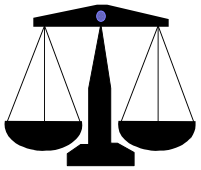
MINISTRY OF EDUCATION

REVISED CURRICULUM GUIDE

MATHEMATICS

GRADE 6



PRODUCED BY CURRICULUM DEVELOPMENT AND IMPLEMENTATION UNIT, NATIONAL CENTRE FOR EDUCATIONAL RESOURCE DEVELOPMENT
PRINTED BY MATERIALS PRODUCTION UNIT, NCERD

September 2008

ACKNOWLEDGEMENTS

The Ministry of Education is grateful to the following persons whose tireless work has resulted in the production of this revised Mathematics Guide for Grade 6.

Ali, Mohamed Osman	St. John's Community High School
Bowman, Samantha	Amelia's Ward Primary School
Chandrapaul, Tajewattie	Gibson Primary School
Chichester, Robin	Belladrum Primary School
Dhanpat, Twaripersaud	Yakusari Primary School
Enniss, Dorrette Ann	Mackenzie Primary School
Harripaul, Bhawase C.	Crabwood Creek Primary School
Jacobis, Fareeda	St. Anthony's Primary School
Jaikarran-Wills, Pramawattie	Rama Krishna Primary School
Jewnandan, Jaiwattie	Arthurville Primary School
Jones, Linda	Senior Subject Specialist (VSO), NCERD
Lall, Eshwar	Lima Sands Primary School
Lo-Hing, Paula	St. Sidwell's Primary School
Mckenzie, Colleen	Virginia Primary School
Mckenzie, Joseph	Senior Subject Specialist, NCERD
Persaud, Pramellawattie	Taymouth Manor Primary School
Peters, Bhatraj	Overwinning Primary School
Prasad, Krishna Nand	Senior Subject Specialist, NCERD
Rambarose, Taramatie	Ketley Primary School
Ramnarine, Paramdai	Huist Dieren Primary School
Singh, Lakewatti Dolly	Stella Maris Primary School

CURRICULUM GUIDE
MATHEMATICS: GRADE 6

CONTENTS

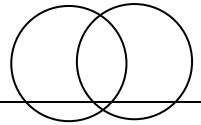
MATHEMATICS CURRICULUM GUIDE
LEVEL 6
SETS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
SETS. Describing sets in words and listing members using braces.	Sorting objects into sets. Describing sets.	Describe sets and use braces to write them.	Participate in group and classroom activities.	Sets and their members {set of countries in South America} {Jamaica, Barbados, Guyana} {1,2,3,4}.	Sort a mixed collection of objects into sets. Describe and name sets. Identify sets. Write sets using braces. { } Identify empty sets and use braces to write them e.g. The set of babies between 20 and 25 years is an empty set and can be written as B = { }	Identify and describe sets. Write and read sets using braces, e.g. the set of even numbers between 1 and 11 E = {2, 4, 6, 8, 10}.	Science Collecting and sorting items for recycling. Social Studies Sets of countries, import products, export products
Distinguish between equal	Making Sets. Observing	Recognise that equal sets are	Appreciate the value of logical	Equal and equivalent	Make a set that has the same	Identifying equal/equivalent	Art and Craft Draw and Colour

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
and equivalent sets.	differences. Classifying Sets according to attributes.	always equivalent but equivalent sets are not always equal.	thinking.	sets. Equal sets are identical only that they are named differently. Equivalent sets are sets with the same number of members.	members/elements and the same number of each element/member and naming the sets equal sets. e.g. A = { , , } B ={ , , } Show that equal sets refer to the same set with different names. Make no sets that have the same number of elements/members but where the elements/members are different and naming the sets equivalent sets. Example { }	sets from given sets, e.g. A = { 3, 6, 9} B = {5, 10, 15} C = {15, 5, 10} D = {9, 12, 15} E = {3, 6, 9}	sets of objects. <u>Science.</u> Observe mini-hearts and put them into the correct invertebrate group.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					is equivalent to { ○ △ □ } Discuss equal and equivalent sets. Are equal sets always equivalent? Are equivalent sets always equal? Identifying and write equal and equivalent sets.		
Using braces to list members of subsets of given sets and use the symbol for same "is a subset of."	Using Mathematics symbols: Describing. Naming, Identifying, Writing. Making subsets. Investigating.	List the members of subsets of given sets and use the ⊂ symbol for "is a subset of."	Develop self-reliance related to indifferent work.	Subsets. A subset is a part of a set. Note that the empty set is also a subset of the set.	Describe and name given sets. Identify and write sets using braces. Make smaller sets from given sets and name these subsets of the given sets, e.g. A = {a, b, c, d} {a, b, c,} is a subset of A. Introduce the symbol "⊂"- e.g. {3, 6 ,8} ⊂ {3, 4 , 6, 8, 9}. Find all the subsets of given sets.	List the subsets of given sets using braces and the ⊂ symbol e.g. list all the subsets of: A = {12, 24, 36, 48}	Social Studies: List the Administrative Regions of Guyana.
Use Venn diagrams to show intersection of sets.	Using Mathematics symbols. Identify. Using diagrams.	Identify the common elements in two sets but there is the member of a new set or	Develop team spirit.	Intersection of not more than two sets. The intersection of two sets is the	Identify the common element (s) in pairs of sets e.g. In A = {2, 5, 6,8} and B = {7,5, 6, 9}, the common	Identify the common element (s) in pairs of sets. Use Venn diagrams to show intersection.	<u>Social Studies</u> Common countries in Caricom and the Commonwealth of Nations.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
		intersection of the two sets.		set containing the common members. If there are no common members, then the intersection is the empty set. The empty set can be written as { } or O.	elements are 5, 6. The symbol ∩ is read "is the intersection of." The braces are the symbol to show the common element (s) in pairs of sets. A ∩ B = { 5, 6 } Use Venn Diagrams to show common element (s) of pairs of sets. Example. 8 5 7 2 6 9 A B	Use braces to write pairs of sets seen on Venn Diagrams and vice versa.	



TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Use braces to write pairs of sets seen on a Venn Diagram and vice versa.		

NUMBER CONCEPTS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
NUMBER CONCEPTS. Read and write numerals numerically and in words, and state the place value of each digit in a numeral up to hundreds of millions.	Reading numerals. Building a place-value chart.	Understand how place values are written in place value chart. Naming place or position of each digit in a numeral. Reading and writing large numbers up to hundreds of millions.	Appreciating each other's contribution towards a common project.	Numerals up to hundreds of millions. Place value of each digit in a numeral.	Read numerals up to hundreds of millions shown on an abacus, a place-value chart, coloured number strips or notation cards. Use the abacus, place-value chart, coloured number strips or notation cards to show numbers up to hundreds of millions. Write numbers in expanded form.	Read and Write numerals to millions numerically and in words. Write the value of each digit in a given whole number. Write given numbers in expanded form and vice versa. State the position in which a digit appears in a numeral (place value).	Art and Craft. Construct learning aids e.g. abacus, place value charts, coloured cards.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Compare and order numbers up to hundreds of millions.	Comparing and ordering numbers. Using comparison symbols.	Recognise that numbers can be compared and ordered.	Develop team spirit.	Compare and order numbers up to hundreds of millions.	Arrange given numbers (up to hundreds of millions) in order from largest to smallest and vice versa. Compare numbers up to millions. Re-arrange digits in given numerals to make numbers that are larger or smaller than the given number. Use the symbols =, >, < to show that one number is equal to, greater than or less than, another number.	Order a given set of numbers from smallest to largest and vice versa. Copy and complete using <, = or > e.g. 527072 ☐ 526961.	Language Skills Communicate using the technical terms of Mathematics.
Prime Factors.	Differentiating Identifying and Observing.	Write numbers up to 144 as a product of Prime Factors.	To develop self-reliance. Appreciate the use and function of prime factors.	Prime Factors. A prime number is a whole number that has only two factors. A prime factors is a factor that is a prime number.	Discussion on Prime Numbers and Prime Factors. Writing a number as a product of prime factors e.g. 30 5 x 6 is not prime 5 x 3 x 2 (prime	Write the product of prime factors e.g. 2 x 3 x 5 = 30. Completing table on prime factors. e.g. 15 = 3 x 5	<u>Games.</u> Develop a game to show 'is a factor', 'is not a factor'.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					factors). Identify Prime Numbers using the Sieve of Eratosthenes.	10 = 2 x 5 6 = 2 x 3.	
Composite and prime numbers.	Identifying and comparing composite and prime numbers.	Identify prime and composite numbers between 0 and 100.	Differentiating between composite and prime numbers.	Prime numbers are numbers that have only two factors. Composite numbers are numbers that have more than two factors. Note that 0 and 1 are not considered composite numbers.	Discussion on Prime and Composite Numbers. Identify numbers that have only two factors as prime numbers. Identify numbers that have more than two factors as composite numbers. Identify Prime and composite numbers on a hundred square grid. Playing games by taking prime or composite numbers from a box and identifying them. Making factor trees to show the prime factors of given composite numbers.	Oral and Written exercises. Make a poster board filling in Composite and Prime Numbers in sequence.	<u>Language.</u> Reading and answering given questions on games – In-out using Composite and Prime Numbers. Art – Cutting and pasting.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Factors and Multiples.	Investigating number properties. Identifying and finding multiples.	Distinguish between factors and multiples. Generate factors and multiples of a given whole number.	Show willingness to work in groups.	Factors and Multiples. A factor is a whole number that can divide another number leaving a remainder zero, e.g. $4 \div 2 = 2$ 2 is a factor of 4 $6 \div 3 = 2$ 3 is a factor of 6 $9 \div 9 = 1$ 9 is a factor of 9. A multiple of a number is a whole number that has that number as a factor, e.g. 12 is a multiple of 6 because 6 is a factor of 12.	Oral discussion on factors and multiples. Recognising that any two numbers, which can be multiplied to make a product, are factors of that number. Listing the factors of given numbers e.g. 10 = 1 x 2 x 5 x 10 12 = 1 x 2 x 3 x 4 x 6 x 12. Use the calculator to test for factors. Generate multiples on the calculator. Making rectangular numbers on a dot board and determine the factors of such numbers. Listing the multiples of given numbers, e.g. 2 $\Rightarrow$ 2, 4, 6, 8, 10, 12, 14. 3 $\Rightarrow$ 3, 6, 9, 12, 15, 18, 21. 4 = 4, 8, 12, 16, 20, 24.	Oral and written exercises on finding factors and multiples. Listing factors of given numbers. Writing multiples of given numbers.	Game – Factors and Multiples.
L.C.M and	Calculating the	Find the L.C.M	Respecting other	(a) L.C.M –	Identifying common	Finding the	Physical

