2021

Recommended Remediation Strategies for developing Core Content and Skills in Primary Mathematics:

INFANT TWO – STANDARD FIVE

CURRICULUM PLANNING AND DEVELOPMENT DIVISION

NOVEMBER 2021

Contents

INTRODUCTION

The **Recommended Remediation Strategies for developing Core Content and Skills in Primary Mathematics: INFANT TWO – STANDARD FIVE** document has been produced to provide support for teachers and parents to build concepts and skills in students, to mitigate learning loss due to the COVID 19 Pandemic.

Diagnostic tests based on the four content strands; number, measurement, geometry, and statistics as identified in the Primary Curriculum were constructed and administered to all students in classes from Infant II to Standard Five in all Government and Government Assisted Primary Schools.

A response to the findings from these tests is a set of recommended strategies for remediation classified into three levels based on the number of correct items, per strand. The strand specific classification of bands of performance by levels is included in this document in Appendix 1. Three levels of students' performances were addressed in each strand: Level I, Level 2, and Level 3. Level 1 recommendations address very little or no understanding of content in the respective strands, Level 2 recommendations address minimum to average understanding of content in the respective strands, and Level 3 recommendations address above average understanding of content in the respective strands.

Recommendations are presented in this document according to class levels. They are suggestions for teachers' use to remedy students' understanding, **based-on analysis of students' scores per strand according to the different levels of performance**. The recommendations are structured to sequentially develop the child's understanding of concept and skill in each strand. Teachers are therefore asked to **use the strategies in sequence**.

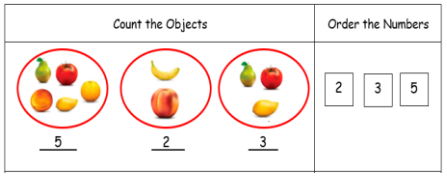
Strategies for parents and guardians are grouped according to class levels: Infant 2 and Standard 1; Standards 2 and 3; and Standards 4 and 5, in the document. Teachers are kindly asked to share and discuss with the parents and guardians, all the strategies they can use to complement and reinforce classroom instruction, to support the students' development of concepts and skills while at home in their natural environment.

Developed by
The Mathematics Unit
Curriculum Planning and Development Division
Ministry of Education, GORTT
(November 2021)

INFANT TWO

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
☐ Connect number names and numerals to quantities up to 10.	• Use concrete materials to facilitate the counting of objects (same and different), one at a time, to determine the number of objects (up to 10). • Question students to elicit how they use numbers in their everyday life. E.g., I count my cookies. I have 5 cookies.  • Encourage arrangement of objects in different ways and verbal counting. • Use rote counting in ascending and descending order, daily.	• Use games to match flash cards with number names and numerals to physical quantity (link to subitize). • Engage students in reading and writing number names and numerals and matching to quantity physically. • Allow students to create and display number charts by drawing quantities and writing number names and numerals.  three 3 • Engage students in forward and backward counting while they demonstrate quantities using their fingers. • Use spelling competitions, oral drills, quizzes and	• Engage students in reading and writing number names and numerals and matching to quantity represented pictorially (link to subitize). • Engage students in drawing objects for specified number names and numerals. • Provide opportunities for students to play number bingo using flashcards with number names, numerals and pictorial representation of quantities. • Allow students to play “what is wrong” games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
		games to enhance retention and recall of the spelling of numbers.	outs for reinforcement and practice. • Encourage students to create and present a verbal story about their favourite number. • Encourage students to self-monitor their own growth by recording number names that they can spell.
☐ Compare groups of objects and order numbers.	• Provide opportunities for students to count objects up to 10. • Engage students in sequencing number names and numerals. • Use explicit teaching to demonstrate one-to-one correspondence between two groups of objects to determine more than, less than or the same. • Use concrete materials to allow for the formation of two and then three groups of objects arranged	• Engage students in discussion about pattern observed when moving from one number to the next (ascending/counting forward) as they draw quantities and write numerals in sequence. • Allow students to create groups that are more than and less than a given group, e.g., show me a group with more than 6 objects and less than 6 objects. • Allow students to use concrete materials to form	• Engage students in discussion about pattern observed when moving from one number to the next (ascending/counting forward and descending/counting backward) as they draw quantities and write numerals in sequence. • Provide opportunities for students to complete exercises in worksheets related to comparing and ordering, such as, circle the group with more than 5 objects, draw a group with less than 7 objects.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	vertically or horizontally to facilitate one-to-one correspondence to determine groups with more than, less/fewer than or the same (no counting). • Encourage the use of appropriate comparison vocabulary (verbally).	two and then three groups of objects arranged vertically or horizontally to facilitate one-to-one correspondence and counting to determine groups with more than or less/fewer than. • Provide opportunities for students to order the groups (concrete work). • Encourage the use of appropriate comparison vocabulary using the words more than, less than, as many as, most, least, same etc. in phrases such as 6 is more than 2.	• Provide opportunities for students to order three groups of objects represented pictorially.  • Allow students to write and read sentences using comparative vocabulary. • Engage students to use one-to-one correspondence or count on and back to answer questions to determine how many more or fewer. • Use games to order flash cards with quantities, number names and numerals e.g., each student is given a number and any 3 students are selected to stand in order from smallest to largest or a student stands with number shown and teacher calls on all students with more than or less

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
			than shown amount to stand and to state how many more/less. • Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice.
☐ Order objects to describe position (first, second, third, last).	• Provide opportunities for students to role play real life scenarios related to position using concrete materials as necessary e.g., persons forming a line to enter a class or in a bank, persons running a race, cars at a gas station. • Encourage students to use the language of position (e.g., before, after, in front of, behind) and ordinal numbers, verbally. • Encourage students to play red light, green light, one, two, three and state	• Design activities whereby students create lines of objects and label positions of objects using flash cards with words they have used verbally and read. • Encourage students to use the language of position (e.g., before, after, in front of, behind) and ordinal numbers in writing. • Read stories to students and encourage them to illustrate positions using objects and pictures/drawings and appropriate language.	• Use worksheets with items related to position e.g., students label positions of persons in a line or colour an object in a given position. E.g., Noah is first and Ravi is third in the line to wash hands. Lily is second and Mia is last in the line. Write the names of the children in their places in the line. 

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	positions of persons after each round. • Encourage the use of appropriate language related to position in activities associated with other subject areas, e.g., Dance and Physical Education.	• Allow students to create charts to display by sticking pictures and writing labels to show position. • Use spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of words.	• Provide opportunities for students to order objects based on position assigned to each object. • Use instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Encourage the use of self-monitoring checklist to record progress in memorizing the spelling of words.
☐ Solve one-step real-life problems involving addition (concrete and pictorial modes only, no symbol). ☐ Solve one-step real-life problems involving subtraction (concrete and pictorial modes only, no symbol). (Using both vertical and horizontal arrangement	• Use think alouds and modelling to explicitly demonstrate how real-world problems are solved through the use of manipulatives. • Use guided questions and scaffolding to assist students in solving problems. • Allow students to work in groups to share ideas and	• Create a simple problem-solving process chart and encourage students to follow steps as a routine. • Review the problem-solving steps explicitly while demonstrating or teaching various strategies. • Encourage the use of a variety of problem-solving strategies such as use of manipulatives, acting it out,	• Encourage the creation and solving of number stories using a variety of strategies. • Encourage students to verbally state the steps to follow when solving problems so that it becomes a habit of the mind. • Pose problems with errors or ones that are incomplete and discuss with students. • Encourage students to “spot the error” by providing solutions with

NUMBER			
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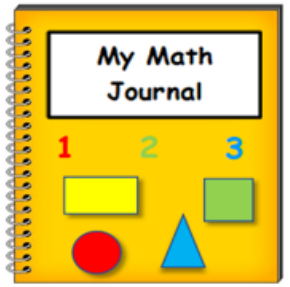
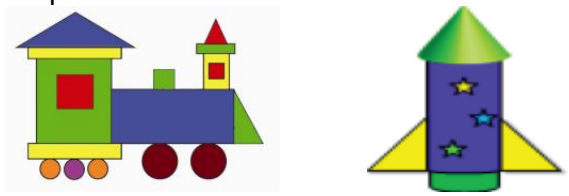
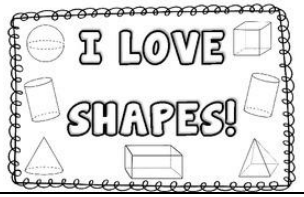
of objects/pictures and drawings)	to solve problems using concrete materials. • Allow students to model think alouds to explain how problems were solved. • Assist students to write simple statements, e.g., 5 take away 2 equals 3; 3 add 2 equal 5. • Use games to practice addition or subtraction, such as those involving 2 dice where repeated numbers can be used to limit the sum to 10 and under.  4 add 3 is equal to 7.	drawings and mental strategies such as add one/subtract one (forward counting/backward counting) to solve problems. • Guide students to write or complete simple statements when solving problems. • Encourage students to explain how they solved problems and to describe what happens to a group after addition/subtraction is performed. • Encourage the use of appropriate vocabulary such as join, altogether, add, take away, remove, remain and left. • Display words on a word wall and review daily different contexts in which they can be used.	errors and elicit the accurate answer. • Allow time for independent practice and sharing of solutions. • Use instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Encourage students to actively seek problems to solve and to create a portfolio of problems they have solved independently. • Encourage students to write in their journals about problem solving, e.g., Why was this problem easy to solve? 

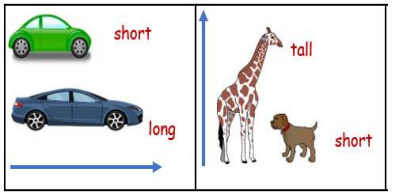
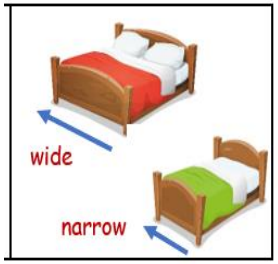
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
		• Provide reinforcement and practice materials to assist students in strengthening their problem-solving skills.	

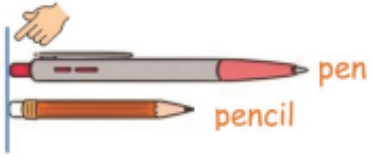
GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
☐ Describe solids and plane shapes using appropriate vocabulary related to geometric attributes (colour, size, shape, position).	• Allow students to play with solids and plane shapes to create models.  • Teach and review words related to colour, size, position and names of shapes (verbally).	• Allow groups to create and display charts by matching flashcards with word names or descriptions to shapes. • Demonstrate the use of an adapted Frayer model – properties, examples and non-examples and allow groups of students to complete and present on assigned shapes. • Provide opportunities for students to match solids to pictorial representations and read and write names.

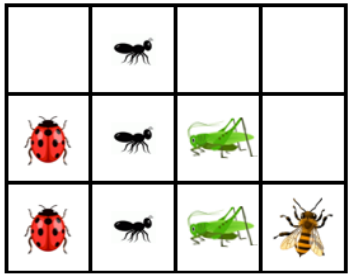
GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
	• Provide opportunities for 'show and tell' activities where students name and describe shapes used to create models. • Encourage students to develop and use vocabulary associated with names, colour, size, shape and position, verbally.  The green box is under the table. • Allow students to explore the environment to locate and describe shapes and play 'I spy' games. • Encourage students to create a scrap book. 	• Engage students in various colouring activities and creation of collages. • Allow students to create riddles or hints about shapes and allow guessing by the class to identify the shape (Guess who am I). • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of new words.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
☐ Explore and describe objects using the language associated with mass/weight (e.g., heavy/light) so as to develop the concept of mass/weight.	• Provide opportunities for students to lift/heft objects and to describe their weight.   light heavy • Allow for display of objects that are classified according to weight. • Engage students in discussion about heavy/light objects in real life.   newspaper book The newspaper is lighter than the book.	• Design activities and games for students to find objects that are heavier or lighter than given objects (by hefting, pushing or pulling). • Allow students to describe objects that are easy or difficult to lift, push or pull. • Encourage the use of appropriate vocabulary and the reading of new words.	• Allow students to identify objects in worksheets according to mass/weight descriptions. • Encourage students to write/complete sentences about the weight of objects e.g. The pumpkin is heavier than the cucumber. • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of new words.

☐ Describe times of the day (e.g., night-time, daytime, lunchtime) and related activities (e.g., eating breakfast, going to sleep) using appropriate vocabulary.	• Encourage students to state and describe activities that they do during the course of a day clearly indicating descriptions for different times of the day. • Allow students to present "show and tell" pictures of activities that they do and state the time of the day the activities are done.   	• Allow students to classify pictures under different times of the day with appropriate reasoning. • Assist students in creating display charts with pictures and matching phrases that reflect appropriate use of vocabulary. • Encourage discussion of activities that are repeated during different times of the day.	• Encourage students to create a scrap book of activities that they do at different times of the day. • Provide opportunities for students to listen to stories and to identify times of the day and related activities. • Engage students in discussion about the most appropriate time for different activities. • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of new words.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
☐ Compare the lengths of two objects using direct comparison (placing side by side and aligning one end) and explain reasoning, using appropriate vocabulary e.g., longer/shorter.	• Allow for the exploration of objects in the environment and discussion on their lengths clearly articulating from one end to the next.  • Provide opportunities for classification of objects according to length (e.g., long/short; tall/short; thin/fat). • Engage students in practical activities related to the comparison of the length of two objects (including students) placed vertically. • Encourage the use of appropriate vocabulary associated with length (e.g., short/shorter; tall/taller), verbally.	• Provide opportunities for classification of objects according to length, gradually introducing different vocabulary (e.g., wide/narrow; deep/shallow).  • Explicitly teach unfamiliar words or vocabulary using appropriate concrete materials and contexts. • Engage students in practical activities related to the comparison of the length of two objects placed vertically or horizontally. • Elicit responses from students about the rules to follow when comparing	• Engage students in practical activities related to the comparison of the length of two objects placed vertically or horizontally or diagonally. • Encourage the use of appropriate vocabulary associated with length (e.g., short/shorter; tall/taller; as long as, long/longer) when explaining answers. • Engage students in worksheet activities related to the comparison of the length of two objects placed vertically or horizontally or diagonally or to draw one object longer or shorter etc. than a given drawing of an object. • Encourage students to write/complete sentences about the lengths of objects e.g. The toothbrush <u>is longer than</u> the toothpick.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Encourage discussion about the placement of objects when their lengths are to be compared (that is, side by side, aligning one end).	length. E.g., start at the same point  The pen is longer than the pencil. • Encourage the use of appropriate vocabulary associated with length (e.g., short/shorter; tall/taller; as long as, long/longer) when explaining answers. • Allow students to assist in the creation of charts to display pictures and words related to lengths.	• Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, online games, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of new words.

STATISTICS		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
☐ Construct and interpret object chart based on real-life problems or situations.	• Provide opportunities for students to classify objects using different criteria (e.g., types of fruits, colour of bags, students with long hair) based on a real-life scenario or story. • Model the construction of object charts clearly indicating how objects are to be arranged. • Question students based on constructed object chart limiting responses that require counting first and then comparison. **My Insect Collection**  • Model how to answer questions and allow students to clearly show and explain how an answer was derived using appropriate movements of fingers. • Use discussion to develop skills in construction and interpretation. • Assist students in constructing object charts. • Encourage the use of appropriate vocabulary when answering questions, verbally.	• Provide opportunities for students to collect data and engage in construction and display of object charts, as a group and individually and to present to the class. • Allow opportunities for students to analyse constructed charts to identify errors and state how they can be corrected. • Question students to elicit responses based on simple to difficult questions including comparative type questions and decision-making questions. • Encourage students to explain their reasoning. • Encourage and assist students in reading, creating and answering questions based on object charts. • Use learning materials such as instructional videos, online games, virtual manipulatives and newspaper pull-outs for reinforcement and practice.

STANDARD ONE

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
☐ Connect number names and numerals to quantities up to 20.	• Use concrete materials to facilitate the counting of objects (same and different), one at a time, to determine the number of objects (up to 20). • Question students to elicit how they use numbers in their everyday life. E.g., I count my cookies. I have 10 cookies.  • Encourage arrangement of objects in different ways and verbal counting. • Use rote counting in ascending and descending order, daily.	• Use games to match flash cards with number names and numerals to physical quantity (link to subitize up to 10). • Use visualization of subitized quantities to aid in determining the number of objects. • Engage students in reading and writing number names and numerals and matching to quantity physically. • Allow students to create and display number charts by drawing quantities and writing number names and numerals. • Engage students in forward and backward counting while they demonstrate quantities	• Engage students in reading and writing number names and numerals and matching to quantity represented pictorially (link to subitize up to 10). • Engage students in drawing objects for specified number names and numerals. • Provide opportunities for students to play number bingo using flashcards with number names, numerals and pictorial representation of quantities. • Allow students to play “what is wrong” games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos,

NUMBER			
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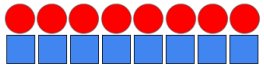
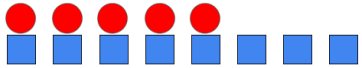
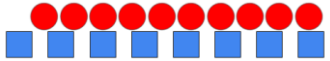
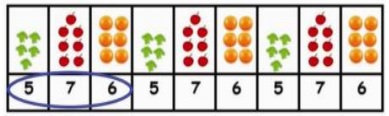
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
		using their fingers (up to 10), and while pointing to number chart and number line (up to 20). • Use spelling competitions, oral drills, quizzes and games to enhance retention and recall of the spelling of numbers.	online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Encourage students to create and present a verbal story about their favourite number. • Encourage students to self-monitor their own growth by recording number names that they can spell.
☐ Compare groups of objects and order numbers.	• Provide opportunities for students to review counting objects up to 20 and reading and writing number names and numerals. • Engage students in sequencing number names and numerals as they rote count (forward and backward), using number charts and number line to 20. • Use explicit teaching to demonstrate one-to-one	• Engage students in discussion about pattern observed when moving from one number to the next (ascending/counting forward) as they draw quantities and write numerals in sequence. • Engage students in reading and writing number names and numerals that are sequenced in number charts and number lines and to	• Engage students in discussion about pattern observed when moving from one number to the next (ascending/counting forward and descending/counting backward) as they draw quantities and write numerals in sequence. • Design activities for students to state and write missing numbers in number charts and on number lines.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	correspondence between two groups (and then three) of objects to determine more than, less than or the same.  These groups have the same number of objects.  There are more squares than circles. There are fewer circles than squares. • Use concrete materials to allow for the formation of two and then three groups of objects arranged vertically or horizontally to facilitate one-to-one correspondence to determine groups with more than, less/fewer than or the same (no counting).	identify numbers before, after and between. • Design activities for students to state and write missing numbers in number charts and on number lines. • Allow students to create groups that are more than and less than a given group, e.g., show me a group with more than 11 objects and less than 11 objects. • Allow students to use concrete materials to form two and then three groups of objects arranged vertically or horizontally to facilitate one-to-one correspondence and counting to determine groups with more than or less/fewer than. • Provide opportunities for students to order the groups (concrete work).	• Provide opportunities for students to complete exercises in worksheets related to comparing and ordering, such as, circle the group with more than 15 objects, draw a group with less than 17 objects.  There are 2 more circles than squares. • Provide opportunities for students to order three groups of objects represented pictorially. • Allow students to write and read sentences using comparative vocabulary. • Engage students to use one-to-one correspondence or count on and back to answer questions to determine how many more or fewer.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	• Encourage the use of appropriate comparison vocabulary (verbally).	• Encourage the use of appropriate comparison vocabulary using the words more than, less than, as many as, most, least, same etc. in phrases such as 15 is more than 12.	• Use games to order flash cards with quantities, number names and numerals e.g., each student is given a number and any 3 students are selected to stand in order from smallest to largest or a student stands with number shown and teacher calls on all students with more than or less than shown amount to stand and to state how many more/less. • Design activities for students to order three numbers either in ascending or descending order. • Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
☐ Explore patterns using repetition of 2 to 4 elements.	• Provide materials (e.g., displays of objects arranged following a repeating pattern-using 2 elements and no pattern) that students will explore and describe their observations. • Use discussion to determine which lines of objects show a repeating pattern and the objects being repeated. • Design activities that allow for the exploration of repeating patterns in the environment, in sounds and movements, and in provided materials, and discussion of observations. • Engage students to identify pattern rules and to extend the repeating pattern.  	• Model the creation of repeating patterns that focuses on the number of objects, e.g.,  one two one two one two 1 2 1 2 1 2 • Use discussion to determine the objects/shapes being repeated and how many. • Provide materials (e.g., displays of objects arranged following a repeating pattern) that students will explore and describe their observations focusing on the objects being repeated and the number of objects. • Allow students to record the number of objects under the objects and to state the pattern rules. • Design activities that allow for practice of determining pattern rules, extending	• Model the creation of repeating patterns with 2 to 4 elements in its core that focuses on the number of objects. • Use discussion to determine the objects/shapes being repeated and how many. • Provide materials (e.g., displays of objects arranged following a repeating pattern-using 2-4 elements) that students will explore and describe their observations focusing on the objects being repeated and the number of objects. • Allow students to record the number of objects under the objects and to state the pattern rules and extend the patterns. • Design activities that allow for practice of determining pattern rules, extending

