.)</p> <p>Grid sheet</p> <p>Equivalent chart (fractions, decimals and percentage)</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Computer/Tablet</p> <p>Worksheets</p>	<p><b>Social Studies</b> Determine the percentages of cultures that speak English.</p> <p><b>Science</b> Determine the percentage of people infected with e.g contagious diseases e.. Covid, Conjunctivitis in different Caribbean countries</p> <p><b>Language Arts</b> Read a variety of books off a list, then figure out the percentage of the liked, disliked books, etc.</p> <p><b>Physical Education</b> Compute the percentage of wins and losses of a favourite sports team.</p>	<p>Problem Based Learning</p> <p>Performance Task</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Demonstration</p>

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TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Percentage	<ul style="list-style-type: none"> <li>Calculate a given percentage of a number</li> <li>Express one number as a percentage of another number</li> </ul>	<p>Model/demonstrate to students how to find the percentage of a number using the whiteboard or Smartboard. Use the following steps:</p> <ul style="list-style-type: none"> <li>Convert the percentage to a decimal by dividing it by 100.</li> <li>Multiply this decimal by the number you are finding the percentage of.</li> <li>Check your units of measurement.</li> </ul> <p>Example 1: Find 27% of \$50.  <math>27 \div 100 = 0.27</math>  <math>0.27 \times 50 = 13.5</math>                      So <math>13.5 = \\$13.50</math></p> <p>Students engage in peer assessment, and mark assigned classwork and use their calculator to find percentages. e.g. <i>classwork marked out of 20, Rebecca had 7 out of 20. What is her percentage. <math>7 \times 100</math> divided by 20. Ansa: 35%.</i></p> <p>Provide students with opportunities to calculate a given percentage of a number and express one number as a percentage of another number in small groups, pairs and individually using worksheets, the Smartboard and calculators.</p>	Percentage cards  Display chart  Manipulation board  Task cards  Coins/money  Lego blocks  Money  Books  Counters  Number cards	<p><b>Social Studies</b>                      Calculate and convert from percent to fraction the total amount of different nationalities found in the TCI e.g. Dominicans, Americans, Haitians, Turks Islanders etc.                      16% Haitian = 4/25</p> <p><b>Art and Design</b>                      Match Game                      Create a pattern using different colours to match percent to fraction equivalent e.g <math>\frac{1}{2} = 50\%</math> in orange</p>	Analysis of student work  3-2-1 Strategy  Think-Pair-Share  Pre-assessment  Response Cards  Project  Exit/Entrance slips  Demonstration  Online Discussion  Quiz  Problem Based Learning  Performance Task

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Percentage	<ul style="list-style-type: none"> <li>Express simple fractions or decimals as percentages</li> <li>Express a decimal and fractions as a per cent, and vice versa</li> <li>Solve problems involving fractions, decimals and per cent</li> <li>Convert between fractions/per cent/decimal to simplify problem-solving situations</li> </ul>	<p>Demonstrate on the Smartboard:</p> <p>(a) <u>Fractions as percentages</u>  <i>Example 1: What is <math>\frac{5}{8}</math> as a per cent?</i>  <math>5 \div 8 = .625</math>, the calculator should show 0.625                      Then multiply by 100, and your answer is: 62.5%</p> <p>(b) <u>Decimals as percentages</u>  <i>Converting from a decimal to a percentage is done by multiplying the decimal value by 100 and adding %.</i> Example: 0.10 becomes <math>0.10 \times 100 = 10\%</math></p> <p>(c) <u>Per cent convert to decimal and fractions</u>                      Converting from a per cent to decimal is done by removing the per cent sign % and dividing the value by 100. Example: 15.6% becomes <math>15.6 / 100 = 0.156</math>.</p> <p>Converting from a per cent to a fraction with a denominator of 100 is done by removing the sign % and place the number over 100. <math>54\% = \frac{54}{100}</math></p> <p>Students use previous knowledge of simplifying and convert between fractions/ per cent/ decimal and simplify: <math>16\% = \frac{16}{100}</math> or <math>\frac{4}{25}</math>      <math>52\% = \frac{52}{100}</math> or <math>\frac{9}{25}</math></p>	Workbook Worksheets Percentage Flashcards Smartboard Whiteboard E-articles Manipulatives Graphics Cut-out Grid Paper Fraction/Percentage/ Decimal Puzzle	I N T E G R A T E  A C R O S S  S U B J E C T S	Analysis of student work 3-2-1 Strategy Think-Pair-Share Pre-assessment Response Cards Project Exit/Entrance slips Demonstration Online Discussion Quiz Problem Based Learning Performance Task

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<b>Percentage</b>	<ul style="list-style-type: none"> <li>Solve word problem involving percentages</li> <li>Show application of percentages in practical situations</li> </ul>	<p>Play various games that require students to complete word problems involving percentages.</p> <p>Example: In a class, 65% of the children are girls. What percentage are boys?</p> <p>A shop sells chocolate, vanilla and strawberry ice creams. 45% of the ice cream sold are vanilla, and 17% are strawberry. What percentage are chocolate?</p> <p>A shop sells 200 chocolate, vanilla and strawberry ice creams in a day. 42% of the ice cream sold are vanilla, and <math>\frac{1}{4}</math> is strawberry. What percentage are chocolate?</p> <p>Engage students in a practical application of percentages using drama such as playing a teacher and finding students total percentage, calculating the percentage of income distributed in a budget, and calculating the amount of import duty (37%) to pay on various items.</p> <p>Example: Item cost \$80, convert 37% to decimal and multiply.</p> <p>Import duty: <math>80 \times .37 = \\$24</math></p>	<p>Task cards</p> <p>Flashcards</p> <p>Internet</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Sticky notes with problems</p> <p>e-article</p> <p>Worksheet</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Pre-assessment</p> <p>Response Cards</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Demonstration</p> <p>Online Discussion</p> <p>Quiz</p> <p>Problem Based Learning</p> <p>Performance Task</p>

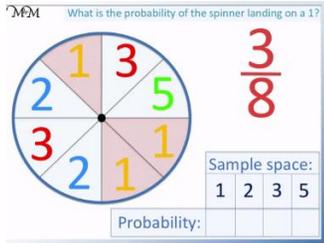
**STATISTICS AND DATA HANDLING**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES												
<p><b>Data Representation</b></p>	<ul style="list-style-type: none"> <li>Construct pictographs, line graphs, bar graphs to show given data</li> </ul>	<p>Pose various scenarios/ stories that include data. Engage students in an interactive session, and work in groups to compose graphs and tables based on the information.</p> <p>Students collect data on their class, school and community based on their interest and construct graphs. <i>“You went to the supermarket to collect data on which fruit it bought the most by customers.”</i></p> <p><i>Start by collecting the data and putting the data in tables.</i></p> <table border="1"> <thead> <tr> <th>Types of Fruits</th> <th>Number of Fruits</th> </tr> </thead> <tbody> <tr> <td>Apples</td> <td>5</td> </tr> <tr> <td>Mangoes</td> <td>3</td> </tr> <tr> <td>Watermelons</td> <td>2</td> </tr> <tr> <td>Strawberries</td> <td>3</td> </tr> <tr> <td>Oranges</td> <td>6</td> </tr> </tbody> </table> <p><i>Then represent the data in graphs.</i></p> 	Types of Fruits	Number of Fruits	Apples	5	Mangoes	3	Watermelons	2	Strawberries	3	Oranges	6	<p>Deck of cards</p> <p>Markers</p> <p>Whiteboards</p> <p>Dice</p> <p>Pictures of graphs/tables</p> <p>Sticky note pads</p> <p>Pictures</p> <p>Graph sheets</p> <p>Tally sheets</p> <p>Model circle graphs</p> <p>Fraction Wall</p>	<p><b>Language Arts</b></p> <p>Write expository/persuasive/descriptive essays based on information gathered</p> <p><b>Social Studies</b></p> <p>Use graph/tally chart to compare election voting results.</p> <p>Analyze data based on questions relating to Tourism: Tourist Origins, Major Airlines etc.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p>
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<p><b>Statistics</b></p>	<ul style="list-style-type: none"> <li>● Interpret data presented in bar graphs, line graphs, pictographs and pie charts</li> <li>● Estimate, calculate and interpret the mean, mode, and median of a set of discrete data</li> <li>● Recognize patterns in a set of data</li> <li>● Make predictions from a set of data</li> </ul>	<p>Pictures of various graphs are distributed on handouts or displayed on the whiteboard. Students ask and answer student/teacher made questions as they analyze the information presented in them.</p> <p>Engage students in the following games in small groups:</p> <ul style="list-style-type: none"> <li>- Students choose five cards from a deck and find the mean, mode and median for the numbers chosen.</li> <li>- Students roll 10 dice and find the mean, mode, median of the numbers.</li> <li>- Students construct frequency tables to find mean, mode and median.</li> </ul> <p>Present students with various data set, graphs and charts on a handout or displayed on a board. Guide students to understand data as number patterns, spotting trends and making predictions.</p> <p>Allow students to use words such as increasing, decreasing, etc., when describing data.</p> <table border="1"> <tr> <td>Year</td> <td>1920</td> <td>1930</td> <td>1940</td> <td>1950</td> </tr> <tr> <td>Life expectancy</td> <td>55.38</td> <td>59.57</td> <td>63.24</td> <td>68.07</td> </tr> </table> <p>Pattern: "Between 1920 -1950, the age of life expectancy increased approximately by 4 years every 10 years.</p> <p>Students analyze data they have collected and note patterns while making predictions.</p>	Year	1920	1930	1940	1950	Life expectancy	55.38	59.57	63.24	68.07	<p>Diagram s of bar graphs and pictographs</p> <p>Whiteboard</p> <p>Work cards</p> <p>Tally table</p> <p>Questionnaire</p> <p>Microsoft Forms</p> <p>Google Forms</p> <p>Online Activities</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Science</b> Predict physical/chemical change of materials over time, e.g., what would happen to a tomato left out in the open/inside a refrigerator?</p> <p><b>Social Studies</b> Pie chart reflecting various information on CARICOM countries.</p> <p><b>Social Studies/ Science</b> Predict the temperature after reviewing data</p> <p><b>Science</b> Analyze rainfall over some time for a specific area and create a chart or graph and make predictions.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p>
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<p><b>Probability</b></p>	<ul style="list-style-type: none"> <li>Understand mathematical language associated with probability (i.e. event, outcome etc.)</li> <li>Find the probability of an event</li> <li>Make predictions of the probability of an event.</li> </ul>	<p>Distribute word cards with probability related words. Allow students to research and share the definitions and explain their meanings in relation to probability.</p> <p>Play the matching game- students match words to their meanings.</p> <p>Demonstrate to students how to use a tree diagram to determine the total outcomes by generating all the outcomes without skipping any.</p> <p>In groups, allow students to create and spin a probability wheel. Students make note of the probability of the spinner landing on a particular colour or number. Ask students to predict the outcome based on the number of spins.</p> 	<p>Word cards</p> <p>Smartboard</p> <p>Decks of cards</p> <p>Dominoes</p> <p>Probability wheel</p> <p>Tree Diagram</p> <p>Wheel of fortune game</p> <p>Worksheets</p> <p>Online Games</p> <p>Scenarios</p> <p>Whiteboard</p>	<p><b>Language Arts</b> Reading: Students use related words to predict outcomes in stories. E.g. Chance, outcome, not equally likely, equally likely, chance events, probability etc.</p> <p><b>Social Studies</b> Students predict the outcome of weather conditions</p> <p><b>Science</b> Measure/collect scientific data and use graphs, charts, lists, tables etc., to organize the data.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p> <p>Writing Portfolios</p>

