KIDS WORLD SCHOOL, NAGPUR
SESSION 2026-27
CLASS VIII
SUBJECT – MATHEMATICS

Unit		Topic	Sub-Topic	Month		Suggested Ice-Breaking Activity	Teaching Pedagogy	Curricular Goals	Competency	Expected Learning Outcome	Assessment
No	Name			Starting	Closing						
Ch. 1	A SQUARE AND A CUBE	A SQUARE AND A CUBE	Introduction with Story – basic concept of Square Numbers; patterns with zero and addition form	JULY Day 1	JULY	Clap according to squaring pattern	Concrete: Use manipulatives like blocks/cubes to build squares (area) and cubes (volume). Pictorial: Draw squares/cubes, show dot patterns for squares. Abstract: Introduce symbols: n^2, n^3.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers. CG-7: Engages with puzzles and mathematical problems.	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation. C-7.1: Demonstrates creativity in discovering own solutions to puzzles.	Students will understand numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	
			Understanding Puzzle and Square Root – Exercise Questions	Day 2		Drawing objects (sun, moon, tree, water & mountains) – making pairs of 3	Square Patterns: Show $1+3+5+...+(2n-1)=n^2$. Games: "Guess the Square/Cube". Real-life: Relate to area of a room (m^2) or volume of a box (cm^3).	CG-7: Engages with puzzles and mathematical problems and develops own creative methods and strategies	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry	Students will engage with puzzles and mathematical problems and develop own creative methods and strategies	

								to solve them.	and aesthetics of puzzle-making and puzzle-solving.	to solve them.	
			Basic concept of Cubic Numbers and Addition Pattern	**Day 3**		Clap according to cubing pattern	Cube Visuals: Use 3D models to explain volume. Pictorial representations of cubes and cube numbers.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation.	Students will develop basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	
			A Pinch of History – Exercise Questions ; Revision	**Day 4**		Finger tap, finger hop & finger bend	Inquiry-Based Learning: Explore historical context of squares and cubes. Activities and problem-solving review.	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								and algorithms.			
			Exercise questions on Square Numbers; patterns with zero and addition form	**Day 5**		Clap according to squaring pattern	Concrete: Use manipulatives like blocks/cubes to build squares (area) and cubes (volume). Pictorial: Draw squares/cubes, show dot patterns for squares. Abstract: Introduce symbols: n^2, n^3.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers. CG-7: Engages with puzzles and mathematical problems.	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation. C-7.1: Demonstrates creativity in discovering own solutions to puzzles.	Students will understand numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	
			Square Root – Exercise Questions	**Day 6**		Drawing objects (sun, moon, tree, water & mountains) – making pairs of 3	Square Patterns: Show $1+3+5+...+(2n-1) = n^2$. Games: "Guess the Square/Cube". Real-life: Relate to area of a room (m^2) or volume of a box (cm^3).	CG-7: Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them.	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	Students will engage with puzzles and mathematical problems and develop own creative methods and strategies to solve them.	
			Exercise questions: Cubic Numbers and	**Day 7**		Clap according to cubing pattern	Cube Visuals: Use 3D models to explain volume. Pictorial	CG-1: Understands numbers and sets of numbers,	C-1.2: Discovers, identifies, and explores patterns in	Students will develop basic skills and capacities	

			Addition Pattern				representations of cubes and cube numbers.	looks for patterns, and appreciates relationships between numbers. CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	numbers and describes rules for their formation. C-8.1: Approaches problems using programmatic thinking techniques.	of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	
			Exercise Questions	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning: Explore historical context of squares and cubes. Activities and problem-solving review.	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								abstraction, and algorithms.			
			Computational Thinking	**Day 9**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 10**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

Ch. 2	**POWER PLAY**	**POWER PLAY**	Introduction with Story – Exercise; Basic knowledge with Law of Exponents	**JULY Day 1**	**JULY**	Finger tap, finger hop & finger bend	Inquiry-Based Learning: Ask "What happens when you multiply x^2 and x^3?" Let students explore and hypothesize. Use patterns: $3^1=3$, $3^2=9$, $3^3=27$...	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	. C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments.	The learner understands and explains that an exponent indicates the number of times a base is multiplied by itself.	
			Relating the Laws with Story and Real Life; Introducing Negative Power	**Day 2**		Emoji Introductions: Use emojis to describe yourself	Misconceptions to Address: $2^3 \neq 2\times3$. Emphasize repeated multiplication. $a^0=1$ (for $a \neq 0$) → Use patterns ($2^3=8$, $2^2=4$, $2^1=2$, $2^0=?$)	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments.	The learner applies the laws of exponents (multiplication, division, power of a power) to simplify numerical and algebraic expressions efficiently.	
			Standard Form and Usual Form; Relating to Real Life Examples; Pinch of History – Exercise	**Day 3**		Partner activities and group sharing	Scientific Notation: Converts, represents, and compares very large or small numbers using standard form. Real-life connections.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.1: Develops a sense for and an ability to manipulate large whole numbers and expresses them in scientific notation using exponents and powers.	The learner converts, represents, and compares very large or small numbers using standard form (scientific notation). The learner interprets negative exponents	