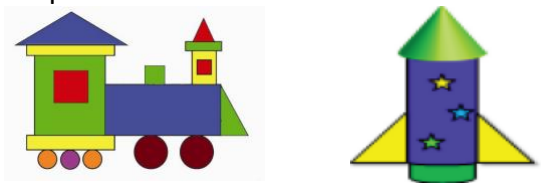
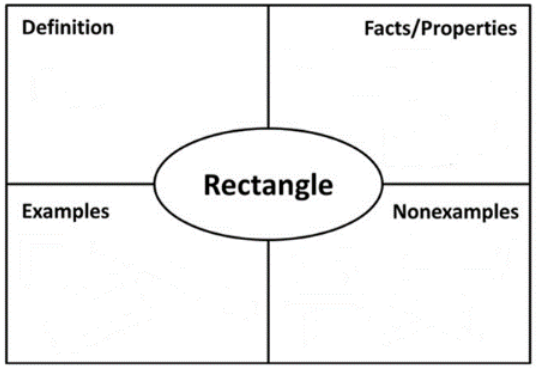
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	• Engage students to insert missing elements in repeating patterns. • Allow students to create repeating patterns using 2 different objects repeatedly and to present their creations to the class.	patterns and inserting missing elements.  • Allow students to create repeating patterns using objects and numbers and to present their creations to the class.	patterns and inserting missing elements. • Provide worksheets with patterns using 2 to 4 elements in its core and non-patterns to engage students to identify and describe patterns and non-patterns and to state the errors or the part that repeats. • Design activities that allow for practice of determining pattern rules, extending patterns and inserting missing elements in pictorial form. • Allow students to create repeating patterns pictorially using drawings and numbers and numbers only and to present their creations to the class. • Encourage students to create a portfolio with created patterns.

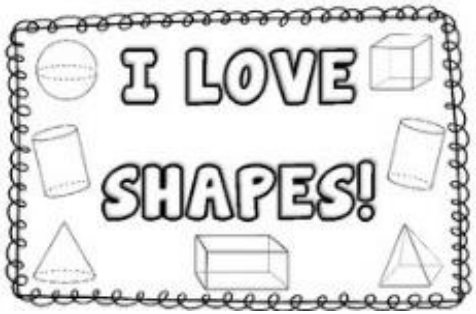
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
			• Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice.
☐ Solve real-life problems involving addition. ☐ Solve one-step real-life problems involving subtraction. (Using both vertical and horizontal arrangement of objects/pictures and drawings)	• Use think alouds and modelling to explicitly demonstrate how real-world problems are solved through the use of manipulatives. • Use guided questions and scaffolding to assist students in solving problems. • Allow students to work in groups to share ideas and to solve problems using concrete materials. • Allow students to model think alouds to explain how problems were solved. • Assist students to write simple statements, e.g., 5 take away 2 equals 3; 3 add 2 equal 5.	• Create a simple problem-solving process chart and encourage students to follow steps as a routine. • Review the problem-solving steps explicitly while demonstrating or teaching various strategies. • Encourage the use of a variety of problem-solving strategies such as use of manipulatives (including the number line), acting it out, drawings and mental strategies such as add one/subtract one (forward counting/backward counting) to solve problems.	• Encourage the creation and solving of number stories using a variety of strategies. • Encourage students to verbally state the steps to follow when solving problems so that it becomes a habit of the mind. • Pose problems with errors or ones that are incomplete and discuss with students. • Encourage students to “spot the error” by providing solutions with errors and elicit the accurate answer. E.g., There are 4 candy canes in one pack. There are 2 candy canes in another pack.

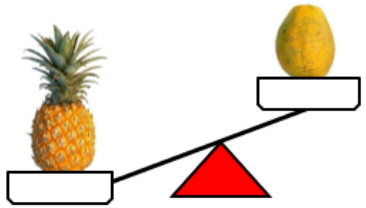
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	• Use games to practice addition or subtraction, such as those involving 2 dice where repeated numbers can be used to limit the sum to 20 and under.	• Guide students to write or complete simple statements when solving problems including symbols (with addition problems up to 3 addends), e.g., 15 take away 4 is equal to 11, 15 - 4 = 11; 13 plus 2 is 15, 13 + 2 = 15 • Encourage students to explain how they solved problems and to describe what happens to a group after addition/subtraction is performed, highlighting differences. • Encourage the use of appropriate vocabulary such as join, altogether, add, take away, remove, remain and left. • Display words on a word wall and review daily different contexts in which they can be used.	How many candy canes are there in total?  4 + 1 = 5 • Allow time for independent practice and sharing of solutions. • Use instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Encourage students to actively seek problems to solve and to create a portfolio of problems they have solved independently. • Provide opportunities for students to solve mechanical problems and to create worded problems to match a given number sentence.

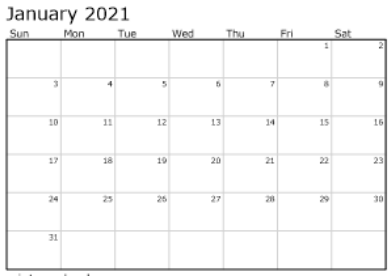
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
		• Provide reinforcement and practice materials to assist students in strengthening their problem-solving skills.	• Encourage students to write in their journals about problem solving, e.g., Why was this problem easy to solve?

GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
☐ Describe solids and plane shapes using appropriate vocabulary related to geometric attributes (size, shape, position, colour, ability to roll, stack and stand).	• Allow students to play with solids and plane shapes to describe each shape individually and then to create models. • Teach and review words related to colour, size, position and names of shapes (verbally) using appropriate resources.	• Allow groups to create and display charts by matching flashcards with word names or descriptions to shapes. • Demonstrate the use of a Frayer model and allow groups of students to complete and present on assigned shapes.

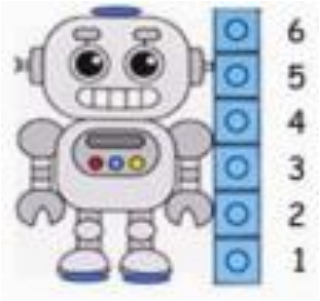
GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
	• Design activities where students manipulate solids to determine which solids can roll, stack and stand. • Provide opportunities for 'show and tell' activities where students name and describe shapes used to create models.  • Encourage students to develop and use vocabulary associated with names, colour, size, shape and position, along with being able to roll, stack and stand, verbally.  The green cube is under the table.	 • Provide opportunities for students to match solids to pictorial representations and read and write names. • Engage students in various colouring activities and creation of collages. • Allow students to create riddles or hints about shapes and allow guessing by the class to identify the shape (Guess who am I?) and play "Which solid am I?" using a 'Mystery Bag.' • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Allow students to present a verbal story about their favourite solid.

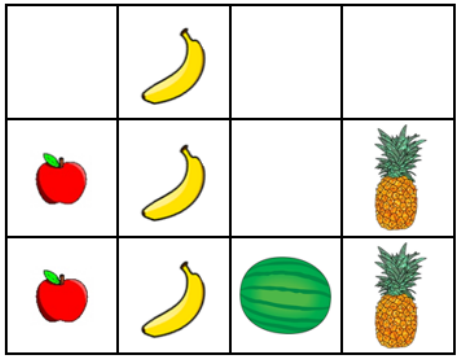
GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
	• Allow students to explore the environment to locate and describe shapes and play 'I spy' games. • Allow students to create foldables for reinforcement.  • Encourage students to create a scrap book.  	• Encourage visualisation of shapes and drawing in the air. • Use learning materials such as instructional videos, online games, virtual manipulatives, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance retention and recall of the spelling of new words.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
☐ Use pictorial representations of equal arm balances to determine which object is heavy or light.	• Provide opportunities for students to lift/heft objects and to describe their weight. • Design activities where students use equal arm balances to verify and compare the weight of two objects. • Engage students in discussion about observations of the arms of the equal arm balance as objects are placed in the pans.  • Allow for display of objects that are classified according to weight. • Engage students in discussion about heavy/light objects in real life.	• Design activities where students use equal arm balances to compare the weight of objects. • Design activities and games for students to find objects that are heavier or lighter than given objects and to verify using the equal arm balance. • Allow students to create pictorial representations of real equal arm balances with objects by choosing appropriate pictures provided by the teacher and sticking pictures in the pans to represent the concrete model. • Encourage the use of appropriate vocabulary and the reading of new words.	• Allow students to complete exercises presented in worksheets with equal arm balances and to identify objects according to mass/weight descriptions. • Encourage students to write/complete sentences about the weight of objects e.g. The pumpkin is heavier than the cucumber. • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, spelling competitions, oral drills and quizzes to enhance

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
			retention and recall of the spelling of new words.
☐ Interpret calendars.	• Review the days of the week and activities that students engage in from day to day. • Teach students about the months of the year by eliciting their dates of birth and referring to activities that take place in different months, e.g., Christmas. • Teach students about calendars by presenting calendars and discussing their features such as the arrangement of the days, weeks and months. 	• Provide opportunities for students to answer questions based on information presented in calendars, verbally and provide explanations on how answers were derived. • Allow students to stick pictures of events in calendars and to write the dates of the events, e.g., birthday, Christmas, Republic Day. • Encourage students to use appropriate vocabulary.	• Provide opportunities for students to answer questions based on information presented in calendars, verbally and provide explanations on how answers were derived, gradually increasing the level of difficulty of questions. • Encourage students to create a scrap book of activities that they do at different times of the year and to write the dates. • Provide opportunities for students to complete worksheet exercises (assisting with the reading of questions as necessary). • Allow students to play "what is wrong" games by providing worksheets with

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Pose literal questions to students about calendars and model how answers are determined, if necessary, and/or allow students to explain how answers were derived, e.g., name the days of the week, name the months of the year in sequence, identify the number of days in each month, identify which days are weekend and school days, write today's date.		errors and elicit the accurate answer. • Use learning materials such as instructional videos, worksheets and newspaper pull-outs for reinforcement and practice. • Use word walls, oral drills and quizzes to enhance retention and recall.
☐ Measure lengths and distances using arbitrary/non-standard units.	• Provide opportunities for students to join materials such as, link cubes and blocks, of specified lengths, e.g., create a caterpillar that is 4 link cubes in length. • Allow students to create and present objects and state the number of items/units that were used along the different lengths.	• Provide opportunities for students to measure the lengths of objects using various resources (such as, paperclip, link cubes, blocks, palette sticks) after modelling the process and discussing rules with students (placing same sized units end-to-end without leaving gaps, without	• Engage students in measuring the lengths of drawings of objects presented vertically or horizontally or diagonally and writing the measure. • Encourage the use of appropriate vocabulary associated with length (e.g., The wall was 11 blocks tall) when explaining answers.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Allow for the exploration of the lengths of objects in the environment and discussion on their lengths, e.g., a wall was 10 blocks long.	overlapping and arranged in a straight line).  My robot is 6 blocks tall. • Elicit responses from students about the rules to follow when measuring length by demonstrating errors along with what is correct. • Allow students to display their work and state the number of units used.	• Engage students in worksheet activities to determine the length of objects with the measuring units drawn. • Encourage students to complete sentences about the lengths of objects e.g. The toothbrush is 12 paperclips long. • Allow students to play "what is wrong" games by providing worksheets with errors and elicit the accurate answer. • Use learning materials such as instructional videos, online games, worksheets and newspaper pull-outs for reinforcement and practice. • Use charts with appropriate diagrams to remind students of measuring rules.

STATISTICS		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
☐ Interpret picture charts based on a real-life problem or situation.	• Provide opportunities for students to classify pictures using different criteria (e.g., types of fruits) based on a real-life scenario or story. • Model the construction of picture charts clearly indicating how pictures are to be arranged (use vertical arrangement then horizontal arrangement). (This can also be done by replacing objects in object charts with pictures.) • Question students based on constructed picture chart limiting responses that require counting first and then comparison. **Our Favourite Fruits**  • Model how to answer questions and allow students to clearly show and explain how an	• Provide opportunities for students to collect data and engage in construction and display of picture charts, as a group and individually and to present to the class. • Allow opportunities for students to analyse constructed charts to identify errors and state how they can be corrected. • Question students to elicit responses based on simple to difficult questions including comparative type questions and decision-making questions. • Encourage students to explain their reasoning. • Encourage and assist students in reading, creating and answering questions based on picture charts. • Use learning materials such as instructional videos, online games, virtual manipulatives and newspaper pull-outs for reinforcement and practice.

STATISTICS		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
	answer was derived using appropriate movements of fingers. • Use discussion to develop skills in construction and interpretation. • Assist students in constructing picture charts. • Encourage the use of appropriate vocabulary when answering questions, verbally.	

RECOMMENDATIONS FOR PARENTS

INFANT TWO and STANDARD ONE

NUMBER

- Encourage counting of objects around the home, parts of the body as well as actions, daily e.g., toys, books, cutlery, fingers, tools, pieces of clothing, items in the grocery bag, jumps, claps (up to 20).

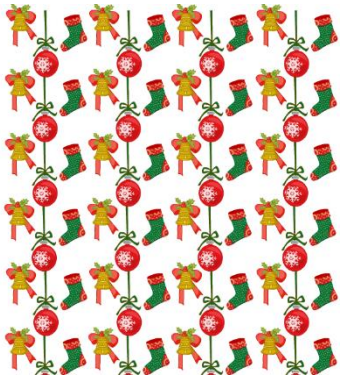
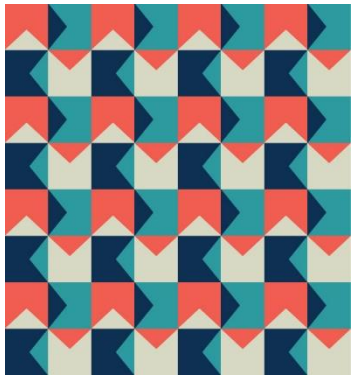
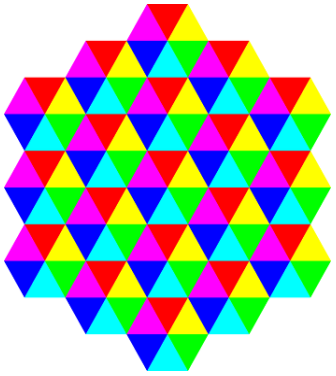
- Help your child to make a number chart with quantities, word names and numerals, e.g.,

three 3

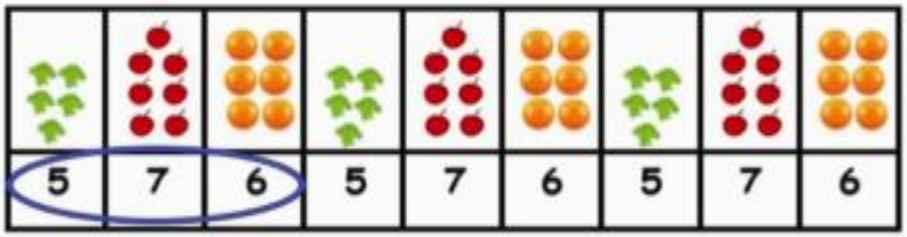
and display the work created (up to 20).

- Listen to your child count from zero to twenty and from twenty to zero, daily.
- Listen to your child read and spell word names, e.g., eleven, twelve.
- Listen to your child recite nursery rhymes such as one two buckle my shoe and encourage the use of fingers to show number.
- Encourage the reading of numbers in books, newspapers and on labels, for example, on medication and canned foods.
- Encourage your child to look for patterns around the home and in the environment, e.g., in tablecloths, curtains, gift wrapping paper, tiled walls or floors etc.

NUMBER

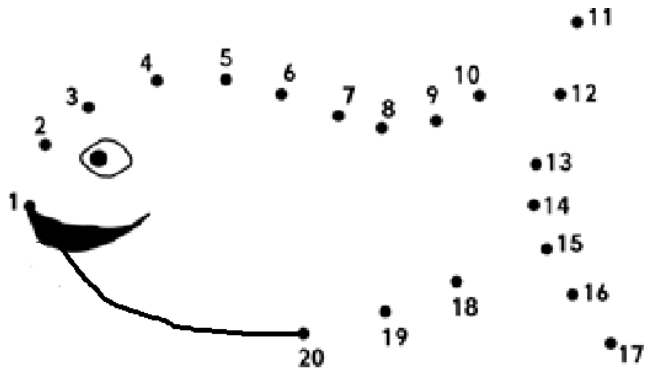
- Engage your child in the creation and completion of repeating patterns. E.g., What comes next?



Three numbers, 5, 7 and 6 repeat in that order in this pattern.