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<p><b>Probability</b></p>	<ul style="list-style-type: none"> <li>Connect to probability as prediction in determining if outcomes are likely, impossible or unlikely.</li> <li>Determine how likely the result of an event is after experimentation</li> <li>Show application of predicting skills in practical situations</li> </ul>	<p>Display posters with the words likely, impossible or unlikely, Students Read and discuss them.</p> <p>Provide students with various scenarios and choices and allow students to determine if the outcome is likely, impossible or unlikely.</p> <p>In pairs, students engage in various experiments and determine the probability, e.g. rolling a certain number on a dice/flipping head/tail on a coin. Each student will flip/roll at least eight times while recording the outcome of each flip/throw.</p> <p>Students use the scientific method to engage in various experiments and predict outcomes (hypothesize) based on previous knowledge or information provided.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>Growth of plants based on factors such as water, location and sunlight.</li> <li>Ice melts faster under which condition; water, salt, paper towel etc.</li> </ul>	<p>Activity sheets</p> <p>Decks of cards</p> <p>Probability posters</p> <p>Statements cards</p> <p>Dice</p> <p>Coins</p> <p>M &amp; M candies</p> <p>Dice</p> <p>Coin</p> <p>Notepad</p> <p>Games</p> <p>Matching games</p> <p>Worksheets</p>	<p><b>Social Studies</b> Students make predictions on when hurricanes may develop during the season.</p> <p><b>Language Arts</b> Students can determine the parts of speech of the words likely, fair, unlikely, impossible, and never. Then compose sentences</p> <p><b>Science</b> Students determine the outcome of the effects of heat on common objects.</p> <p>Pin The Tail - use probability to predict and conduct experiments to test predictions.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p> <p>Writing Portfolios</p>

MEASUREMENT					
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Time	<ul style="list-style-type: none"> <li>Read and record time using the 24-hour clock using the appropriate words and notations</li> <li>Record time in hours and minutes, and vice versa with 24-hour clocks</li> <li>Convert between units of time from larger to smaller unit and vice versa, including fractional units</li> </ul>	<p>Divide the class into two groups and display the riddle. Students record, e.g., Riddle me this riddle me that, what time am I on the 24-hour clock if it is 8:35 pm?</p> <p>Students given time cards written in both 12 and 24-hour time. They move around to music and find their matching partners. Alternatively, students match times in a matching exercise individually.</p> <p>Students record the times they do particular events daily, e.g.: have breakfast, dinner, complete assignments...then record the times using the 24-hour clock</p> <p>In pairs, students set their model clocks to specific times in hours and minutes then record the times using the 24-hour clock.</p> <p>Review the conversion table. Display, read and discuss the following rule with students: "if converting from a larger unit to a smaller unit, multiply. If you converting from a smaller unit to a larger unit, divide. Allow students to apply the rule.</p> <p>60 seconds = 1 minute    24 hours = 1 day 60 minutes = 1 hour    7 days = 1 week</p> <p>12 months = 1 year    10 years = 1 decade 52 weeks = 1 year    100 years = 1 century 365 days = 1 year    1000 years = 1 millennium</p>	<p>Smartboard</p> <p>Timecards</p> <p>Music</p> <p>Timelines</p> <p>Model clocks</p> <p>24-hour clock</p> <p>Worksheet</p> <p>Online Games</p> <p>Conversion Table</p> <p>Watch</p> <p>Smartboard</p> <p>Whiteboard</p>	<p><b>Science</b> Record time during experiments.</p> <p><b>Physical Education</b> Students record time lapse between events.</p> <p><b>Social Studies/Art and Design</b> Learn about the history of clocks.  Students take them apart, and put them back together. Then practice telling time using the clocks</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p>

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Time	<ul style="list-style-type: none"> <li>Solve problems involving converting from hours to minutes; hours and minutes to minutes; minutes to seconds; minutes and seconds to seconds; years to months; weeks to days</li> <li>Solve problems involving time, e.g., intervals of time, duration of events, starting and finishing times of events.</li> <li>Determine the length of time elapsed between given time using months, days, hours or minutes</li> </ul>	<p>Display a video showing time conversion. Observe and engage students in a discussion and practical application of conversion.</p> <p>Students create and display a time conversion table converting between seconds, minutes, days, weeks, months and year.</p> <p>Engage students in conversion games and online activities/problems in pairs, small groups and individually.</p> <p>Students use a number line to count backwards or forward to solve problems relating to intervals, duration etc. To find an ending time, jump forward from the starting time. To find a starting time, jump back from the ending time.</p> <p>Students use clock faces to move backwards or forward to determine the start and finish times, counting by minutes.</p> <p><u>Allow students to complete time elapsed tables.</u></p> <table border="1"> <thead> <tr> <th>Start Time</th> <th>End Time</th> <th>Elapsed Time</th> </tr> </thead> <tbody> <tr> <td></td> <td>12:33 P.M.</td> <td>1 Hours &amp; 33 Minutes</td> </tr> <tr> <td></td> <td>7:35 A.M.</td> <td>3 Hours &amp; 15 Minutes</td> </tr> <tr> <td>3:00 A.M.</td> <td>4:34 A.M.</td> <td></td> </tr> <tr> <td></td> <td>10:34 P.M.</td> <td>2 Hours &amp; 34 Minutes</td> </tr> </tbody> </table>	Start Time	End Time	Elapsed Time		12:33 P.M.	1 Hours & 33 Minutes		7:35 A.M.	3 Hours & 15 Minutes	3:00 A.M.	4:34 A.M.			10:34 P.M.	2 Hours & 34 Minutes	<p>Smartboard</p> <p>Whiteboard</p> <p>Graphic organizers</p> <p>Number line</p> <p>Clock</p> <p>Worksheets</p> <p>Problem strips</p> <p>Worksheets</p> <p>Conversion table</p> <p>Stopwatch</p> <p>Online Games</p>	<p><b>Language Arts</b> Ask a student to repeat the question in their own words, clarifying the goal for the problem.</p> <p><b>Social Studies</b> Map a starting point and destination, decide on appropriate transportation and determine a reasonable speed. Calculate the distance that will be travelled, and the time the trip will take.</p> <p>Create timelines to show the independence of Caribbean nations.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p>
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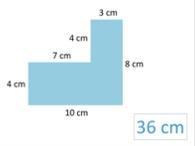
MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Time	<ul style="list-style-type: none"> <li>Understand the meaning of decade and century</li> <li>Determine the decade or century in which an event took place, given the year of the event.</li> <li>Interpret and use the letters A.D. and B.C. after a year.</li> <li>Demonstrate addition and subtraction of hours and minutes</li> </ul>	<p>Students research and share the definition of decade and century. Engage students in a discussion on the number of days in a decade and a century and the number of decades in a century, and the relationship between a year and a decade, a year and a century, a decade and a century. <i>1-year 365 days. 1 Decade – 10 years. 1 Century – 100 years.</i></p> <p>Display a list of events, e.g., Haiti earthquake, first United States of America black president, first female Premier in the T.C.I., ending the salt industry etc. Allow students to research the year of each event, determine the decade and create timelines.</p> <p>Students watch an appropriate video about A.D and B.C and engage in a ‘table talk’ and practical application.</p> <p>Display problems and allow students to participate in ‘Think-Pair-Share’ on ways to solve them using rules relating to the addition and subtraction of time. E.g. <b>"Adding Times:</b> Add the hours, Add the minutes. If the minutes are 60 or more, subtract 60 from the minutes and add 1 to hours. <b>Subtracting Times:</b> Subtract the hours. Subtract the minutes. If the minutes are negative, add 60 to the minutes and subtract 1 from hours."</p> <p>Students compose problems independently and demonstrate the solutions.</p>	<p>Timeline sheets</p> <p>YouTube</p> <p>Stopwatch</p> <p>Time chart</p> <p>Smartboard</p> <p>Computer</p> <p>Whiteboard</p> <p>Word cards</p> <p>Worksheet</p> <p>Interactive clock</p> <p>Paper plates</p> <p>Chart with time units</p> <p>Clock</p> <p>Watch</p>	<p><b>Art and Design</b> Students paint pictures representing various eras or create collages.</p> <p><b>Science</b> Engage students in gravity and air resistance experiments regarding speed and time, e.g. Dropping an egg vs dropping a feather, dropping an egg without breaking it.</p>	<p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p> <p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p>