										as reciprocals.	
			Exercise questions on Law of Exponents	**Day 4**		Finger tap, finger hop & finger bend	Inquiry-Based Learning: Ask "What happens when you multiply x^2 and x^3?" Let students explore and hypothesize. Use patterns: $3^1=3$, $3^2=9$, $3^3=27$...	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	C-1.1: Develops a sense for and an ability to manipulate large whole numbers and expresses them in scientific notation using exponents and powers.	The learner understands and explains that an exponent indicates the number of times a base is multiplied by itself.	
			Exercise questions on Negative Power	**Day 5**		Emoji Introductions: Use emojis to describe yourself	Misconceptions to Address: $2^3 \neq 2\times3$. Emphasize repeated multiplication. $a^0=1$ (for $a \neq 0$) → Use patterns ($2^3=8$, $2^2=4$, $2^1=2$, $2^0=?$)	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments.	The learner applies the laws of exponents (multiplication, division, power of a power) to simplify numerical and algebraic expressions efficiently.	
			Exercise questions on Standard Form and Usual Form	**Day 6**		Partner activities and group sharing	Scientific Notation: Converts, represents, and compares very large or small numbers using standard form. Real-life connections.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.1: Develops a sense for and an ability to manipulate large whole numbers and expresses them in scientific notation using exponents and powers.	The learner converts, represents, and compares very large or small numbers using standard form (scientific notation). The learner interprets	

										negative exponents as reciprocals.	
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

Ch. 3	**A STORY OF NUMBERS**	**A STORY OF NUMBERS**	Introduction with Story; The Mechanism of Counting; Roman Number System – Exercise	**AUGUST Day 1**	**AUGUST**	First to complete a row/column shouts "Bingo!"	Storytelling Approach: Start with historical context – how ancient civilizations (Egyptians, Babylonians) used numbers. Link to modern uses: phone numbers, passwords, data coding.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.3: Learns about the inclusion of zero and negative quantities as numbers, and the arithmetic operations on them, as given by Brahmagupta.	Student will understand numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	
			Use of Body Parts; Tally Marks; Number Names obtained; Roman Numerals – Exercise	**Day 2**		Human Scavenger Hunt: Find someone who…	Number Systems Exploration Activity: Compare Roman vs Hindu-Arabic numerals. Discuss place value. Show how zero revolutionized math (India's contribution!).	CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and modern mathematicians.	C-9.1: Recognises how concepts evolved over a period of time in different civilisations. C-9.2: Knows and appreciates the contributions of specific Indian mathematicians, such as Baudhayana, Pingala, Aryabhata, Brahmagupta, Virahanka, Bhaskara, and Ramanujan.	Student will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			The Egyptian Number System and Notion of Base –	**Day 3**		Partner sharing and discussion activity	Comparative study of Egyptian number system with Hindu-Arabic. Discuss	CG-1: Understands numbers and sets of numbers, looks for patterns,	C-1.4: Explores and understands sets of numbers, such as whole numbers,	Students will recognise how concepts like counting	

			Exercise; Explanation and Shortcomings of Number System – Exercise				concept of base in number systems.	and appreciates relationships between numbers.	fractions, integers, rational numbers, and real numbers, and their properties, and visualises them on the number line.	numbers, whole numbers, negative numbers, rational numbers, and zero evolved over time in different civilisations.	
			The Mesopotamian Number System – Exercise; Mayan Number System; Chinese Number System; Hindu Number System – Exercise	**Day 4**		Group activity comparing number systems	Collaborative exploration of global number systems. Students compare and contrast each system.	CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and modern mathematicians. CG-10:Knows about and appreciates the interaction of Mathematics which of their other subjects	C-9.1: Recognises how mathematical concepts evolved over a period of time in different civilisations. C-10.1: Recognises interaction of Mathematics with multiple subjects.	Student will understand and appreciate contributions of specific Indian and global mathematicians and the development of number systems.	
			Roman Number System – Exercise	**Day 5**		First to complete a row/column	Storytelling Approach: Start with historical context – how	CG-1: Understands numbers and sets of numbers,	C-1.3: Learns about the inclusion of zero and negative	Student will understand numbers and sets of numbers,	

						shouts "Bingo!"	ancient civilizations (Egyptians, Babylonians) used numbers. Link to modern uses: phone numbers, passwords, data coding.	looks for patterns, and appreciates relationships between numbers. CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and modern mathematicians.	quantities as numbers, and the arithmetic operations on them, as given by Brahmagupta. C-9.1: Recognises how concepts evolved over a period of time in different civilisations.	looks for patterns, and appreciates relationships between numbers.	
			Exercise : Tally Marks; Number Names ; Roman Numerals	**Day 6**		Human Scavenger Hunt: Find someone who…	Number Systems Exploration Activity: Compare Roman vs Hindu-Arabic numerals. Discuss place value. Show how zero revolutionized math (India's contribution!).	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Student will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

			Exercise on Egyptian Number System	**Day 7**		Partner sharing and discussion activity	Comparative study of Egyptian number system with Hindu-Arabic. Discuss concept of base in number systems.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers, such as whole numbers, fractions, integers, rational numbers, and real numbers, and their properties, and visualises them on the number line.	Students will recognise how concepts like counting numbers, whole numbers, negative numbers, rational numbers, and zero evolved over time in different civilisations.	
			The Mesopotamian Number System – Exercise; Mayan Number System; Chinese Number System; Hindu Number System – Exercise	**Day 8**		Group activity comparing number systems	Collaborative exploration of global number systems. Students compare and contrast each system.	CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and modern mathematicians. CG-10:Knows about and appreciates the interaction of Mathematics which of	C-9.1: Recognises how mathematical concepts evolved over a period of time in different civilisations. C-10.1: Recognises interaction of Mathematics with multiple subjects.	Student will understand and appreciate contributions of specific Indian and global mathematicians and the development of number systems.	

								their other subjects			
			Computational Thinking	**Day 9**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 10**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