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
H.C.F. Least Common Multiple (L.C.M.) Highest Common Factor (H.C.F.)	L.C.M of given numbers. Identifying the common factors of given numbers.	and H.C.F. of given numbers using sets of multiples and factors.	pupils' contributions in a group activity.	(b) Lowest Common Multiples H.C.F – Highest Common Factor. L.C.M. and H.C.F. are defined on the set of natural numbers {1, 2, 3,…}	multiples of numbers. Identifying which is the lowest common multiple e.g. L.C.M. of 2, 3 and 4 is 12. Listing the factors of given numbers e.g. 6 = 1 x 2 x 3 x 6 9 = 1 x 3 x 9. 12 = 1 x 2 x 3 x 4 x 6 x 12 18 = 1 x 2 x 3 x 6 x 9 x 18 Identifying the common factors for each set of numbers. Selecting the Highest Common Factor of each set, e.g. H.C.F. of 6, 9, 12 and 18 is 3. Note that 1 is also a common factor.	L.C.M and H.C.F of given numbers. Completing tables for L.C.M and H.C.F of given numbers.	<u>Education and Games.</u> - Playing games involving factor multiple.
Rounding whole numbers.	Investigating the principles used in rounding	Round whole numbers to the nearest ten,	Appreciate the elegance in number patterns.	Round numbers to 10, 100, 1000.	Counting in tens from a given number to another	Rounding given numbers to the nearest ten,	Rounding numbers using the calculator.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
	numbers.	hundred or thousand.		If the number to be rounded is more greater than the mid-point value in the interval, round up. If the number is less than the mid-point value in the interval, round down. If the number is at the mid-point value, round to the even unit in the interval, e.g. to the nearest 10, 75 is rounded to 80 but 65 is rounded to 60. The even units are 8 tens and 6 tens. Note that 7 tens is not an even unit of tens.	given number on a number line or on the hundred square grid. Identifying given numbers on the number line and stating their position in relation to the tens on both sides of the number. Identifying the mid-point between two numbers on the number line. Rounding given numbers to the nearest ten and stating a rule for rounding numbers i.e. numbers from the mid-point and higher than the mid-point are rounded up, numbers below the mid-point are rounded down.	hundred or thousand. Identifying numbers to the nearest ten, hundred or thousand from given charts.	
Testing for divisibility.	Investigating and Recognising the divisibility pattern.	Test for divisibility by 2, 3, 5, 9 and 10.	Developing self-reliance. Working in groups to arrive at rules for	Numbers divisible by 2, 3, 5, 9 and 10. A number whose last	Dividing given numbers by 2, 3, 5, 9 and 10. Examining the sum of the digits of	Identifying numbers that are divisible by 2, 3, 5, 9 and 10 using the rules for	<u>Language –</u> Reading and comprehending a technical piece of writing e.g. rules

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
			divisibility.	digit is even, is divisible by 2. A number whose last digit ends in 5or 0 is divisible by 5. A number whose last digit is 0, is divisible by 10. A number whose digit sum is divisible by 3 or 9 is divisible by 3 or 9.	numbers exactly divisible by 3 and by 9 stating the rule for each. Using rules to find numbers that are divisible by 2, 3, 5, 9 and 10.	each.	to test for divisibility.
Odd and Even Whole Numbers.	Identifying odd and even numbers in a given sequence.	Distinguish between odd and even numbers.	Recognising and appreciating patterns in odd and even number sequence.	Odd and Even Whole Numbers. Even whole numbers are 0, 2, 4, 6, ….. Odd whole numbers are 1, 3, 5, 7, …..	Identifying odd and even numbers from given sets. Discussion on patterns and rules. Odd numbers are numbers, which are not divisible by 2. Even numbers are numbers, which are divisible by 2. Making some odd and even numbers using given 1-digit numerals, e.g. given 1, 2, 3, 4, 5. Odd 235 Even 204	Selecting the odd and even numbers from given sets of numbers. Using a set of 1-digit numbers to make up odd and even numbers. Completing sequences in odd and even numbers.	Games – Playing games involving odd and even numbers. – Snakes and Ladders, Ludo, Monopoly

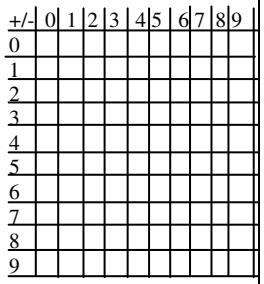
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					655 340 1419 1656, etc. Recognising that (a) An odd number added to an odd number gives an even number e.g. 3 + 7 = 10. (b) An even number multiplied by an even number gives an even number e.g. 4 x 2 = 8 (c) An odd number multiplied by an even number gives an even number e.g. 7 x 6 = 42. Explore with pupils all the possible combinations. Try it out for subtraction and division. Can you come up with other rules?		
Ordinal numbers.	Identifying and using ordinals to do recordings.	Use ordinals as applied to dates, anniversaries.	Appreciate the use of ordinals in ranking.	Ordinals. Cardinal Ordinal 1 First 2 Second 3 Third - - - -	Observing a variety of calendars for a given year. Reading the dates from the calendar using ordinals. Using ordinals to record the date for	Using ordinals to record dates.	Language – Spelling days of the week, months of the year, ordinal numbers,

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				- -	each day of the month. Discussing and naming the order of days of the week, weeks in a month, months in a year. The days and months of such events as birthdays, anniversaries, celebrations and National Events. Using ordinals to describe positions of objects or people.		
Roman numerals up to thousands.	Identifying and writing Roman Numerals up to one thousand.	Read and write Roman Numerals to M (1000).	Follow patterns and appreciate the values of Roman numerals in a historical context..	Roman Numerals to M (1000) L = 50 C = 100 D = 500 M = 1000. Rules for writing Roman Numerals. 1. No symbol is repeated in succession more than 3 times 2. I can be subtracted from V	Identifying Roman Numerals for given Hindu-Arabic Numerals and vice versa. Observing and identifying patterns in Roman Numerals up to M. Discussing how the basic symbols affect the meaning of numerals. Example: XL = 50 – 10 = 40 LX = 50 + 10 = 60 CC = 100 + 100 = 200	Writing Roman Numerals for Hindu-Arabic Numerals and vice-versa.	Reading inscriptions of dates on plaques.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				and X only 3. X can be subtracted from L and C only 4. C can be subtracted from D and M only. 5. A bar over a symbol means 1000 times e.g. V = 5000.	CD = 500 – 100 = 400 DCC = 500 + 100 + 100 = 700. Writing Roman Numerals for Hindu-Arabic Numerals up to 1000 and vice-versa.		
Number Pattern.	Observing and identifying the patterns of square numbers	Identify square numbers.	Sharing idea. Recognising and interpreting ideas.	A square number is a number resulting from multiplying a number by itself e.g. 49 = 7 x 7 ¼ = ½ x ½	Arranging given sets of objects of the same shape and size to form squares e.g. 1 object will give an array like this ○ . We may think of this as being one across and one down. Two down. ○ ○ two down ○ ○	Identifying square numbers from diagrams. Writing the square of given numbers e.g. 16^2 = 16 □ 16 or 16 x 16 = 16 □ 16	Pattern building in art.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					two across We say the square of 1 is 1, and of 2 is 4. Identifying the arrays that make squares; naming the number of rows and columns made and the number of objects in each e.g. the array of 16 objects has 4 rows and 4 column. 4 x 4 = 16 4^2 = 16		

OPERATIONS, RELATIONS AND PROPERTIES

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Additional and Subtraction facts.	Adding and Subtracting using number bonds.	Recall with speed and accuracy all basic number facts for addition and subtraction.	Show persistence in working on a tedious exercise.	Addition and subtraction facts. 0 + 6 = 6 2 + 3 = 5 3 + 2 = 5 … 5 – 3 = 2 5 – 2 = 3 3 – 0 = 3 …	Use addition and subtraction table to aid recall addition and subtraction facts.  Use the inverse operations between addition and subtraction to solve simple problems. e.g. 13 + 16 = 29 29 – 16 = 13 29 – 13 = 16	Complete tables involving addition and subtraction facts. Complete number sentences involving inverse operations, using the basic addition and subtraction facts. Solve simple addition and subtraction problems.	Making change in make believe shopping activities.