NUMBER

- Play games with your child such as:
  - citing/identifying numbers on the number plates of cars and road signs and buildings during a drive/walk
  - I spy – e.g. I spy a number that is more than 10
  - Let's create a pattern using sounds or movement, e.g., clap your hands and stomp your feet – clap, stomp, clap, stomp, clap, stomp
  - What comes next? e.g., four, three, four, three, four, three, four, three, ……
  - Am I correct? – the numbers 6, 4 and 12 in order from smallest to largest is 4, 6 and 12
  - How fast can you say a number! – e.g., What number comes between 15 and 17?
  - Red light, green light one two three (encourage your child to state the position of persons after each round – e.g., Who is first, second, third, last?)
  - I am a shopkeeper, where "play" items are bought and sold
  - Board games and card games involving counting, adding and subtracting
- Provide 'connect the dots activities' with numbers that are to be connected in the correct order to create a shape/drawing which can be coloured, e.g.,
-



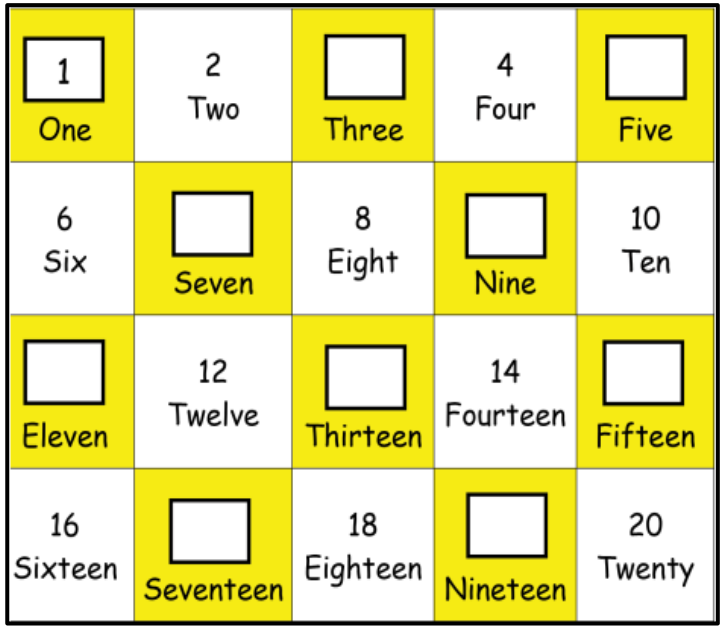
NUMBER

- Ask questions on everyday activities, e.g.
  - How many eggs did Mummy boil?
  - How many cars are in the line?
  - How many persons ran the race?
  - Who ate the most plums?
  - Who completed their chores first?
  - Who was last in the line?
  - Who was behind Mary?
  - Which object is in front of the vase on the table?
  - How many sandwiches did we make altogether?
  - How many more plates than spoons are on the table?
  - How many fewer oranges are there than bananas?
- Read stories and ask questions related to number, e.g.
  - How many bears are in the picture?
  - Who picked the most flowers?
  - How many more cars are there than trucks?
  - Who placed second in the race?
- Use everyday contexts to create problems for your child to solve, e.g.,
  - Tom ate two guavas. Martin ate three. How many did they eat altogether?
  - Bob had 20 cents. He purchased a sweet for 10 cents. How much money does he have remaining?
  - Alice bought eight bananas. Nadia ate three. How many are left?

    (Encourage your child to use objects and drawings to solve problems and to explain what was done.)

NUMBER

- Use learning materials such as worksheets, instructional videos and online games to assist your child.



GEOMETRY

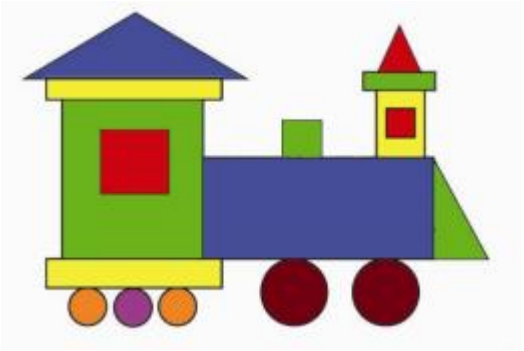
- Allow your child to play with objects in the home e.g., balls, cans, toilet paper roll, boxes, party hats.
- Label the objects at home for your child to read and spell.
- Encourage your child to describe objects, e.g., The box that is on top of the shelf is big and red. This small ball can roll.

The cube is green but the cuboid is multicoloured.

- Play 'I spy' games with your child to locate objects in the environment and at home, e.g., I spy an object that is round and blue.
- Allow your child to use objects to create models which can be displayed at home.

- Allow your child to cut out plane shapes such as squares, triangles, rectangles and circles and use them to make pictures or designs using patterns or cards.

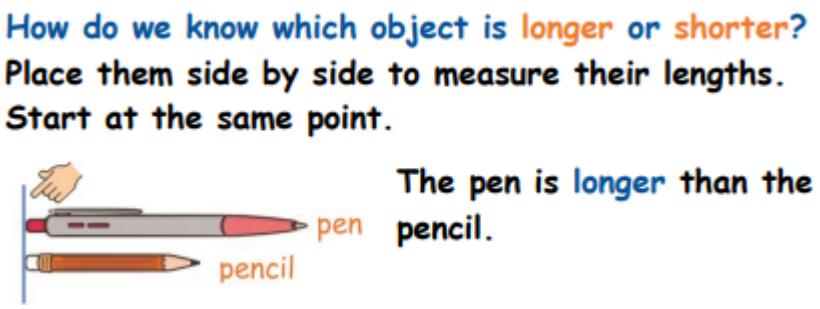
GEOMETRY



- Create charts with your child with shapes and their names.
- Ask questions to encourage your child to state the position of objects around the home, e.g.
  - Which object is at the back of the chair?
  - What items are on top of the refrigerator?
  - Where did Andy put the toy?
- Use learning materials such as instructional videos and online games to assist your child.

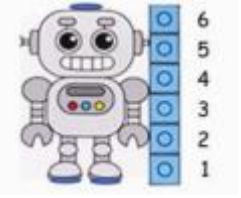
MEASUREMENT

- Engage your child in activities around the home that requires safely lifting/pushing/pulling objects and encourage your child to state if they are heavy or light.
- Assist your child in creating and using an equal arm balance to weigh objects at home. Ask questions such as, which object was lighter, the marble or the stone?
- Encourage your child to describe objects weighed, e.g., The orange is heavier than the plum.
- Ask questions about everyday activities done during the day, e.g.,
  - What did you do before breakfast?
  - When did you complete your homework?
- Assist your child in creating a scrap book with pictures showing activities done during the morning, lunch time, in the afternoon and at night.
- Encourage your child to display a calendar and to record activities done and to note the dates of special occasions such as birthdays.
- Ask questions about calendars, e.g.,
  - How many Fridays are there in the month of January?
  - What month comes before March?
  - What day is the 18th of April?
- Encourage your child to describe the length of everyday objects, e.g., The knife is longer than the fork.



MEASUREMENT

- Encourage the use of words such as long, short, tall, thin, fat, deep, shallow, wide, narrow, shorter, taller, longer when describing the length of objects and answering questions.
- Allow your child to create models using blocks and other objects and to describe the different lengths of the model, e.g., My house is 10 blocks high and 5 blocks wide. My caterpillar is 8 clothes clips long.

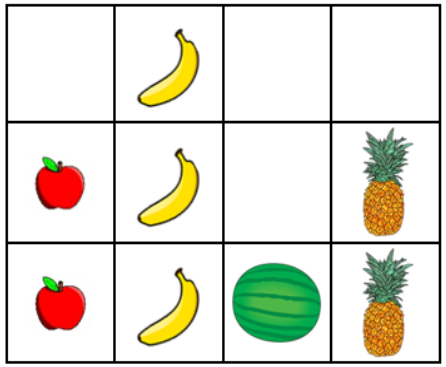


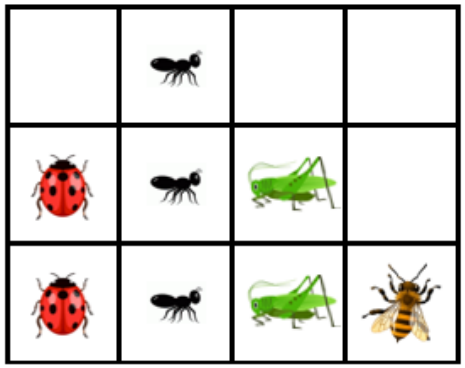
My robot is 6 blocks tall.

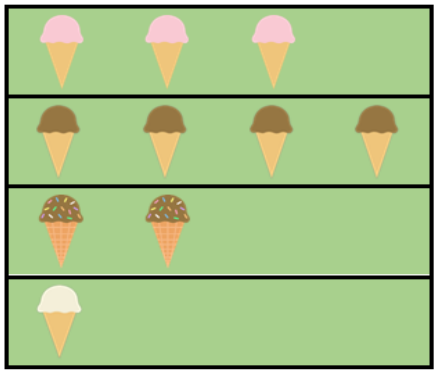
- Play games with your child such as:
  - Treasure hunt – find an object that is taller than the chair but shorter than the cupboard.
- Use learning materials such as instructional videos and online games to assist your child.

STATISTICS

- Encourage your child to sort objects or pictures into groups and arrange them in lines following the examples shown below:







- Ask questions on the created charts, e.g.
  - How many apples are there?
  - How many more ants are there than bees?
  - Which ice cream do most children like?
- Use instructional videos to assist your child.

STANDARD TWO

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
1. Read and write number names and numerals to 100.	• Have students use counters and base ten blocks to represent numerals with the focus on place value and value of digits. • Use 100-chart (students can create pocket 100-charts) and have students read numbers aloud, beginning with 1-10 first, then 11-20, 21-30, 31-40 etc. • Let students describe the patterns they observe in each group of numerals in the 100-chart and the associated number names e.g. what parts of the number names are repeated e.g. thir**teen**, four**teen**, fif**teen**, **twenty**-one, **twenty**-two, **twenty**-three. etc • Have students then write the numerals and number names using the patterns in the 100-chart.	• Have students write the numerals and number names using the patterns in the 100-chart. • Have students explain the number name or numeral with an understanding of place value and value of the number. • Display number names and numerals on a mathematics word wall (virtually, if necessary). • Have students practise the reading and writing of the number names and numerals on a daily basis through designed (include virtual interactive activities/games) e.g. Spin the Wheel, Say the Number Name; Throw the die, Write the Number Name (use a 100-chart for activity).	• Display number names and numerals on a mathematics word wall (virtually, if necessary). • Allow students to read and write number names/numerals independent of the place value chart • Introduce journal writing so that students can draw base ten representations of numbers and practise writing number names and numerals.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	• Have students explain the number name or numeral in with an understanding of place value and value of the number. • Display number names and numerals on a mathematics word wall (virtually, if necessary). • Have students practise the reading and writing of the number names and numerals on a daily basis through designed (include virtual interactive activities/games) e.g. Spin the Wheel, Say the Number Name; Throw the die, Write the Number Name (use a 100-chart for activity). • Introduce journal writing so that students can draw base ten representations of numbers and practise writing number names and numerals.	• Introduce journal writing so that students can draw base ten representations of numbers and practise writing number names and numerals.	
2. Describe the order or relative position of objects	• Design activities/games in which students place	• Design activities/games in which students place	• Design activities/games in which students place

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
using ordinal numbers up to 10.	themselves or objects in a line. • Link activities from other subject areas e.g. Physical Education and Dance. • Have students use the language and numerical representations of ordinals e.g. first (1^{st}), second(2^{nd}), third (3^{rd}), fourth (4^{th}), fifth (5^{th}) etc…to tenth (10^{th}), through labels and word/number cards during games and activities. • Create worksheets with simple problems involving ordinals numbers to 10 and have students solve by modelling problems with concrete objects and drawing of diagrams.	themselves or objects in a line. • Link activities from other subject areas e.g. Physical Education and Dance. • Have students use the language and numerical representations of ordinals e.g. first (1^{st}), second(2^{nd}), third (3^{rd}), fourth (4^{th}), fifth (5^{th}) etc…to tenth (10^{th}), through labels and word/number cards during games and activities. • Create worksheets with graded one-step problems involving ordinals numbers to 10 and have students solve by modelling problems with concrete objects and drawing of diagrams.	themselves or objects in a line. • Link activities from other subject areas e.g. Physical Education and Dance. • Have students use the language and numerical representations of ordinals e.g. first (1^{st}), second(2^{nd}), third (3^{rd}), fourth (4^{th}), fifth (5^{th}) etc…to tenth (10^{th}), through labels and word/number cards during games and activities. • Create worksheets with multi-step problems involving ordinals numbers to 10 and have students solve by modelling problems with concrete objects and drawing of diagrams.
3. Compare and order numerals up to 99 (in	• Have students represent numerals up to 99 using base ten blocks (rods, cubes),	• Use place value and value to compare and order numbers	• Develop or use online worksheets to have students practise problems involving

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
ascending and descending order).	unifix (linking) cubes, red beans (grouped in tens, ones), straws (bundles of ten, ones). • Use place value and value to compare and order numbers in ascending or descending order. • Use a 100-chart and number lines as other resources for comparing and order numerals up to 99. • Develop or use online worksheets to have students practise problems involving comparison/ordering numerals up to 99.	in ascending or descending order. • Use a 100-chart and number lines as other resources for comparing and order numerals up to 99. • Develop or use online worksheets to have students practise problems involving comparison/ordering numerals up to 99.	comparison/ordering of numerals up to 99.
4. Explore patterns using repetitions of 3- 5 elements.	• Have students explore repeating patterns in the environment (numbers and letters) e.g. calendars, digital clocks, electronic signs, phone numbers, newspapers, vehicle licence	• Students can then create their own repeating number patterns (3 – 5 elements) and represent them using counters. • Students can represent repeating patterns by drawing objects, then	• Create worksheets in which students will solve graded problems involving repeating patterns.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	plate numbers, calculators, and charts. • Have students explore repeating patterns in sounds and movements. • Let students describe the repeating patterns they see, identifying the core element that repeats. e.g. ○ 123 123 123 123 is a "3 pattern" with 123 repeating. ○ ABABABAB is a "2 pattern" with AB repeating etc. • Students can also identify non-repeating patterns or errors in patterns in number, sounds and movements. • Students can then create their own repeating number patterns (3 – 5 elements) and represent them using counters.	representing using the numeral or number name. • Design or use virtual activities/games/worksheets in which students can practise identification of repeating patterns and the element that repeats.	

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	• Students can represent repeating patterns by drawing objects, then representing using the numeral or number name. • Design or use virtual activities/games/worksheets in which students can practise identification of repeating patterns and the element that repeats.		
5. Write the numeral to match objects grouped in tens and ones (concretely and pictorially).	• To begin the development of base-ten concepts have students count objects (concretely or virtually) with a count-by-ones idea of number (up to 99). • Have students then make groupings of tens and ones and record or say the amounts. • Let students explore the idea of grouping in tens and ones with many examples and explain that the quantity remains the same in each	• Let students explore the idea of grouping in tens and ones with many examples and explain that the quantity remains the same in each case (conservation of number) e.g. 28 ones = 2 tens and 8 ones. • Have students represent the base ten models through drawings (pictorial) using a variety of contexts to demonstrate their	• Have students represent the base ten models through drawings (pictorial) using a variety of contexts to demonstrate their understanding of grouping in tens and ones. • Design activities/games or use online interactive activities/games in which students will practise and reinforce base ten ideas. • Create worksheets in which students solve graded

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	case (conservation of number) e.g. 28 ones = 2 tens and 8 ones. • Have students represent the base ten models through drawings (pictorial) using a variety of contexts to demonstrate their understanding of grouping in tens and ones. • Design activities/games or use online interactive activities/games in which students will practise and reinforce base ten ideas.	understanding of grouping in tens and ones. • Design activities/games or use online interactive activities/games in which students will practise and reinforce base ten ideas. • Create worksheets in which students solve simple problems in grouping quantities in tens and ones.	problems in grouping quantities in tens and ones.
6. Solve real-life problems (concrete, pictorial and symbolic modes) involving addition and subtraction.	• Model one-step real-life addition and subtraction problems (without regrouping, two addends only) using concrete (or virtual) materials such as counters, unifix (linking) cubes, base ten blocks and money.	• Model one-step and two-step addition and subtraction problems (without regrouping, two addends only) using concrete (or virtual) materials such as counters, unifix cubes, base ten blocks and money. • Use addition problems (joining structures) change,	• Create or use online worksheets in which students solve one-step and two-step problems in addition and subtraction. • Encourage the use of a variety of problem-solving strategies such as, use a model, act it out, draw a picture, look for a pattern,

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	• Use additions problems (joining structures) with result unknown initially, then change unknown; part-part-whole structures, whole unknown initially. • Use subtraction problems (separating structures) - result unknown initially • Allow students to use the concrete materials to solve problems. • Record solutions to problems using drawings, numerals, symbols and together with the related number sentences (vertical and horizontal arrangements, no algorithm required). • Encourage the use of a variety of problem-solving strategies such as, use a model, act it out, draw a picture, look for a pattern,	result unknown; part-part-whole structures (whole and part unknown) • Use subtraction problems (joining structures) - start/initial unknown and change unknown; separating structures - change, result unknown; part-part-whole structures - part unknown; separating structures - change, start/initial unknown • Allow students to use the concrete materials to solve problems, if necessary. • Record solutions to problems using drawings, numerals, symbols and together with the related number sentences (vertical and horizontal arrangements, no algorithm required). • Encourage the use of a variety of problem-solving strategies such as, use a	work backwards and guess and check. • Have students create and solve addition and subtraction stories (include money).

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	work backwards and guess and check. • Create or use online worksheets in which students solve simple one-step problems in addition and subtraction.	model, act it out, draw a picture, look for a pattern, work backwards and guess and check. • Create or use online worksheets in which students solve simple one-step and two-step problems in addition and subtraction.	
7. Solve problems involving sharing and grouping (concept of division, no symbol).	• Review the concept of multiplication (repeated addition, by forming equal groups of 2s, 3s, 5s and 10s up to 20). • Model concept of division by sharing and grouping concrete (or virtual) objects, using equal groups of 2s, 3s, 5s and 10s up to 20 (use repeated subtraction, skip counting and number line activities). • Link the concept of division to multiplication. • Record solutions to problems using drawings,	• Model concept of division by sharing and grouping concrete (or virtual) objects, using equal groups of 2s, 3s, 5s and 10s up to 20 (use repeated subtraction, skip counting and number line activities). • Link the concept of division to multiplication. • Record solutions to problems using drawings, numerals, (no symbol required) and words together with the related number sentences.	• Create or use online worksheets in which students solve graded problems in division. • Have students explain how they solve the problems. • Have students create and solve division stories (repeated subtraction).

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 – 2 items	3 – 6 items	7 – 8 items
	numerals, (no symbol required) and words together with the related number sentences. • Create or use online worksheets in which students solve simple problems in division. • Have students explain how they solve the problems.	• Create or use online worksheets in which students solve graded problems in division. • Have students explain how they solve the problems. • Have students create and solve division stories (repeated subtraction).	
8. Use a variety of mental math strategies to solve problems involving addition and subtraction, e.g., add 2/subtract 2, ten facts, related addition and subtraction facts, count on and back, skip counting.	• Use concrete (or virtual) materials to model the strategies through a variety of examples. • Have students record as number sentences. • Create drills (oral and written) in which students practise strategies in a timed setting. • Design games/class competitions in which students can practise strategies.	• Use concrete (or virtual) materials to model the strategies through a variety of examples. • Have students record as number sentences. • Create drills (oral and written) in which students practise strategies in a timed setting. • Design games/class competitions in which students can practise strategies.	• Create drills (oral and written) in which students practise strategies in a timed setting. • Design games/class competitions in which students can practise strategies.