Ch. 4	**QUADRILA-TERALS**	**QUADRILATE-RALS**	Introduction through Diagram and Real Life Situation; Properties of Rectangle	**AUGUST Day 1**	**AUGUST**	Stand Up/Sit Down: Act on statements	Hands-on Exploration Activity: Use paper cutouts/geoboards to create quadrilaterals. Identify types (parallelogram, rectangle, square…). Ask "What properties do opposite sides/angles have?"	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems. CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium. C-3.1: Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes.	Student will develop understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	ASSESSMENT AS LEARNING
			Properties of Square – Exercise; Properties of Parallelogram; Properties of Rhombus – Exercise	**Day 2**		Word Association: Quick word chains with themes	Visual Proofs: Show angle-sum property: 360° (divide into 2 triangles). Use parallelograms to prove opposite sides/angles are equal.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D). CG-6: Develops mathematical thinking and the ability to communica	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems. C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate	Student will understand, formulate, and apply properties and theorems regarding simple geometric shapes (2D and 3D).	

								te mathematical ideas logically and precisely.	convincing arguments.		
			Properties of Kite and Trapezium – Exercise; Revision	**Day 3**		Concept Mapping activity	Concept Mapping: Create a chart with properties (sides, angles, diagonals) for each quadrilateral. Students compare differences.	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely. CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D). CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments. C-3.5: Understands congruence and similarity as it applies to geometric shapes. C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium.	Students will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	

			Exercise questions on Properties of Rectangle	**Day 4**		Stand Up/Sit Down: Act on statements	Hands-on Exploration Activity: Use paper cutouts/geoboards to create quadrilaterals. Identify types (parallelogram, rectangle, square…). Ask "What properties do opposite sides/angles have?"	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems. CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium. C-3.1: Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes.		
			Exercise questions on Properties of Square – Properties of Parallelogram; Properties of Rhombus	**Day 5**		Word Association: Quick word chains with themes	Visual Proofs: Show angle-sum property: 360° (divide into 2 triangles). Use parallelograms to prove opposite sides/angles are equal.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D). CG-6: Develops mathematical thinking and the ability to communica	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems. C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate		

								te mathematical ideas logically and precisely.	convincing arguments.		
			Exercise questions on Properties of Kite and Trapezium	**Day 6**		Concept Mapping activity	Concept Mapping: Create a chart with properties (sides, angles, diagonals) for each quadrilateral. Students compare differences.	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely. CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D). CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments. C-3.5: Understands congruence and similarity as it applies to geometric shapes. C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium.		

			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

Ch. 5	**NUMBER PLAY**	**NUMBER PLAY**	Consecutive Numbers – Odd, Even, Multiples of 2, 3, 4…; Explanation with Algebra and Visualization	**SEPTE-MBER Day 1**	**SEPTE-MBER**	Back-to-Back Drawing: Draw something, partner guesses	Inquiry Approach: Ask "Why is a number divisible by 3 if sum of digits is divisible by 3?" Explore magic squares, number tricks.	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely. CG-7: Engages with puzzles and mathematical problems.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments. C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems.	Learner will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	
			LCM and HCF – Exercise; Divisibility Test of 2, 5, 10 and 9 – Exercise	**Day 2**		Draw your face card	Collaborative Work: Groups solve HCF/LCM puzzles. Create number patterns, present.	CG-7: Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them.	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	Student will apply tests for 2, 3, 4, 5, 6, 8, 9, 10, 11 and solve problems using patterns, divisibility, HCF/LCM.	
			Divisibility Test of 11, 3, 4, 6 and Digital Root – Exercise;	**Day 3**		Group problem-solving activity	Divisibility rules exploration: students find and verify each rule. Digit in Disguise:	CG-7: Engages with puzzles and mathematic	C-7.1: Demonstrates creativity in discovering one's own solutions to	Student will identify and create sequences, magic squares	

			Digit in Disguise – Exercise; Revision				Cryptarithmetic-style activities.	al problems and develops own creative methods and strategies to solve them.	puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	and apply number skills to solve real-life problems.	
			Exercise questions on Consecutive Numbers – Odd, Even, Multiples of 2, 3, 4…	**Day 4**		Back-to-Back Drawing: Draw something, partner guesses	Inquiry Approach: Ask "Why is a number divisible by 3 if sum of digits is divisible by 3?" Explore magic squares, number tricks.	CG-6: Develops mathematical thinking and the ability to communicate mathematical ideas logically and precisely. CG-7: Engages with puzzles and mathematical problems.	C-6.1: Applies both inductive and deductive logic to formulate definitions and conjectures and evaluate convincing arguments. C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems.	Learner will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	
			Exercise questions on Divisibility Test of 2, 5, 10 and 9 – Exercise	**Day 5**		Draw your face card	Collaborative Work: Groups solve HCF/LCM puzzles. Create number patterns, present.	CG-7: Engages with puzzles and mathematical problems and develops own creative methods	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and	Student will apply tests for 2, 3, 4, 5, 6, 8, 9, 10, 11 and solve problems using patterns, divisibility, HCF/LCM.	