**MEASUREMENT**

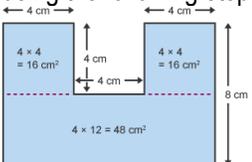
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Length</b></p>	<ul style="list-style-type: none"> <li>Convert between units of length (larger to a smaller unit and vice versa) including fractional units (, e.g.. Convert 6 1/2 m to cm)</li> <li>Convert between units of length (larger to a smaller unit and vice versa) including decimal units (, e.g.. Convert 6.45 m to cm)</li> </ul>	<p>Review the metric table with a video, chart and examples on the white/smartboard.</p> <p>1 Kilometre = 1000 metres 1 metre = 100 centimetres 1 centimetres = 10 millimetres</p> <p>Display the rule for converting between units of length and discuss using examples: "When converting a larger unit to a smaller one, you multiply; when you convert a smaller unit to a larger one, you divide."</p> <p>Distribute problem cards and allow students to solve and explain how to solve each using the rule.</p> <p>Students make charts to show the conversion of lengths for objects in their environment.</p> <p>Students complete given worksheets and engage in a peer review.</p>	<p>Charts</p> <p>Problem cards</p> <p>Online game</p> <p>Worksheet</p> <p>Metric Table</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Measuring Tools</p> <p>Tablet/Laptop</p>	<p><b>Science</b> Measure and collect scientific data and use graphs, charts, lists, tables etc., to organize the data.</p> <p><b>Social Studies</b> Measure the height of several family members and create a bar graph showing the results.</p> <p><b>Language Arts</b> Students create learning anchor charts to explain the conversion of a large unit to a smaller unit</p> <p><b>Art and Design</b> Create an abstract pattern using length of different objects in the environment e.g straws, pencils, leaves etc.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Area and Perimeter</b>	<ul style="list-style-type: none"> <li>Estimate, measure, compare and order the perimeter of irregular and regular polygons by measuring sides</li> <li>Determine the measurement of one side of a polygon given the perimeter and the lengths of the other side</li> </ul>	<p>Engage students in a discussion on how to find the perimeter. "The perimeter can be found by adding the lengths of sides of plane shapes."</p> <p>Students use geo-boards and rubber bands or grid paper and make irregular and regular polygons. Then, estimate their sizes, measure and compare.</p> <p>Students make irregular polygons and use their rulers to measure and record each of them, then calculate to find their perimeters, then compare and order them in ascending and descending order.</p> <p>Display polygons on the white/smartboard with one side of the polygon missing a measurement and provide the perimeter. Guide students with finding the missing side using the given perimeter.</p> <ul style="list-style-type: none"> <li>Develop and use formulas for finding the perimeter of squares and rectangles.</li> <li>Finding a missing side: Add the sides given and subtract the given perimeter from the total.</li> </ul>	<p>Playdough</p> <p>Sticks glue</p> <p>Strings</p> <p>Rulers</p> <p>YouTube</p> <p>Display board</p> <p>Internet</p> <p>Cut-out of Polygons</p> <p>Grid Paper</p> <p>Worksheet</p> <p>Geo-Board (nail, coloured rubber bands and a block of wood.</p>	<p><b>Art and Design</b> Use graph sheets to design buildings and estimate and measure perimeter).</p> <p><b>Music</b> Sing the 'Perimeter Song' (Farmer and the Dell tune) Lyrics: "Perimeter is around. Perimeter is around. O.H., OH, don't you know, the perimeter is around. You add up all the sides. You add up all the sides. Oh, oh, don't you know, you add up all the sides.</p> <p><b>Physical Education</b> Students can calculate different running distances e.g 200m, 400m, 800m etc.</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Solve problems involving the perimeter of compound shapes.</li> <li>Differentiate between area and perimeter</li> <li>Estimate, measure and compare the area of various figures by counting centimetre squares</li> <li>Estimate, measure and compare the area of irregular polygons by counting squares</li> </ul>	<p>Display a compound shape. , e.g.:</p>  <p>Allow students to solve problem involving compound shapes. Identify the shapes that make up the compound shape, indicate how the perimeter can be found and find a missing side based on the given perimeter.</p> <p>Engage students in discussions and demonstrations on whether to use cm<sup>2</sup> or m<sup>2</sup>.</p> <p>In pairs, students research and share the difference between area and perimeter and lead a discussion on how to calculate each. Perimeter = x + x + x + x Area = x times y</p>  <p>Provide students with shapes and use grid paper to estimate, measure and compare the area by counting squares.</p> <p>Students draw figures on grid paper and count squares to identify the area. Students list shapes in a T-chart or use comparison symbols while comparing.</p>	<p>Compound shapes</p> <p>Grid Paper</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Building blocks</p> <p>Base 10 blocks</p> <p>Worksheet</p> <p>Online Games</p> <p>Laptop/Tablet</p>	<p><b>Social Studies</b> Use Lego bricks or blocks to create replicas of famous buildings, monuments, or structures. While building, discuss mathematical concepts such as perimeter, area, and volume.</p> <p><b>Field Trip</b> Visit a garden in a park and discuss symmetry or how much mulch it takes to cover the garden area.</p> <p><b>Art and Design</b> Colour spaces of irregular polygons to create a pattern e.g collages, abstract art</p>	<p>Observations</p> <p>Response Cards</p> <p>Project</p> <p>Teacher-made Test</p> <p>Exit/Entrance slips</p> <p>Think-Pair-Share</p> <p>Analysis of Student work</p> <p>Online Discussion</p> <p>Demonstration</p> <p>Pre- Assessment</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Determine the total area of compound shapes by counting unit squares</li> <li>Determine the area of right angled triangles but counting unit squares</li> <li>Determine the area of rectangles and squares using a given formula.</li> <li>Determine the area of compound shapes.</li> </ul>	<p>Students construct various compound shapes and right-angled triangles and place them on grid paper to determine the total area by counting squares.</p> <p>Engage students in a demonstration of finding the area rectangles and squares using a formula with cut-outs. <i>Rectangle: <math>L \times W</math></i> <i>Square: <math>L \times L</math></i></p> <p>Students determine the total area of compound shapes by working in pairs and individually using the following steps.</p>  <p>Divide the shape into squares and rectangles, find their respective areas and then add them together. e.g. The length of the larger rectangle is <math>4 + 4 + 4 = 12</math> cm Area = <math>16 + 16 + 48 = 80\text{cm}^2</math></p> <p>Use the formula for area of a rectangle to compute the area of a rectangular region.</p>	<p>Rulers</p> <p>Cut-out Shapes</p> <p>Grid Paper</p> <p>Worksheet</p> <p>Smartboard</p> <p>YouTube</p> <p>Tablet/Computer</p>	<p><b>Language Arts</b> Create an anchor learning chart on formulas for finding the area and perimeter of different compound shapes</p> <p><b>Art and Design</b> Colour code different shapes found in compound shape to create patterns of abstract art</p> <p><b>Social Studies</b> Field trip Students visit and tour different areas e.g. community swimming pool, soccer field, garden border to find area and perimeter.</p>	<p>Demonstration</p> <p>Presentation</p> <p>Project</p> <p>Peer Assessment Analysis of Student Work</p> <p>Strategic Questioning Strategies</p> <p>Think-Pair-Share</p> <p>Exit/Admit Tickets</p> <p>Performance Task</p>

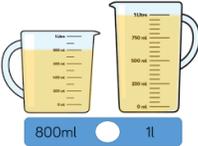
**EASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Area and Perimeter</b></p>	<ul style="list-style-type: none"> <li>Solve problems involving rectangles with the same perimeter but different area</li> <li>Solve one-step and two-step problems involving area of surfaces</li> </ul>	<p>Use a chart to help students understand how rectangles can have the same perimeter with different areas.</p> <p>Using the Think, Pair, share strategy provide students with problems involving rectangles with the same perimeter but a different area to solve.</p> <p>Provide students with sentence strips with word problems to solve individually, in small groups or in pairs.</p> <p><i>The area of a square is 4 inches. What is the length of a side?</i></p> <p><i>The area of a rectangular sandbox is <math>56 \frac{2}{3}</math> square feet. The length of the sandbox is <math>8 \frac{1}{2}</math> feet. What is the width?</i></p> <p>Engage students in problem-based activities to find the area of various surfaces in their environment.</p>	<p>YouTube</p> <p>Square counters</p> <p>Legos</p> <p>Graph sheets</p> <p>Floor tiles</p> <p>Coloured tape</p> <p>Rulers</p> <p>Worksheet</p> <p>Smartboard</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<b>Mass/Weight</b>	<ul style="list-style-type: none"> <li>Show estimation, measurement, recording and comparison of the mass of objects using standard units, i.e. kg, gram, milligram and tonne</li> <li>Approximate mass/weight to the nearest kilogram, <math>\frac{1}{2}</math> kilogram or <math>\frac{1}{4}</math> kilogram.</li> </ul>	<p>Estimate mass of different objects using an improvised balance. Measure the mass of objects using a scale and compare the estimated mass with the true measurement.</p> <p>Students estimate amounts of flour, chips, sugar, rice, or pasta, then measure using a scale.</p> <p>Distribute gram/kilogram tables and allow students to estimate the best unit that can be used to measure each.</p> <p>Compare the weight of objects using hands and outstretched arms to develop further a student's conceptual understanding of weight kg, gram, milligram and tonne</p> <p>Play the guessing game. Students feel the weight of items then approximate to the nearest kilogram.</p>	<p>Sugar, Flour Chips</p> <p>Pens</p> <p>Pencils</p> <p>Books</p> <p>Beam balance</p> <p>Spring balance</p> <p>YouTube</p> <p>Smartboard</p> <p>Whiteboard</p>	<p><b>Science</b> Discussion on finding out if someone is overweight and underweight.</p> <p>Measure different quantities samples to use in different experiments e.g. Kg of flour,</p> <p><b>Language Arts</b> Vocab. Word Wall Students spell new words from lesson e.g. capacity, millimeters, containers, etc.</p> <p><b>Field Trip</b> Take a trip to the playground and estimate how fast a person travels down a slide using their weight and height.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Mass/Weight</b></p>	<ul style="list-style-type: none"> <li>Convert between units of mass (larger to a smaller unit and vice versa), including fractional and decimal units</li> <li>Solve problems in real-life situations involving mass</li> </ul>	<p>Allow students to work in pairs to research and create an anchor chart to show the conversion between standard units (kg, gram, milligram).</p> <p>Guide students through the process of converting between units of mass using the following rule: To change kg to g multiply by 1000. To change g to kg, divide by 1000. Example 3 kg 100 g = (1000 x 3) + 100 g = 3100 g. 1 g = 0.001 kg</p> <p>Students measure quantities in kilograms using a balance and record these in grams. Measure objects in grams and record these in kilograms</p> <p>Display a problem on the board, e.g., Brian sold 123 kg 231 g of newspapers and 200 kg of magazines. Find the total quantity of articles sold. In pairs, allow students to solve the problems.</p> <p>Students hunt for problem strips then solve them individually. (Strips will be hidden in the classroom).</p> <p>Allow students to solve problems involving the four operations without and with conversion.</p>	<p>Smartboard</p> <p>Whiteboard</p> <p>Tablet/Laptop</p> <p>YouTube</p> <p>Display chart</p> <p>Display board</p> <p>Problem strips</p> <p>Scales</p> <p>Items to measure</p>	<p>I N T E G R A T E  A C R O S S  S U B J E C T S</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

MEASUREMENT					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Capacity	<ul style="list-style-type: none"> <li>Know the relationships between the millilitre, litre, and kilolitre</li> <li>Select and justify the appropriate standard unit for capacity of liquids (litres and millilitres)</li> <li>Estimate, measure and record the capacity of containers using the millilitre as a unit of measure</li> </ul>	<p>Use a video to help students understand the relationship between the units of capacity and engage in a class discussion.</p> <p>Allow students to research and create interactive posters that show the conversion between millilitre, litre, and kilolitre and the appropriate standard unit for various capacities of liquids.</p> <p>Display containers of varying measures (litre, millilitre). Students guess the best unit of capacity for each container.</p>  <p>Students complete a table to show the conversion of litres to millilitres and millilitres to litres. Decimal notation to record units and use standard capacity measures for all activities.</p> <p>Distribute containers to students. Students estimate and record the capacity of each in millilitre, then measure using a measuring cylinder or cup to find the correct measurement.</p>	<p>Cups</p> <p>Pitcher</p> <p>bottles</p> <p>YouTube</p> <p>Measuring spoons</p> <p>Household containers. , e.g. teaspoon, tablespoon, measuring cups</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Language Arts</b> Engage students in rhymes and poems using units of mass, measurement and capacity.</p> <p><b>Science</b> Experiments that require measuring liquids.</p> <p>Research the capacity of service water given or use by citizens on different islands in TCI</p> <p>Measure and collect scientific data and use graphs, charts, lists, tables etc., to organize the data.</p>	<p>Demonstration</p> <p>Peer Assessment</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Quiz</p> <p>Observation</p> <p>Pre-assessment</p> <p>Project</p>