<table>
<tr><th rowspan="2">TOPIC</th><th colspan="3">OBJECTIVE</th><th rowspan="2">CONTENT</th><th rowspan="2">METHODS/
STRATEGIES</th><th rowspan="2">EVALUATION</th><th rowspan="2">AREAS OF

INTEGRATION</th></tr>
<tr><th>SKILLS</th><th>KNOWLEDGE</th><th>ATTITUDE</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Solve simple addition and subtraction problems based on addition and subtraction facts

Use odd and even numbers to reinforce addition and subtraction by adding different combinations of pairs of odd and even numbers. Checking to see if the results are odd or even
e.g. 4 + 3 = 7
even + odd = odd.</td><td>Completing odd and even addition and subtraction table.

<table><tr><td>+/−</td><td>0</td><td>E</td></tr><tr><td>0</td><td></td><td></td></tr><tr><td>E</td><td></td><td></td></tr></table></td><td>Explain the meaning of <u>odd</u> when used outside of mathematics.</td></tr>
</table>

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Multiplication Tables.	Recognising the relationship between addition and multiplication.	Build up and use multiplication tables up to 12 x 12.	Appreciate the need for short-cuts in tedious computation.	Multiplication tables up to 12 x 12. Multiplication is a short-cut to repeated addition.	Identify patterns and relationships in multiplication table (grid) for up to 12 times tables and make generalizations. Any number multiplied by 0 is zero. Any number multiplied by 1 is the number itself. The order, in which numbers are multiplied, does not alter the answer. Multiplication and division are inverse operations. Solve simple multiplication problems involving basic facts up to 12 times tables.	Complete multiplication tables on grid for up to 12 times tables. Write repeated addition sentences as multiplication facts and vice versa. e.g. 4 + 4 + 4 + 4 = 6 4 x 4 = 16. Complete number sentences with basic multiplication and division facts for up to 12 times tables. Solve simple multiplication division problems.	Mathematics Bingo

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Number Sequences.	Counting Ordering Finding rules for sequences.	Build number sequences (not more than 10 numbers in a sequence) so that the difference between consecutive terms is a 1-digit or 2-digit number, (include 10 and multiples of 10).	Awareness of patterns in nature.	Number sequences e.g. 10, 15, 20, _, _, _ 80, 90, 100, _, _,_ 1, ½, ¼, $\frac{1}{8}$, -, -, -.	Count in ones, twos, tens, twenty, fives, multiples of tens (fractions also) e.g. 30, 50, 60 etc., hundreds beginning at any number. Recognise number patterns in sequences and find the principle governing a particular pattern. Read numbers in number sequence on a number line and state the difference between consecutive terms. Complete number sequences on a number line.	Completing number sequences e.g. 105, 110, _, _, _, _.	Patterns in nature.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Addition and Subtraction of whole number.	Decomposing numbers. Recognising place value and face value of digits in a number.	Add and subtract sets of numbers up to 9 digits with and without regrouping.	Develop healthy competitive attitude.	Addition and subtraction of numbers (up to 9 digits)	Use expanded notation and place value to add and subtract up to 9-digit whole numbers e.g. 81 = 80 + 1 = 70 + 11 - 36 = 30 + 6 = 30 + 6 40 + 5 = 45 Add and subtract up to 9 digit whole numbers without showing the expanded format e.g. Subtract the ones 81 - 36 Regroup1 ten to 10 ones 7 8 1 - 36 5 Subtract tens 7 8 1 - 36 45	Add and subtract whole numbers using expanded notation Add and subtract whole numbers without showing the expanded form (decomposition)	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Inverse Operation – addition and subtraction.	Using function machines to undo an operation.	Recognise that if a whole number is added to and then subtracted from a given whole number, the result is the original whole number.	Handle manipulatives with care.	Addition and subtraction as inverse operations. 3 + 6 = 9 9 – 3 = 6 9 – 6 = 3	Using the commutative and zero properties to do addition. Using the inverse operations - addition and subtraction - 3 + ☐ = 10 10 -☐ = 7 Using magic square to reinforce addition and subtraction of whole numbers. Adding then subtracting the same whole number from a given number and discussing the result e.g. 3 + 4 – 4 = 3. Using the minicomputer or Papy computer to perform the operations.	Completing additions using the commutative and zero properties Solving addition and subtraction problems using the inverse operations.	Doing and undoing activities in the home environment.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Multiplication of whole numbers.	Estimating the range of an answer in a multiplication sum.	Multiply up to 4-digit numbers by 1-digit numbers; by 10, 100 and 1000. Multiply up to 4-digit numbers by numbers with not more than 3 digits. Recognise short-cut for multiplication by powers of 10.	Recognise the value of making an estimating.	Multiplication up to 4-digit numbers. e.g. 148 x 3 6362 x 14 Using expanded notation up to 4-digit numbers by 1-digit numbers 15 x 5 10 +5 (10 x 5) + (5 x 5) 50 + 25 = 75 50 + 25 = 75 15 x 5 = 75 Multiplying up to 4-digit numbers by 1-digit numbers without showing the expanded form. e.g. 15 x 3 = 45 Using the minicomputer or Papy computer to do the multiplication.	Multiply up to 4-digit numbers by 1-digit numbers using expanded notation and without using expanded notation. Multiplying 1-digit numbers by 10 and 100 Multiply up to 4-digit numbers by 10 and 100 using the rule for multiplying by 10 and 100.	Use of the metric units of length, mass and volume.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Division of whole number.	Estimating partial a quotients in partial division.	Divide up to 4-digit numbers by numbers with not more than 3-digits.	Appreciate the value of estimation in a complex division sum.	Division up to 4-digit numbers by numbers with not more than 3-digits. e.g. $3\overline{)218}$ $2452 \div 4$ $21\overline{)489}$	Divide up to 4-digit numbers using the basic multiplication and division facts. e.g. $\begin{array}{r} 72 \\ 3\overline{)218} \\ -\ 21 \\ \hline 08 \\ -\ 6 \\ \hline 2 \end{array}$ (divisor, dividend, remainder) Use repeated subtraction to divide up to 4-digit numbers by up to 2-digit numbers: (encourage pupils to subtract in groups of tens) e.g.	Use calculators to verify results.	Precision in calculations as applied to woodwork, for example.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					$12\overline{)64}$ $\underline{-12}$ _____ 1 52 $\underline{-12}$ _____ 1 40 $\underline{-12}$ _____ 1 28 $\underline{-12}$ _____ 1 16 $\underline{-12}$ _____ 1 4 Ans. 5 Remainder 4		

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Multiplication and its inverse, division.	Recognising and operation and its inverse.	Recognise that if a whole number is multiplied by, then divided by the same number, the result is the original number.	Appreciate the views of others in a group discussion.	Multiplication and division as inverse operations e.g. 12 x 2 = 24 24 ÷ 12 = 2 12 x 6 ÷ 6 = 12	Multiply a whole number by a given whole number, then divide the result by the same given whole number and then discuss the result e.g. 9 x 4 ÷ 4 Use the rule derived from the discussion in the above, to solve mentally problems in which a number is multiplied by a given number and divided by the same given number.	Solve mentally, problems in which a whole number is multiplied by a given number and then divided the same given number. Project on building complex exercises using a calculator.	Using a calculator in solving complex multiplication and division exercises.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Estimation in computation.	Recognising the range of an answer for a computation exercise.	Estimate answers to computation exercises involving the four operations by rounding to the nearest 10, 100, 1000, 10000. Use the rule that to round a number exactly between two units, round either up or down to the even unit. Examples To the nearest 10, 45 is 40 but 55 is 60.	Appreciate the value in estimating the result of a computation.	Round numbers, Example 26 to the nearest tens is 30. 225 to the nearest hundred is 200. 1806 to the nearest thousand is 2000. 48 x 21 will produce a result around 50 x 20 = 1000. The actual result is 1008.	Round numbers to the nearest 10 to simplify a problem and to get approximate answers. Find actual answers for the problem. Compare the estimated answer and the actual answer and say if the estimated answer is reasonable or not. Extend the ideas in the above to round numbers to (a) the nearest hundred (b) the nearest thousand.	Round off numbers to the nearest (a) tens (b) hundred (c) thousand Use rounded numbers to estimate answers. Make a booklet of examples to round numbers using the even number principle.	Measurement in Science.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Order of operations.	Recognising operations in a compound calculation.	State and use the order of operations in expressions with more than one operation.	Recognise the value of doing things orderly and systematically.	The rule of the order of signs. B – Brackets O – Of D – Divide M – Multiply A – Add S – Subtract. When working a sum involving more than one operation, you must follow the order above. e.g. (6 + 4) x 6 + 7 ÷ 8 of 9 work 1st, work 4th, work 5th, work 3rd, work 2nd	Discuss the rule of order of signs i.e. Bracket, Of, Division, Multiplication, Addition, Subtraction, (BODMAS) Work exercises based on the rule.	State the rule for the order of operations in expressions. Use the rule of order of signs to simplify expressions with not more than 3 terms.	Primary Science – making electrical circuits.
Arithmetic mean.	Collecting and recording data.	Find the mean (average) of a set of quantities derived from real life situations.	Respect for the privacy of individuals.	Finding the mean of given quantities e.g. 62 + 19 + 50 + 5 = ☐ ☐ ÷ 4 = _____. Mean = Sum of quantity Number of quantity	Find mean of quantities derived from real life situations. Discuss the situation in the above by using a real life situation. Discuss the computations involves in finding mean.	Data collection project on traffic, fishes caught, birds trapped, etc. and finding the mean.	Observing community based activities and collecting relevant data.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Problem Solving.	Analysing the components of a problem.	Solve 1-step, 2-step and 3 step problem not involving more than 3 operations at a time.	Willingness to approach solving problems from several perspectives.	Solve word problems and puzzles. Routine and non-routine problem.	Use concrete materials and diagrams to solve simple 1-step, 2-step and 3-step problems involving any of the four operation.	Solving simple 1-step, 2-step and 3-step problems using diagrams. Constructing problems to be solved. Making mathematical puzzles.	Problems can be drawn from all subjects of the curriculum.

