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

UNIT			Month		Suggested Ice-Breaking Activity	Teaching Pedagogy	Curricular Goals	Competency	Expected Learning Outcome	Assessment
No.	Topic Name	Sub-Topic	Starting	Closing						
Unit 1	**Patterns in Mathem-atics**	1.1 What is Mathematics?	JULY **DAY 1**	JULY	Conduct a "Pattern Hunt Around Us" Ask students to look around the classroom and find at least 3 natural or man-made patterns they can see — on tiles, windows, designs on notebooks, etc.	Use concrete objects and visuals to introduce numbers and sets. Conduct simple activities and pattern games for understanding. Encourage questioning and group work to explore number relationships	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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 (e.g., multiples of 7, powers of 3, prime numbers), and explains relations between different patterns	• Identify and represent numbers and sets. • Recognize and extend simple patterns. • Compare numbers and understand basic relationships (before/after, greater/smaller).	
		1.2 Patterns in Numbers	**DAY 2**		Write a pattern on the board (e.g., 2, 4, 6, _, _) and ask students to continue it.	Use activity-based and visual methods to introduce patterns. Encourage observation, questioning, and discussion to find rules.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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 (e.g., multiples of 7, powers of 3, prime numbers), and explains relations between different patterns	• Identify and extend number patterns. • Discover and describe the rule of pattern formation. • Create simple patterns using numbers independently.	
		1.3 Visualising Number Sequences	**DAY 3**		Conduct a "Clap and Repeat Pattern Game" **Procedure**: The teacher will ask all students to stand in a circle or beside their seats. The teacher will first perform a simple action pattern such as: Clap, Clap, Tap Clap, Tap, Clap, Tap Clap, Clap, Stomp	Use number line, charts, and flashcards to show sequences. Conduct fill-in-the-missing-number and sequencing activities. Encourage students to observe, predict, and discuss the order of numbers.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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 (e.g., multiples of 7, powers of 3, prime numbers), and explains relations between different patterns	• Identify and arrange numbers in correct sequence. • Visualize and complete missing numbers. • Classify order of numbers (before, after, between).	

		1.3 Visualising Number Sequences	**DAY 4**		"Number Clap Pattern" Teacher says a number sequence while clapping(ex-2,4, 6, 8,.....) Students repeat the pattern with claps and says the next number and ask, What is the rule?	Use number line, charts, and flashcards to show sequences. Conduct fill-in-the missing number and sequencing activities. Encourage students to observe, predict, and discuss the order of numbers.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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 (e.g., multiples of 7, powers of 3, prime numbers), and explains relations between different patterns	• Identify and arrange numbers in correct sequence. • Visualize and complete missing numbers. • Classify order of numbers (before, after, between).	
		1.4 Relations among Number Sequences	**DAY 5**		“Classroom object Pattern” Use classroom objects like book-pencil-book- pencil. Students continue the pattern by holding or pointing to the next object.	Use number patterns and simple sequences (e.g., 2, 4, 6…). Ask students to observe, predict, and find the rule. Use quick activities and discussion for understanding.	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, and appreciates the work of others in finding their own, possibly different, solutions	• Identify and extend number sequences. • Describe the rule of formation. • Classify relation between numbers in a sequence.	
		1.4 Relations among Number Sequences	**DAY 6**		“What Comes Next” Say a quick number sequence: 5, 10, 15, Students respond with the next number (20). Ask: “How did you know?” (rule: +5	Use number patterns and simple sequences (e.g., 2, 4, 6…). Ask students to observe, predict, and find the rule. Use quick activities and discussion for understanding.	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, and appreciates the work of others in finding their own, possibly different, solutions	• Identify and extend number sequences. • Describe the rule of formation. • Classify relation between numbers in a sequence.	
		1.5 Patterns in Shapes	**DAY 7**		Ask students to quickly look around the classroom and find any pattern (tiles, windows, uniforms, bags). Students raise hands and describe what they see and ask: “Is it repeating or growing?”	Introduce shape patterns through grid-paper activities: students draw sequences of shapes (L-shapes, T-shapes, staircases) and count tiles to generate corresponding number sequences.	CG-7 Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them	C-7.2 Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving	• Students will visualise number sequences using dot/shape arrangements and connect them to geometric patterns.	
		1.6 Relation to Number Sequences	**DAY 8**		Find the Rule” Write: 3, 6, 12, 24, _ Students guess the next number and tell the rule (×2).	Use puzzle-based and activity method to introduce sequences. Encourage students to think, explore, and explain their own strategies. Promote discussion and multiple ways of solving.	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, and appreciates the work of others in finding their own, possibly different, solutions	• Identify and extend number sequences. • Discover and explain the rule of formation. • Develop creative strategies to solve pattern-based problems.	