GEOMETRY			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
9. Classify, describe, compare and name solids and give reasons for classification (cube, cuboid, cylinder, cone, sphere and pyramid – with a focus on naming the different types of pyramids).	• Allow students to explore solids concretely (or virtually). • Have students describe each solid in terms of its attributes e.g. colour, size, shape, function, before classifying and comparing them. • Allow students to sort solids and describe the criteria used to group the solids together. • Engage students in discussion on what makes solids alike, similar or different. • Allow students to continue to sort using various criteria. • Have students name solids and use the names in their discussion while classifying. • Have students name, describe and compare the types of pyramids. • Use pictorial representations of the solids and have students	• Allow students to sort solids and describe the criteria used to group the solids together. • Engage students in discussion on what makes solids alike, similar or different. • Allow students to continue to sort using various criteria. • Have students name solids and use the names in their discussion while classifying. • Have students name, describe and compare the types of pyramids. • Use pictorial representations of the solids and have students name, compare and sort/classify the solids. • Design games/activities in which students guess the name of the solid/ determine which one does not belong to the group etc.	• Use pictorial representations of the solids and have students name, compare and sort/classify the solids. • Design games/activities in which students guess the name of the solid/ determine which one does not belong to the group etc. • Introduce different sizes and orientations of the same solid in order to distinguish the characteristics of the solid and to identify features that are not relevant.

GEOMETRY			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
	name, compare and sort/classify the solids. • Design games/activities in which students guess the name of the solid/ determine which one does not belong to the group etc.	• Introduce different sizes and orientations of the same solid in order to distinguish the characteristics of the solid and to identify features that are not relevant.	
10. Recognize, complete and create patterns using solids or plane shapes (repeating – 3 to 5 elements, growing or increasing and decreasing patterns).	• Review all types of patterns – repeating, increasing and decreasing patterns with solids and plane shapes (concrete or virtual). • Have students describe repeating non/repeating patterns; the number and elements in the core that repeats; errors etc. • Have students identify pattern rules and use rules to fill in missing elements and/or extend repeating, increasing or decreasing patterns (3-5 elements).	• Have students identify pattern rules and use rules to fill in missing elements and/or extend repeating, increasing or decreasing patterns (3-5 elements). • Have students create patterns using actual solids and plane shapes and have other students identify pattern rules and complete patterns. • Use pictorial representations of patterns with both solids and plane shapes with activities above.	• Have students identify pattern rules and use rules to fill in missing elements and/or extend repeating, increasing or decreasing patterns (3-5 elements). • Have students create patterns using actual solids and plane shapes and have other students identify pattern rules and complete patterns. • Use pictorial representations of patterns with both solids and plane shapes with activities above.

GEOMETRY			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
	• Have students create patterns using actual solids and plane shapes and have other students identify pattern rules and complete patterns. • Use pictorial representations of patterns with both solids and plane shapes with activities above. • Create or use online activities/games/worksheets in which students solve simple problems involving geometrical patterns.	• Create or use online activities/games/worksheets in which students solve graded problems involving geometrical patterns.	• Create or use online activities/games/worksheets in which students solve graded problems involving geometrical patterns.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items

11. Measure, record, compare and order length using non-standard units.	• Have students measure the lengths of objects in their environment using non-standard units e.g. paper clips, handspans, clothespins, spoons, forks, etc.
	• The non-standard units must be of the same size, placed end to end without gaps or overlap, along the length of the object to be measured.
	• Allow students to record the measurements including units used.
	• Students can measure
	  ○ the same objects using different non-standard units
	  ○ different objects using the same units.
	• Have students compare the length of objects and order them according to lengths –
		• Use pictorial representations in which students state the length of objects using non-standard units.
		• Create or use online activities/games/worksheets in which students solve simple problems involving lengths of objects using non-standard units.
			• Create or use online activities/games/worksheets in which students solve simple problems involving lengths of objects using non-standard units.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	from shortest to longest or vice versa. • Have students discuss their findings. • Use pictorial representations in which students state the length of objects using non-standard units. • Create or use online activities/games/worksheets in which students solve simple problems involving lengths of objects using non-standard units.		
12. Solve practical problems involving time including the interpretation of calendars.	• Have students review the days of the week, months of the year and the number of days for each month (including a leap year). • Have students observe calendars and describe their features i.e. the arrangement of the days, dates etc.	• Have students solve graded problems on calendars initially to build understanding, e.g. how many days in the month of November; How many Tuesdays are there in the month of November? etc • Create or use online activities/games/worksheets	• Create or use online activities/games/worksheets in which students solve graded problems involving the calendar.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Have students solve simple problems on calendars initially to build understanding, e.g. how many days in the month of January, June, November? etc • Create or use online activities/games/worksheets in which students solve simple problems involving the calendar.	in which students solve graded problems involving the calendar.	
13. Measure, record, compare and order capacity using non - standard unit.	• Review the concept of capacity through practical activities in which students sort objects from their environment, into two groups: those they "can put things into" (containers) and those they " cannot put things into", giving reasons for their choices. • Let students explore the concept of capacity by filling and emptying containers	• Have students measure the capacity of containers using one non-standard unit, then compare and order the containers from smallest to largest capacity or vice versa. • Use pictorial representations in which students compare the capacity of containers using non-standard units.	• Use pictorial representations in which students compare the capacity of containers using non-standard units. • Create or use online activities/games/worksheets in which students solve graded problems involving capacity using non-standard units.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	using non-standard units such as sand, water, beans etc. • Have students measure the capacity of containers using one non-standard unit, then compare and order the containers from smallest to largest capacity or vice versa. • Use pictorial representations in which students compare the capacity of containers using non-standard units. • Create or use online activities/games/worksheets in which students solve simple problems involving capacity using non-standard units.	• Create or use online activities/games/worksheets in which students solve graded problems involving capacity using non-standard units.	

STATISTICS			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
14. Construct tally charts and pictographs using appropriate symbolic representations.	• Review the features of the tally charts and the pictograph inclusive of the appropriate symbols used. • Have students conduct simple surveys e.g. Favourite Fruits, Movies etc. • Guide students as they construct the tally chart (including frequency column) and/or the pictograph. • Have students describe the data through questioning. • Students can create questions and have their peers respond to them. • Create or use online activities/games/worksheets in which students solve simple problems based on tally charts and/or pictographs.	• Have students conduct simple surveys e.g. Favourite Fruits, Movies etc. • Reinforce the purpose of collecting, organizing and representing data for decision-making. • Guide students as they construct the tally chart (including frequency column) and/or the pictograph. • Have students describe the data through questioning. • Students can create questions and have their peers respond to them. • Create or use online activities/games/worksheets in which students solve simple problems based on tally charts and/or pictographs.	• Have students conduct simple surveys e.g. Favourite Fruits, Movies etc. • Reinforce the purpose of collecting, organizing and representing data for decision-making. • Guide students as they construct the tally chart (including frequency column) and/or the pictograph. • Have students describe the data through questioning. • Students can create questions and have their peers respond to them. • Create or use online activities/games/worksheets in which students solve simple problems based on tally charts and/or pictographs.
15. Make decisions based on interpretation of data.	• Reinforce the purpose of collecting, organizing and	• Have students interpret data from tally charts and	• Have students interpret data from tally charts and

STATISTICS			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
	representing data for decision-making. • Have students interpret data from tally charts and pictographs (through questions designed by teacher and students). • Include questions that involve decision-making on real life problems e.g. what fruit/s should be sold in the school's cafeteria/ village market stall etc? • Include open-response type questions in which students give reason/s for their answers. • Have students communicate findings and justify decisions by giving brief reports on the data through oral presentations or in writing (journals).	pictographs (through questions designed by teacher and students). • Include questions that involve decision-making on real life problems e.g. what fruit/s should be sold in the school's cafeteria/ village market stall etc? • Include open-response type questions in which students give reason/s for their answers. • Have students communicate findings and justify decisions by giving brief reports on the data through oral presentations or in writing (journals).	pictographs (through questions designed by teacher and students). • Include questions that involve decision-making on real life problems e.g. what fruit/s should be sold in the school's cafeteria/ village market stall etc? • Include open-response type questions in which students give reason/s for their answers. • Have students communicate findings and justify decisions by giving brief reports on the data through oral presentations or in writing (journals).

STANDARD THREE

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
Number Concepts, Place Value and Rounding	0 item	1 item	2 items
☐ Read and write number names and numerals to 1 000 ☐ Write the numeral to match objects grouped in hundreds, tens and ones (concretely and pictorially)	• Have students practise reading and writing number names for multiples of 10 (to 90) and multiples of 100 (to 900). • "Multiple" Stories: Have students write a story or poem that uses as many number names of multiples of 10 (to 90) or the multiples of 100 (to 900) as possible. • Display number names and numerals on a mathematics word wall. • Begin the development of base-ten concepts with a count-by-ones idea of number (up to 99). • Next allow students to make groupings of ten and record or say the amounts. • It is important for students to confront the actual quantity in a manner meaningful to them.	• Build numbers to 1 000 in place value charts. Begin with values that combine multiples of 10 (up to 90) and multiples of 100 (up to 900). • Next, introduce other number values up to 1 000. Be sure to include numbers with zeros e.g. 409. • Display number names and numerals on a mathematics word wall. • Place importance on exploring how a group of 100 can be understood as a group of 10 tens as well as 100 single ones. • Use a groupable model, e.g. base-ten blocks, so that students can see how the 10 groups are similar to the 100 individual items.	• Allow students to read and write number names/numerals independent of the place value chart . • Reinforce the concept of 1 hundred as 10 ones by exploring equivalent representations for hundreds as groups of tens. For example: ○ students show 617 using base-ten materials in standard representation. Next, they find and record at least three other ways of representing the number. ○ Base-ten riddles – I have 5 hundreds, 14 tens and 27 ones. Who am I?

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
Addition and Subtraction, Multiplication and Division	0 - 1 item	2 items	3 items
☐ Perform addition (up to 3 addends) and subtraction (up to 999) using the algorithm ☐ Solve one-step real-life problems involving repeated addition ☐ Solve one-step real-life problems involving sharing and grouping	• Begin instruction by asking students to solve problems based on real-world settings. • Explore problems that do not involve re-grouping. • Do not require that students use the algorithm. • Allow students to use base-ten materials to solve problems. • Encourage students to use place value language as they describe their manipulations, e.g. 3 tens and 4 tens make 7 tens.	• Begin instruction by asking students to solve problems based on real-world settings. • Where possible, start problems with concrete models and an organizational mat which helps to connect the concrete. representation to the symbolic • Introduce problems that involve re-grouping.	• Create several problems and have students solve them independently. • Allow them to use base-ten materials and place value charts if they choose to.
Number Patterns and Relationships	0 item	1 item	2 items
☐ Describe and extend simple number patterns that increase or decrease ☐ Use the equal sign to record equivalent number relationships e.g. 6+4=7+3	• Focus first only on repeating patterns. • Provide opportunities for students to notice patterns in different ways, not just one e.g. number line, hundred charts, calendars, addition tables. • When number patterns are presented, have students represent them using	• Introduce increasing and decreasing patterns. • Expose students to different growing/decreasing patterns until they begin to see how patterns continue. • Give students increasing and decreasing patterns and have them show and extend the patterns using coloured linking	• Introduce word problems that involve identifying and extending number patterns. • Provide exercises involving equivalent relationships that students can solve independent of an equal arm balance.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	counters. Then ask them to describe the pattern. • Have students predict exactly what elements would be in specific steps (e.g. the 6th step) and provide a reason for their prediction. • Model the problem using an equal arm balance as a number balance to show a concrete representation of the equal sign.	cubes or by colouring grid paper. • Present a pictorial representation of a simple two-pan equal arm balance. In each pan write a numeric expression and investigate which pan will go down or whether the two will balance. Challenge students to write expressions for each side of the scale to make it balance.	
Fractions	0 item	1 item	
☐ Name and record fractions using words and symbols	• Using various combinations of large and small shapes, have students explore how small shapes can be used to show fractions of larger shapes. • Allow students to build trains using connecting cubes. Have them divide the trains into different fractions. Discuss all challenges encountered. • Have them use words and symbols to record the fractions.	• Have students use a dot paper or grid paper to draw whole shapes then divide them evenly to represent various fractional parts. • Have them use words and symbols to record their representations.	

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
☐ Demonstrate the appropriate use of the measuring instrument for length (ruler) ☐ Tell and record time on digital and analog clocks to the hour, half past the hour, quarter past and quarter to the hour ☐ Compare and order the area of surfaces using direct comparison	• Before demonstrating the standard ruler, allow students to use the ten rod from the base-ten materials to explore length in centimetres. • The first ruler students use should have centimetre markings without numbers along one edge so they see the unit on the ruler is represented by the space not the mark. • Draw a horizontal 12-hour timeline then discuss and draw how it would look when rearranged to form a circle with the number 12 at the top. • Begin with a one-handed clock (hour hand only). Point the hand to different numbers on the clock and use the appropriate vocabulary e.g. "It's halfway between 5 o'clock and 6 o'clock" • Introduce a two-handed clock. Discuss what happens to the big hand as the little hand	• Allow students to measure using the edge of the ruler that has numbers under the markings. • In demonstrating the correct use of the ruler, emphasize the importance of the zero mark at the beginning of the object being measured. • Introduce the writing of time (digital) on the even hour e.g. 2 o'clock, 2 hours and 0 minutes, 2:00 • Allow that notation to become clear before proceeding to half hour and quarter hour intervals. • Have students compare and order the area of different-shaped objects where it is possible to lay one object on top of the other e.g. a circular card can be placed on a sheet of paper.	• Have students measure using a "broken" ruler (one with the first series of units broken off or otherwise hidden from view). • Allow students to create a weekend schedule. On the schedule there must be at least one activity in the morning, one in the afternoon, one that starts on the hour, one that starts at half past the hour, one that starts at quarter past the hour, and one that starts at quarter to the hour. After writing their schedules in digital form, have students model each time on an analog clock. • Have students compare and order the area of shapes created using pattern blocks but require reconfiguration before the area can be directly compared.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	moves from one hour to the next. • Teach time after the hour in 15-minute intervals. • Let students record the times shown on analog clocks. • Have students compare and order the area of identical shapes of different size so that one shape can fit inside the boundaries of others.		

GEOMETRY			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
☐ Classify, describe, compare and name solids and give reasons for classification (cube, cuboid, cylinder, pyramid, cone, sphere and triangular-based prism – with a focus on the triangular-based prism) ☐ Explore the properties of solids in terms of faces, edges and vertices and compare and classify solids according to their properties related to faces, edges and vertices (cube, cuboid, cylinder, pyramid, cone and triangular-based prism)	• Allow students to physically explore solids. • Focus on one type of shape at a time so that students have an opportunity to understand each shape separately before comparing them. • Have students sort a small group of solids and then state the sorting rule. • Ask them to re-sort the set and state the sorting rule. • Work with physical models. • Allow students time to build and explore solids. • Direct discussions to enable students to determine the attributes of solids. • Model the appropriate vocabulary.	• After sorting a small group of solids and stating the sorting rule, ask students to re-sort the set and state the new sorting rule. • Have one student chose a solid and give clues about it, including a description of its attributes, while another student uses the clues to determine what the mystery solid is. • Introduce different sizes and orientations of the same solid in order to distinguish the characteristics of the solid and to identify features that are not relevant. • Record attributes on a reference chart. • Provide illustrations and words to indicate attributes.	• Give students plane shapes and have them describe solids with that plane shape in its composition. • Allow students to sort pictures of various solids under the headings cube, cuboid, cylinder, pyramid, cone, sphere and triangular-based prism. Use three headings at a time. • Have students make a journal entry explaining how prisms and pyramids are similar and different. • Guess the object: show students the faces and have them guess the solid they came from. • Have students create their own “Guess the object” to share with the class. • Ask students to write riddles for solids.

STATISTICS			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
☐ Identify features of tally charts and block graphs (e.g. using one stroke/tally mark, grouping of strokes/tally marks in fives, baseline/start line, labels (of sets) on axis, equal spacing, title, scale factors) ☐ Interpret data from tally charts and block graphs based on a real-life problem or situation	• Use everyday occurrences to formulate questions about the student's environment. • Model ways in which the data can be collected e.g. checklist. • Have pairs of students take turns formulating a survey question, collecting the data, representing it, and then presenting their findings to the class. • Require students to describe, orally or in writing, what the graph is showing (interpret the data). Use guiding questions where necessary.	• Provide meaningful opportunities for students to collect, represent and interpret data. A possible student-created question is: "In what month were you born?" • Have students formulate a survey question, collect and represent the data, and summarize the results by making statements about the data. • In preparation for the interpretation of data, lead students to ask and answer questions about the information on graphs. Some examples include: ○ What does the graph show? How do you know? ○ What does this tell about …? ○ Which is liked most? least?	• Present students with data within a real-world context. • Have students represent the data in the form of a tally chart and block graph. • Using numbers evident within the tally chart and block graph created, have students develop questions that can be answered by those numbers.

RECOMMENDATIONS FOR PARENTS

STANDARD TWO AND STANDARD THREE

NUMBER
Explore the variety of ways numbers are used at home and in the wider community: • Point out how numbers are used on appliances, street signs and buildings. • Spot numbers in books, magazines and newspapers. • Encourage your child to tell you whenever he or she discovers a new way in which numbers are used. Engage in frequent counting: • Sing songs and read books that involve numbers and counting. • Count pages in books and documents. • Count forward and backwards from different starting places. • Practise “skip counting” by 2s, 3s, 10s, 25s, 50s and 100s. • Count money when making purchases and receiving change. • Trade equal amounts of money.  has the same value as     has the same value as 

NUMBER

Create games using dice and playing cards:

- Roll two dice then add or multiply the numbers that appear. Add the totals until you achieve a target number, like 100.
- Do the reverse to practise subtraction.

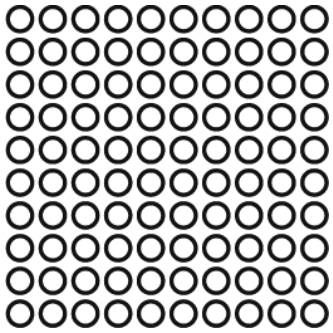
Have your child help you solve everyday problems:

- "Today five friends are visiting you. If each friend gets four snacks, how many snacks do we need?"
- Use household items to practise and reinforce addition, subtraction, multiplication and division.
- Ask your child to explain how he or she solved a problem so that you may share in the thought process. By talking about a mathematics problem, you and your child may discover other ways to solve it.

To expand children's thinking processes and help them "see" groups. Ask questions like:

- "7 and how much more make 10?" "70 and how much more make 100?" "700 and how much more make 1,000?"
- "10 and how much more make 15?" "10 and how much more make 18?" "10 and how much more make 25?"
- "17 and how much more make 20?" "87 and how much more make 100?" "667 and how much more make 1,000?"
- "How far is it from 6 to 10?" "How far is it from 89 to 100?" "How far is it from 678 to 1,000?"
- "How many 10s are there in 70? …100? …200? …340? …500? …1,000?
- "How many 4–person teams can you make out of 12 children? …20 children?... 100 children?…50 children?"
- "How much is 5, four times? …ten times? …a hundred times? …a thousand times?"