								and strategies to solve them.	appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.		
			Exercise questions on Divisibility Test of 11, 3, 4, 6 and Digital Root	**Day 6**		Group problem-solving activity	Divisibility rules exploration: students find and verify each rule. Digit in Disguise: Cryptarithmetic-style activities.	CG-7: Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them.	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	Student will identify and create sequences, magic squares and apply number skills to solve real-life problems.	
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								and algorithms.			
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
Ch. 6	**WE DISTRIBUTE YET THINGS MULTIPLY**	**WE DISTRIBUTE YET THINGS MULTIPLY**	Identities; Pinch of History – Exercise	**SEPTE-MBER Day 1**	**SEPTE-MBER**	Follow the Leader: Copy leader's movements	Visual Proofs: Use diagrams for identities: $(a+b)^2= a^2+2ab+b^2$, $(a-b)^2= a^2-2ab+b^2$, $a^2-b^2=(a+b)(a-b)$.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and distributive property, and identities.	C-2.1: Understands equality between numerical expressions and learns to check arithmetical equations. C-2.2: Extends the representation of a number in the form of a variable or an algebraic expression using a variable.	Student will understand the concepts of variable, constant, coefficient, expression, and distributive property, and identities and use these concepts to solve meaningful daily-life problems.	ASSESSMENT FOR LEARNING
			Fast Multiplication and	**Day 2**		Emoji Chat: React	Using ICT Technology to visualise	CG-2: Understands the	C-2.3: Forms algebraic expressions	Learner will develop mathematic	

			Special Case – Exercise; Pattern Study – Exercise; Revision			with emojis, partner guesses why	algebraic identities. Expansion Exercises and Simplification Problems using distributive property.	concepts of variable, constant, coefficient, expression, and distributive property, and identities.	using variables, coefficients, and constants and manipulates them through basic operations. C-2.5: Develops own methods to solve puzzles and problems using algebraic thinking.	al thinking and the ability to communicate mathematical ideas logically and precisely.	
			Exercise on Identities	**Day 3**		Follow the Leader: Copy leader's movements	Visual Proofs: Use diagrams for identities: $(a+b)^2= a^2+2ab+b^2$, $(a-b)^2= a^2-2ab+b^2$, $a^2-b^2=(a+b)(a-b)$.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and distributive property, and identities.	C-2.1: Understands equality between numerical expressions and learns to check arithmetical equations. C-2.2: Extends the representation of a number in the form of a variable or an algebraic expression using a variable.	Student will understand the concepts of variable, constant, coefficient, expression, and distributive property, and identities and use these concepts to solve meaningful daily-life problems.	
			Exercise on Fast Multiplication	**Day 4**		Emoji Chat: React with emojis, partner guesses why	Using ICT Technology to visualise algebraic identities. Expansion Exercises and Simplification Problems	CG-2: Understands the concepts of variable, constant, coefficient, expression, and	C-2.3: Forms algebraic expressions using variables, coefficients, and constants and manipulates	Learner will develop mathematical thinking and the ability to communicate mathematic	

							using distributive property.	distributive property, and identities.	them through basic operations. C-2.5: Develops own methods to solve puzzles and problems using algebraic thinking.	al ideas logically and precisely.	
			Exercise on Special Case	**Day 5**		Emoji Chat: React with emojis, partner guesses why	Using ICT Technology to visualise algebraic identities. Expansion Exercises and Simplification Problems using distributive property.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and distributive property, and identities.	C-2.3: Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations. C-2.5: Develops own methods to solve puzzles and problems using algebraic thinking.	Learner will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	
			Exercise on Pattern Study	**Day 6**		Emoji Chat: React with emojis, partner guesses why	Using ICT Technology to visualise algebraic identities. Expansion Exercises and Simplification Problems using distributive property.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and distributive property, and identities.	C-2.3: Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations. C-2.5: Develops own methods to	Learner will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	

									solve puzzles and problems using algebraic thinking.		
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								and algorithms.			
Ch. 7	**PROPORTIONAL REASONING – 1**	**PROPORTIONAL REASONING – 1**	Introduction to Chapter and Ratio – Exercise; Rule of 3 – Exercise	**OCTOBER Day 1**	**OCTOBER**	Statue game	Real-Life Examples: Speed-Distance-Time (direct proportion); Workforce-Time (inverse proportion).	CG-1: Understands numbers and sets of numbers (fractions, integers, rational numbers, profit & loss, Simple & compound interest and real numbers), looks for patterns.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Learner will develop basic skills and capacities of computational thinking. Learner will understand and apply concepts of direct and inverse proportion.	
			Sharing but Not Equally – Exercise; Unit Conversions – Exercise; Revision	**Day 2**		Rose & Thorn: Share one good/bad thing today	Problem-Solving Tasks: "If 5 men finish work in 10 days, how long for 2 men?" "Cost of 3 kg apples is ₹150. Find for 5 kg."	CG-8: Develops basic skills and capacities of computational thinking. Understand and apply concepts of direct and inverse proportion.	C-8.1: Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations.	Learner will solve problems involving ratios, rates, and proportions and use proportional reasoning in real-life contexts.	
			Exercise on Rule of 3	**Day 3**		Statue game	Real-Life Examples: Speed-Distance-Time (direct proportion); Workforce-Time (inverse proportion).	CG-1: Understands numbers and sets of numbers (fractions, integers, rational numbers, profit & loss,	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both	Learner will develop basic skills and capacities of computational thinking. Learner will understand	

								Simple & compound interest and real numbers), looks for patterns.	as ratios and in decimal form) in daily-life situations.	and apply concepts of direct and inverse proportion.	
			Exercise on Sharing	**Day 4**		Rose & Thorn: Share one good/bad thing today	Problem-Solving Tasks: "If 5 men finish work in 10 days, how long for 2 men?" "Cost of 3 kg apples is ₹150. Find for 5 kg."	CG-8: Develops basic skills and capacities of computational thinking. Understand and apply concepts of direct and inverse proportion.	C-8.1: Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations.	Learner will solve problems involving ratios, rates, and proportions and use proportional reasoning in real-life contexts.	
			Exercise on Unit Conversions	**Day 5**		Rose & Thorn: Share one good/bad thing today	Problem-Solving Tasks: "If 5 men finish work in 10 days, how long for 2 men?" "Cost of 3 kg apples is ₹150. Find for 5 kg."	CG-8: Develops basic skills and capacities of computational thinking. Understand and apply concepts of direct and inverse proportion.	C-8.1: Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations.	Learner will solve problems involving ratios, rates, and proportions and use proportional reasoning in real-life contexts.	
			Computational Thinking	**Day 6**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic	Students will develop basic skills and capacities of computational thinking in order to	

								namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	counting and listing, systematic reasoning about counts and iterative patterns.	solve problems effectively.	
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	ASSESSMENT OF LEARNING
PART II											
Ch. 1	**FRACTIONS IN DISGUISE**	**FRACTIONS IN DISGUISE**	Basic Knowledge and Conversion – Exercise; Handfree Computation and Real Life Example;	**NOVE-MBER Day 1**	**NOVE-MBER**	"If I Were…": Partner says "If I were [thing], I'd be…"	Real-Life Connections: Discounts – Calculate percentage off on items. Loans – Compare SI vs CI for borrowing.	CG-1: Understands numbers and sets of numbers (fractions, integers, rational numbers, profit & loss,	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both	Student will understand numbers and sets of numbers (fractions, integers, rational numbers, profit & loss,	

			The FDP Trio – Exercise					Simple & compound interest and real numbers), looks for patterns.	as ratios and in decimal form) in daily-life situations.	Simple & compound interest and real numbers), looks for patterns.	
			Percentage and Proportion – Exercise; Growth and Compound – Exercise	**Day 2**		Quick Draw: Draw something, partner guesses	Activity-Based Learning: Mock Shop – Profit/loss calculations. Interest Calculator: Compare SI and CI.	CG-1: Understands numbers and sets of numbers (fractions, integers, rational numbers, profit & loss, Simple & compound interest and real numbers), looks for patterns.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Student will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	
			Compounding & No Compounding – Exercise; Depreciation – Exercise; Revision	**Day 3**		Group discussion and real-life problem solving	Word Problems: Real-life scenarios on profit/loss, CI/SI. Case Studies: Calculate profit/loss or CI for business scenarios.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Student will apply concepts of percentage, fractions, profit/loss, and compound interest to solve real-world problems.	
			Exercise on Handfree Computation	**Day 4**		"If I Were…": Partner says "If I were	Real-Life Connections: Discounts – Calculate percentage off on items.	CG-1: Understands numbers and sets of numbers (fractions,	C-1.5: Explores the idea of percentage and applies it	Student will understand numbers and sets of numbers (fractions,	

						[thing], I'd be…"	Loans – Compare SI vs CI for borrowing.	integers, rational numbers, profit & loss, Simple & compound interest and real numbers), looks for patterns.	to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	integers, rational numbers, profit & loss, Simple & compound interest and real numbers), looks for patterns.	
			Exercise on Percentage and Proportion	**Day 5**		Quick Draw: Draw something, partner guesses	Activity-Based Learning: Mock Shop – Profit/loss calculations. Interest Calculator: Compare SI and CI.	CG-1: Understands numbers and sets of numbers (fractions, integers, rational numbers, profit & loss, Simple & compound interest and real numbers), looks for patterns.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Student will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	
			Exercise on Compounding	**Day 6**		Group discussion and real-life problem solving	Word Problems: Real-life scenarios on profit/loss, CI/SI. Case Studies: Calculate profit/loss or CI for business scenarios.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Student will apply concepts of percentage, fractions, profit/loss, and compound interest to solve real-world problems.	

			Exercise on Depreciation	**Day 7**		Group discussion and real-life problem solving	Word Problems: Real-life scenarios on profit/loss, CI/SI. Case Studies: Calculate profit/loss or CI for business scenarios.	CG-1: Understands numbers and sets of numbers, looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems. C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	Student will apply concepts of percentage, fractions, profit/loss, and compound interest to solve real-world problems.	
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 9**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and	Students will develop basic skills and capacities of computational thinking in order to solve	

								decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	listing, systematic reasoning about counts and iterative patterns.	problems effectively.	
Ch. 2	**THE BAUDHAYANA – PYTHAGORAS THEOREM**	**THE BAUDHAYANA – PYTHAGORAS THEOREM**	Sulba Sutra; Doubling and Halving Square; Hypotenuse of Right Triangle	**DECEMBER Day 1**	**DECEMBER**	3-2-1: Share 3 likes, 2 hobbies, 1 weird habit	Historical Context: Introduce Baudhayana's contribution (pre-dates Pythagoras). Compare with Pythagoras' approach.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes – 2D. CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-3.4: Draws and constructs geometric shapes with specified properties using a compass and straightedge. C-4.2: Learns the Baudhayana-Pythagoras theorem on the lengths of the sides of a right-angled triangle.	Students will understand, formulate, and apply properties and theorems regarding simple geometric shapes – 2D.	
			Decimal Expression of $\sqrt{2}$ – Exercise; Combining Different Squares; Baudhaya	**Day 2**		Partner sharing activity	Visual Proofs: Paper cutting/folding for $a^2+b^2=c^2$. Use grids to show area equivalence.	CG-4: Develops understanding of perimeter and area for 2D shapes and	C-4.2: Learns the Baudhayana-Pythagoras theorem on the lengths of the sides of a	Students will develop understanding of perimeter and area for 2D shapes and	

			na Theorem					uses them to solve day-to-day life problems. CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and modern mathematicians.	right-angled triangle. C-9.1: Recognises how concepts evolved over a period of time in different civilisations. C-9.2: Knows and appreciates contributions of specific Indian mathematicians including Baudhayana.	use them to solve day-to-day life problems.	
			Pythagoras Triplet – Exercise; Applications of Theorem – Exercise; Revision	**Day 3**		Group problem-solving and verification activity	Application problems using the theorem. Testing procedural knowledge and conceptual understanding regarding geometric reasoning.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-4.2: Learns the Baudhayana-Pythagoras theorem and discovers a geometric proof using areas of squares erected on the sides of the triangle.	Students will apply the Baudhayana-Pythagoras theorem to find unknown sides of right-angled triangles and solve real-world problems.	
			Exercise on Doubling and Halving Square; Hypotenuse of	**Day 4**		3-2-1: Share 3 likes, 2 hobbies, 1 weird habit	Historical Context: Introduce Baudhayana's contribution (pre-dates Pythagoras). Compare with	CG-3: Understands, formulates, and applies properties and theorems	C-3.4: Draws and constructs geometric shapes with specified properties using a	Students will understand, formulate, and apply properties and theorems	