		1.6 Relation to Number Sequences	**DAY 9**		“Clap the Pattern” Time: 3 minutes Create a rhythm pattern like: 1 time clap, 2 times clap, 3 times clap Students repeat it and then guess: What is repeating?	Use puzzle-based and activity method to introduce sequences. Encourage students to think, explore, and explain their own strategies. Promote discussion and multiple ways of solving.	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, and appreciates the work of others in finding their own, possibly different, solutions	• Identify and extend number sequences. • Discover and explain the rule of formation. • Develop creative strategies to solve pattern-based problems.	
		COMPUTATIONAL THINKING	**DAY 10**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Identify and analyse patterns in numbers. • Break problems into simple steps (computational thinking). • Describe and apply rules/algorithms to extend patterns. • Develop logical and systematic thinking skills.	
Unit 2	**Lines and Angles**	2.1 Point 2.2 Line Segment	JULY **DAY 1**	JULY	Ask students to use two pencils (or rulers) held in their hands to demonstrate a right angle, an acute angle, and an obtuse angle — without using any instruments.	Use real-life examples (dots, edges of objects) to introduce concepts. Draw and demonstrate using board and simple tools (scale).Engage students in hands-on drawing and identification activities.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1: Describes, classifies, and understands relationships among different types of two-dimensional shapes using their defining properties/attributes	• Identify and represent points and line segments. • Draw line segments using a scale with correct measurement. • Classify the difference between point and line segment.	
		2.3 Line 2.4 Ray	**DAY 2**		Arrow Line Game” Draw a dot on the board and extend a line with an arrow on one side. Ask: “Is this a line or a ray?” Students answer and identify the starting point and direction.	Use visuals and real-life examples (torch light, road). Demonstrate through drawing and student participation. Encourage observation and questioning.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1: Describes, classifies, and understands relationships among different types of two-dimensional shapes using their defining properties/attributes	• Identify and differentiate line and ray. • Represent line and ray correctly. • Classify direction and starting point in a ray.	

		2.5 Angle	**DAY 3**		Angle Pose Students use their arms to make acute, right, obtuse, and straight angles. Other students guess the angle	Use real-life examples (clock, door). Show angle formation with paper/match sticks. Demonstrate protractor use. Practice in pairs (draw & measure)..	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems	• Students will be able to: • Identify types of angles. • Measure angles using a protractor. • Draw angles correctly. • Classify angles based on measure.	
		2.6 Comparing Angles	**DAY 4**		Play 'Angle Aerobics': students use their arms to form angles called out by the teacher (right, acute, straight, reflex) — a kinaesthetic warm-up that activates prior knowledge.	Use real-life examples (clock, door). Introduce simple comparison using terms like greater than (>), less than(<) and equal to(=)	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems	• Students will be able to identify and compare angles using visual observation.	
		2.6 Comparing Angles by superimpose-tion	**DAY 5**		Trace & Match” Students draw two angles on paper, cut one, and place (superimpose) it over the other. They check which angle is bigger, smaller, or equal by overlapping. Quick discussion on their observations.	Demonstrate superimposition by tracing/cutting and placing one angle over another. Then compare angles visually (without superimposition) by observing opening size. Pair activity: students compare and discuss which is bigger /smaller/equal.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems	Students will be able to: • Compare angles by superimposition. • Compare angles by visual observation. • Identify greater, smaller, or equal angles. • Explain their comparison using simple reasoning.	
		2.6 Comparing Angles without superimposition	**DAY 6**		“Angle or Not?” Time: 1 minute Say statements quickly: “Corner of a book” “Clock at 3:00” “Straight road” Students respond: Thumbs up = Angle Thumbs down = Not an angle	Demonstrate superimposition by tracing/cutting and placing one angle over another. Then compare angles visually (without superimposition) by observing opening size. Pair activity: students compare and discuss which is bigger /smaller/equal.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.2: Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems	Students will be able to: • Compare angles by superimposition. • Compare angles by visual observation. • Identify greater, smaller, or equal angles. • Explain their comparison using simple reasoning.	