Use pictures to present and reinforce mathematics concepts. For example:



"How many circles are there in the picture?"
"If each circle is a penny, how much money is shown in the picture?"
"If each circle is a dime (…a nickel …a quarter…), how much money is shown in the picture?"
"Shade in half of the circles. How many circles are not shaded in?"
"Shade in half of the circles that are not shaded in. Now how many circles are not shaded in?"
"Again, shade in half of the circles that are not shaded in. Now how many circles are not shaded in?"

GEOMETRY

Identify items by their shape and size:

- "Please bring me three ice cubes."
- "Open the largest bottle of juice."
- "What shape is roof of that building?"

Use household items to create and extend patterns:

- Arrange a row of clothes pins pointing in different directions in a particular pattern (down, down, up, down, down, up) and ask your child to extend the pattern

- Arrange teacups and saucers (or forks and spoons) in such a manner that a pattern could be observed.

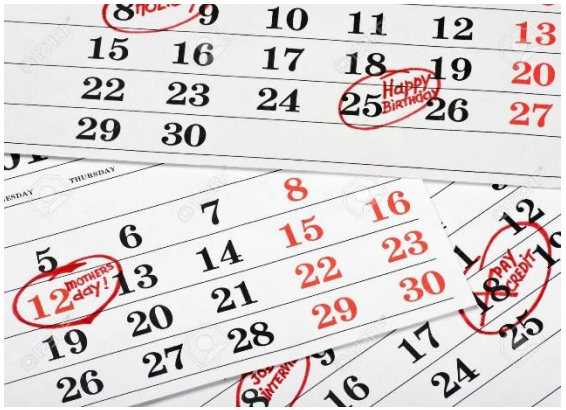
MEASUREMENT

Involve your child in activities that require measurements:

- Allow your child to measure the ingredients in a recipe or the length of a skirt you plan to sew.

Talk about time:

- Have your child check the time on the clock when he or she awakes on mornings, starts and finishes chores, goes to bed etc.
- Together, verify the time of a movie you plan on watching together.
- Record on a calendar the dates of important events in your child's life e.g., birthdays or Mother's Day.



Involve your child in making estimations:

- Estimate the number of litres of milk your family will need for the week. At the end of the week count the number of 1-litre cartons of milk that the family actually used.
- Estimate the time needed to prepare a meal. If the preparation is expected to take 45 minutes, when do you have to begin?

STATISTICS

Sort household items:

- As your child tidies up toys or clothing, discuss which items should go together and why.
- Involve your child in organizing food items in the refrigerator – fruits together, vegetables together, drinks on one shelf, condiments on another.
- Create opportunities for your child to sort other household items – crayons by colour, utensils by type or shape, money by denomination.

Create a vehicle chart:

- Together with your child, tally the number of specific vehicle types (car, SUV, bus, motor cycle, etc.) seen during a fifteen-minute period.

Vehicle Type	Tally	Number of Vehicles
Car 	𝍸 𝍸 𝍸 |	18
SUV 	𝍸 ||||	9
Bus 	||	2
Motor Cycle 	𝍸 |	6

- Discuss the following with your child:
  - Which type of vehicle did you see the most?
  - Which type of vehicle did you see the least?
  - Why do you think you saw more of one type than of another?
  - Do you think the chart will look different on a weekend than on a weekday?

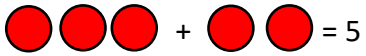
STANDARD FOUR

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
Number Concepts, Place Value and Rounding	0 - 1 item	2 items	3 items
☐ Read and write number names and numerals to 10 000	• Have students practise reading and writing number names for multiples of 10 (to 90), multiples of 100 (to 900) and multiples of 1 000 (to 9 000). • "Multiple" Stories: Have students write a story or poem that uses as many number names of multiples of 10 (to 90), the multiples of 100 (to 900) or the multiples of 1 000 (up to 9 000) as possible.	• Build numbers to 10 000 in place value charts. Begin with values that combine multiples of 10 (up to 90), multiples of 100 (up to 900) and multiples of 1 000 (up to 9 000). • Next, introduce other number values up to 10 000. Be sure to include numbers with zeros e.g. 7 205.	• Allow students to read and write number names/numerals independent of the place value chart.
☐ Show, using various manipulatives (e.g. base ten materials, place value mats) that a given numeral consists of a certain number of thousands,	• Focus on three-digit numbers. • Use base-ten materials to represent numbers.	• Introduce four-digit numbers • Have students describe and represent numbers in several ways. For example,3 245 can be described as:	• Have students translate large numbers into something that is easy or fun to think about. For example, start a project in which students draw 100 dots on sheet of paper each

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
‘hundreds’ ‘tens’ and ‘ones’ and record as such, e.g. 1 245 = 1 thousand, 2 hundreds, 4 tens and 5 ones	• Have students gave the base-ten name and the standard name. • Vary the arrangement from one example to the next by changing only one type of piece. That is, add or remove only ones or only tens or only hundreds.	○ 3 245 items is 3 thousands, 2 hundreds 4 tens and 5 ones ○ 3 245 means 3 000 plus 2000 plus 40 plus 5 ○ 3 245 is 324 tens and 5 ones ○ 3 245 is 32 hundreds and 45 ones	day until a total of 10 000 dots is achieved.
☐ Round numbers to the nearest tens, hundreds and thousands	• Use representation of numerals with concrete materials and extend to the concept of rounding to 10s, 100s and then 1000s using the benchmark of half the quantity for rounding up or down e.g. 5 or more, round to 10, 50 or more round to 100, 500 or more, round to 1000. • Design or use online games for rounding.	• Have students review the ‘rules’ for rounding through instructional videos, teacher review and demonstration using place value charts, 100-charts, 1000-charts etc. • Design or use online games for rounding.	• Create worksheets or use online interactive worksheets for practice and reinforcement. • Design or use online games for rounding.
Whole Number (Operations)	0 - 1 item	2 - 3 items	4 items

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
☐ Solve problems involving addition (up to 4 digit numbers with sum less than 10 000) and up to 4 addends and subtraction (with minuend up to 4 digits) addition ☐ Solve real-life problems (concrete, pictorial and symbolic modes, including money) involving addition and subtraction	• Focus on problems with no re-grouping. • Use base-ten materials and a place value chart. • When adding or subtracting, require students to model their solutions concretely (with the base-ten materials) and pictorially (with the place value mats).	• Introduce problems that involve re-grouping. • Continue to use base-ten materials and a place value chart. • Have students re-group by exchanging the appropriate base-ten materials. • Where necessary, assist students in exchanging base-ten materials to re-group.	• Give students addition and subtraction problems, some requiring an exact answer and some requiring an estimate. • For problems requiring an estimate, have students estimate using mental mathematics first. Then have them use base-ten blocks to check all answers.
Number Patterns and Relationships	0 - 1 item	2 items	3 items
☐ Describe and extend whole number patterns involving the four operations e.g. 1, 6, 11, 16… and patterns involving fractions, by using the pattern rule	• Have students use concrete resources/drawings to represent and extend number patterns. • Encourage students to make connections with numbers by presenting the pattern with numerical term positions.	• Demonstrate how to transfer information seen in patterns to a table. • Discuss the relationship between the concrete/pictorial representation and the data shown in the table.	• Have student select patterns from a multiplication table, describe the pattern, and explain why the pattern occurs. • Connect patterns to number operations/basic facts. Have students explain how the identified pattern might be a

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Use hundred chart activities to help students make sense of patterns e.g. colour in all the numbers that have a 4 or 8 or 6. • Have students describe the patterns they observe.	• Have students use this relationship to extend given patterns.	beneficial strategy to use when they are multiplying.
☐ Calculate the unknown in number sentences involving addition, subtraction, multiplication and division of whole numbers and involving one unknown	• Focus on expressions with one unknown: ○ I have some ripe mangoes and 6 green mangoes. What expression describes the total number of mangoes I have? ○ Have students suggest other situations that could be described using similar expressions. ○ Elicit examples for addition, subtraction, multiplication and division ○ Have students give different ways to read	• Introduce number sentences with one unknown: ○ Present simple word problems. ○ Have students use counters to model the information and solve. ○ Require students to explain their solutions.	• Encourage students to use mental mathematics to solve problems: ○ Discuss with students how mental mathematics can help to solve number sentences e.g. how do you solve 5 × ☐ = 30 using a related fact? ○ Have students tell a story that could be solved using a given number sentence, e.g. $36 \div p = 12$, and explain how to calculate the unknown.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	expressions such as *r minus 2* and *2 less than r* for *r – 2.* ○ Have students use counters to model expressions when the unknown is given a value e.g. *3 + a when a = 2.* 		
Fractions and Decimals	0 - 1 item	2 items	3 items
☐ Represent fractions using area, linear and set models ☐ Recognize and generate equivalent fractions using a variety of models ☐ Distinguish between proper, improper and mixed number and convert from one form to another	• Focus initially on developing a beginning understanding of fractions less than one, relating fractions to real life situations, and comparing fractions with the same denominator. • Have students identify everyday situations that use fractions. • Give students pictures of shapes divided into equal	• Engage students in activities with different manipulatives, to discover for themselves that equivalent fractions name the same amount. For example: ○ Ask students to find different lengths on fraction strips that have been labelled differently. ○ Provide students with a set of counters e.g. 24	• Challenge students to figure out equivalent forms without using models. • Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of fractions.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	and unequal parts. Have them sort them and give the sorting rule. • Explore fraction models through the use of various manipulatives and represent them using word name only initially. • To introduce the symbols, show students pictures with fractional parts shaded along with the fraction symbol. Ask students if they can tell what each number/digit in the fraction represents.	buttons, 12 of each colour. Ask students to find equivalent fractions for given fractions e.g. one-half, one-quarter, two-thirds. ○ Have students work with geoboards/geopaper to investigate other ways to make equivalent fractions. • Expose students to different ways that fractions greater than one can be represented. • Have students count fractional parts beyond a whole. Ask students to use a model to illustrate the values and find equivalent representations using wholes and fractions (mixed numbers).	

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
☐ Explain the suitability of the unit as it relates to the length to be measured ☐ Measure and calculate the perimeter of regular and irregular shapes and compare and order	• Have students think of household items that are best measured using millimetres, centimetres and metres. Then allow them to use rulers to take measurements and compare the data. • Allow students to create regular and irregular shapes by placing colour tiles on 1-cm grid paper. Then ask them to estimate each shape's perimeter and use a centimetre ruler to measure it. • Have students draw regular and irregular shapes on 1-cm dot paper. Allow them to estimate and verify the perimeter of each shape.	• When deciding on the suitability of the unit, have students first estimate how large the length/distance to be measured is. For example: ○ Imagine a metre ruler next to a school building. You would expect it to be a few times taller than 1 metre, so the millimetre, the centimetre and the kilometre would not be the most appropriate unit. ○ Imagine the length of a 100-metre sprint. You would expect the distance between Port-of-Spain and San Fernando to be more than ten times that length. Therefore, the kilometre would be the most suitable unit to measure that distance.	• Create worksheets or use online interactive worksheets for practice and reinforcement of content covered.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
		• Have students create regular and irregular shapes out of colour tiles or make their own drawings using plain paper. Then have them estimate and measure the perimeter of their creations. • Explore activities that involve calculating the perimeter of shapes in which the dimensions are given.	
☐ Measure and compare the mass/weights of objects in kilograms and grams	• Give students an item weighing one gram to hold and use to estimate. Then have them hold 5, then 10, and then 20, and compare how the different weights feel. • Repeat the activity for kilograms (up to 3 kilograms). • Have students use the equal arm balance to measure and compare the	• Challenge students by using the weights of the Three Bear Family Counters to create problem-solving opportunities e.g. What combination of bears weigh 36 grams? • Instruct students to find items they believe to have specified mass/weights e.g. 500 grams or 3 kilograms. Have students use a bucket balance to check the	• Have students explain in writing how to measure the mass weight of a given object. • Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of measuring and comparing mass/weights in kilograms and grams.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	mass/weights of common household items.	mass/weights of the items and select new items as needed. • Have students list and compare the items discovered for each of the target weights.	
☐ Compare the duration of various events	• Allow students create a schedule of their activities for one day and use a clock to find the amount of time spent performing each activity. • Have students identify start time, end time, and elapsed time (duration) of the activities and use printed copies of blank clocks to model each. • Have students order the activities according to their duration.	• Use empty time lines to solve elapsed time problems. • Engage students in tasks related to finding the end time given the start time and duration/elapsed time or finding the start time given the end time and the duration/elapsed time. • Give importance to the use of models.	• Have students explain in writing how to measure the mass weight of a given object. • Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of measuring and comparing mass/weights in kilograms and grams.
☐ State the relationship between the litre and millilitre and convert from one to the other	• Model the correct procedure for measuring the volume of a liquid using a beaker.	• Show students a 1 litre container and have them estimate the number of 50 ml beakers of water it will	• Give students word problems and have them record and explain their solutions.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 - 3 items	4 - 5 items
	• Provide students with opportunities to measure the volume of water using beakers of different capacities (50 ml, 100 ml, 250 ml and 500 ml). • Have students explain the process of measuring the volume of a liquid using a beaker.	take to fill it. Allow them to record their estimates in a table. • Allow students to check their estimates by the 1 litre container with 50 ml beakers of water and record their results in the table. • Repeat the activity using the 100 ml beaker, the 250 ml beaker and the 500 ml beakers. • Guide discussion among students about what can be concluded about the relationship between the litre and millilitre. • Provide opportunities for students to practice converting from litres to millilitres and vice versa.	

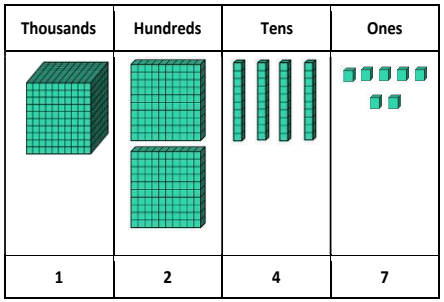
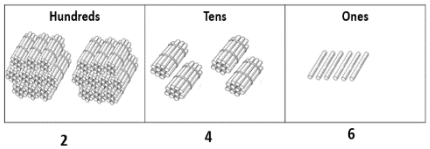
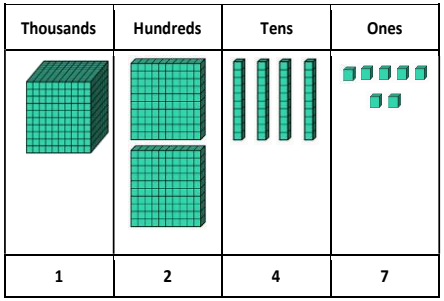
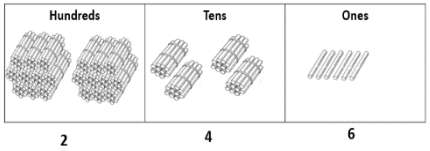
GEOMETRY			
	REMEDIATION STRATEGIES		
CONTENT/SKILL	**LEVEL 1**	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
☐ Differentiate between regular and irregular solids	• Present a pre-sorted collection of regular and irregular solids (regular in one group and irregular in the other). Discuss with students why they think the shapes are grouped as presented. • Allow students time to physically explore regular and irregular solids. • Direct discussions to enable students to determine the attributes of regular and irregular solids. • Model the appropriate vocabulary.	• Present students with an assortment of solids and have them sort them as regular solids and irregular solids. Allow them to represent the information using a table. • Place a solid in a bag. Have each student reach in, feel the solid, state whether it is a regular solid or an irregular solid and then justify their response. • Have students construct regular and irregular solids using plasticine/play dough.	• Have students explain any similarities and differences between regular and irregular solids.
☐ Compare and classify plane shapes according to their properties	• Provide students with an assortment of plane shapes (made using paper) of various sizes. • Ask students to sort the collection into two groups and to name the groups.	• Have students develop a table to organize the attribute information of different plane shapes. • Ask students to make different sizes of one shape or different types of the same shape on dot paper.	• Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of the properties of plane shapes.

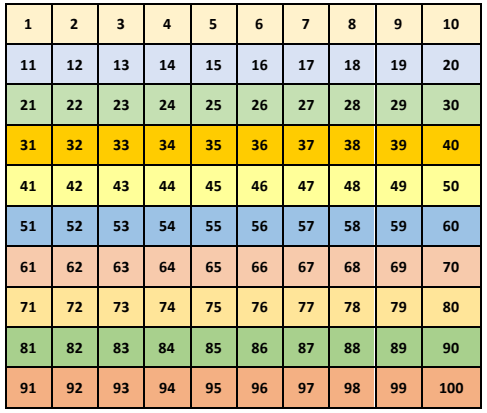
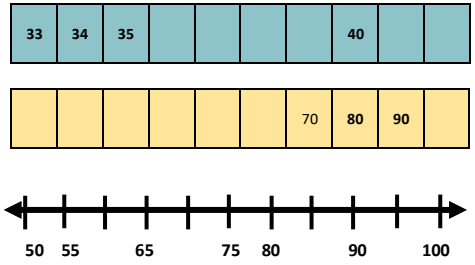
GEOMETRY			
	REMEDIATION STRATEGIES		
CONTENT/SKILL	**LEVEL 1**	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Have students regroup the collection and sort it in other ways. • With each sort, have students describe the attribute(s) common to the group.		
☐ Determine the number of lines of symmetry in plane shapes – regular, irregular and curved, and in numerals and letters	• Focus on shapes, numerals and letters with one line of symmetry only. • Provide students with opportunities to explore symmetry through creative explorations: ○ Have students fold a sheet of paper in half, open and drop paint on one half, then fold to "print." Have students unfold the paper and discuss the attributes of the image. ○ Allow students to use Miras or mirrors to sort numerals and letters into	• Include shapes, numerals and letters with more than one line of symmetry. • Have students sort shapes, numerals and letters into three groups – no lines of symmetry, one line of symmetry, more than one line of symmetry. • Provide students with pictures of half an image. Have them use the line of symmetry to complete the image. • Using dot paper, have students draw a line (horizontally, vertically, or diagonally) through several	• Ask students, "How would you define symmetry to someone who does not know what it is?" • Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of lines of symmetry.

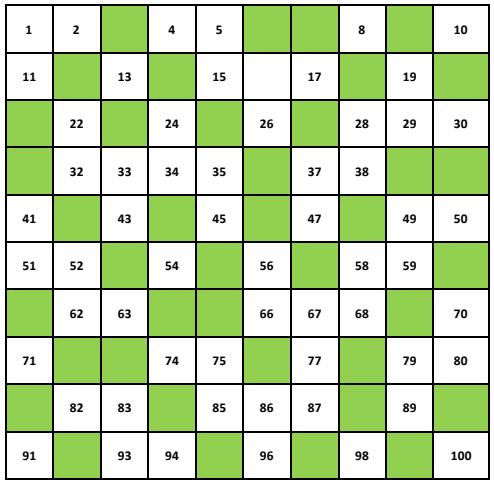
GEOMETRY			
	REMEDIATION STRATEGIES		
CONTENT/SKILL	**LEVEL 1**	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	two groups – symmetrical and not symmetrical. • Have students identify and discuss examples of symmetrical shapes found in everyday life.	dots. Ask students to make a design or picture completely on one side of the line. Have students make a mirror image of their design on the other side of the line.	