**MEASUREMENT**

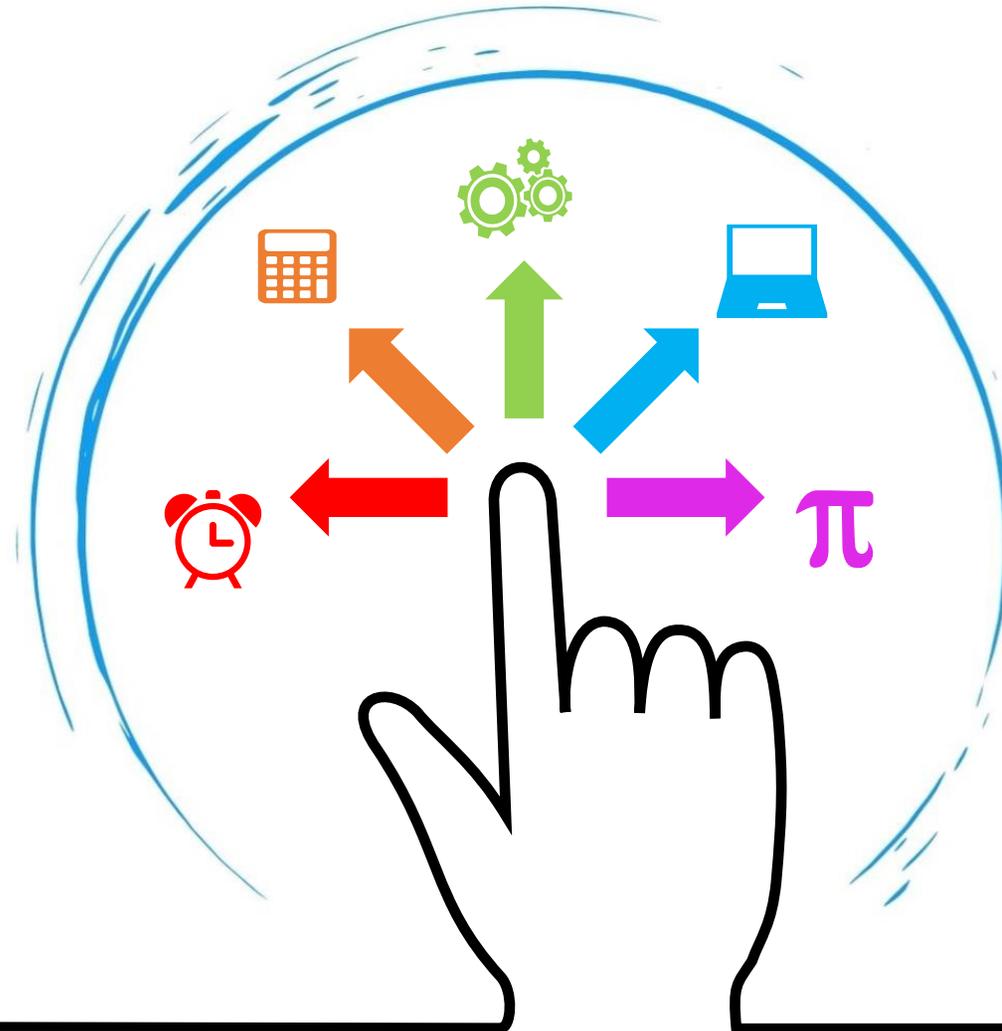
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Capacity</b></p>	<ul style="list-style-type: none"> <li>Convert between units of capacity (larger to smaller unit and vice versa) including fractional and decimal units (<math>\frac{1}{2} = 0.5</math>)</li> <li>Estimate capacity and determine the reasonableness of the answers or estimation</li> <li>Solve problems in real-life situations involving capacity</li> </ul>	<p>Allow students to use their knowledge of conversion of capacity to convert between units using multiplication and division.</p> <p>Students are given containers measuring various capacities and estimate how much of a smaller container can fill a bigger container. To determine the reasonableness of the answers or estimation, allow students to measure after estimations.</p> <p>Allow students to dip in a bowl to choose and solve problems relating to capacity..</p> <p>Solve problems involving the four operations in litres and millilitres. Distribute problem cards and allow students to work in groups to generate and demonstrate how to solve the problems.</p>	<p>Measuring cylinder</p> <p>Household containers. , e.g. teaspoon, tablespoon, measuring cups</p> <p>Liquids and Solids.</p> <p>Labels from liquids: juice, milk, water</p> <p>YouTube</p> <p>Worksheets</p> <p>Computer</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Problem cards</p>	<p><b>Science</b> Research the capacity of service water given or use by citizens on different islands in TCI</p> <p><b>ICT</b> In groups students research water treatment methods</p> <p><b>Art and Design</b> Collage Display together different litre measurement labels from containers e.g milk, juice, water etc.</p>	<p>Oral Presentation</p> <p>Demonstration</p> <p>Projects</p> <p>Problem Based Learning</p> <p>Performance Task</p> <p>Quiz</p> <p>Think- Pair- Share</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Exit/Entrance slips</p> <p>Online Discussions</p>

# GRADE 6

## Term 3

Strands: Measurement; Geometry

Theme: Running an Enterprise



Term: 3

Curriculum Theme: **Running an Enterprise**

Aim: The aim of this theme is to provide students with the opportunity to discover what is involved in running a successful enterprise.

Project Criteria:

1. List ideas or methods that will lead to the success of an enterprise activity
2. Choose a product or service for selling
3. Choose an appropriate price
4. Choose an appropriate venue for carrying out the enterprise
5. Demonstrate sales skills when selling a product or service
6. List the number of sales and costs
7. List the profit or loss made

Suggested assignments/activities

- Teacher-led discussion on what makes an enterprise activity successful.
- In groups, students identify possible customers, and tasks and timescales for the activity, and allocate tasks and roles to appropriate people.
- Assessment – learner's complete worksheet/ form to list ideas or methods that will lead to the success of the enterprise activity.
- Teacher-led discussion on keeping financial records.
- Students practice completing financial records according to scenarios provided by the teacher.
- Students carry out enterprise activity.
- Assessment – students are observed selling product or service.
- Assessment – learner's complete financial records including number of sales, costs and profit and loss made during the enterprise activity.
- Assessment feedback, review and evaluation of theme.
- **CPEA Project Rubric**

## STRAND: MEASUREMENT

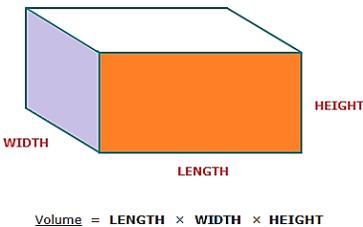
SUB-STANDS	TARGETS
Volume	<p><b>STUDENTS SHOULD BE ABLE TO:</b></p> <ul style="list-style-type: none"><li>● Show comparison of volumes of solids made up of 1-cm or 1-m cubes</li><li>● Investigate to find the relationship between the length, breadth, height and volume of cubes and cuboids</li><li>● Determine the volume of a cuboid given its length, breadth and height</li><li>● Develop and apply the formula for measurement of volume</li><li>● Determine the volume of cubes and rectangular prism</li><li>● Determine the volume of liquid in cubic or rectangle containers</li><li>● Estimate the volume of objects and verify by counting so as to determine the reasonableness of estimation</li><li>● Investigate and use the formula for the volume of a rectangular prism to solve problems</li></ul>

<b>STRAND: GEOMETRY</b>	
<b>SUB-STANDS</b>	<b>TARGETS</b>
Lines/ Line Segments	<b>STUDENTS SHOULD BE ABLE TO:</b> <ul style="list-style-type: none"> <li>● Understand the concept of one dimensional and two dimensional</li> </ul>
Angles	<ul style="list-style-type: none"> <li>● Understand the concept of angles formation, constructing, naming and measuring</li> <li>● Recognize angles in two-dimensional and three- dimensional figures</li> <li>● Estimate and calculate missing angles by apply knowledge of the angular properties of triangles, quadrilateral and rectangles</li> <li>● Solve problems involving angles</li> </ul>
2- Dimensional / Plane Figures	<ul style="list-style-type: none"> <li>● Recognize and construct two- dimensional figures while exploring their properties (triangles, quadrilateral, rectangles and circles)</li> <li>● Characterize 2-D geometric figures into appropriate subsets (categories) based characteristics (number of sides, vertices, angles, etc.)</li> <li>● Apply knowledge of properties of 2-D shapes to calculate missing angles and sides</li> <li>● Explain the concept of 'congruent figures'</li> <li>● Recognize congruent angles in polygons</li> <li>● Solve challenging problems involving triangles and four-sided figures</li> </ul>
3- Dimensional Figures/ Solids	<ul style="list-style-type: none"> <li>● Distinguish between 2D and 3D shapes</li> <li>● Use mathematics language to accurately describe 3D shapes (curved surface, flat face, square face, circular face, curved edge)</li> <li>● Explore and construct pyramids (triangular and square base) by outlining their properties and nets.</li> <li>● Explore and construct polyhedron (tetrahedron and octahedron) by outlining their properties and nets</li> <li>● Solve problems based on the properties of 3D shapes and their nets</li> </ul>
Transformation	<ul style="list-style-type: none"> <li>● Understand and use the concept of reflection within the Cartesian plane</li> <li>● Recognize, describe and represent the position of points within the first quadrant of the Cartesian plane</li> </ul>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Show comparison of volumes of solids made up of 1-cm or 1-m cubes</li> </ul>	<p>Guide students in understanding that the volume of solids is the space occupied by any solid shape and volume is measured in cubes, e.g. <math>\text{cm}^3</math>, <math>\text{mm}^3</math>, <math>\text{m}^3</math>. Use examples and videos to broaden understanding.</p> <p>Allow students to build prisms based on given lengths in <math>\text{cm}^3</math> and <math>\text{m}^3</math> using comparison symbols '&lt;', '&gt;' or '='.</p> <p>Distribute worksheets and allow students to count cubes to find the volumes.</p> <div style="text-align: center;"> </div>			