		2.7 Making Rotating Arms	**DAY 7**		"Angle in Your Body" Time: 1 minute Ask: "Where can you see angles in your body right now?" Students say:Elbow, Fingers, Knees	Show a rotating arm using paper strip + pin. Let students make their own model. Rotate and observe different angles formed.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	Students will be able to: • Construct a rotating arm model. • Demonstrate formation of angles by rotation. • Identify different angles using the model.	
		2.8 Special Types of Angles (Right, Acute, Obtuse, Straight, Reflex)	**DAY 8**		"Quick Guess" Time: 1–2 minutes Draw 2 quick angles on the board (no measurement). Ask: "Which is bigger?"	Use real-life examples (clock, door). Show angles with paper strips/rotating arms. Demonstrate and classify each type. Quick practice by identifying angles around them.	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, evaluate and produce convincing arguments or proofs to turn these definitions and conjectures into theorems or correct statements, particularly in the areas of algebra, elementary number theory, and geometry	Students will be able to: • Identify types of angles (acute, right, obtuse, straight, reflex). • Classify angles based on measure. • Relate angles to real-life situations.	
		2.8 Special Types of Angles (Right, Acute, Obtuse, Straight, Reflex)	**DAY 9**		" Show the Angle Card" Teacher shows angle names or flashcards. Students quickly draw the angle in the air or on notebook.	Use real-life examples (clock, door). Show angles with paper strips/rotating arms. Demonstrate and classify each type. Quick practice by identifying angles around them.	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, evaluate and produce convincing arguments or proofs to turn these definitions and conjectures into theorems or correct statements, particularly in the areas of algebra, elementary number theory, and geometry	Students will be able to: • Identify types of angles (acute, right, obtuse, straight, reflex). • Classify angles based on measure. • Relate angles to real-life situations.	
		2.9 Measuring Angles using Protractor	**DAY 10**		"Angle in Your Body" Time: 1 minute Ask: "Where can you see angles in your body right now?" Students say: Elbow Fingers Knees	Demonstrate how to place the protractor correctly. Include peer-check activity for accuracy	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will able to use protractor correctly. • Let students practice measuring different drawn angles in notebooks.	
		2.10 Pairs of Angles (Complementary , Supplementary, Vertically Opposite)	**DAY 11**		"Rapid Fire Pair" Time: 1–2 minutes Teacher says: "30° + 60° =?" "100° + 80° =?" Students shout: "Complementary!" "Supplementary!"	Use simple diagrams and real-life examples to introduce angle pairs. Demonstrate each type: complementary (90 degree). Supplementary (180 degree) and vertically opposite angles.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify complementary (90 degree). Supplementary (180 degree)and vertically opposite angles. • Able to state their properties.	

		2.11 Parallel Lines	**DAY 12**		Ask: “If one angle is 70°, what is the vertically opposite angle?” Students answer: “70°!”, etc.	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify corresponding, alternate interior, and co-interior angles formed by a transversal and apply properties to find unknown angles.	
		Activity	**DAY 13**		Ask: students to look around the classroom and find objects with the parallel lines.	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant.	
		Figure it Out	**DAY 14**		“Rapid Fire Pair” Time: 1–2 minutes Teacher says: “30° + 60° =?” “100° + 80° =?” Students shout: “Complementary!” “Supplementary!”	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant.	
		Figure it Out	**DAY 15**		“Angle in Your Body” Time: 1 minute Ask: “Where can you see angles in your body right now?” Students say: Elbow Fingers Knees	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant.	
		Activity	**DAY 16**		“Quick Guess” Time: 1–2 minutes Draw 2 quick angles on the board (no measurement). Ask: “Which is bigger?”	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify corresponding, alternate interior, and co-interior angles formed by a transversal and apply properties to find unknown angles.	
		Figure it Out	**DAY 17**		“Angle in Your Body” Time: 1 minute Ask: “Where can you see angles in your body right now?” Students say: Elbow Fingers Knees	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant.	