STATISTICS			
	REMEDIATION STRATEGIES		
CONTENT/SKILL	**LEVEL 1**	**LEVEL 2**	**LEVEL 3**
	0 item	1 item	2 items
☐ Construct tally charts and bar graphs using appropriate symbolic representations ☐ Interpret data from tally charts and bar graphs based on a real-life problem or situation	• Use everyday occurrences to formulate questions about the student's environment. • Model ways in which the data can be collected e.g. checklist. • Have pairs of students take turns formulating a survey question, collecting the data, representing it, and then presenting their findings to the class. • Require students to describe, orally or in writing, what the graph is showing (interpret the data). Use guiding questions where necessary.	• Provide meaningful opportunities for students to collect, represent and interpret data. A possible student-created question is: "On what day of the week will your birthday be celebrated in the year 2022?" • Have students formulate a survey question, collect and represent the data, and summarize the results by making statements about the data. • In preparation for the interpretation of data, lead students to ask and answer questions about the information on graphs. Some examples include: ○ What does the graph show? How do you know? ○ What does this tell about …? • Which is liked most? least?	• Present students with data within a real-world context. • Have students represent the data in the form of a tally chart and block graph. • Using numbers evident within the tally chart and bar graph created, have students develop questions that can be answered by those numbers.

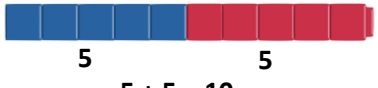
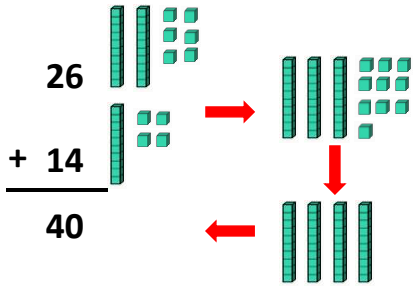
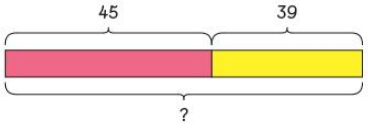
STANDARD FIVE

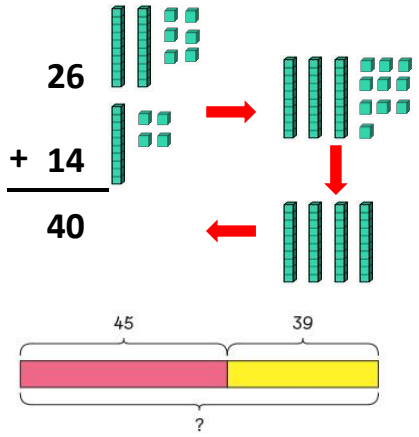
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
Number Concepts, Place Value and Rounding	0 - 1 item	2 - 3 items	4 - 5 items
1. Represent whole numbers to 1 000 000 using multiple models and connect to numerals and number names.	• Model numerals using a variety of base ten concrete materials such as Dienes blocks, money, stick bundles or virtual manipulatives, on place value mats or templates e.g.  	• Use instructional videos, games and worksheets in which different models are used to demonstrate numerals represented on place value templates for reinforcement of deficient skills.  	• Create worksheets or use online interactive worksheets for practice and reinforcement of place value concepts and skills.

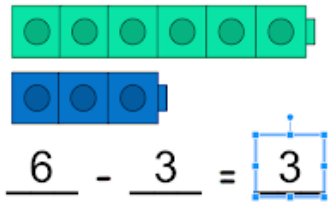
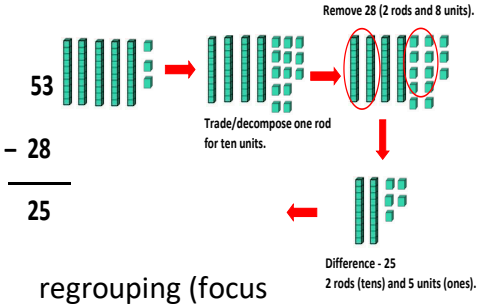
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
2. State the place value of any digit in large numbers.	• Design activities in which students identify the place value of digits in numerals that they have modelled using concrete materials. • Have students describe the meaning of each digit in a numeral.	• Allow students to write the digits of numerals on place value templates from given number names. • Have students describe the meaning of each digit in given numerals.	• Use online interactive worksheets or create worksheets/games in which students identify the place value of digits in numerals. • Have students describe the meaning of each digit in given numerals.
3. Identify the missing numbers in an ordered sequence or on a number line.	• Have students count forward and backward, and skip count on a 100-chart while observing the patterns in place value, as numbers increase/decrease.  • Design activities/games in which students use the 100-chart and	• Design games/worksheets in which students compare numbers (larger/largest /smaller/smallest). • Allow students to write the sequence of numbers on a number line (in ascending or descending order) using the understanding of place value and value of numerals.  • Extend activities to larger numbers	• Allow students to write the sequence of numbers on a number line (in ascending or descending order) using the understanding of place value and value of numerals. • Create worksheets or use online worksheets for practice and reinforcement with ordered sequences with missing numbers.

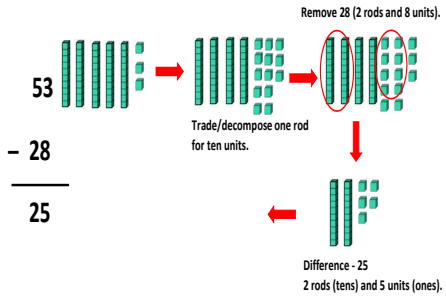
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	place value to compare two or more numbers (larger/largest /smaller/smallest). Extend activity to larger numbers. • Have students fill in missing numbers in the 100-chart.  		
4. Demonstrate an understanding of different types of numbers.	• Design activities/games in which students represent various numbers using objects/counters in arrays to determine factors and multiples of numbers, prime, composite and square numbers.	• Have students use multiplication tables and calculators to determine factors and multiples of numbers, prime, composite and square numbers. • Create worksheets or use online interactive worksheets/games in	• Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of the different types of numbers.

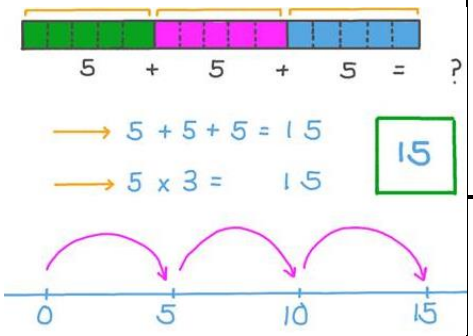
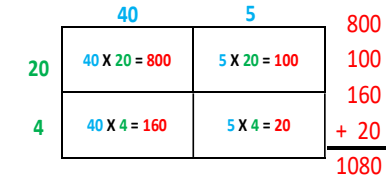
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Create worksheets or use online interactive worksheets/games in which students can reinforce their understanding of the different types of numbers.	which students can reinforce their understanding of the different types of numbers.	• Have students explain the differences in the arrays for prime and composite numbers and square numbers.
5. Round whole numbers to the nearest thousand.	• Use representation of numerals with concrete (or virtual) materials counters and extend to the concept of rounding to 10s, 100s and then 1000s using the benchmark of half the quantity for rounding up or down e.g. 5 or more, round to 10, 50 or more round to 100, 500 or more, round to 1000. • Design or use online games for rounding.	• Have students review the 'rules' for rounding through instructional videos, teacher review and demonstration using place value charts, 100-charts, 1000-charts etc. • Design or use online games for rounding.	• Create worksheets or use online interactive worksheets for practice and reinforcement. • Design or use online games for rounding.
Whole Number (Operations)	0 - 1 item	2 - 3 items	4 items
6. Solve problems in addition (sum less than 10 000) and subtraction (minuend less than 10 000).	• Model 1-digit add 1-digit addition problems (numerical and simple one-step word problems) using counters (concrete and virtual). Use unifix (linking) cubes to	• Model one step and multi-step addition problems involving regrouping (focus on algorithm) using base ten materials or unifix cubes (use trading/decomposition for regrouping) e.g.	• Create worksheets or use online interactive worksheets for practice with one -step and multi-step

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	introduce concrete versions bar models e.g.  **5 + 5 = 10**  **6 + 4 = 10** • Model 1-digit add 1-digit problems (numerical and simple one step word problems) to review commutative and associative properties of addition. • Model addition involving 1-digit and 2-digit numbers using manipulatives such as base ten materials, unifix cubes and/or number lines (no regrouping). • Model simple one-step addition problems with regrouping (focus on algorithm), using base ten materials or unifix cubes (use trading/decomposition for regrouping) e.g.	 • Create worksheets with pictorial models for addition problems inclusive of bar models.  • Reinforce Polya's four-step problem solving model and the use of the strategies e.g. drawing diagrams, using a model, looking for a pattern or guess and check, when solving problems. ○ Grade problems using addition hierarchy i.e. ○ 1-digit add 1-digit ○ 2-digit add 1 digit ○ 2-digit add 2-digit etc	addition problems (include bar modelling as a strategy). • Reinforce Polya's four-step problem solving model and the use of the strategies e.g. drawing diagrams, using a model, looking for a pattern or guess and check when solving problems. • Engage students in the use of mental strategies for addition e.g. jump strategy, split strategy, bridging to ten, compatible numbers, double facts etc.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	 • Create worksheets with pictorial models for addition problems inclusive of bar models. • Reinforce Polya's four-step problem solving model and the use of the strategies e.g. drawing diagrams, using a model, looking for a pattern or guess and check when solving problems. • Grade problems using addition hierarchy i.e. ○ 1-digit add 1-digit ○ 2-digit add 1 digit ○ 2-digit add 2-digit etc	• to determine student's skill deficiencies in addition algorithm. • Engage students in the use of mental strategies for addition e.g. jump strategy, split strategy, bridging to ten, compatible numbers, double facts etc.	

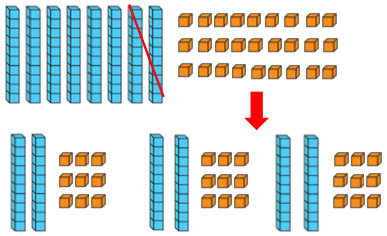
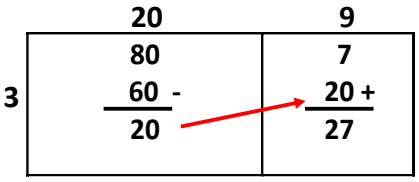
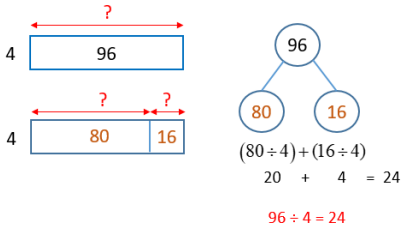
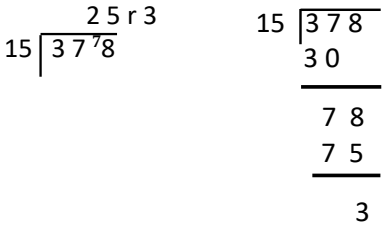
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	to determine student's skill deficiencies in addition algorithm. • Engage students in the use of mental strategies for addition e.g. jump strategy, split strategy, bridging to ten, compatible numbers, double facts etc.		
7. Solve problems in addition (sum less than 10 000) and subtraction (minuend less than 10 000).	• Model 1-digit subtract 1-digit problems (numerical and simple one step word problems) using unifix cubes counters (concrete and virtual) to introduce bar models.  • Model subtraction involving 1-digit and 2-digit numerals using manipulatives such as base ten materials, unifix cubes and/or number lines (no regrouping, review).	• Model one step and multi-step subtraction problems involving  regrouping (focus on algorithm) using base ten materials or unifix cubes (use trading/decomposition for regrouping) e.g. • Create worksheets with pictorial models/drawings for subtraction problems inclusive of bar models. • Reinforce Polya's four-step problem solving model and strategies when solving problems.	• Create worksheets or use online interactive worksheets for practice with one -step and multi-step subtraction problems (include bar modelling as a strategy). • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems. • Engage students in the use of mental strategies for addition e.g. jump strategy, split strategy, bridging to ten, compatible numbers, double facts etc.

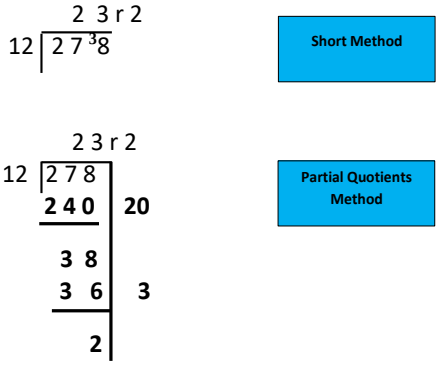
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Model simple one-step subtraction problems involving regrouping (focus on algorithm) using base ten materials or unifix cubes (use trading/decomposition for regrouping) e.g.  • Create worksheets with pictorial models/drawings for subtraction problems inclusive of bar models. • Reinforce Polya's four-step problem solving model and strategies when solving problems. • Grade problems using subtraction hierarchy i.e. ○ 1-digit subtract 1-digit, ○ 2-digit subtract 1 digit, ○ 2-digit subtract 2-digit etc	• Grade problems using subtraction hierarchy i.e. ○ 1-digit subtract 1-digit, ○ 2-digit subtract 1 digit, ○ 2-digit subtract 2-digit etc to determine student's skill deficiencies in subtraction algorithm. • Engage students in the use of mental strategies for subtraction e.g. think addition strategy, related addition and subtraction facts etc.	

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	to determine student's skill deficiencies in subtraction algorithm. • Engage students in the use of mental strategies for subtraction e.g. think addition strategy, related addition and subtraction facts etc.		
8. Multiply 2, 3- and 4-digit numbers by 2-digit numbers.	• Model 1-digit by 1-digit multiplication problems (numerical and simple one step word problems) using simple arrays, counters (concrete and virtual), bar models (unifix cubes) and number lines.  • Using the models above, review the commutative and associative properties of multiplication.	• Model 2, 3- and 4- digit by 2-digit multiplication problems (numerical and word) base ten blocks, counters and grids (using arrays, area model, the distributive property and partial products). **Area Model for Multiplication** 45 x 24 = 1080  • Have students make drawings (pictorial) of the arrays and the area models and bar models to represent multiplication problems.	• Create worksheets or use online interactive worksheets for practice with one -step and multi-step multiplication problems (include bar modelling as a strategy). • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Model 2, 3- and 4- digit by 1-digit multiplication problems (numerical and word) with base ten blocks and counters (arrays and area model) for review purposes. Use the repeated addition strategy, if necessary. • Model 2, 3- and 4- digit by 2-digit multiplication problems (numerical and word) base ten blocks, counters and grids (using arrays, area model, the distributive property and partial products). **Area Model for Multiplication** 45 X 24 1080 40 (20): 40 X 20 = 800 5 (20): 5 X 20 = 100 40 (4): 40 X 4 = 160 5 (4): 5 X 4 = 20 800 100 160 + 20 1080 • Have students make drawings (pictorial) of the arrays and area models and draw bar models to represent multiplication problems.	• Create worksheets with pictorial models for multiplication problems inclusive of bar models. • Have students solve multiplication problems using the algorithm, partial products and distributive property of multiplication. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.	

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Introduce algorithm for 2, 3- and 4- digit by 2-digit multiplication problems. • Have students solve multiplication problems using partial products and distributive property of multiplication (include concrete and pictorial models if needed by students). • Create worksheets with pictorial models for multiplication problems inclusive of bar models. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.		
9. Divide 2, 3- and 4-digit numbers by 2-digit numbers (with and without remainder).	• Model 1-digit and 2-digit divided by 1-digit division problems (sharing and grouping) using base ten materials and counters (concrete and virtual). • Model 2, 3- and 4- digit divided by 1-digit division problems (numerical and word) with base ten blocks, number lines, decomposition and area models e.g. **87 ÷ 3**	• Model 2, 3- and 4- digit divided by 1-digit division problems (numerical and word) with base ten blocks for review purposes. Use the repeated subtraction strategy, if necessary. • Model 2, 3- and 4- digit divided by 2-digit division problems (numerical and word) using base ten blocks.	• Create worksheets or use online interactive worksheets for practice with one -step and multi-step division problems (include bar modelling as a strategy). • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.

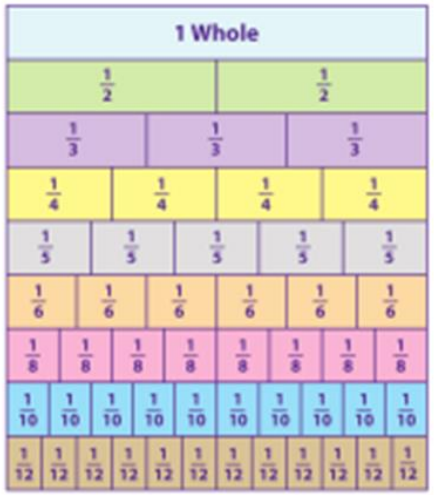
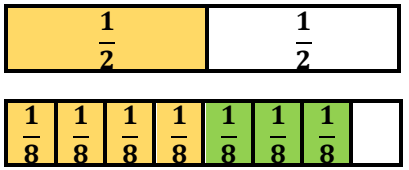
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	 **87 ÷ 3**  Example: Find 96 ÷ 4  Model 2, 3- and 4- digit divided by 2-digit division problems (numerical and word) using base ten blocks, decomposition and bar models.	• Have students make drawings (pictorial) of the division models and draw bar models to represent division problems. • Have students solve 2, 3- and 4-digit divided by 2-digit division problems with and without remainders using the algorithm/s.  • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.	