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Investigate to find the relationship between the length, breadth, height and volume of cubes and cuboids.</li> <li>Determine the volume of a cuboid given its length, breadth and height</li> <li>Develop and apply the formula for measurement of volume.</li> </ul>	<p>Display an image and use it to generate a discussion on the relationship between length, breadth, height and volume.</p>  <p><math>Volume = LENGTH \times WIDTH \times HEIGHT</math></p> <p>Students identify the lengths, breadths and heights of cubes and cuboids, then use rulers to measure and note the differences/similarities.</p> <p>Guide students in finding the volume of various cuboids with given length, breadth and height</p> <p>Display various cuboids and given length, breadth and height. Students review display area and work in small groups, individually and in pairs, to determine the volume.</p>	<p>Smartboard Whiteboard Boxes Cubes Cuboids Rulers Plastic fillable geometric solids Paper, pencils, pens Boxes and unit cubes Laptops/Tablets Worksheet</p>	<p><b>Langange Arts</b> Write a short paragraph or create an anchor chart on new information learnt</p> <p><b>Art and Design</b> Students use different measurements to make cubes/cuboids then compare</p>	<p>Observation Pre-assessment Performance Task Project Exit/Entrance slips Teacher made test Analysis of student work 3-2-1 Strategy Think-Pair-Share Problem-based Activities Quiz Students-Made Test</p>

**MEASUREMENT**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Volume</b></p>	<ul style="list-style-type: none"> <li>Determine the volume of cubes and rectangular prism</li> <li>Estimate the volume of objects and verify by counting to determine the reasonableness of estimation</li> <li>Determine the volume of liquid in cubic or rectangle containers</li> <li>Investigate and use the formula for the volume of a rectangular prism to solve problems</li> </ul>	<p>Students use lego blocks and building blocks to construct cubes and rectangular prisms; then count the amount used to make the length/breadth and height to determine the volume.</p> <p>Students make nets of solids then fill them with 1 cm cubes to determine how many fill the net.</p> <p>Students use measuring cups and marked bottles to measure liquid, then filling cubic and rectangular-shaped containers to determine their volumes.</p> <p>Students work in pairs and fill up boxes with cubes. Student count to determine the number of cubes used. Students can estimate and vary the volume of given solids.</p> <p>In groups, students will be given a rectangular prism made of cubes and determine how many cubic units it is without taking it apart and counting the cubes.</p>	<p>Lego blocks</p> <p>Building blocks</p> <p>Nets of solids</p> <p>1 cm cubes</p> <p>Measuring cups/cylinders</p> <p>Containers</p> <p>Rectangular prism link:</p> <p>Prism models</p> <p>Smartboard</p> <p>Whiteboard</p>	<p><b>Science/STEM</b> Experiment to find out why objects sink/float in water</p> <p>Engage students in experiments regarding the volume (density) of a coin using water and coins</p> <p><b>Social Studies</b> Create tsunami models to determine the damage that volumes of water may cause</p>	<p>Performance Task</p> <p>Project</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Problem-based Activities</p> <p>Quiz</p> <p>Students-Made Test</p>

GEOMETRY					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
Lines/ Line Segments	<ul style="list-style-type: none"> <li>Understand the concept of one dimensional and two dimensional</li> </ul>	<p>Engage students in a discussion and review lines and line segments.</p> <p>Engage students in the following:</p> <ul style="list-style-type: none"> <li>Draw and name lines that do not meet or cross.</li> <li>Show lines that cross at only one point using pieces of string</li> <li>Draw lines that cross. Name lines that cross as intersecting lines.</li> <li>Name lines that cross at right angles as perpendicular lines.</li> <li>Identify and draw parallel lines, intersecting lines and perpendicular lines.</li> <li>Distinguish between lines and curves and identify these in the environment.</li> </ul> <p>Using examples, images and videos, guide students understanding of the concept of 1 and 2 dimensional.</p>	<p>Shapes</p> <p>Tangrams</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>MIMIO</p> <p>YouTube</p> <p>Wikki Stix</p> <p>Worksheets</p> <p>Workbook</p> <p>Internet Access</p> <p>Whiteboard</p> <p>Smartboard</p>	<p><b>Social Studies</b> Discuss lines of latitude and longitude.</p> <p><b>Science/STEM</b> Students use. Line graphs to compare changes over the same period of time for more than one group.</p> <p>Students use lines to represent information collected e.g weight of stones, heights of plants</p> <p><b>Language Arts</b> Students write a journal entry about the concept of one dimensional and two dimensional</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

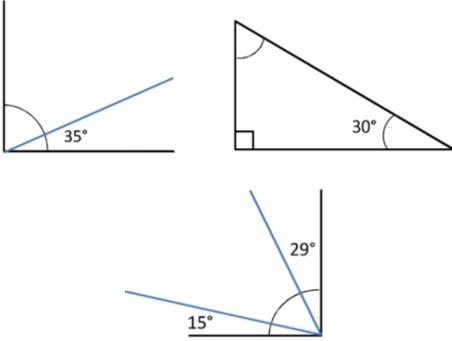
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Angles</b></p>	<ul style="list-style-type: none"> <li>Understand the concept of angles formation, constructing, naming and measuring</li> <li>Recognize angles in two-dimensional and three-dimensional figures</li> <li>Estimate and calculate missing angles by apply knowledge of the angular properties of triangles, quadrilateral and rectangles</li> <li>Solve problems involving angles</li> </ul>	<p>Students engage in research activity on types of angles then display and present the angles creatively (acute, obtuse, or right.)</p> <p>Students engage in an "Angle Bingo Game" to improve the identification/naming of various angles.</p> <p>Students use masking tapes to tape intersecting lines on their desks/boards/papers and explore the various angles they constructed.</p> <p>Students complete an angle maze by measuring and writing the correct measurements of angles.</p> <p>Allow students to observe various 2 and 3 dimensional figures, then identify and measure the various angles on them.</p> <p>Use tape to construct shapes around the classroom. In groups, students measure and write the measurements of each shape, leaving one or two missing measurements. Groups will switch places to find the missing angle/s.</p> <p>Students 'Think-Pair-Share' to find the missing angles and solve problems involving angles on worksheets and the Smartboard.</p>	<p>Internet</p> <p>Coloured papers</p> <p>Playdough</p> <p>Bingo cards</p> <p>Desks/papers</p> <p>Protractor</p> <p>Maze cards</p> <p>Desks</p> <p>Books</p> <p>Pencil cases</p> <p>Cones</p> <p>Cut-out shapes</p> <p>Smartboard</p> <p>Coloured masking tape</p>	<p><b><u>Art and Design</u></b>                  Students paint pictures/create mosaic using various lines and angles.</p> <p><b><u>Performance Arts</u></b>                  Use the body to create angular moves for dance routines</p> <p><b><u>Social Studies</u></b>                  Use spaghetti and glue to create lines of latitude and longitude on a grid.</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognize and construct two-dimensional figures while exploring their properties (triangles, quadrilateral, rectangles and circles)</li> <li>Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics (number of sides, vertices, angles, etc.)</li> <li>Apply knowledge of properties of 2-D shapes to calculate missing angles and sides</li> </ul>	<p>Review and compare types of triangles; equilateral, isosceles, scalene and right triangle with students using images of examples. Students use measurements to construct each triangle.</p> <p>Students use cardboard papers to make two-dimensional shapes. They observe and share their properties (number of sides, vertices, angles, measurement of angles)</p> <p>Students observe 2D shapes and complete table that characterize based on the number of sides, vertices and angles.</p> <p>Allow students to research the parts of a circle and label.</p> <ul style="list-style-type: none"> <li>Name the boundary of the circle as the circumference</li> <li>Students fold the circle to show two congruent parts (semi-circles).</li> <li>Students trace along the line formed by the fold and naming this line the diameter</li> <li>Students research the relationship of radius to diameter and share,</li> </ul> <p>Students make templates of circles and identify and name the circumference, arc, centre, diameter, radius, segment and sector of a circle.</p>	<p>Cardboards</p> <p>Markers</p> <p>Shape work cards</p> <p>Bingo cards</p> <p>Internet</p> <p>Circle Diagram</p> <p>Worksheets</p> <p>Cut-outs of triangles, quadrilateral, rectangles and circles</p> <p>Tablet/Laptop</p> <p>Smartboard</p> <p>Whiteboard</p>	<p><b>Art and Design</b> Create shape puppets for story characters.</p> <p><b>Language Arts</b> Students create a riddles to solve what type of angle is given.</p> <p><b>Physical Education</b> Use bodies to form shapes during exercise routines</p> <p><b>Social Studies</b> Use circles and radius to discuss locations</p> <p><b>Science</b> Use a circle to show phases of the moon</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

**GEOMETRY (cont'd)**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>2- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Recognize and construct two-dimensional figures while exploring their properties (triangles, quadrilateral, rectangles and circles)</li> <li>Characterize 2-D geometric figures into appropriate subsets (categories) based on characteristics (number of sides, vertices, angles, etc.)</li> <li>Apply knowledge of properties of 2-D shapes to calculate missing angles and sides</li> </ul>	<p>Allow students to sort quadrilaterals according to the nature of their sides and angles in a table.</p> <p>Engage students in activities that require them to draw and measure angles in quadrilaterals.</p> <p>Students make models of the various types of quadrilaterals and identify the various kinds of quadrilaterals in their environment.</p> <p>Guide students to find the missing angles and sides using the following information:</p> <ul style="list-style-type: none"> <li>Angles in a triangle add up to <math>180^{\circ}</math>.</li> <li>Right angle = <math>90^{\circ}</math></li> <li>Straight line = <math>180^{\circ}</math></li> <li>Angles around a point = <math>360^{\circ}</math></li> </ul> 	<p>Cardboards</p> <p>Markers</p> <p>Shape work cards</p> <p>Bingo cards</p> <p>Internet</p> <p>Circle Diagram</p> <p>Worksheets</p> <p>Cut-outs of triangles, quadrilateral, rectangles and circles</p> <p>Tablet/Laptop</p> <p>Smartboard</p> <p>Whiteboard</p>	<p><b>Art and Design</b></p> <p>Use straws to make rectangles, squares, parallelograms, kites, rhombuses, trapeziums.</p> <p>Make triangles of varying shapes. Colour equal sides with the same colour.</p> <p><b>Physical Education</b></p> <p>Use bodies to form shapes during exercise routines</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

GEOMETRY					
TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
2- Dimensional / Plane Figures	<ul style="list-style-type: none"> <li>Explain the concept of 'congruent figures'</li> <li>Recognize congruent angles in polygons</li> <li>Solve challenging problems involving triangles and four-sided figures</li> </ul>	<p>Using a teacher-made diagram, explain congruent as figures that are equal in size and shape.</p> <p>Play games with students who require them to review various figures and use the term 'is congruent' to show the relationship between equal angles and equal polygons.</p> <p>Students create a display of congruent figures and discuss each with the class.</p> <p>Distribute shape cut-outs of various sizes, students sort and pair them based on their sizes and angles.</p> <p>Students participate in a treasure hunt for task cards, then work in groups to solve them. For each pair, determine if they are congruent/not congruent (give reasons) or if there is not enough information to decide.</p>	<p>YouTube</p> <p>Coloured papers</p> <p>Glue</p> <p>Shape models</p> <p>Tablet/Laptop</p> <p>Smartboard</p> <p>Whiteboard</p> <p>Task cards</p> <p>Diagrams of triangle, rectangle, square, trapezium</p> <p>Geometric shapes</p>	<p><b>Social Studies</b> Sort countries and their capitals using congruent shapes</p> <p><b>Art and Design</b> Use a Geo Boards or graph to make congruent shapes and then colour</p> <p>Examine works of art that incorporate geometric shapes.</p> <p><b>Music</b> Compose songs in different groups on the properties of different shapes e.g triangles, quadrilaterals (Hint use the song to the tune Bits of Paper Lying on the Floor)</p>	<p>Observation</p> <p>Pre-assessment</p> <p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p>