FRACTIONS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Fraction Concept	Identifying fractional parts of sets or objects.	Name fractions e.g. $\frac{2}{3}$, $\frac{1}{8}$, $\frac{3}{4}$	Co-operating with each other and finding fractional parts of groups of pupils, given objects and quantities.	Fractional parts of given quantities.	Use pupils and objects to find fractional parts of given sets or objects.	Finding fractional parts of given quantities – e.g. (a) $\frac{2}{3}$ of 24 (b) $\frac{2}{5}$ of 30 kg (c) $\frac{3}{4}$ of 1 m (d) $\frac{5}{7}$ of 1 wk.	Social Studies e.g. Shade $\frac{1}{5}$ of the member countries of Caricom.
Equivalent fractions.	Comparing fractions and identifying the	Write the equivalent fractions of given	Working together in groups using fraction charts	Equivalent fractions e.g. ☐	Use fraction charts and diagrams to find equivalent	Find the missing a numerator or a denominator of	Language Arts – Spelling: Fraction

☐

☐

☐

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
	equivalent forms for a given fraction.	fractions	and a rule to find equivalent fractions of given fractions	$\frac{3}{5} = \frac{9}{15}$ $\frac{2}{} = \frac{4}{14}$	fractions Examining pairs of equivalent fractions to determine the relationship between the numerators and the denominators e.g. x 2 e.g. $\frac{1}{3}$ = $\frac{2}{6}$ x 2 Apply the rule to find equivalent fractions (i.e. multiply or divide the numerator and denominator by the same number) e.g. (i) $\frac{2}{5} = \frac{2}{5} \times \frac{2}{2} =$ $\frac{4}{10} \div \frac{2}{2} = \frac{2}{5}$. (ii) $\frac{9}{12} = \frac{9}{12} \div \frac{3}{3} =$ $\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$ Checking equivalence using cross products e.g.	the equivalent fractions, e.g. (a) $\frac{3}{4} = \overline{12}$ (b) $\frac{5}{} = \frac{10}{16}$	Chart Equivalent Numerator Denominator. Art: Draw and shade shapes and parts of shapes to make patterns.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					$\frac{12}{\frac{2}{3}} = \frac{12}{\frac{4}{6}}$ Cross products of equivalent fractions are equal.		
Addition and subtraction of proper fractions.	Identifying fractions and mixed numbers.	Add and subtract fractions, mixed numbers.	Working together to do addition and subtraction of fractions.	Addition and subtraction of proper fractions.	Add and subtract proper fractions with like denominators. Use diagrams to illustrate addition and subtraction.	Add and subtract proper fractions with like denominators e.g. (a) $\frac{5}{8} + \frac{1}{8} + \frac{7}{8}$ (b) $\frac{1}{12} + \frac{7}{12} + \frac{3}{12}$ (c) $\frac{9}{10} - \frac{6}{10}$ (d) $\frac{11}{12} - \frac{7}{15}$	Language Arts – vocabulary: Antonyms (opposites) e.g. add – subtract multiply – divide.
Addition and subtraction of mixed number.	Differentiating between proper fractions and mixed numbers.	Add and subtract mixed numbers.	Willingness to explore new areas of knowledge.	Addition and subtraction of mixed numbers or a combination of proper fractions and mixed numbers	Add and subtract proper fractions with unlike denominators by re-writing these fractions using the L.C.D. e.g. $½ + \frac{3}{8} = \frac{4}{8} - \frac{3}{8} = \frac{1}{8}$	Using the L.C.D. to add and subtract fractions and mixed numbers, e.g. (a) $\frac{1}{3} + \frac{5}{6} + ¼$ (b) $\frac{3}{8} + 2\frac{1}{3} + 1\frac{1}{6}$	Solving problems in the environment that involve fractions and/or mixed numbers.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Add and subtract mixed numbers with unlike denominators Add and subtract mixed numbers and fractions. Solving simple 1 – step problems involving addition and subtraction of fractions.	(c) $3\frac{4}{5} - 1\frac{3}{4}$ (d) John ate 1½ bananas. Seon ate 2¼ and Dave ate $\frac{7}{8}$. How many bananas did they eat in all.	
Multiply and divide fractions and mixed numbers by other fractions and mixed numbers	Converting mixed numbers to improper fractions and vice versa. Using cancellation to multiply and divide fractions and mixed numbers.	Multiply and divide fractions and apply rules learnt to solve one-step problems involving multiplication or division of fractions.	Co-operating with one another to solve problems. Work in groups and share ideas which will help to solve problems.	Multiplication and division of fractions and mixed numbers.	Multiply fractions by fractions e.g. $\frac{1}{8} \times \frac{3}{4}$ Multiply mixed numbers by mixed numbers or fractions. Multiplying mixed numbers and fractions by other mixed numbers and fractions using cancellation. Solve one – step problems involving the multiplication of fractions and mixed numbers.	Multiplying and dividing fractions and mixed numbers by other fractions and mixed numbers, e.g. (a) $\frac{5}{8} \times \frac{2}{3}$ (b) $2¼ \times 1\frac{1}{3}$ (c) $\frac{9}{10} \div \frac{3}{4}$ (d) $2\frac{2}{5} \div 1½$ Solve simple one – step problems involving multiplication and division of fractions	Language Arts Vocabulary – words and meanings (a) Multiplication (b) Division (c) Cancellation (d) Reciprocal

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Reciprocals.	Making reciprocals from given numbers e.g. make reciprocals from 2, 3, ⅓ , ⅖ .	Exploring patterns using reciprocals e.g. 1/1 , ½, ⅓ , ¼ …, Recognise that the larger the denominator, the smaller the fraction – keeping the numerator constant.	Willingness to explore number concepts in an abstract manner.	Multiply numbers by their reciprocals e.g. $\frac{2}{3}$ x $\frac{3}{2}$ 8 x $\frac{1}{8}$ A number times its reciprocal is equal to 1. Note that zero does not have a reciprocal.	Recognise that when the product of two numbers is equal to 1, each number is the reciprocal of the other. e.g. $\frac{1}{7}$ x 7 = 1 and 7 x $\frac{1}{7}$ = 1 so $\frac{1}{7}$ is the reciprocal of. $\frac{7}{1}$ Use diagrams and the number line to divide whole numbers by fractions. Use reciprocals to divide fractions and mixed numbers by whole numbers, other fractions and mixed numbers. Solve simple one – step problems involving the	Write the reciprocals of number e.g. Reciprocals of (a) $\frac{4}{5}$ is $\frac{5}{4}$ (b) 8 is $\frac{1}{8}$	Language Arts: Writing sentences with the verb formed from reciprocal. Explore the meaning of the word reciprocal as used in everyday usage.

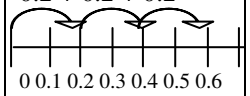
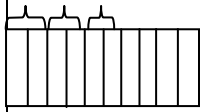
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					division of fractions.		
Order of operations in expressions.	Explaining the rule of order of signs (BODMAS)	Apply the rule of order of signs to work exercises involving fractions and mixed numbers.	Healthy debate on the logic for BODMAS.	The order of operations (BODMAS)	Discuss the rule of order of signs, i.e. Bracket Of Division Multiplication Addition Subtraction (BODMAS). Working exercises involving expressions with two or more than two terms.	State the rule of order of signs. Working expressions involving more than one operation e.g. (a) ½ of $\frac{4}{5} \div \frac{7}{10}$ (b) 3½ + $\frac{2}{3}$ of $\frac{3}{4}$ (c) (2¼ + ½) ÷ $\frac{7}{8}$	Using calculators to verify results.
Solve 1 – step and 2 – step problems involving fractions.	Explaining the steps in solving a problem. Using the calculator in complex computation.	Analyse questions and solve 1 – step and 2 – step problems involving fractions	Co-operating with one another to solve problems. Appreciate the use of hand-held technologies – the calculator.	Word problems involving the four operations. Routine and non-routine problems. Use of the calculator.	Use calculators, diagrams and the number line to solve simple 1 – step problems involving any of the four operations of fractions Discussing, analysing and using diagrams to	Solve 1 – step problem involving any of the four operations of fractions e.g. John had 5 apples. He ate $2\frac{5}{8}$ of them, how many has he left? Solving 2 – step	Using the calculator to compute complex number problems.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					solve 2 – step problems that require the use of any 2 of the four operations.	problems involving any 2 of the four operations of fractions.	
Use associative, commutative and inverse properties to do the four operations on fractions.	Defining terms: Associative Commutative Additive inverse Multiplicative inverse.	Perform addition and multiplication of fractions using the commutative and associative properties. Use the inverse operations to simplify expressions.	Willingness to explore properties of numbers working on group projects.	The associative, commutative and inverse properties (where applicable) to do the four operations on fractions. Associative: a + (b + c) = (a + b) + c a (bc) = (ab) c Commutative: a + b = b + c ab = ba Inverse: The additive inverse of a is –a. The multiplicative inverse of a is $\frac{1}{a}$ where a, b and c are numbers.	Use the commutative and associative properties to do addition and multiplication of fractions, e.g. (1) $\frac{2}{5} + \frac{3}{4} = \frac{3}{4} + \frac{2}{5}$ (2) ¼ x $\frac{1}{3} = \frac{1}{3}$ x ¼. Use diagrams and the number line to show the inverse relationship. between addition and subtraction, multiplication and division. Use the inverse operations (including the use of letters) to do addition and subtraction, multiplication and division of fractions, e.g.	Complete sentences using the associative and commutative properties to do addition and multiplication of fractions, e.g. Find the value of the letters in each: (a) 1½ + 2½ = 2½ + P. (b) $\frac{1}{3} - \frac{1}{8} = X - \frac{1}{8}$. (c) 3½ ÷ B = 1¼ x 3½.	Using the calculator to confirm the properties on numbers.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					(1) $\frac{2}{3} + ¼ - ¼ = \frac{2}{3}$ (2) ½ x $\frac{2}{3} \div \frac{2}{3}$ = ½ ½ ÷ $\frac{2}{3}$ x $\frac{2}{3}$ = ½.		