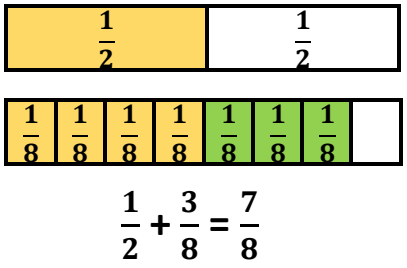
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Have students make drawings (pictorial) of the division models and draw bar models to represent division problems. • Introduce algorithms for 2, 3- and 4- digit divided by 2-digit division problems with and without remainders.  • Create worksheets with pictorial models for division problems inclusive of bar models. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.		
Number Patterns and Relationships	0 item	1 item	2 items

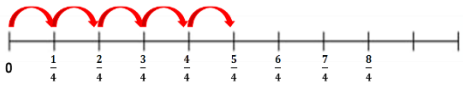
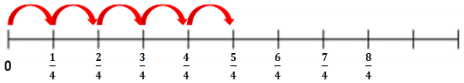
NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
10. Use a pattern rule to determine missing elements for a given pattern and to extend or predict subsequent elements in patterns.	• Review all types of patterns – repeating, increasing and decreasing patterns using concrete (or virtual) manipulatives such as counters and unifix (linking) cubes to represent the numbers. • Review number patterns in the 100 -chart and extend to the 1000-chart, addition and multiplication charts (student pocket charts can be created). • Have students select a number on the 100-chart and determine what changes will have to be made to the number to make another number (to the right, left, above or below the selected number). • Review skip counting to 100, 1000 and beyond, using various numbers e.g. 2's, 3's, 5's, 10's, 20's, 25's, etc • Use think-alouds for students to describe the patterns and state the pattern rule observed in the number charts.	• Review number patterns in the 100 -chart and extend to the 1000-chart, addition and multiplication charts (student pocket charts can be created). • Have students select a number on the 100-chart and determine what changes will have to be made to the number to make another number (to the right, left, above or below the selected number). • Review skip counting to 100, 1000 and beyond, using various numbers e.g. 2's, 3's, 5's, 10's, 20's, 25's, etc • Use think-alouds for students to describe the patterns and state the pattern rule observed in the number charts. • Present number charts with missing numbers and have students play a game in which they predict ~~what are~~ the missing numbers. • Have students extend the patterns observed and explain their reasoning.	• Design activities/games in which students create their own patterns using the number charts and have other students predict missing elements or extend pattern. • Create worksheets or use online interactive worksheets for practice with predicting and extending simple patterns.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Present number charts with missing numbers and have students play a game in which they predict the missing numbers. • Have students extend the patterns observed and explain their reasoning. • Design activities/games in which students create their own patterns using the number charts, and have other students predict missing elements, or extend pattern. • Create worksheets or use online interactive worksheets practice of predicting and extending simple patterns.	• Design activities/games in which students create their own patterns using the number charts, and have other students predict missing elements or extend pattern. • Create worksheets or use online interactive worksheets for practice of predicting and extending simple patterns.	
11. Solve problems involving number sentences with one unknown.	• Model simple problems with 1-digit numbers at first, using concrete (or virtual) materials such as counters to find one unknown quantity. • Use an equal arm balance and counters to represent problems with one unknown.	• Model problems with 2-digit, 3-digit and 4-digit numbers (with one unknown quantity) with base ten materials, number lines or number sentences. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems including guess and check, using the inverse operation	• Represent problems with one unknown (2-digit, 3-digit and 4-digit) using number sentences and bar models. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems including guess and check,

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	• Model problems with 2-digit numbers (with one unknown quantity) with base ten materials, number lines or number sentences. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems including guess and check, using the inverse operation and drawing diagrams such as bar models. • Create worksheets or use online interactive worksheets/games/activities using simple problems (one step, no more than 2-digit numbers) involving one unknown. • Review and practice mental mathematics strategies involving the four operations with whole numbers. • Review and practice addition and subtraction facts.	and drawing diagrams such as bar models. • Create worksheets or use online interactive worksheets/games/activities with graded problems (from one step to multi-step with larger numbers) involving one unknown. • Review and practice mental mathematics strategies involving the four operations with whole numbers. • Review and practice addition and subtraction facts.	using the inverse operation and drawing diagrams such as bar models. • Create worksheets or use online interactive worksheets/games/activities with graded problems (from one step to multi-step with larger numbers) involving one unknown. • Review and practice mental mathematics strategies involving the four operations with whole numbers. • Review and practice addition and subtraction facts.
Fractions and Decimals	0 - 1 item	2 - 3 items	4 items

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
12. Add and subtract fractions involving same denominator and one denominator a multiple of the other.	• Review and practice finding equivalent fractions for common fractions by representation with concrete materials for area, set and linear models of fractions. • Have students create a fraction wall for equivalent fractions.  • Represent addition and subtraction of fractions (area, set and linear models) involving same denominator, then one denominator a multiple of the other, using concrete (or virtual) manipulatives such as fraction	• Create worksheets with graded problems involving addition and subtraction of fractions. • Have students draw diagrams to represent addition and subtraction of fractions inclusive of bar models.  $\frac{1}{2} + \frac{3}{8} = \frac{7}{8}$ • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.	• Create worksheets or use online interactive worksheets/games/activities to solve graded problems involving addition and subtraction of fractions involving same denominator and one denominator a multiple of the other. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	towers, fraction circles, counters and number lines. • Create worksheets with simple problems involving addition and subtraction of fractions. • Have students draw diagrams to represent addition and subtraction of fractions inclusive of bar models.  • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.		
13. Multiply fractions by whole numbers.	• Represent multiplication of fractions by whole numbers for area, set and linear models using concrete (or virtual) manipulatives such as fraction	• Have students draw diagrams (inclusive of bar models) to represent multiplication of fractions by whole numbers.	• Create worksheets or use online interactive worksheets/games/activities to solve problems involving multiplication of fractions.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	towers, fraction circles, counters and number lines. • Have students draw diagrams (inclusive of bar models) to represent multiplication of fractions by whole numbers.  $\frac{1}{4} \times 5 = \frac{5}{4} = 1\frac{1}{4}$ • Develop the algorithm for multiplication of fractions by whole numbers using a variety of concrete and pictorial models. Use the strategy of repeated addition at first. • Create worksheets with simple problems involving multiplication of fractions.	 $\frac{1}{4} \times 5 = \frac{5}{4} = 1\frac{1}{4}$ • Develop the algorithm for multiplication of fractions by whole numbers using a variety of concrete and pictorial models. Use the strategy of repeated addition at first. • Create worksheets with graded problems involving multiplication of fractions.	• Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.
14. Divide whole numbers by fractions.	• Represent division of whole numbers by fractions using concrete (or virtual) manipulatives such as fraction circles, counters and number lines.	• Represent division of whole numbers by fractions using concrete (or virtual) manipulatives such as fraction circles, counters and number lines.	• Create worksheets or use online interactive worksheets/games/activities to solve problems involving division of whole numbers by fractions.

NUMBER			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	 **$3 \div \frac{1}{6} = 18$ ($\frac{1}{6}$ pieces)** • Have students draw diagrams, inclusive of bar models, to represent division of whole numbers by fractions. • Develop the algorithm for division of whole numbers by fractions using a variety of concrete and pictorial models. • Create worksheets with simple problems involving division of whole numbers by fractions.	 **$3 \div \frac{1}{6} = 18$ ($\frac{1}{6}$ pieces)** • Have students draw diagrams, inclusive of bar models, to represent division of whole numbers by fractions. • Develop the algorithm for division of whole numbers by fractions using a variety of concrete and pictorial models. • Create worksheets with simple problems involving division of whole numbers by fractions.	• Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.
15. Convert expanded notation to decimal fractions.	• Review the place value system for whole numbers by using concrete manipulatives such as base ten blocks, squares, strips of paper and place value mats. • Review the expanded notation of whole number representation. • Extend the place value system to tenths. Use base ten blocks, grids, strips of paper and place value	• Extend the place value system to tenths. Use base ten blocks, grids, strips of paper and place value mats to represent 100s, 10s, 1s, $\frac{1}{10}$, in numbers with tenths. • Represent numerals with tenths on place value charts. Introduce the decimal point to separate whole numbers from fractions.	• Use worksheets or online interactive activities and games with expanded notations involving decimal numbers up to hundredths, for practice and review.

<table>
<tr><th colspan="4">NUMBER</th></tr>
<tr><th rowspan="2">CONTENT/SKILL</th><th colspan="3">REMEDIATION STRATEGIES</th></tr>
<tr><th>LEVEL 1</th><th>LEVEL 2</th><th>LEVEL 3</th></tr>
<tr>
<td></td>
<td>mats to represent 100s, 10s, 1s, $\frac{1}{10}$, in numbers with tenths.
• Represent numerals with tenths on place value charts. Introduce the decimal point to separate whole numbers from fractions.
• Extend the place value system further to introduce hundredths, only when students have a good understanding of representing tenths on a place value chart. Use base ten blocks to model the numbers with tenths and hundredths. e.g. 32.68, 250.75
<table>
<tr><th>Hundreds</th><th>Tens</th><th>Ones</th><th>Tenths</th><th>Hundredths</th></tr>
<tr><td></td><td>3</td><td>2</td><td>6</td><td>8</td></tr>
<tr><td>2</td><td>5</td><td>0</td><td>7</td><td>5</td></tr>
</table>
• Represent numerals with tenths and hundredths in expanded notation form.
• Use worksheets or games (including from online sources) for practice and reinforcement.</td>
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MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items

16. Convert linear measure from one form to the other (millimetres, centimetres and metres).	• Review the relationships among the metre (standard unit) and its sub units: the centimetre and the millimetre.
	• Review the method for measuring using a ruler: alignment of ruler to object, starting at 0 or other points on the ruler.
	• Have students measure and record the lengths of objects in each unit separately.
	• Have students measure and record lengths using
	  ○ metres and centimetres
	  ○ centimetres and millimetres
	• Using the relationships among the units (conversation table can be developed), allow students to express measurements made, in different units.
		• Have students measure and record the lengths of objects in each unit separately.
		• Have students measure and record lengths using
		  ○ metres and centimetres
		  ○ centimetres and millimetres
		• Using the relationships among the units (conversation table can be developed), allow students to express measurements made, in different units.
		• Use worksheets or games (including online) for practice and reinforcement.
			• Use worksheets or online interactive activities/games with conversion of linear units of measure (millimetres, centimetres and metres).

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Use worksheets or games (including online) for practice and reinforcement.		
17. Solve computational and real-life problems involving grams and kilograms.	• Review the relationship between the kilogram and the gram (1 kilogram = 1000 grams). • Have students measure and record the mass of objects in kilograms and grams. • Have students convert measurements: ○ kilograms to grams ○ grams to kilograms ○ kilograms and grams to grams ○ grams to kilograms and grams. • Create worksheets or use online interactive activities/worksheets to practice conversion and solve simple computational problems involving kilograms and grams.	• Review the relationship between the kilogram and the gram (1 kilogram = 1000 grams). • Have students convert measurements: ○ kilograms to grams ○ grams to kilograms ○ kilograms and grams to grams ○ grams to kilograms and grams. • Create worksheets or use online interactive activities/worksheets to practice conversion and solve computational and real-life problems involving kilograms and grams. • Reinforce Polya's four-step problem solving model and the use of the strategies.	• Create worksheets or use online interactive activities/worksheets to practice conversion and solve computational and real-life problems involving grams and kilograms. • Reinforce Polya's four-step problem solving model and the use of the strategies.

MEASUREMENT			
CONTENT/SKILL	**REMEDIATION STRATEGIES**		
	LEVEL 1	**LEVEL 2**	**LEVEL 3**
	0 - 1 item	2 items	3 items
	• Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.		
18. Calculate the duration of events.	• Review the relationship between the hour and the minute (1 hour = 60 minutes). • Review time expressed on analog and digital clocks. • Create worksheets in which students compute elapsed time for different start and finish times. • Use think-alouds to have students explain their reasoning for answers given. • Have student solve simple, familiar problems involving duration of time. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.	• Create worksheets in which students compute elapsed time for different start and finish times. • Use think-alouds to have students explain their reasoning for answers given. • Have student solve graded problems involving duration of time. • Reinforce Polya's four-step problem solving model and the use of the strategies when solving problems.	• Create worksheets or use online interactive activities/worksheets to practice computation of elapsed time from different start and finish times. • Have student solve multi-step problems involving duration of time with both analog and digital clocks. • Reinforce Polya's four-step problem solving model and the use of the strategies.

GEOMETRY		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1	**LEVEL 2**
	0 item	1 item
19. Identify angles on faces of solids or plane shapes that are right angles, greater than right angles or smaller than right angles.	• Review concept of turns through practical activities using concrete objects. Include student body movements to demonstrate turns. • Have students explore turns in objects (solids and plane shapes) in their environment e.g. hand movements on a clock, opening and closing of doors, laptops, book etc. • Have students model turns: whole turn, three quarter turn, half turn or quarter turn using geostrips or similar objects. • Have students make a quarter turn measure and use to determine whether angles in objects are right angles, greater than right angles or smaller than right angles. • Draw turns that are right angles, greater than right angles or smaller than right angles on grid paper. • Review the properties of the plane shapes. • Design or use online activities/games in which students can compare angles to the right angle (greater than a right angle, less than a right angle). Have students explain their reasoning through think-alouds. • Create or use online worksheets/activities/games in which students find angles that are right angles, greater than right angles or smaller than right angles.	• Review the properties of the plane shapes. • Design or use online activities/games in which students can compare angles to the right angle. Have students explain their reasoning. • Create or use worksheets/activities/games in which students find angles that are right angles, greater than right angles or smaller than right angles.

STATISTICS		
CONTENT/SKILL	**REMEDIATION STRATEGIES**	
	LEVEL 1 0 item	**LEVEL 2** 1 item
20. Interpret the findings displayed in the tables, charts and graphs.	• Have students collect data such as a class survey on students' favourite subject. • Students will then organise and represent the data in a table. • Have students use the information in the table to create charts and graphs e.g. pictograph, block graph and bar graph • Have students collect data represented in various ways from other sources e.g. the newspaper, books, online publications etc and let students describe the data in their own words (their interpretation). • Have students interpret the data from their own surveys through oral presentations. • Create worksheets in which students interpret data displayed in the tables, charts and graphs. • Have students create their own questions on the data and have other students respond to the questions.	• Have students collect data such as a class survey on students' favourite subject. • Students will then organise and represent the data in a table. • Have students use the information in the table to create charts and graphs e.g. pictograph, block graph and bar graph for review purposes. • Have students collect data represented in various ways from other sources e.g. the newspaper, books, online publications etc and let students describe the data in their own words (their interpretation). • Have students interpret the data from their own surveys through oral presentations. • Create worksheets in which students interpret data displayed in the tables, charts and graphs. • Have students create their own questions on the data and have other students respond to the questions.

RECOMMENDATIONS FOR PARENTS

STANDARD FOUR AND STANDARD FIVE

NUMBER
Number Concepts, Place Value and Rounding: • Let children identify large numbers (up to one million, including money) from various sources e.g. newspapers, magazines, books, signs, vehicle licence plates etc. Have them practise reading and writing the large numbers as figures and words. • Discuss with children the uses of large numbers in everyday life e.g. for providing information on population, preparation of national budget, buying a car, cost of appliances etc • Have children cut out large numbers from newspapers or magazines and stick them on a ~~large~~ sheet of paper in order: largest to smallest or vice versa. Extend the activity to writing number sentences using the signs “more than” (>) and “less than” (<) to compare the size of numbers. • Have children engaged in activities such as “Number Talk” or “Story of a Number”. They can select a number and tell everything they know about it e.g. o Is it a prime number, a multiple, a square number? o What are its factors? o What number comes before it/goes after it? o How many groups of thousands, hundreds, tens, ones make up the number? etc. Have them tell and/or write their number stories. • Encourage children to read stories with Mathematics content. Math Literature texts and videos can be sourced online. • Create a place value mat as shown using a large sheet of paper and markers. Make number cards from smaller pieces of thick paper such as bristol board or cardboard. Children can stick the numbers on the place value mat to reinforce the understanding of place value e.g.

Thousands	Hundreds	Tens	Ones
2	0	9	5

More columns can be drawn for larger numbers (tens of thousands, hundreds of thousands, one million). Let children represent numbers that they come upon from various sources e.g. newspapers, books, television advertisements etc.

- Have children count to large numbers in various activities e.g. Walk and Count:
  - count their steps as they walk
  - include skip counting in 5s, 10s, 25s, 50s, 100s, 500s, 1000s,
- Children can sort and count dollars and coins e.g. $1, $10, $20, $50, $100; 10-cent coins, 25-cent coins, 50-cent coins (if available).
- Take children on visits to the market stall or supermarkets. Children can explore numbers through a variety of activities e.g.
  - count bills and coins when paying in cash and receiving change
  - estimate and round cost of a few items - have children keep a running total of how much you are spending by using prices rounded to the nearest dollar
  - check over bills/receipts with calculators
  - use rows to estimate, then count (to verify or check) the numbers of items on shelves
  - estimate then count (to verify or check) the number of vegetables and fruits in a particular area.

Number Patterns and Relationships:

- Have children look for patterns around the home and in the environment e.g. in leaves, flowers, prints in cloth such as t-shirts, bedsheets, curtains, gift wrapping paper, tiles etc. Let students count the number of leaves, petals, objects, shapes to identify the number patterns.
- Have children create patterns through sound and movement e.g. Clap your hands and stomp one foot (clap, clap, stomp; clap, clap, stomp; clap, clap, stomp). Then together create variations of the pattern.

NUMBER

- Have children create pattens using different objects e.g. 2 spoons placed up, 3 spoons down, 2 spoons up, 3 spoons down etc
- Let children identify number patterns in a 100- chart i.e. numbers 1 to 100. You can also use a Snakes and Ladders board. Have students create a 1000-chart using a large sheet of paper and markers/crayons. Search for number patterns on the 1000-chart.
- Children can create addition or multiplication charts and search for patterns. They can use different colour markers/crayons to show patterns. Sample charts are shown with number patterns:

+	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10

X	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

- Have children give the missing value in simple number sentence in the four operations: addition, subtraction, multiplication and division. If access is available look for online games and activities in which children can solve these types of problems e.g.
  - 34 + ____ = 50
  - ___ + 23 = 75
  - 100 – 45 = ____

- 21 X 5 = ___
- 96 ÷ ___ = 8

- Have children memorise and recall multiplication and division facts (tables). Select a particular table/or tables every day, and have child memorise and recall the facts. Let them use counters or drawings to build the tables for any set of for which they need extra support.

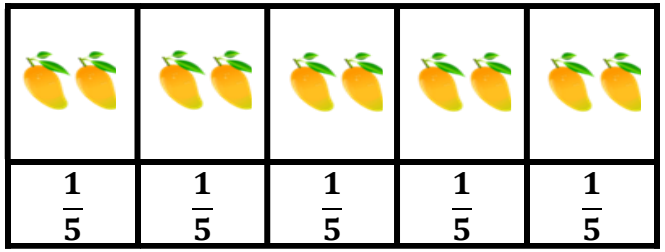
The Four Operations: Addition, Subtraction, Multiplication, Division:

- Use everyday situations to have children use the four operations for problem solving e.g.
  - shopping - have children add cost of items, find the total cost of a few of the same items, calculate change etc
  - Games -
    - throw two dice and multiply the numbers or use the numbers to create a 2-digit number and divide by each of the numbers shown, giving the remainder. The game can be extended to three dice.
    - using playing cards e.g. Highest Number: Each player takes 2 cards, the player with the highest sum gets the other players' cards. Players continue to take and add up two cards at a time until no cards are left. The player with most cards is the winner. The game can be adapted to subtraction and multiplication.
    - have children play online interactive games or solve puzzles involving four operations.
    - ask children verbal math problems e.g.
      - "Take the number twenty-seven; add six; multiply by three; subtract four; divide by five. What's your answer?" Speak slowly at first until your child gets better at solving these mental problems.
      - ask questions like: how much more do I need? How many will I have if I had 6 times? How many will each get if I share equally? etc
- Place multiplication and division fact charts where children can use them as a quick reference when solving problems involving multiplication and division e.g. on the walls of the homework area.
- Review Math facts at home, in the car, waiting in line or while on a walk or stroll.
- Ask questions or play games with other number facts e.g.

- double facts e.g. 8+8; 20+20; 25+25,
- numbers that add to 100 e.g. 55 and 45; 30 and 70; 64 and 36
- numbers that add to 1000 e.g. 600 and 400; 250 and 750; 540 and 460 (use subtraction facts too).