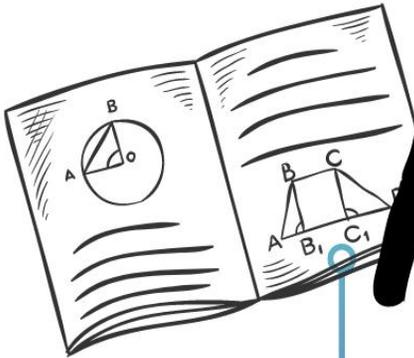
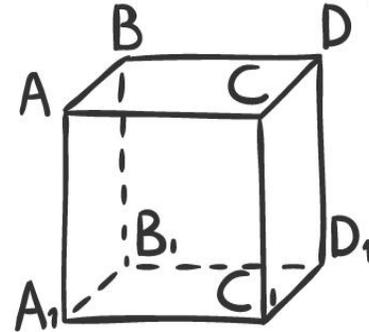
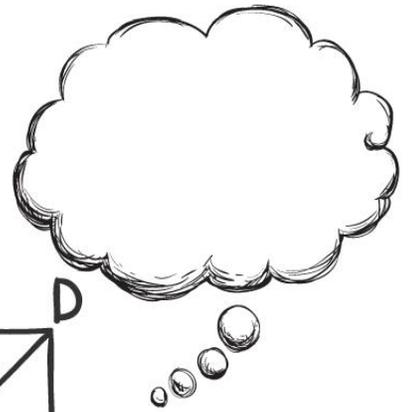
**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>3- Dimensional / Plane Figures</b></p>	<ul style="list-style-type: none"> <li>Distinguish between 2D and 3D shapes</li> <li>Use mathematics language to accurately describe 3D shapes (curved surface, flat face, square face, circular face, curved edge)</li> <li>Explore and construct pyramids (triangular and square base) by outlining their properties and nets.</li> <li>Explore and construct polyhedron (tetrahedron and octahedron) by outlining their properties and nets.</li> <li>Solve problems based on the properties of 3D shapes and their nets</li> </ul>	<p>Create a word wall that outlines all the words relating to 3D figures and engage students in discussing each using examples.</p> <p>Display various figures and allow students to describe the edges and surfaces on these solids, e.g. straight edges, flat surfaces.</p> <p>Students cut out nets of solids then glue them to make models of solids.</p> <p>Provide students with a table to complete that require students to observe the nets of solids and note the properties (number of edges, surfaces and vertices)</p> <p>Provide opportunities for students to create models of the cube, cuboid, cone, cylinder, prism from given nets and pinpoint the solid for a given net.</p> <p>Engage students in a walkabout on the school grounds and match other objects in the environment with the various solids.</p>	<p>Rulers</p> <p>Display boards</p> <p>Tangrams</p> <p>Pictures</p> <p>Geometric shapes</p> <p>Wooden blocks</p> <p>Nets of solid</p> <p>Magnetic blocks</p> <p>Magnetic sticks</p> <p>Magnetic shape</p> <p>Whiteboard</p> <p>Smartboard</p> <p>Properties of solid table</p>	<p><b><u>Social Studies</u></b> Students can research the three-dimensional aspect (branches) of government</p> <p><b><u>Science</u></b> Discuss the states of matter gas, liquid and solids.</p> <p><b><u>Art and Design</u></b> Construct 3-dimensional structures or sculptors</p> <p>Students create tessellations.</p> <p><b><u>Language Arts</u></b> Use 3D objects to create dioramas to tell stories</p>	<p>Project</p> <p>Demonstration</p> <p>Peer Assessment</p> <p>Teacher made test</p> <p>Analysis of student work</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Oral Discussion</p> <p>Oral Presentation</p> <p>Exit/Entrance slips</p> <p>Performance Task</p> <p>Problem Based Learning</p>

**GEOMETRY**

TOPIC/CONCEPT	OUTCOMES/OBJECTIVES	SUGGESTED TEACHING STRATEGIES/ACTIVITIES	RESOURCES	INTEGRATED ACTIVITIES	ASSESSMENT STRATEGIES
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>Understand and use the concept of reflection within the Cartesian plane</li> <li>Recognize, describe and represent the position of points within the first quadrant of the Cartesian plane</li> </ul>	<p>Introduce students to the Cartesian plane by displaying an example on the Smartboard and engaging in a discussion</p> <p>Help students understand that a point is considered a reflection of another point when the absolute values of the coordinates are the same, but the signs of one of the values are opposites.</p> <p>Guide students on how to label all four quadrants and reflect various points, lines and plane shapes using graph sheets.</p> <p>Students use graph sheets to identify, describe and demonstrate the position of points.</p>	<p>Sheets of paper</p> <p>Worksheets with shapes</p> <p>Pairs of plane shapes</p> <p>Whiteboard</p> <p>Workbooks</p> <p>Online Activities</p> <p>YouTube</p> <p>Smartboard</p> <p>Computer</p> <p>Ruler</p> <p>Pencil</p>	<p><b>Art and Design</b> Use lines to create a reflection of images</p> <p><b>Social Studies</b> Students engage in activities that use the Cartesian plane to identify locations on a maps</p> <p><b>Language Arts</b> Spelling of new words learn e.g tetrahedron, octahedron, pyramids etc</p> <p><b>ICT</b> Power Point Presentation- Compare and Contrast concepts on 2D and 3D shapes</p>	<p>Demonstration</p> <p>Analysis of student work</p> <p>Peer Assessment</p> <p>Exit/Entrance slips</p> <p>Teacher made test</p> <p>3-2-1 Strategy</p> <p>Think-Pair-Share</p> <p>Presentation</p> <p>Quiz</p> <p>Observation</p> <p>Performance Task</p> <p>Project</p>

# Teacher



# Resources



## Lesson Plan Format (Five E Model)

<b>Teacher:</b> Mrs. Cox
<b>School:</b> Enid Capron Primary
<b>Date:</b>
<b>Subject / Grade level:</b> Mathematics / Grade 6
<b>Topic:</b> Addition
<b>Curriculum Theme:</b> Producing a Product/ Service
<b>Specific Theme:</b> Souvenirs for Tourist
<b>Resources:</b> Concept map, Display board, Work cards, Line it up grid, Counters, Jenga blocks, Smartboard, Mini whiteboard, Desktop/laptop, Manipulatives, Calculator, Task Cards, Flipgrid, Flip Chart, Deck of Cards, Mentimeter Word Cloud Generator
<b>Turks and Caicos Islands National Curriculum (TCINC) Targets</b> <ul style="list-style-type: none"><li>• Use several strategies to develop and recall the basic facts for addition of whole numbers</li><li>• Show addition involving numbers with up to five digits with and without regrouping</li><li>• Show addition involving numbers with totals up to 100,000 with and without regrouping</li><li>• Check accuracy of answers using a calculator</li></ul>
<b>Specific objective(s):</b> <ul style="list-style-type: none"><li>• Apply several strategies to develop and recall the basic facts for addition of whole numbers</li><li>• Solve addition involving numbers with up to five digits with and without regrouping with 90% accuracy</li><li>• Solve addition involving numbers with totals up to 100,000 with and without regrouping efficiency and accuracy</li><li>• Check accuracy of answers using a calculator with 100% accuracy.</li></ul>

**Theme Related Activities:**

- In small groups, students suggest products to make or services to provide, with resources or materials needed.
- In groups, students calculate the total number of resources needed to make their product.

**Differentiation strategies to meet diverse learner needs:**

- Sort number cards
- Play online games involving addition of numbers.

**Integrated Activities:**

- Language Arts - Students create word problems involving addition.
- Social Studies - Students make change in a dramatization of shopping activities.

**ENGAGEMENT**

Describe how the teacher will capture students' interest.

What kind of questions should the students ask themselves after the engagement?

**Possible Activities:** Short Game, Picture Book, Video clips, Real-world problems, Kinesthetic Activities and Demonstrations

**Teaching Strategies**

- Walk into class scrolling through phone and think out loud saying 'Yesterday I posted a video on TikTok and got 15,000 views, today when I checked, I got 37,000 more views. Now if only there was a way to know how much views I got in all.'
- Elicits responses that uncover students' current knowledge about the concept/topic. How do you think I can find out all the views I got?
- Mentimeter Activity- What comes to mind when you think of

**Student Behaviours****Expected response**

- You can add the views to get the total.
- Log on to Mentimeter and type in their responses i.e., total, sum, adding, combine, all together etc.

addition...Provide students with opportunity to provide 2 responses?

## EXPLORATION

Describe what hands-on/minds-on activities students will be doing.

List questions the teacher will use to encourage and/or focus students' exploration

**Possible Activities:** Cooperative Learning Task, Hands-on task using manipulatives and Investigations

## Teaching Strategies

- Ask students to list life experiences in which they had to use addition.
- Provide students with flash cards of different vocabulary associated with addition to explore i.e., addends and sum.
- Provide students with 'Line It Up' grid sheet to reinforce the columnar method and 2 buckets with different addition question cards to see how they arrange the numbers when adding.
- Provide students with calculators and ask students to check answers using them.

## Student Behaviours

- Students list life experiences on post-it-cards and go to front of the class, share and paste on flip chart.
- In pairs, each student collects a card and discuss how they will arrange it on the students laminated 'Line it Up' grid before solving it.
- Brainstorming how to use the calculators to check answers.

## EXPLANATION

Describe how formal terms, definitions, and notes will be provided to students.

Include differentiated activities cater to different learners in the class.

List higher order thinking questions which teachers will use to solicit *student* explanations and help them to justify their explanations.

**Possible Activities:** Vocabulary Organizers, Guided or Partial-Note, Interactive Foldables and Explanatory Videos

### Teaching Strategies

- Ask students to stand with their partner and explain the reasoning behind their selected layout from the Line It Up activity.
- Teacher clarifies any misconceptions regarding addition that students may have and reinforce the larger number must always go to the top, lining up according to place value etc.

### Probing Questions and Practical Activity:

-What is the sum of the addition of two or more whole numbers? i.e. **14,532+23,454=**

-Does the sum change when the order of two or more whole numbers changes? **32,556+12,478= 12,478+32,556=**

-Does the sum change when zero is added to a number? **54,872+0**

- Anchor Chart use to support students' explanation.
- Teacher uses the recorded video comments to clarify misconceptions.
- On the smartboard, teacher explains how to add five-digit number with totals sums up to 100,000
- Demonstrate how to accurately use calculators when solving problems.