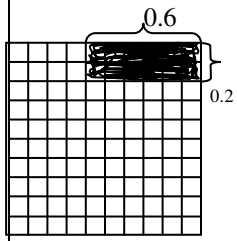
DECIMALS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
DECIMAL Addition and subtraction of decimals (tenths, hundredths and thousandths) with and without whole numbers.	Drawing diagrams. Adding and subtracting decimals. Converting decimals to vulgar fractions. Placing the decimal point correctly after a computation.	Add and subtract decimals.	Group work to develop self-reliance.	Addition and subtraction of decimals (tenths, hundredths and thousandths).	Use diagrams, the number line and fractions to add decimals tenths, hundredths and thousandths without and with regrouping, e.g.  $\frac{5}{10}$ +  $\frac{8}{10}$ = $\frac{13}{10}$ 	Add (a) 0.1; 1.1; 0.4 (b) 0.11; 0.01; 0.10 (c) 1.42 – 0.39 (d) 4.532 + 1.496 – 2.945	Using calculators to do addition and subtraction.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					$\frac{10}{10}$ + $\frac{3}{10}$ = $\frac{13}{10}$ $1\frac{3}{10}$ = 1.3		
Multiplication of decimals.	Identifying decimals and whole numbers. Multiplying decimals accurately. Reading and solve problems involving decimals.	Multiply decimals by decimals.	Work together. Work individually. Develop self-reliance. Demonstrate critical thinking.	Multiplication of decimals.	Using diagrams and the number line to show multiplication of decimals as repeated addition. e.g. 0.2 + 0.2 + 0.2  3 times 0.2 = 3 x 0.2 = 0.2 + 0.2 + 0.2 = 0.6. 0.2 + 0.2 + 0.2  = 3 times 0.2 = 3 x 0.2 = 0.2 + 0.2 + 0.2.	5 x 0.2 5 x 0.2 x 0.1 0.1 x 0.1 x 0.1	Science:- Measurement of - Capacity - Mass - Length - Area Working with money. Using the calculator to multiply decimals.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					= 0.6 Use multiplication of fractions to do multiplication of decimals, e.g. 3 x 0.4 = 3 x $\frac{4}{10}$ = $\frac{12}{10}$ = $1\frac{2}{10}$ = 1.2. Discussing the relationship between the number of decimal places in the two factors and the number of decimal places in the answer. In 3 x 0.4 = 1.2: There is one decimal place in the two factors and one decimal place in the answer. Discover a pattern (rule) from several examples. Use the rule to multiply whole numbers by decimal (tenths)	Multiply decimals and by whole numbers and vice versa.	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					and vice versa. Use activities similar to the above to multiply whole numbers by decimals. Use the rule to multiply whole numbers by decimals.	Complete tables such as: Number x10 x100 6 1.06 6.5 0.98 Multiply whole numbers and decimals, e.g. (1) 5 x 0.3 = (2) 0.9 x 4 = (3) 2.12 x 6 = (4) 3 x 0.08 =	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Shade diagrams to show decimals e.g. 0.2 x 0.6 =  Since 0.2 x 0.6 of the grid is the same as 12 of the equal parts or $\frac{12}{100}$ of the grid then 0.2 x 0.6 = 0.12.	Multiplying decimals by decimals using diagrams where appropreate.	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Use multiplication of fractions to show multiplication of decimals e.g. (tenths times tenths) e.g. 0.6 x 0.8 = $\frac{6}{10}$ x $\frac{8}{10}$ = $\frac{48}{100}$ = 0.48 or 0.6 x 0.8 0.48 Discuss the relationship between the number of decimal places in the two factors and the number of decimal places in the answer (one place in each factor and two places in the answer) to arrive at a rule for multiplying decimals. Use the rule to multiply decimals.	Multiplying decimals by decimals using fractional forms: e.g. (1) 0.5 x 0.3 0.2 x 0.4	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Use multiplication of fractions to do multiplication of decimals by 10. e.g. (a) 0.4 x 10 = $\frac{4}{10}$ x 10 = $\frac{40}{10}$ = 4 (b) 0.07 x 10 = $\frac{7}{100}$ x 10 = $\frac{70}{100}$ = 0.70. Discuss the relationship between the position of the decimal point in the decimal being multiplied and the answer, to arrive at a rule for multiplying a decimal by 10 (Rule – move the decimal point one place to the right). Use the rule to multiply decimals by 10. Use activities similar to the above to multiply decimals by 100, 1000, etc. Discuss and solve simple problems	Multiply decimals by 10 and 100 using fractions e.g. (1) 0.7 x 10 = (2) .009 x 10 = Multiply decimals by 10, 100, 1000	<u>Science:</u> Measuring the

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					involving the multiplication of decimals.	using rule e.g. (1) 5.6 x 10 = (2) 3.84 x 100 = (3) 3.84 x 1000 = Solve problems involving multiplication of decimals. e.g. On Monday 1.5 cm of rain fell, for the rest of the week 1.2 times that amount fell. How much rain fell for the rest of the week?	amount of rainfall daily in cm and decimal of a cm.
Divide decimals.	Differentiating between decimals and whole numbers. Dividing numbers accurately using a calculator. Reading and solving problems.	Divide decimals by whole numbers and vice versa, decimals by decimals and decimals by 10, 100, 1000	Working together. Working individually. Developing critical thinking. Developing self-confidence.	Division of decimals.	Use diagrams to show division of decimals by whole numbers e.g. 0.4 ÷ 2 = Shade four tenths. Separate 4 tenths into 2 equal parts. Each part is 0.2. So 0.4 ÷ 2 = 0.2. $\frac{4}{10}$ or 0.4 Use division of fraction to do division of decimals by whole	Dividing decimals by whole numbers and vice versa (using diagrams). Dividing decimals by whole numbers (using fractions) e.g. 0.9 ÷ 3. Divide decimals by decimals, e.g. 6.3 ÷ 0.7. Divide whole	Science:- Area Capacity Volume Mass.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					numbers and vice versa, e.g. $0.6 \div 3 = \frac{6}{10} \div 3 =$ $^{2}\frac{6}{10} \times \frac{1}{3}{}_{1} = \frac{2}{10} =$ 0.2. Use division of fractions to do division of decimals by decimals, e.g. $7.5 \div 1.5$ $7\frac{5}{10} \div 1\frac{5}{10}$ $= \frac{75}{10} \div \frac{15}{10}$ $= \frac{75}{10} \times \frac{10}{5}$ = Discuss the steps involved in dividing whole numbers and decimals by decimals, that is	numbers and decimals by decimals. e.g. $45 \div 0.3$ $0.56 \div 0.7$	

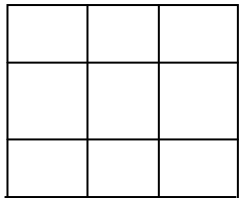
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					make the divisor a whole number first by multiplying the divisor by a multiple of 10, then multiplying the dividend correspondingly. e.g. 0.84 ÷ 0.4 = (0.84 x 10) ÷ (0.4 x 10) = 8.4 ÷ 4 = 2.1 Divide whole numbers and decimals by decimals. Examine a set of decimals multiplied by 10 and the answer divided by 10, e.g. 5.12 x 10 = 51.2 51.2 ÷ 10 = 5.12 To arrive at a rule for dividing a decimal number by 10, move the decimal point one place to the left. Put in zeros if needed.	Divide decimals by 10 and multiples of 10. (1) 3.5 ÷ 1- (2) 0.7 ÷ 10 (3) 0.9 ÷ 100 (4) 5.01 ÷ 100.	