			Right Triangle				Pythagoras' approach.	regarding simple geometric shapes – 2D. CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	compass and straightedge. C-4.2: Learns the Baudhayana-Pythagoras theorem on the lengths of the sides of a right-angled triangle.	regarding simple geometric shapes – 2D.	
			Exercise on Decimal Expression of √2; Combining Different Squares; Baudhayana Theorem	**Day 5**		Partner sharing activity	Visual Proofs: Paper cutting/folding for $a^2+b^2=c^2$. Use grids to show area equivalence.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems. CG-9: Knows and appreciates the development of mathematical ideas over a period of time and contributions of past and	C-4.2: Learns the Baudhayana-Pythagoras theorem on the lengths of the sides of a right-angled triangle. C-9.1: Recognises how concepts evolved over a period of time in different civilisations. C-9.2: Knows and appreciates contributions of specific Indian mathematicians including Baudhayana.	Students will develop understanding of perimeter and area for 2D shapes and use them to solve day-to-day life problems.	

								modern mathematicians.			
			Exercise on Pythagoras Triplet	**Day 6**		Group problem-solving and verification activity	Application problems using the theorem. Testing procedural knowledge and conceptual understanding regarding geometric reasoning.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-4.2: Learns the Baudhayana-Pythagoras theorem and discovers a geometric proof using areas of squares erected on the sides of the triangle.	Students will apply the Baudhayana-Pythagoras theorem to find unknown sides of right-angled triangles and solve real-world problems.	
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of	C-8.1: Approaches problems using programmatic thinking	Students will develop basic skills and capacities of	

								computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	computational thinking in order to solve problems effectively.	
Ch. 3	**PROPORT-IONAL REASONING – 2**	**PROPORTIONAL REASONING – 2**	Quick Recap; Ratio of More than 2 Terms; Dividing a Whole into Ratio – Exercise	**JANUA-RY Day 1**	**JANUA-RY**	1-2-3 Go: Share 1 dream, 2 skills, 3 favourite books	Real-Life Examples: Speed-Distance-Time (direct proportion); Workforce-Time (inverse proportion). Problem-Solving Tasks.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life experiences. CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representat	C-5.2: Selects, creates, and uses appropriate graphical representations (e.g., pie charts) of data to make interpretations. C-8.1: Approaches problems using programmatic thinking techniques.	Learner will develop basic skills of computational thinking. Learner will understand and apply concepts of direct and inverse proportion.	ASSESSMENT AS LEARNING

								ion, generalisation, abstraction, and algorithms.			
			A Slice of Pie – Exercise; Inverse Proportion – Exercise; Revision	**Day 2**		A-Z Share: Pick a letter, share related word about yourself	Problem-Solving Tasks: Word problems involving proportionality and ratio. Graphical representations – Pie charts.	CG-8: Develops basic skills and capacities of computational thinking. Understand and apply concepts of direct and inverse proportion.	C-8.1: Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations.	Learner will solve problems involving ratios, rates, and proportions and use proportional reasoning in real-life contexts. Learner will read and interpret pie charts.	
			Exercise on Ratio of More than 2 Terms; Dividing a Whole into Ratio	**Day 3**		1-2-3 Go: Share 1 dream, 2 skills, 3 favourite books	Real-Life Examples: Speed-Distance-Time (direct proportion); Workforce-Time (inverse proportion). Problem-Solving Tasks.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life experiences. CG-8: Develops basic skills and capacities of computational	C-5.2: Selects, creates, and uses appropriate graphical representations (e.g., pie charts) of data to make interpretations. C-8.1: Approaches problems using programmatic thinking techniques.	Learner will develop basic skills of computational thinking. Learner will understand and apply concepts of direct and inverse proportion.	

								thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.			
			Exercise on Inverse Proportion	**Day 4**		A-Z Share: Pick a letter, share related word about yourself	Problem-Solving Tasks: Word problems involving proportionality and ratio. Graphical representations – Pie charts.	CG-8: Develops basic skills and capacities of computational thinking. Understand and apply concepts of direct and inverse proportion.	C-8.1: Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations.	Learner will solve problems involving ratios, rates, and proportions and use proportional reasoning in real-life contexts. Learner will read and interpret pie charts.	
			Computational Thinking	**Day 5**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisati	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								on, abstraction, and algorithms.			
			Computational Thinking	**Day 6**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
Ch. 4	**EXPLORING SOME GEOMETRIC THEMES**	**EXPLORING SOME GEOMETRIC THEMES**	Introduction and Sierpinski Discovery – Square (Carpet), Triangle (Gasket), Koch Snowflake – Exercise; Fractals in Art	**JANUA-RY Day 1**	**JANUA-RY**	Statue and release game	Collaborative Work: Groups design geometric patterns or structures. "Find angles in surroundings" scavenger hunt.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-3.3: Identifies attributes of three-dimensional shapes, works hands-on with material to construct these shapes. C-4.3: Constructs various designs (using tiling) on a plane surface using different 2D shapes.	Student will understand, formulate, and apply properties and theorems regarding simple geometric shapes (2D and 3D).	
			Build in Imagination; Making	**Day 2**		One-Word Check-In:	Using ICT Technology. 3D model	CG-7: Engages	C-7.1: Demonstrates creativity in	Student will engage with	