Fractions:

- Use everyday items to help your children understand the idea of a whole and its parts for e.g.
  - use objects, such as a pizza, piece of paper, a towel, a placemat, a picture frame, a mirror, a magazine and a book (rectangular or square shaped objects).
  - ask children to show you one half of each object. They can use a string to mark the halfway point. Let them fold or cut paper and compare to see that each part/piece is the same size (important for ideas in fractions).
  - have children show quarters, then thirds of objects by folding, cutting (paper) or using pieces of strings.
  - Let them compare sizes e.g. Which is larger - one half or one quarter of the towel? one half of the towel or one quarter of a blanket? Ask questions for e.g. "Is one half always larger than one quarter?"
  - Use sets of objects and have students find one-half, one-quarter, one-fifth of the set. e.g.
    - Daddy bought 10 mangoes. Share the mangoes equally among the five persons in the house. What fraction of the total number of mangoes will each person get? How many mangoes will each person get? Let children understand that each part of the set must be equal. Have them share the mangoes in five equal parts. Each person will get one-fifth of the set of mangoes. Each person will get 2mangoes.



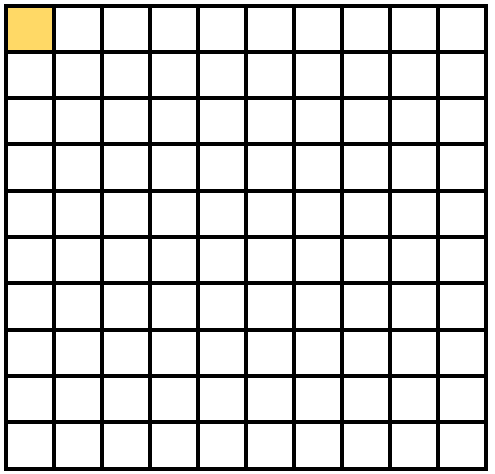
NUMBER

- Have children say and write fractions as figures and words e.g. $\frac{3}{4}$ – three quarters
- Have children create a Fraction Families chart e.g., thirds - one third ($\frac{1}{3}$), two-thirds ($\frac{2}{3}$), three-thirds($\frac{3}{3}$),same as one whole.
- Children can then add and subtract fractions in the same family e.g.
    - one third and one third is equal to two thirds ($\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$).
    - four fifths subtract one fifth - $\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$.
    - They can demonstrate addition and subtraction of fractions using objects/materials around them.

Decimals:

- Have children cut or fold paper in ten equal parts. Let them label each part as one-tenth or $\frac{1}{10}$ or 0.1. They can use a 100-grid (each part is equal in size) and shade and label hundredths e.g. $\frac{1}{100}$ or 0.01.

$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
0.1	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**



$\frac{1}{100}$ **or 0.01**

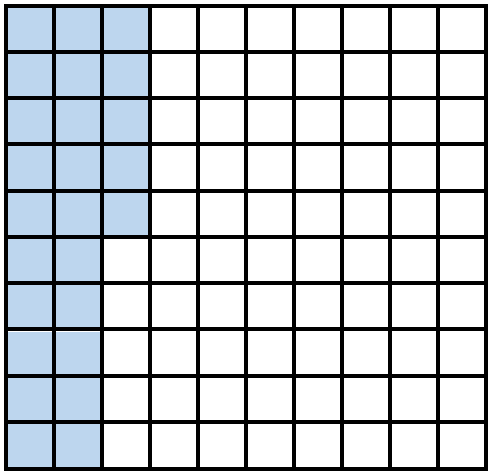
NUMBER

- Let children extend place value chart to include tenths, hundredths. They can search for decimal numbers from various sources e.g. bills/receipts, newspapers, item prices, sale tags etc and represent them on the chart e.g. 32.68, $250. 75

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
		3	2	6	8
	2	5	0	7	5

Percent/Percentages:

- Draw or cut out 100-grids (from exercise books, graph paper or print from online sources) and have children colour to show per cents e.g., 25% is 25 out of a hundred.



$\frac{25}{100}$ or 25% (also 0.25)

NUMBER
• Help children see that fractions, decimals and per cent are related e.g. one hundredth ($\frac{1}{100}$) is the same as 0.01 or one per cent (1%) • Assist children with identifying percentages in various sources e.g. newspapers, television advertisements, flyers, labels, signs and showcases in stores, online advertisements etc. Discuss with them how the percentages are used. • Have children read nutrition labels and calculate the percent of a specific nutrient in each item. Assist them with this task, if necessary. **Problem solving:** • Have children solve problems from various sources e.g., textbooks, online worksheets and activities. • Encourage children to use different strategies when solving problems e.g., drawing diagrams, using smaller numbers to solve problems, guess and check, using objects such as counters (bottle covers, straws, red beans), if necessary • Let children talk about the problem before solving i.e. say in their own words, explain how they can solve, look for all the information in the problem etc. • Have children check over their solutions. **Critical Thinking/Reasoning:** • Let children play board games such as Snakes and Ladders, Monopoly and Sudoku. Children can also design and create their own board games with your assistance. • Let children construct objects using blocks (packaged or sourced online). • Allow children to play video games that develop critical thinking (with supervision). • Have children engaged in math activities (from various sources including online) such as math number puzzles, magic squares, and math riddles. • Let children have fun with math activities while developing critical thinking skills!

GEOMETRY

Solids and Plane Shapes, Symmetry and Geometrical Patterns:

- Have children identify solids and plane shapes from their environment and talk about their properties e.g.
  - Solids – cube (box, dice,), cuboid (box, cupboard), cylinder (toilet paper roll, cans), cone (ice cream cones, ornaments)
  - Plane shapes – square (tile), rectangle (picture frame), circle (plate, cake), triangle (street sign)
- Play games with your children involving solids and plane shapes e.g.
  - I Spy – ask the children to guess an object you identify by its shape: "I spy something that is round," "I spy something that is shaped like a cylinder." Make this game more challenging by stating two shapes: "I spy a box with square sides".
- Use the vocabulary to describe objects e.g. "the rectangular table", "the cubic box (or the box that looks like a cube)", the "ornament that looks like a square based pyramid", "the round bulb".
- Fold sheets of paper in half and have children draw shapes along the fold; cut out the shape and unfold the paper to create symmetrical shapes. Children can also create symmetrical shapes using ink or poster paints splashed on folded paper.
- Have children construct shapes with common household items, such as toothpicks, straws, marshmallows, empty boxes, empty toilet paper rolls, twist ties. Children can also use construct shapes virtually using online interactive sites or apps.
- Have children talk about the objects they notice in their environment while they are travelling in a car or walking outdoors e.g. talk about buildings, signs, electricity poles, garbage bins, store windows, doors etc. in reference to their size, shape and symmetry.
- Assist your children to create a three-dimensional model of the street or village in which you live, using household items such as cardboard boxes, paper, paint etc. Then have the children draw an image of the model they created. This will help them to understand three -dimensional shapes represented on paper.
- Allow children to play online interactive games/solve puzzles involving shapes.
- Have children create geometrical patterns with objects or shapes in their environment e.g., toothpicks, straws, boxes, cans.

Angles/Parallel and Perpendicular lines:

- Adapt games like "I Spy" to identify shapes or objects which turn. e.g., "I spy, and you learn, something is making a quarter turn."
- Help children recognize and identify real-world examples of right angles (quarter turns) e.g., the corner of a room, the corner of a table.
- Help children recognise parallel and perpendicular lines in the environment e.g., parking space lines, corners.

MEASUREMENT

Length/Perimeter:

- Have children measure the lengths of objects using various instruments for lengths e.g. metre rule, ruler, measuring tape.
- Review the conversions of measure for length e.g. how many centimetres are there in a metre? How many metres make a kilometre?
- When building something, ask children to convert the measurements given in centimetres to metres, etc.
- When travelling, ask children to convert the measurements given in kilometres to metres, etc.
- Let children express lengths of the same objects, using different units, for practice. They can compare the lengths of objects by measuring using the same units.
- Have children measure the lengths of each side of the living room, backyard, porch, and add to determine perimeter.
- Ask children to guess (estimate) measurements before they actually measure length or perimeter.

Area:

- Let children count tiles on floor, countertops and walls to determine area of surfaces around the house.
- Have children cut out grids with squares and count squares to determine area. Source online activities/games/puzzles in which children can count squares to calculate area.
- Have children cut out squares – 1-metre square and use to measure and express the area of the floor and other large surfaces in square metres.
- Ask children to guess (estimate) measurements before they actually measure area of surfaces.

Mass/Weight:

- Have children look at packaged foods and record weights expressed in kilograms and grams.
- Let children assist you when cooking, to measure mass of ingredients expressed in grams.
- Have children convert mass/weight measures expressed in grams e.g. 1500 grams to kilograms and grams (1 kilogram 500 grams) and vice versa.

MEASUREMENT
• Have children convert mass/weight measures expressed in kilograms e.g. 1.7 kilograms to grams (1700 grams) and vice versa. • Have children measure and compare the weight of fruits, vegetables, flour rice etc using a kitchen scale, if accessible. **Capacity and Volume:** • Let children make paper cubes of the same size. Have them stack and create three-dimensional models. Let children express the volume of the models by counting the number of cubes. • Have children read labels of packs, cans etc to determine the quantity of liquid they hold, in litres or millilitres. Let children compare containers that hold the same quantities, more and less quantities. • Have children convert the measure from litres to millilitres e.g. 1.2 litres is the same as 1200 millilitres, and vice versa. • Let children compare the cost of items to the quantity expressed in litres and millilitres when shopping. **Time:** • Have children tell you the time at various times of the day using both analog and digital time. • Assist children to prepare a schedule for the day, inclusive of times allocated for certain activities e.g., online classes, homework and study, watching television, outdoor games, sleep. Ask questions on their schedule to help them understand the importance of time e.g. allocating enough time for study, sleep etc. Help them adjust their schedules, if necessary.

STATISTICS

- **Frequency Tables/ Graphs: Pictographs, Block graphs, Bar graphs:**
- Create scenarios for children to conduct simple surveys with family members and/or friends e.g., Favourite meals or dishes
- Have children conduct the surveys and present the information in different ways e.g., frequency table, pictograph, block graph or bar graph.
- Help children understand the importance of collecting information: for making decisions e.g. What should we have for dinner?
- Assist children with describing the information from the survey. Ask questions on the information presented in the table and/or graphs.
- Let them search for tables and graphs with information from various sources e.g. newspapers, television, online sources etc and discuss the importance of the information presented.

Mode/Mean/Average:

- Have children identify the most popular choice in surveys conducted with family members and/or friends e.g., what is the most popular meal?
- Let children calculate mean/averages e.g.
  - the mean/average of their last five tests in Mathematics.
  - the mean/average of the amount of money spent of food shopping for the last four weeks. Allow the use of calculators.
  - the mean/average of time spent watching television for a week.
  - let children use the mean to make decisions e.g. how many more marks should I try to get in my next Mathematics test if I want to improve my average? Do I need to watch less television? Why?
- Have children play games and solve problems involving mean/average and mode sourced from textbooks or worksheets (online sources included).

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APPENDICES

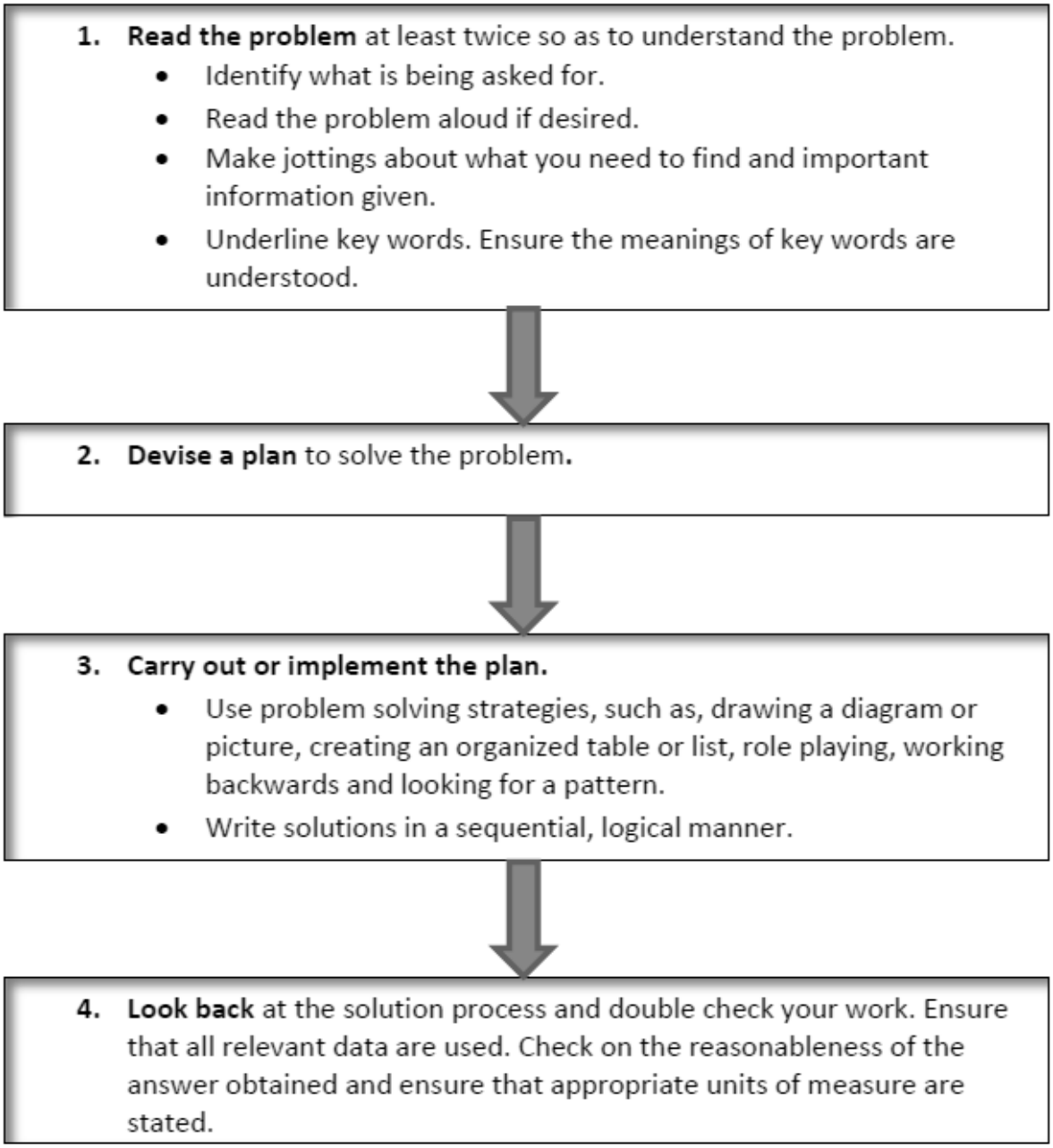
Appendix 1.

ASSIGNMENT TO LEVELS

TOTAL Number of Items per STRAND or SUBGROUP	LEVELS OF PERFORMANCE defined by NUMBER OF CORRECT ITEMS		
	LEVEL 1	LEVEL 2	LEVEL 3
1	0	1	
2	0	1	2
3	0 - 1	2	3
4	0 - 1	2 - 3	4
5	0 - 1	2 - 3	4 - 5
6	0 - 2	3 - 4	5 - 6
7	0 - 2	3 - 5	6 - 7
8	0 - 2	3 - 6	7 - 8
9	0 - 3	4 - 6	7 - 9
10	0 - 3	4 - 7	8 - 10

Appendix 2.

George Polya's Four-Step Problem Solving Strategy



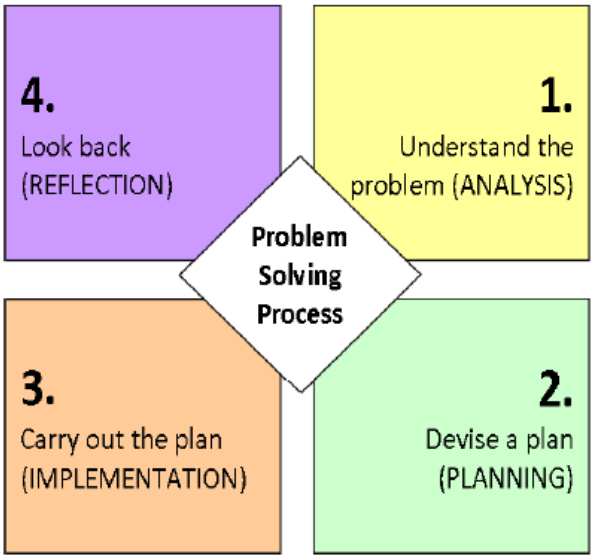
Appendix 3.

Polya's 4-Step Approach to Problem Solving:

Using Polya's 4-Step Approach to Problem Solving:

Step 1. – ANALYSIS – Understand the problem
I must answer these questions:-

- What am I being asked?
- What important information was I given?
- What key words are there?



Step 2. – PLANNING – Devise a plan
What problem solving strategy can I use?

- Draw a Picture
- Act it out
- Use a model
- Look for a Pattern
- Guess and Check
- Work backward
- Make a table or chart
- Simpler form of the problem
- Make an organised list
- Write an equation

Step 3. – IMPLEMENTATION – Carry out the plan
To solve the problem I must:-

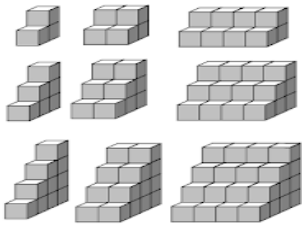
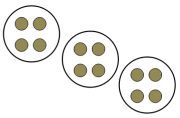
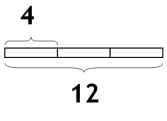
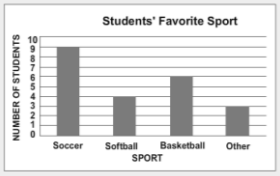
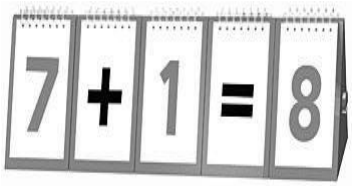
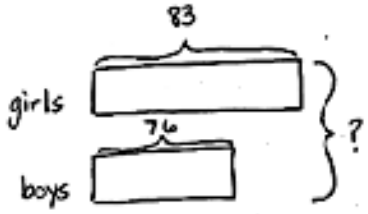
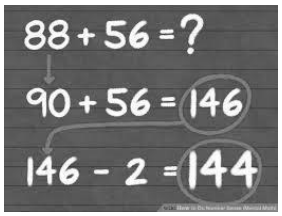
- Apply the strategy chosen
- Obtain a solution
- Write the solution in a sequential, logical manner
- If no solution is obtained, repeat steps 1 to 3

Step 4. – REFLECTION – Looking back / Review the solution:
In reflecting, I will:-

- Look back at the solution process and double check my work
- Ensure that all relevant data are used
- Check on the reasonableness of the answer obtained
- Try an alternative approach

Appendix 4.

Problem Solving Strategies

Look for a Pattern 	**Try a Simpler Problem** ~~600 + 300 = ?~~ 6 + 3 = 9 600 + 300 = 900	**Make a Model** 3 × 4 = 12    4 12
Guess and Check 	**Make a List, Graph or Chart** Students' Favorite Sport SPORT / NUMBER OF STUDENTS Soccer 9 Softball 4 Basketball 6 Other 3  	**Create a Number Sentence** 
Work Backwards 	**Use Reasoning**  	**Act it Out** 
Draw a Picture  	**Use Mental Math**  	**Use your Fingers** 

Appendix 5.

Concrete-Pictorial-Abstract Models