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Extend for multiplying by multiples of 10. Use this rule to divide decimals by 10. Extend to multiples of 10. Discussion involving division of decimals.	Solve problems involving the division of decimals.	
Round off numbers.	Applying rule for rounding numbers.	Round off numbers after a computation to given levels of accuracy.	Discussing the views of others in relation to the principles of rounding numbers.	To round a number to a given place, follow the principles: 1. If the number is greater than half the unit,	Discussion using the number line to illustrate the principles. <u>Examples:</u> Number | Nearest 10 14 | 10 28 | 30	Complete the table. Number | One d.p. 5.82 | 5.8 5.54 5.56 19.47 12.55	Calculation in Science using a calculator.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				round up. 2. If the number is less than half the unit, round down. 3. If the number is <u>exactly</u> half the unit, round to the even digit.	146 150 155 160 165 160 25 20 35 40 45 40	13.55 14.55	

PERCENTAGE – RATIO AND PROPORTION

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Percentage and its relation to fractions and decimals.	Identifying fractions and decimals.	Change fractions to decimals and decimals to percent and the reverse order.	Showing appreciation for accuracy.	Concept of percent. Express fraction as decimals, as percent and the reverse process.	Use the hundred – square grid and coloured ten 1 x 10 strips of cardboard to identify fractional parts of a hundred, e.g. place the strip/strips over part of the grid and name the fraction covered. Write the fraction,	Shade given number of squares from squared paper. Read shaded part as a fraction, decimal and percent. Complete table given.	Social Studies Transportation in my village or Community. <u>Science.</u> Write as a decimal the approximate amount of the earth's surface covered with

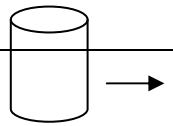
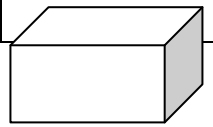


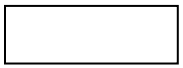
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					e.g. $\frac{20}{100}$ and reading it as twenty hundredths or twenty parts out of one hundred parts. Write the fraction $\frac{20}{100}$ as a 0.20 and as a percent $^{1}\frac{20}{100}$ x 100^{1} = 20%. Introduce the symbol for percent (%). Write proper fractions as decimals and percent and the reverse, e.g. $\frac{4}{10}$ = $\frac{40}{100}$ = 0.40 = 40% Find percentages by expressing fractions first with denominators of 100 then as a percent, e.g. = $\frac{21}{25}$ = $\frac{84}{100}$ 84%	Fract Deci % $\frac{6}{100}$ 0.25 2½ 84%	water.
Find percentage of numbers and	Finding percentages.	Find percentage of given numbers	Working in groups to solve	Find percentages of	Find percentages of given quantities,	Find percentages of given numbers	<u>Social Studies</u> Population

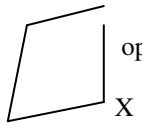
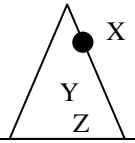
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
solve problems involving percent.	Solving problems.	and solve problems involving percent.	problems.	numbers and solving problems involving percent.	e.g. 5% of 20. Solve simple problems involving percentages, e.g. (a) 15% of the children in Class Four like oranges, the others like mangoes. What percentage of the class like mangoes? Discuss the steps involved in solving the problem.	and quantities. Solve simple problems involving percentages.	Census. <u>Science.</u> Transportation and communication
Solve Problems involving unequal sharing.	Comparing quantities.	Solve problems involving unequal sharing.	Working in groups to solve problem based on project.	Problem solving involving unequal sharing.	Use objects to solve problems involving unequal sharing in situations where (a) one person gets a certain quantity more than the other, e.g. Share 14 mangoes between Sue and Betty so that Betty gets 2 mangoes more than Sue. (b) A proportion is given, e.g. Share 12 sweets between 2 boys so that one gets twice as many as the other.	Solve problems involving unequal sharing.	<u>Social Studies</u> Unequal sizes of the Administrative Regions in Guyana. Unequal distribution of population in villages, towns, etc.

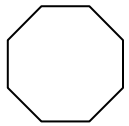
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Having two pupils solve the problems in a practical situation, e.g. in the first situation let one pupil take two mangoes (2 objects) let the two pupils now share the remainder equally between them. Let them now count how many each pupil gets.		

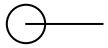
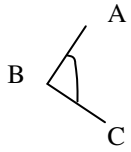
GEOMETRY

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
GEOMETRY. Solids:	Collecting Solids and Identifying them. Using their attributes.	Identify and state the properties of the cube, cuboid, cone, cylinder, sphere and prism.	Appreciate working individually and in groups.	Identify and state the properties of the cube, cuboid, cone, cylinder, sphere and prism. Solid | Edges | Surfs. | Verts.  - 1 -  12 - - 	Collect, identify and name solids. Identify and state the number of edges, surfaces and vertices on the cube, cuboid, cone cylinder, sphere and prism. Describe the edges and surfaces on these solids, e.g. straight edges, flat surfaces. Record the properties of given solids on a table. Make models of the cube, cuboid, cone,	Matching solids with their appropriate names and nets. Completing table showing the number of edges, surfaces and vertices of stated shapes. Matching shapes with given properties. 	<u>Science:</u> The states of matter – Gaseous liquid and solids. <u>Art and Craft</u>: Making solids using straw.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				klim Cylinder Milk Tin Cone Party Hat	cylinder, prism from given nets. Identify the solid for a given net. Match other objects in the environment with the various solids.	Making skeletal models using drink straws.	
Plane shape.	Classifying and Identifying plane shapes.	Identify and state the properties of plane shapes – sides, vertices, angles, inside, outside, boundary, perimeter.	Develop self-reliance working individually on projects.	Properties of plane shapes. Example:  This is the rectangle. 4 straight sides, 4 right angles, and the opposite sides are equal.	Classifying square, rectangles, and triangles according to the number of edges/sides and angles.	Completing tables on properties of plane shapes. Shape / No Sides ☐ square / 4 / all sides are equal Making squares, rectangles and triangles, from templates. Using geoboards and rubber bands to make shapes. Completing table showing number of sides.	Art: Making patterns using shapes. Tessellation of shapes. Comprehension Study and answer questions based on table showing properties of shapes.

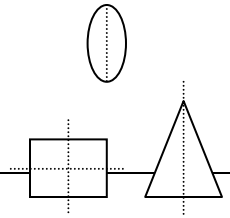
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Closed and open shapes.	Drawing a variety of closed and open shapes.	Identify closed and open shapes, inside and outside of closed shapes.	Develop self-reliance.	Closed and open shapes.	Identify closed and open shape.  open X  closed State the difference between closed and open shapes. Draw closed and open shapes. Identify the boundary, inside and outside closed shapes.  X Y Z	Identifying open and closed shapes from given diagrams. Identifying inside, outside and on (boundary) of shape.	Composition: Writing descriptive paragraphs. Model building in Art and Craft.

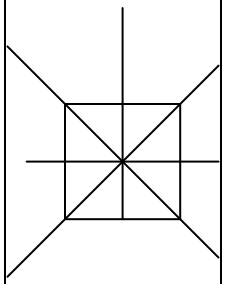
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					X – outside Y - on Z - inside Use a length of string to make a variety of closed and open shapes		
Polygons.	Identifying and classifying polygons. Making polygons with pointers/ matchsticks.	Classify and name polygons according to the number of sides and angles. Insert diagonals in a polygon.	Develop self-reliance and teamwork.	A polygon is a closed figure bounded by line segments. The triangle is a polygon and has no diagonals. A diagonal is a line segment connecting two non-adjacent vertices.	Identify polygons from a given set of shapes. Classify a given set of polygons according to the number of sides. Name polygons with up to 10 sides - triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons and decagons. Match polygons with their names.	 Octagon. Identify and name polygons. Match polygons with their correct names.	Vocabulary: Prefixes and their meaning octa means eight, deca means ten.
Angles	Making angles using two rotating arms. Classifying angles based on estimated rotation (angle).	Identify and name angles according to size.	Appreciate working individually and in groups.	Types of angles (right, acute, obtuse and straight). Angle is the amount of turn. arm vertex arm Angle right angle    	Making full turns with body movement, half turns, quarter turns. Identifying right angles in the environment and in given shapes. Using two connected cardboard strips to show a right angle, angles less than and greater than a right angle, and the straight angle.	Identify as angles right, acute, obtuse and straight from a given set of angles. Naming and drawing given angles.	Drawing objects with angles e.g. sling shots. 

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				acute angle straight angle obtuse angle  reflex angle  rotation			
Measuring angles	Measuring angles Drawing angles Naming angles.	Measure angles using a protractor. Draw angles using ruler and pencil. Drawing angles using a protractor.	Develop self-reliance. Appreciate working in groups.	Angles are measured with a protractor. The unit angular measurement is the degree. Angles are usually named using three capital letters of the alphabet e.g.  Angles ABC.	Recognising the protractor as an instrument for measuring angles. Recognising that angles are measured in degrees. Measuring given angles using a protractor. Using the notation for recording their measurements. Draw angles using ruler and pencil. Draw angles using a protractor.	Measuring given angles using the protractor. Using the degree notation for recording angular measurements. Draw angles of various kinds.	Social Studies: Weather reports – drawing and reading a pie chart.
Lines and curves.	Naming and Drawing lines and curves.	Recognise and draw parallel, intersecting and perpendicular lines.	Participate fully in group discussion.	Parallel, intersecting and perpendicular lines. Closed and open curves.	Draw lines that do not meet or cross. Name lines that cannot meet or cross when produced parallel lines.	Fold papers, to form parallel lines, intersecting lines and	Art: Making simple line patterns.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
		Distinguish between lines and curves. Recognise closed and open curves.		Simple closed curves.	Show lines that cross at only one point using pieces of string Draw lines that cross. Name lines that cross as intersecting lines. Name lines that cross at right angles as perpendicular lines. Identify and draw parallel lines, intersecting lines and perpendicular lines. Draw cloud and open curves. Distinguish between lines and curves and identify these in the environment.	perpendicular lines. Use string to make closed and open curves.	
Plane shapes – Triangles.	Sorting and describing shapes based on attributes. Make models of plane shapes using drinking straws.	Classify triangles according to the nature of the sides and angles – equilateral, isosceles, right, scalene, acute, obtuse.	Appreciate the beauty of shapes in nature.	The properties of triangles (right angled, equilateral, isosceles, scalene acute, obtuse).	Sort triangles into sets according to the nature of their sides and their angles e.g. triangles with 3 equal sides and equal angles, triangles with 2 equal sides and 2 equal angles, triangles with sides and angles of different measures, triangles with one right angle. Exploring triangles using ruler and protractor.	Naming given triangles. Matching triangles with given properties. Drawing triangles given the properties.	Vocabulary: Words in sentences: Right-angled. <u>Art:</u> Make triangles of varying shapes. Colour equal sides with the same colour.