			Solid Figures – Exercise; Shortest Path on a Cube			"Describe your mood in one word"	construction activities. Students visualise and solve problems using 2D representations of 3D objects.	with puzzles and mathematical problems and develops own creative methods and strategies to solve them.	discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	puzzles and mathematical problems and develop own creative methods and strategies to solve them.	
			Solids on Plane Surface and Projection – Exercise; Shadow – Exercise; Isometric Projections and Drawing – Exercise; Revision	**Day 3**		Partner drawing and guessing activity	Visual representations: Isometric drawings, shadows, projections of 3D solids on plane surfaces.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-3.3: Identifies attributes of three-dimensional shapes and uses two-dimensional representations of three-dimensional objects to visualise and solve problems.	Students will draw isometric projections, interpret shadows and projections, and apply geometric reasoning to 3D shapes.	
			Exercise on Square (Carpet), Triangle (Gasket), Koch Snowflake, Fractals in Art	**Day 4**		Statue and release game	Collaborative Work: Groups design geometric patterns or structures. "Find angles in surroundings" scavenger hunt.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-3.3: Identifies attributes of three-dimensional shapes, works hands-on with material to construct these shapes.	Student will understand, formulate, and apply properties and theorems regarding simple geometric shapes (2D and 3D).	

			Exercise on Making Solid Figures, Shortest Path on a Cube	**Day 5**		One-Word Check-In: "Describe your mood in one word"	Using ICT Technology. 3D model construction activities. Students visualise and solve problems using 2D representations of 3D objects.	CG-7: Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them.	C-7.1: Demonstrates creativity in discovering one's own solutions to puzzles and other problems. C-7.2: Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving.	Student will engage with puzzles and mathematical problems and develop own creative methods and strategies to solve them.	
			Exercise on Solids on Plane Surface and Projection, ; Isometric Projections and Drawing	**Day 6**		Partner drawing and guessing activity	Visual representations: Isometric drawings, shadows, projections of 3D solids on plane surfaces.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D).	C-3.3: Identifies attributes of three-dimensional shapes and uses two-dimensional representations of three-dimensional objects to visualise and solve problems.	Students will draw isometric projections, interpret shadows and projections, and apply geometric reasoning to 3D shapes.	
			Computational Thinking	**Day 7**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

								recognition, data representation, generalisation, abstraction, and algorithms.	reasoning about counts and iterative patterns.		
			Computational Thinking	**Day 8**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
Ch. 5	**TALES BY DOTS AND LINES**	**TALES BY DOTS AND LINES**	Introduction; Unchanging Mean; Finding the Unknown; Mean and Median – Exercise	**FEBRUA-RY Day 1**	**FEBRUA-RY**	Would You Rather? Ask a fun question: "Would you rather fly or be invisible? "	Data Interpretation: Plot points, connect to form line graphs. Interpret trends (rise, fall, steady). Real-life connections: Stock market trends, temperature changes, sports data.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life experiences.	C-5.1: Collects, organises, and interprets the data using measures of central tendencies such as average/mean, mode, and median.	Learners will collect, organise, represent graphically, and interpret data/information from daily-life experiences.	ASSESSMENT AS LEARNING

			Line Graph – Exercise; Infographics; Data Story – Exercise; Revision	**Day 2**		Skip no. 5 game	Using ICT Technology: digital graphing tools. Students create infographics and data stories. Summative Assessments: Exams, projects, presentations.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life experiences.	C-5.2: Selects, creates, and uses appropriate graphical representations (e.g., pictographs, bar graphs, histograms, line graphs, and pie charts) of data to make interpretations.	Learners will develop basic skills and capacities of computational thinking in order to solve problems where such techniques are effective.	
			Exercise on Mean and Median	**Day 3**		Would You Rather? Ask a fun question: "Would you rather fly or be invisible?"	Data Interpretation: Plot points, connect to form line graphs. Interpret trends (rise, fall, steady). Real-life connections: Stock market trends, temperature changes, sports data.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life experiences.	C-5.1: Collects, organises, and interprets the data using measures of central tendencies such as average/mean, mode, and median.	Learners will collect, organise, represent graphically, and interpret data/information from daily-life experiences.	
			Exercise on Line Graph	**Day 4**		Skip no. 5 game	Using ICT Technology: digital graphing tools. Students create infographics and data stories. Summative Assessments: Exams, projects, presentations.	CG-5: Collects, organises, represents (graphically and in tables, Mean and Median), and interprets data/information from daily-life	C-5.2: Selects, creates, and uses appropriate graphical representations (e.g., pictographs, bar graphs, histograms, line graphs, and pie charts) of data to make	Learners will develop basic skills and capacities of computational thinking in order to solve problems where such techniques	

								experiences.	interpretations.	are effective.	
			Computational Thinking	**Day 5**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 6**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	