### Student Behaviours

- In Cooperative learning groups, students utilize concept mapping to engage in recalling and developing addition of whole number facts based on the probing questions.

**Expected answers:** Students apply the questions in practical activities to determine response.

- The sum of the addition of two or more whole numbers is always a whole number
- When we add two or more whole numbers, their sum is the same regardless of the order of the addends
- On adding zero to any number, the sum remains the original number. Adding 0 to a number does not change the value of the number.
- Complete addition interactive notebook activity to have a record of their learning and use Flipgrid to explain what they had discovered.
- Students work in pairs and explain how to add varies examples totaling up to 100,000 using an online game.
- Check accuracy of sums using calculators.

## ELABORATION

Describe how students will apply their new knowledge to deepen understanding.

Include differentiated activities cater to different learners in the class.

**Possible Activities:** Problem Solving Task, Investigations, Real-World Task, Independent Practice (avoid basic worksheets), Games and Stations designed to practice skills

### Teaching Strategies

#### Rules of the Game outlined to students

- Each player must contribute to the team by working a problem when it is his/her turn.
  - The team that finishes first with the most correct responses will be the winner.
  - Review questions with class at the end of the game.
- Present Kahoot multiple choice quiz.

Guide groups as they are encouraged to create their own word problems for members to solve.

- Provide support for students who have not grasped the concept yet.

### Student Behaviours

- Students in teams of no more than 5 with a deck of card and a mini whiteboard. The first person in each team will complete the first card then place at the back of the deck. Then he/she will pass the cards and the mini whiteboard to the next person in his/her circle. This will continue until all team members have answered a card.

#### Differentiated Activity

Each deck of card has 3 different questions for students to choose based on their abilities.

- Engage in Kahoot quiz, work individually and submit responses.
- Engage in dramatization of shopping activities *i.e.*, (**Restaurant**- flip a flashcard pancake and solve the problems provided *i.e.*,  $23,456 + 11,023 =$ , **Enterprise Activity**- starting a business and wanting to know the total spent, **Shopping**- going to the jewelry store and buying a diamond necklace and watch etc.)

## EVALUATION

How will students demonstrate that they have achieved the lesson objective?

This should be embedded throughout the lesson as well as at the end of the lesson

**Possible Activities:** Self-Assessment, Peer-Review, Performance-Based Assessments, Portfolio of Student's Work, Presentations, Projects and Exit Tickets

### Teaching Strategies

- Stick addition problems that totals up to 100,000 to the ends of Jenga blocks.
- Assess students' performance while solving problems in their groups, ability to answer questions during class, and class participation.

### Student Behaviours

- Students must solve the equation before they can attempt to remove the block.
- Students create word problem task cards involving addition for group members to solve.
- Engage in a peer review of classmates' work using a calculator to check the accuracy of answers.
- Students will discuss their challenges and share their successes/attempts.

# KWL Chart

Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

Topic: \_\_\_\_\_



Use this graphic organizer below to organize your information.

<b>K</b> What I <u>Know</u>	<b>W</b> What I <u>Want</u> To Know	<b>L</b> What Have I Learnt



# KWHL Chart



Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

Topic: \_\_\_\_\_

Use this graphic organizer below to organize your information.

<b>K</b> What I <u>Know</u>	<b>W</b> What I <u>Want</u> To Know	<b>H</b> <u>How</u> do I find out? <small>(experiment or calculations)</small>	<b>L</b> What Have I Learnt



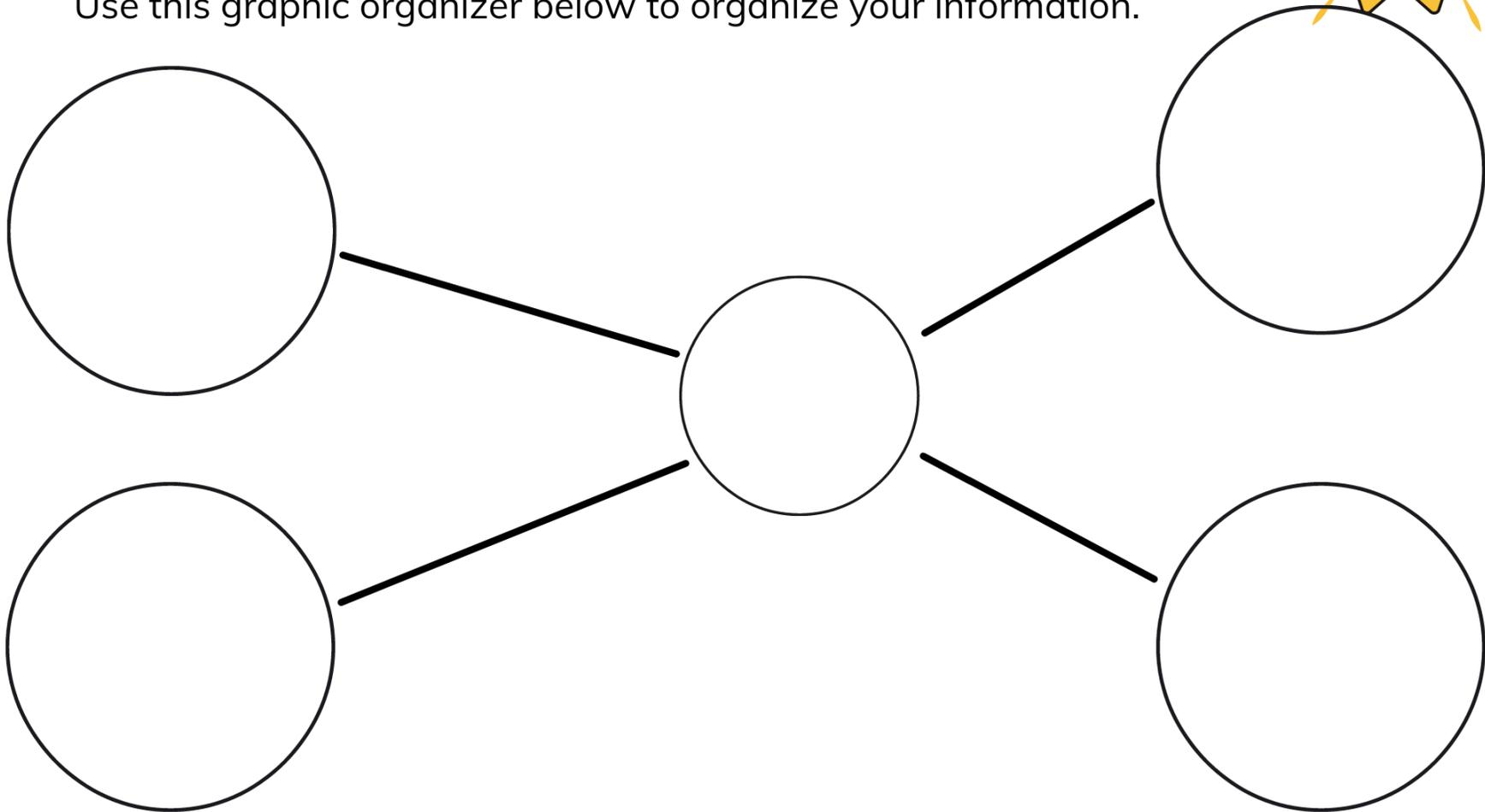
# Concept Map

Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

Topic: \_\_\_\_\_

Use this graphic organizer below to organize your information.



## RUBRIC FOR ASSESSING PROJECT

Name of Pupil: \_\_\_\_\_

Date: \_\_\_\_\_

Category	Very Good 4	Good 3	Adequate 2	Unsatisfactory 1	Score
<b>Introduction</b>	<ul style="list-style-type: none"> <li>- Clearly stated objectives/goals/purpose of the project</li> <li>- Description of how the project is to be conducted is detailed</li> </ul>	<ul style="list-style-type: none"> <li>- Objectives/goals/purpose of the project are stated</li> <li>- Description of how project is to be conducted contains basic information</li> </ul>	<ul style="list-style-type: none"> <li>- Objectives/goals/purpose of the project are stated</li> <li>- Description of the project lacks important information</li> </ul>	<ul style="list-style-type: none"> <li>- No objectives/goals/purpose of the project are stated</li> <li>- Description of the project is not clear</li> </ul>	
<b>Organisation</b>	<ul style="list-style-type: none"> <li>- All of the information is clearly and logically presented</li> </ul>	<ul style="list-style-type: none"> <li>- Most of the information is logically presented</li> </ul>	<ul style="list-style-type: none"> <li>- Some of the information is logically presented</li> </ul>	<ul style="list-style-type: none"> <li>- Information is not logically presented</li> </ul>	
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>- Grammar, spelling, punctuation are mostly correct</li> <li>- All sentences and paragraphs are properly constructed</li> </ul>	<ul style="list-style-type: none"> <li>- Grammar, spelling, punctuation are mostly correct</li> <li>- Most sentences and paragraphs are properly constructed</li> </ul>	<ul style="list-style-type: none"> <li>- Many grammatical errors, misspelling and punctuation errors but they do not interfere with the comprehension</li> <li>- Some sentences are properly constructed</li> </ul>	<ul style="list-style-type: none"> <li>- Included many grammatical errors which made comprehension difficult</li> <li>- Unsatisfactory sentence construction throughout</li> </ul>	
<b>Communication</b>	<ul style="list-style-type: none"> <li>- Oral presentation is delivered with confidence, eloquence and good diction</li> <li>- Demonstrates excellent knowledge of content, especially in response to questions</li> </ul>	<ul style="list-style-type: none"> <li>- Oral presentation is delivered with confidence and eloquence</li> <li>- Demonstrates good knowledge of content, especially in response to questions</li> </ul>	<ul style="list-style-type: none"> <li>- Oral presentation is delivered satisfactorily</li> <li>- Demonstrates adequate knowledge of content, especially in response to questions</li> </ul>	<ul style="list-style-type: none"> <li>- Oral presentation is attempted but is inadequate</li> <li>- Demonstrates limited knowledge of content, especially in response to questions</li> </ul>	