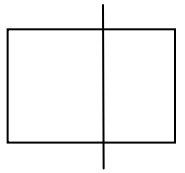
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Plane Shapes – Quadrilaterals.	Describing and naming the various kinds of quadrilaterals.	Classify quadrilaterals according to the nature of the sides and angles – rectangle, square, parallelogram, kite, rhombus, trapezium.	Appreciate team and individual work.	Types of quadrilaterals - rectangles, squares, parallelograms, kites, rhombuses, trapeziums – and their properties.	Sorting quadrilaterals according to the nature of their sides. Sort quadrilaterals according to the nature of their angles. Measure the angles in each shape. Discuss the results. Name each set of quadrilaterals. Make models of the various types of quadrilaterals. Identify the various kinds of quadrilaterals in the environment.	Naming given quadrilaterals. Matching quadrilaterals with given properties. Projects on model building.	Craft: Use straw to make rectangles, squares, parallelograms, kites, rhombuses, trapeziums.
Properties of a circle.	Observing Folding paper Tracing shapes Identifying and naming parts of a circle. Drawing circles of different radii using a pair of compasses.	Identify and name parts of a circle. Recognise the relationship of radius to diameter.	Shared responsibilities in doing a group project.	Parts of a circle - (radius, diameter, centre, arc circumference, sector, semi-circle).	Identify the boundary of a circle. Name the boundary of the circle as the circumference (a special name for perimeter of a circle). Fold the circle to show two congruent parts (semi-circles). Tracing along the line formed by the fold and naming this line the diameter. Discover the	Making templates of circles. Identify and name the circumference, arc, centre, diameter, radius, segment and sector of a circle.	Art: Making patterns using circles. <u>Games:</u> Form circles for activities. <u>Comprehension</u> Use pie chart for discussion.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					relationship of radius to diameter.		
Lines Lines segments Polygons.	Measuring and comparing line segments.	Identify congruent lines, line segments, angles and polygons.	Develop and appreciate individual and team work.	Congruent lines, line segments, angles and polygons. Congruent figures are equal in <u>all</u> respects. Symmetrical shapes are congruent.	Identify lines, line segments, angles and polygons. Identify line segments of equal lengths, angles of equal sizes and polygons of equal sizes and shapes. Use the term 'is congruent' to show relationship between equal line segments, equal angles and equal polygons. Test for and identify congruent line segments, angles and polygons using templates of polygons, protractors and rulers.	Identify line segments, angles and polygons on given diagrams.	Drawing symmetrical shapes in Art.
Symmetry.	Identifying symmetrical shapes. Folding paper to make symmetrical shapes. Drawing Symmetrical shapes.	Determine the number of lines of symmetry in regular polygons and other shapes.	Develop self-reliance and appreciate group and individual work.	Symmetry - a structure that allows an object to be divided into parts of an equal shape and size e.g. 	Folding templates of polygons in different ways to find lines of symmetry. Identifying shapes that have line symmetry. Using mirrors to find the line of symmetry of different shapes. Stating the number of lines of symmetry in a given each shape.	Identifying shapes that have line symmetry. Identifying the number of lines of symmetry in regular polygons and other shapes Drawing all the lines of symmetry in regular polygons	Art: Mirror Pattern. <u>Drawing:</u> Balanced shapes.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					Drawing lines of symmetry on given shapes. Identifying all the lines of symmetry on given shapes. Recognising symmetry in nature.	and other shapes. 	
Tessellation.	Observing shapes that can tessellate. Naming the shape or shapes that can tessellate.	Make patterns with geometric shapes that tessellate. Discover that the square is the best shape for tessellation and that is the reason why area is measured in square units.	Share responsibility in a group project.	Patterns with geo-metric shapes that tessellate. Tessellate: covering a plane surface by repeated use of a single shape or a combination of shapes.	Test for shapes that tessellate. Use shapes that tessellate to make patterns.	Making patterns that tessellate.	Art: Making patterns using shapes.

MEASUREMENT - LENGTH

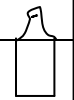
TOPIC	OBJECTIVES						AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE	CONTENT	METHODS/ STRATEGIES	EVALUATION	
MEASUREMENT - LENGTH.	Estimating, measuring and recording lengths of objects.	Estimate and measure the lengths of objects. Record lengths of objects on charts.	Awareness of the importance of measuring accurately. Share objects and co-operate in	Estimate and measure lengths of objects selecting appropriate units of	Identify millimetre and centimetre on a calibrated metre rule. Estimate the length of objects such as the chalkboard,	Choose the appropriate unit of measure for objects, e.g. chalk, eraser, sheet of cardboard, height	Science – measures the distance when objects are moved from one place to another.

TOPIC	OBJECTIVES			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
		Compare lengths measured	group activities	measurement.	floor, teacher's table, cupboard, etc. Measure the length of given lines.	of a book, a new pencil. Measure the objects and compare the measurements. Complete charts Object Length Est. Act. 	Language Art Reading stories. The Abbreviations, e.g. cm, m, km.
Conversion of linear measure.	Converting units of length from small units to large units and vice versa. Recording conversions in decimal notation.	Convert the units of length from small units to large units and vice versa.	Complete tasks working in groups.	Units of length can be converted from larger to smaller units and vice versa. 100 cm = 1 m 100 m = 1 km Lengths can be written as decimal notation, e.g. 25 cm = 0.25 m 1 mm = 0.1 cm	Measure strips of cardboard in lengths of 10mm, 10 cm, 1 m, 1 cm. Check the number of smaller units needed to cover a larger strip calibrated in another unit, e.g. mm and cm. Formulate table from their observation, e.g. a strip of 10mm will cover a strip 1 cm long. Convert lengths and give answers in decimal notation.	Convert to other units the following units: km m cm Write conversion factors.	Consumer buying
Perimeter	Measuring the distance/lengths	Measure the sides of shapes	Appreciating guidance, when	The perimeter is the distance	Measuring the perimeter of	Give the perimeter of each	Agricultural Science.

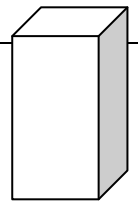
TOPIC	OBJECTIVES			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
	around objects Finding the perimeter of regular, irregular and composite shapes. Recognising properties of shapes, e.g. number of sides and angles. Problem solving.	(regular and irregular). Calculate the perimeter by adding the lengths of sides.	given.	around a plane shape. The perimeter can be found by adding the lengths of sides of plane shapes.	objects in and around the classroom. Measuring side of regular, irregular and composites shapes	figure. (1) 3cm 2cm (2) 2cm 2cm 2cm 2cm 2cm 3cm (3) 10cm 4cm 8cm 4cm 4cm 6cm	
Area of plane shapes.	Finding areas of irregular shapes. Calculating the areas of regular shapes using the formula. Finding the lengths of rectangle given the width and the area. Recognising that π is approximately equal to $\frac{22}{7}$.	Find the area of a plan shape using grid. Calculate the area of regular shapes using a formula. Solve problems finding the length or width of a rectangle, given the area and length or width.	Use known data to solve problems.	The area of a surface is measured in squares, e.g. cm^2, mm^2, km^2. Area of circle, triangle, parallelogram, rectangle, trapezium.	Use a grid to find the area of irregular shapes. Calculate the area of regular shapes using formula. Use the area and length of one side of a rectangle to find the length of the other side.	Find the area of given shapes (on a grid) by counting the number of squares. Find the area of squares, triangles, parallelograms, trapeziums, rectangles and circles, using formulae.	Social Studies:- Area of a country.
Area of surfaces of solids.	Calculating the surface area of	Calculate the surface area of	Working co-operatively in	A cube/cuboids	Find the total surface area of a	Find the missing measurements on	Geography.