Ch. 6	**ALGEBRA PLAY**	**ALGEBRA PLAY**	Introduction; Number Tricks; Number Pyramid – Exercise	**FEBR-UARY Day 1**	**FEBR-UARY**	Count to 10 Challenge, and jump in odd numbers	Games and Puzzles: "Find the missing number" puzzles. Algebra Bingo with equations. Real-Life Connections: Word problems (age, distance, money). Form equations from stories.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and (one-variable) equation, and uses these concepts to solve meaningful daily-life problems with procedural fluency.	C-2.1: Understands equality between numerical expressions and learns to check arithmetical equations. C-2.2: Extends the representation of a number in the form of a variable or an algebraic expression using a variable.	Students will understand the concepts of variable, constant, coefficient, expression, and (one-variable) equation and use these to solve meaningful daily-life problems with procedural fluency.	
			Fun with Grid – Exercise; Divisibility Trick – Exercise; Revision	**Day 2**		Mirror Movement: One person does simple actions, others copy like a mirror	Algebraic grid investigations. Divisibility tricks using algebra. Students work in groups to solve mathematical problems.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and (one-variable) equation, and uses these concepts to solve meaningful daily-life problems with procedural fluency.	C-2.3: Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations. C-2.4: Poses and solves linear equations to find the value of an unknown. C-2.5: Develops own methods to solve puzzles and problems using	Students will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	

									algebraic thinking.		
			Exercise on Number Tricks; Number Pyramid	**Day 3**		Count to 10 Challenge, and jump in odd numbers	Games and Puzzles: "Find the missing number" puzzles. Algebra Bingo with equations. Real-Life Connections: Word problems (age, distance, money). Form equations from stories.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and (one-variable) equation, and uses these concepts to solve meaningful daily-life problems with procedural fluency.	C-2.1: Understands equality between numerical expressions and learns to check arithmetical equations. C-2.2: Extends the representation of a number in the form of a variable or an algebraic expression using a variable.	Students will understand the concepts of variable, constant, coefficient, expression, and (one-variable) equation and use these to solve meaningful daily-life problems with procedural fluency.	
			Exercise on Fun with Grid; Divisibility Trick	**Day 4**		Mirror Movement: One person does simple actions, others copy like a mirror	Algebraic grid investigations. Divisibility tricks using algebra. Students work in groups to solve mathematical problems.	CG-2: Understands the concepts of variable, constant, coefficient, expression, and (one-variable) equation, and uses these concepts to solve meaningful daily-life problems with procedural fluency.	C-2.3: Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations. C-2.4: Poses and solves linear equations to find the value of an unknown. C-2.5: Develops own methods to solve puzzles and	Students will develop mathematical thinking and the ability to communicate mathematical ideas logically and precisely.	

									problems using algebraic thinking.		
			Computational Thinking	**Day 5**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	
			Computational Thinking	**Day 6**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computational thinking in order to solve problems effectively.	ASSESSMENT FOR LEARNING

Ch. 7	**AREA**	**AREA**	Area and Perimeter; Area and its Applications	**MARCH Day 1**	**MARCH**	Guess the Sound: One person makes a sound (animal, object), others guess	Formula Derivation: Derive area formulas for rectangles, triangles, circles. Use dissections (tangrams) for parallelograms.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D). CG-4: Develops understanding of perimeter and area for 2D shapes.	C-3.1: Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes. C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium.	Student will understand, formulate, and apply properties and theorems regarding simple geometric shapes (2D).	
			Area of Polygons	**Day 2**		Clap Pattern Copy: Leader does a pattern, others clap according to instruction	Problem-Solving Tasks: "Find area of shaded regions." "Maximise area with fixed perimeter." Performance Tasks: Apply math to real-life scenarios.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems.	C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium and develops strategies to find the areas of composite 2D shapes. C-4.3: Constructs various designs (using	Student will develop understanding of perimeter and area for 2D shapes and use them to solve day-to-day life problems. Students will find areas of composite shapes.	

									tiling) on a plane surface. C-4.4:Develops familiarity with the notion of fractal and identifies and appreciates the appearances of fractals in nature and art in India and around the world.		
			Exercise on Area and Perimeter	**Day 3**		Guess the Sound: One person makes a sound (animal, object), others guess	Formula Derivation: Derive area formulas for rectangles, triangles, circles. Use dissections (tangrams) for parallelograms.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D). CG-4: Develops understanding of perimeter and area for 2D shapes.	C-3.1: Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes. C-4.1: Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium.	Student will understand, formulate, and apply properties and theorems regarding simple geometric shapes (2D).	
			Exercise on Area of Polygons	**Day 4**		Clap Pattern Copy: Leader does a pattern, others	Problem-Solving Tasks: "Find area of shaded regions." "Maximise area with fixed	CG-4: Develops understanding of perimeter and area for 2D	C-4.1: Discovers, understands, and uses formulae to determine the area of a	Student will develop understanding of perimeter and area for 2D	

						clap according to instructio n	perimeter." Performance Tasks: Apply math to real-life scenarios.	shapes and uses them to solve day-to-day life problems.	square, triangle, parallelogram, and trapezium and develops strategies to find the areas of composite 2D shapes. C-4.3: Constructs various designs (using tiling) on a plane surface.	shapes and use them to solve day-to-day life problems. Students will find areas of composite shapes.	
			Computati onal Thinking	**Day 5**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computatio nal thinking, namely, decomposit ion, pattern recognition, data representat ion, generalisati on, abstraction, and algorithms.	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and listing, systematic reasoning about counts and iterative patterns.	Students will develop basic skills and capacities of computatio nal thinking in order to solve problems effectively.	
			Computati onal Thinking	**Day 6**		Finger tap, finger hop & finger bend	Inquiry-Based Learning	CG-8: Develops basic skills and capacities of computatio nal thinking, namely,	C-8.1: Approaches problems using programmatic thinking techniques. C-8.2: Learns systematic counting and	Students will develop basic skills and capacities of computatio nal thinking in order to solve	ASSESSMENT OF LEARNING

								decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms.	listing, systematic reasoning about counts and iterative patterns.	problems effectively.	