Category	Very Good 4	Good 3	Adequate 2	Unsatisfactory 1	Score
<b>Problem Solving</b>	- Efficiently utilizes strategy and reasoning to achieve the objectives/goals/purposes	- Some evidence that a strategy or reasoning was used to achieve the objectives/goals/purposes	- Limited evidence of a strategy or reasoning to achieve the objectives/goals/purposes	- Very little evidence of a strategy or reasoning to achieve the objectives/goals/purposes	
<b>Visual Presentation</b>	- Appropriate and accurate diagrams, models or charts are used to present, describe or explain the findings  - Labels are visible and very appropriate	- Appropriate diagrams, models or charts are used to present, describe or explain the findings  - Labels are visible and mostly appropriate	- Diagrams, models or charts are used but are not all appropriate for the data presented  - Labels are sometimes missing or inappropriate	- No attempt to use diagrams, models or charts	
<b>Scientific Procedures</b>	- Applies the scientific method accurately: <ul style="list-style-type: none"> <li>• develops probing questions</li> <li>• evidence of a systematic approach</li> </ul> - Gathered, recorded and analysed data in all instances accurately	- Effectively used the scientific method: <ul style="list-style-type: none"> <li>• develops simple questions</li> <li>• evidence of a systematic approach</li> </ul> - Gathered and recorded data but analysis of data was not adequate	- Attempted to use the scientific procedures to complete some tasks <ul style="list-style-type: none"> <li>• develops a few simple questions</li> <li>• limited evidence of a systematic approach</li> </ul> - Limited evidence of data collection or appropriate recording	- No evidence of the application of scientific procedures <ul style="list-style-type: none"> <li>• no questions developed</li> <li>• no evidence of a systematic approach</li> </ul> - Inadequate data collected	
<b>Tools and technology</b>	- Competently uses appropriate tools and technologies to gather and analyze data	- Effectively uses some appropriate tools and technologies to gather and analyze data	- Adequate use of appropriate tools or technologies to gather data	- Limited use of appropriate tools or technologies to gather data	

Category	Very Good 4	Good 3	Adequate 2	Unsatisfactory 1	Score
<b>Group Work</b>	<ul style="list-style-type: none"> <li>- Group works well and members motivated each other</li> <li>- Members assume clear roles and share the responsibility</li> </ul>	<ul style="list-style-type: none"> <li>- Group works well</li> <li>- All members take part in most decisions and activities</li> </ul>	<ul style="list-style-type: none"> <li>- Group works well</li> <li>- Members experience some difficulty sharing in decision-making and taking responsibility</li> </ul>	<ul style="list-style-type: none"> <li>- Members cannot work with others in most situations</li> <li>- Members do not share in the decision-making nor do they take responsibility</li> </ul>	
<b>Sources of information</b>	<ul style="list-style-type: none"> <li>- Identifies and uses appropriate resources (persons, materials, books, magazines, electronic, etc.)</li> <li>- The information provided is well researched, detailed and relevant to the topic</li> </ul>	<ul style="list-style-type: none"> <li>- Identifies and uses some resources (persons, materials, books, magazines, electronic, etc.)</li> <li>- There is some evidence of research and the information provided is relevant to the topic</li> </ul>	<ul style="list-style-type: none"> <li>- Limited use of resources (persons, materials, books, magazines, electronic, etc.)</li> <li>- Very little research is conducted; the information is useful but limited</li> </ul>	<ul style="list-style-type: none"> <li>- Resources used are not appropriate</li> <li>- No evidence of research; the information is not relevant to the topic</li> </ul>	
<b>[Maximum score 40]</b>					

## Glossary of Terms

- **Authentic Learning Activities:** Learning activities related to the real world/real life.
- **Assessment Criteria:** A list of statements specifying what the learner is expected to do to show that the learning outcome has been achieved.
- **Civics:** The study of the civil, human, and constitutional rights and obligations of citizens in society.
- **Concept Attainment Strategy:** In this strategy students form their own definition of a concept by examining the attributes of several examples and non-examples of the word, concept, or topic.
- **Concept Mapping:** A concept map is a visual organizer that can enrich students' understanding of a new concept. Using a graphic organizer, students think about the concept in several ways. Most concept map organizers engage students in answering questions such as, "What is it? What is it like? What are some examples?" Concept maps deepen understanding and comprehension.
- **Competence:** The capability and ability of individual skills, knowledge and behaviour to complete the task assigned to them.
- **Critical Thinking:** The ability to analyse, evaluate, interpret, or synthesize information and apply creative thought to form an argument, solve a problem, or reach a conclusion.
- **Curriculum Web:** A graphical representation that illustrates the integration of a central theme across curriculum subjects.
- **Fish Bowl:** The Fishbowl Discussion is a teaching strategy that encourages full student participation, reflection and depth of knowledge. Students take turns "in the bowl" and "out of the bowl". Students in the bowl participate in a lively discussion, often about opposing views or controversial topics, Students outside of the bowl listen and reflect on the alternative viewpoints. And then...they switch!
- **Group Text Reading:** This activity can help the students feel like the text is more manageable. It can also model to students what they should be doing when reading a text. Group Text reading provides an opportunity for students to practice their communication skills.
  - ✓ Select a "difficult" text or passage. Break the large text up into 1-2 paragraph sections.
  - ✓ Break students up into groups of 2-4. Give each group of students a different section of the text/passage.
  - ✓ Give the students time (~15-20 minutes) to read through and discuss their section of the text. If possible, give students guiding questions such as: What is happening in this section? What is the important take-away point? What might be important for me to know later?
  - ✓ Bring the class back together. Each group (starting with the first part of the text) presents their section to the class.
  - ✓ As students present, the instructor should write/draw on the board, correct and add to student responses, and provide examples as needed in order to help tie the concepts together

- **Herringbone Technique:** The herringbone technique helps develop comprehension skills as well as informational organization, contrast and comparison skill as well as the ability to remember details. The technique asks the student to determine the main idea of a reading by requiring him to determine the who, what, when, where, why and how of the reading. Students answer each of these questions by filling out a diagram that resembles a herringbone to achieve the main point of the reading.
- **Illustrated Annotations:** Illustrated annotations use images to increase comprehension and understanding. Students create illustrations to represent concepts and elements of literature. Prior to reading the text, the students create a visual representation or symbol for the concept or element of focus for the learning target. When the students annotate the text, they use the illustration they created.
- **Integrated Approach-** The transfer of knowledge and skills across different learning areas and context to make meaning connections in learning (*Integrate Across Subjects*)
- **Jigsaw:** Jigsaw (teaching technique) The jigsaw technique is a method of organizing classroom activity that makes students dependent on each other to succeed. It breaks classes into groups and breaks assignments into pieces that the group assembles to complete the (jigsaw) puzzle.
- **KWL:** The KWL reading strategy is an instructional technique used to improve reading comprehension. It also improves a student's ability to remember the material. KWL is most often used with expository reading materials such as classroom textbooks, research articles, and journalistic pieces.
  - ✓ K stands for what you already know about the topic.
  - ✓ W stands for what you'd like to know about the topic.
  - ✓ L stands for what you learned
- **K-W-H-L:** is a strategy that tracks what a student knows (K), what a student wants to know (W), how a student will find the information(H), and what a student has learned (L) about a topic. It is used before, during, and after reading a text and/or conducting research.
- **Multiliteracy:** The concept of understanding information and the design of meaning through the manipulation of individual modes, these being: Linguistic Meaning, Visual Meaning, Audio Meaning, Gestural, Tactile and Spatial Meaning.
- **Peer Reviews:** Peer review refers to the many ways in which students can share their creative work with peers for constructive feedback and then use this feedback to revise and improve their work. For the writing process, revision is as important as drafting, but students often feel they cannot let go of their original words.

- **Pro & Cons Grid**
  - ✓ The Pro and Con Grid will help develop a list of advantages and disadvantages of any issue and helps students develop analytical and evaluative skills. It also forces students to go beyond their initial reactions, search for at least two sides to the issue, and promotes critical thinking skills. This can be facilitated as an individual exercise or in groups.
  - ✓ This technique helps students develop analytical and evaluative skills, and encourages them to go beyond initial reactions to complex issues. It can be used in any discipline: students can evaluate the pros and cons of a procedure, technique, conclusion, action of a fictional character, political decision, etc.
- **Problem-Based Learning:** Problem-Based Learning begins with a problem that determines what students study. The problem derives from an observable phenomenon or event.
- **Project-Based Learning (PBL):** Project-Based Learning begins with the assignment of tasks that will lead to the creation of a final product or artefact. The emphasis is on the end product.
- **Question-Answer Relationship (QAR):** The question–answer relationship (QAR) strategy helps students understand the different types of questions. By learning that the answers to some questions are "Right There" in the text, that some answers require a reader to "Think and Search," and that some answers can only be answered "On My Own," students recognize that they must first consider the question before developing an answer
- **Theme:** A topic which all classroom activities and resources are pivoted on during the term.
- **Quescussion:** The Quescussion strategy represents a shift from making statements to starting to wonder and ask questions. The participants make points as in a normal discussion, but the use of statements is forbidden.  
Follow these instructions to try the Quescussion strategy:
  - ✓ Provide a trigger (such as a poem, topic or theme). The trigger might be a problem to be solved, a provocative question or statement, some text or a keyword, a video clip, a multimedia presentation, or a website to be analysed or discussed.
  - ✓ Have students participate in a discussion that only contains questions.
  - ✓ Have participants yell "Statement" or make a sound if anyone makes a statement rather than asking a question). Note: This is monitored by the class.
  - ✓ Do not raise your hand.
  - ✓ Open-ended questions are preferred to closed questions. "What?", "Why?" "How?" rather than "Is it true that...?"
  - ✓ Try to ask questions about feeling as well as facts, try to ask simple knowledge questions as well as sophisticated questions.

- ✓ Humour is encouraged, sarcasm is discouraged.
- ✓ A question does not have to be directly related to the previous question.
- **Respond-Read-Reply:** Reader Response stresses the importance of the reader's role in the construction of meaning. Readers actively create their own meaning from texts and express their individual responses and understandings. When responding, students are encouraged to reflect on what they bring to the text as readers. This includes experiences, knowledge, emotions, and concerns.
- **Round Table:** Roundtable is a good cooperative structure and interactive activity to practice vocabulary, grammar, or even content. Students pass a paper around, adding an item according to the criteria you designate. It is similar to Roundrobin, which is an oral chain activity.
- **Skills:** (i) The ability to perform tasks and solve problems. (i) An ability to perform a particular mental or physical activity that may be developed through vocational training or practice.
- **SQ3R**
  - ✓ Survey: Students review the text to gain initial meaning from the headings, bolded text, and charts.
  - ✓ Question: Students begin to generate questions about their reading from previewing it.
  - ✓ Read: As students read, they need to look for answers to the questions they formulated during their preview of the text. These questions, based on the structure of the text, help focus students' reading.
  - ✓ Recite: As students move through the text they should recite or rehearse the answers to their questions and make notes about their answer for later studying.
  - ✓ Review: After reading, students should review the text to answer lingering questions and recite the questions they previously answered.
- **Think Aloud:** The think-aloud strategy asks students to say out loud what they are thinking about when reading, solving math problems, or simply responding to questions posed by teachers or other students. Effective teachers think out loud on a regular basis to model this process for students.
- **Think-Pair-Share:** Think-pair-share (TPS) is a collaborative learning strategy where students work together to solve a problem or answer a question about an assigned reading. This strategy requires students to (1) think individually about a topic or answer to a question; and (2) share ideas with classmates. Discussing with a partner maximizes participation, focuses attention and engages students in comprehending the reading material.

## References

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