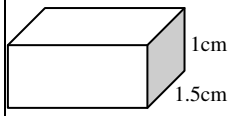
TOPIC	OBJECTIVES			CONTENT	METHODS/ STRATEGIES	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
	cubes and cuboids Solving word problems involving area and perimeter.	each cube/cuboid and find the total. Solve word problems involving perimeter and area.	groups to calculate the total surface area of cubes and cuboids.	has six surfaces. The total surface area of a cube is equal to the length times breadth of one surface times 6.	cube or cuboid. Solve problems involving application of metric measures related to local life situations.	given shapes, e.g. ? $96cm^2$ 8cm Complete the tables such as:- Length Width Area 4cm 2m - 6cm - $42cm^2$ - 12cm $108cm^2$	

CAPACITY

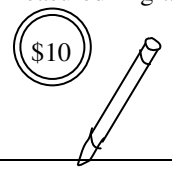
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
CAPACITY	Estimating, measuring and recording the capacity of containers.	Estimate, measure and record capacity of containers using standard unit of measurement.	Working co-operatively to complete activities.	Concept of capacity – the total space within any given container, e.g. box, bottle, tin.	Estimating the capacity of containers. Measuring the capacity of containers using a measuring cylinder or cup.	Finding the estimated and measured capacity of containers, e.g. Con. | Est. Cap. | Meas. Cap. Tin  bottle  	Science: - Measuring liquids for investigation

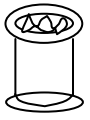
TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
						bowl	
Capacity conversion	Stating the number of millilitres in a litre. Converting millilitres to litres using decimal notation	State how many millilitres there are in one litre. Convert millilitres to litres and vice versa using decimal notation.	Co-operating and calculating accurately the conversions from one unit to another	The symbol for millilitre is ml. 1L = 1000 mL 4L = 4 x 1000 mL 2.015L = (2 x 1000 + 15) mL = 2015 mL	Use standard capacity measures for the activities. Completing table to show the conversion of litres to millilitres and millilitres to litres. Using decimal notation to record units.	Complete the spaces. Litres / Millilitres 3 - 5 - 12 - - 6000 - 4327 - 250 2.015 -	Measuring in Science.
Problems involving capacity	Solving problems based on the four operations applied to litres and millilitres	Solve problems using the four operations applied to litres and millilitres.	Complete task accurately and working in groups.	Word problems	Solving problems involving the four operations in litres and millilitres	Solve the problem (1) There are 25 children in a class. If each child was given 500 millilitres of milk, how	Social Studies:- Production of aerated drinks, molasses, etc.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
						many litres of milk was given all together?	
Volume of solids by space filling.	Calculating the volume of solids by filling the space with cubes. Making various solids form a given volume.	Find the volume of solids by filling space with cubes. Estimate the volume of certain containers.	Sharing in group activities. Participate actively in the group activities.	Volume of solid – the space occupied by any solid shape is the volume of the shape. Volume is measured in cubes, e.g. cm^3, mm^3, m^3.	Filling boxes with cubes and counting to find out the number of cubes used. Estimating the volume of given solids. Verifying the estimates.	Solve the problem (a) How many 2 cm cubes are needed to fill a larger cube of edge 6 cm? (b) How many matchboxes each with a volume of 3 cm^3 will be needed to fill a larger box with a volume of 24 cm^3?	Science activities related to the activity.
Volume by calculation	Calculating the volume of cubes and cuboids using the formulae.	Find the volume of cubes and cuboids using the formulae. Find the volume of cylinders, cones, prisms and	Sharing ideas in problem solving situations.	The formula for calculating the volume of cubes, cuboids and prisms is Volume = cross - sectional area x	Calculating the volume of given cubes or cuboids using the formula V = A x H Experiments to show the	Use the formula and find the volume of the following. (a) 	Science activities. Art activities

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
		pyramids experimentally.		height. Volume = Area of base x Height. V = A x H Volume is measured in cubic units, e.g. cm^3, m^3. 1 ℓ = 1000 mℓ = 1000 cm^3	relationships between the volumes of: cone and cylinder pyramids and prisms.	4 cm 0.5 cm 0.5 cm (b)  3 cm	

MASS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Mass	Estimating, measuring and recording the masses of objects.	Estimate the mass of objects. Measure the mass of objects. Compare mass of objects. Record the mass in grams and kilograms.	Share objects and work together in groups.	Mass: The mass of an object is measured in grams and kilograms. The symbols for:- gram and kilogram are g	Estimate mass of different objects using an improvised balance. Measure the mass of objects using a scale, and comparing the estimated mass with the actual measure.	Complete. Mass is measured in __ and __. Here are some objects where masses are measured in grams.  	Science: Health Science:- Over weight and under weight. Language Arts:- Comprehension. Recipes.



TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
				and kg respectively.		Can you identify objects where masses are measure in kg? (a) Estimate, then measure the mass of each in grams. (b) On a table, record and compare your estimates and the actual mass of the objects.	
Conversion of mass	Converting grams to	Convert grams to kilograms using	Sharing responsibilities in	To change kg to g multiply	Measure quantities in kilograms using a	Copy and complete:	Science:- Measuring

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
measurements.	kilograms using decimal notation. Converting kilograms to grams and vice versa.	decimal notation. Convert kilograms to grams and vice versa.	a group assignment.	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	balance and record these in grams. Measure objects in grams and record these in kilograms. Measure one's body mass.	kilograms grams 70 - - 1850 2.525 - - 750 Write these in grams: (a) 2 kg. (b) 5 kg 320 g. (c) 1¼ kg.	objects for investigation.
Problems on mass	Solve simple problems involving the four operations.	Read and interpret word problems. Solve simple word problems involving the four operations.	Co-operate with others in solving word problems.	Word problems involving the four operations.	Steps in solving a problem. Solving problems involving the four operations without and with conversion.	Word problems: (1) How many 50 g packets can be filled from a bag containing: (a) 450 g. (b) 3 kg. (c) 25 kg.	Language Arts:- (Comprehension) – Recipes. Rhymes and Poems using units of mass, measurement and capacity.

TIME

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
TIME	Calculating, Solving problems Reading times.	Show the relationship between a year, a decade and a century.	Co-operate and work on activities.	Time – 24-hours clock. Relationships between units of time, e.g. a	State the number of days in a decade, in a century and the number of decades in a century.	Read and write time using a 24-hour clock. - Solve simple problems.	Language Arts:- Reading problems. Art and Craft: Draw face of

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
		Solve problems by the four operations applied to time, using the 24-hour clock. Calculate time allotted to subjects on timetable. Explain the concept of a leap year.		year, a decade, a century. Subtraction Addition Time Notation. hour h minute min second s Concept of leap year. Century years are leap years if they are divisible by 400.	Show the relationship between a year, and a decade, a year and a century, a decade and a century. Explore leap year concept. Solve simple problems involving relationship between year, decade and century.		clock and put in hands to show time.

STATISTICS AND GRAPHS

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
GRAPH. Collecting and displaying data on simple graphs.	Identifying pictographs, bar graphs histograms and line graphs.	Collect and display data on simple graphs.	Neatness and accuracy in drawing graphs. Co-operate in plotting graphs.	Graphs: pictograph, bar graph, histogram and line graph.	Collecting and displaying data on simple pictographs, bar graphs and line graphs, e.g. favourite fruits of pupils.	Display your favourite games on a pictograph, bar graph or line graph.	Science. Pictograph showing examples of the states of matter.
Reading and interpreting given graphs.	Interpreting and explaining the data on pictograph, bar and line graphs and pie charts.	Interpreting data/information on pictograph, bar or line graphs and pie charts.	Analyse and report information. Share ideas.	Interpret information displayed on pictographs bar graph, histograms and line graphs.	Read and interpret data on simple pictographs, bar graphs and line graphs where one picture represents one or more	Read and interpret information on given pictographs, bar graphs, histograms, line graph and pie charts.	Social Studies. Pie chart reflecting various information on Caricom countries.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					objects. Read and interpret data on simple line graphs, histograms and pie charts.		
Constructing and reading information from tally charts and tables.	Explaining what is a tally chart. Constructing and reading tally charts and tables.	Construct and read tally charts and tables.	Co-operation Analyse charts and tables in groups.	Tally charts and tables.	Read and write tallies given the numerals and vice versa e.g. 9 = ~~1111~~ 1111 and ~~1111~~ 1111 = 9 Collect and display information on tally charts and tables. Read and interpret data on tally charts and tables.	Complete the tables, given the numerals and tallies. Construct, read and interpret information on tally charts and tables.	Language Arts:- Spelling – collecting, interpreting tally, constructing chart.
Construct frequency tables using tallies to find the mode.	Constructing frequency tables and finding the mode.	Construct frequency tables using tallies to find the mode.	Co-operation Analyse tables. Respect other pupils' opinions. Neatness.	Frequency tables, mode.	Construct frequency tables from given data. Find the mode from frequency tables.	Construct frequency tables using tallies. Find the mode from frequency tables.	<u>Social Studies.</u> Science. Temperature.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
Constructing pictographs, bar graphs and histograms to show information contained in tables.	Constructing pictographs, bar graphs and histograms.	Interpret information. Construct pictographs, bar graphs and histograms to display information.	Analyse information Share ideas. Neatness and accuracy in plotting graphs. Group work.	Construct pictographs, bar graphs and histograms.	Read and interpreting information contained in tally charts. Construct pictographs, bar graphs and histograms to show this information.	Read and interpret information contained in tables and tally charts. Construct pictographs and bar graphs to show information contained in tables and tally charts.	Social Studies Census. Science. Amount of rainfall for a period as reflected on graphs.
Choose a suitable scale to display information on pictographs, bar graphs, histograms and point graphs.	Selecting suitable scales. Display information on graphs.	Determine a suitable scale. Construct graph to display information. Identify scale used in given graphs.	Make decisions. Critical thinking. Work co-operatively. Appreciation of other pupil's work.	Construct pictographs, bar graphs and histograms.	Determine a suitable scale for displaying data. Use scale to display given data on pictographs, bar graphs and point graphs. Identify the scale used on pictographs, bar	Choose a suitable scale to display information on pictographs, bar graphs and point graphs. Identify the scale used on graphs.	Science. Volume of cylinders of various sizes. Social Studies. Sugar/Rice production for a five years period.

TOPIC	OBJECTIVE			CONTENT	METHODS/ STRATEGIES-	EVALUATION	AREAS OF INTEGRATION
	SKILLS	KNOWLEDGE	ATTITUDE				
					graphs and point graphs.		