		Figure it Out	**DAY 18**		Finger Angle Show- Students use two fingers to show: Small angle (acute) Big angle (obtuse), etc.	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant	
		Figure it Out	**DAY 19**		Finger Angle Show- Students use two fingers to show: Small angle (acute) Big angle (obtuse), etc.	Show real-life examples and ask to observe if lines ever meet. Use scale and set squares to draw parallel lines and verify equal distance	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4: Draws and constructs geometric shapes — lines, parallel lines, perpendicular lines, angles — with specified properties using a compass and straight edge	• Students will identify parallel lines in surroundings. • Students will classify that parallel lines never intersect. • Explain that parallel lines never meet and remain equidistant	
		COMPUTA-TIONAL THINKING	**DAY 20**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will identify and state properties of complementary, supplementary, and vertically opposite angle pairs.	ASSESSMENT AS LEARNING
Unit 3	**Number Play**	3.1 Numbers can Tell us Things	AUGUST **DAY 1**	AUGUST	"Number Chain" Ask students to stand in a circle. One student says a number, and the next student says the number that comes after it or before, making it more fun by asking them to count in 2s, 5s, or 10s.	Super cells activity: present a row of 5-digit numbers in boxes; students colour the 'super cells' (numbers greater than both neighbours) and notice the maximum possible super cells in an arrangement.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	• C-1.1: Develops a sense for and an ability to manipulate and name large whole numbers; expresses them in scientific notation	• Students will identify and explain at least three ways numbers convey information in real-world contexts.	

		3.2 Super cells	**DAY 2**		Bundle Power!" Show students many loose items (sticks, pencils, or chalk pieces). Ask: "Is it easy to count like this?" Now tie them in bundles of 10. Ask: "Is this easier?" Say: "When we group things to make counting easy, we create a super group — this is like a Super cell!"	Start with concrete materials (bundles of 10, 100 using sticks or beads). Move to visual representation (draw bundles and single units). Connect with place value chart (ones, tens, hundreds). Use real-life examples (money, packets, boxes).	CG-1: Understands sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.1: Develops a sense for and an ability to manipulate and name large whole numbers; expresses them in scientific notation	• Students will be able to: • Interpret numbers in daily life situations. • Extract information from simple data (charts/tables). • Compare and analyse numbers meaningfully. • Use numbers to describe real-world situations.	
		Figure it Out	**DAY 3**		"Jump Count" Students jump while counting aloud in a pattern such as 2, 4, 6, 8 or 5, 10, 15, 20.	Start with concrete materials (bundles of 10, 100 using sticks or beads). Move to visual representation (draw bundles and single units). Connect with place value chart (ones, tens, hundreds). Use real-life examples (money, packets, boxes)..	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.1: Develops a sense for and an ability to manipulate and name large whole numbers; expresses them in scientific notation	• Students will be able to: • Interpret numbers in daily life situations. • Extract information from simple data (charts/tables). • Compare and analyse numbers meaningfully. • Use numbers to describe real-world situations.	
		3.3 Patterns of Numbers on the Number Line	**DAY 4**		Make 100 Challenge Say a number (e.g.,64). Students must quickly say what to add to make 100. 64 → "36!"	Number Line explorations: students plot sets of numbers (multiples of 3, perfect squares, Fibonacci numbers) on long number lines taped to the classroom floor and identify gaps/patterns.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies.	

		3.4 Playing with Digits	**DAY 5**		"Human Calculator" : Feel patterns in digits, -How to play: “Everyone stand up. I'll say a number. If it’s divisible by 2, jump. By 3, clap. By 5, spin."	Use real-life examples: house numbers, dates, and vehicle numbers. Let kids sort numbers as even/odd. Play quick games: "Make biggest number with digits 3, 7, 1". Move from concrete to patterns.	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	• Students will classify numbers as even/odd • . They’ll spot simple number patterns. • They’ll relate types of numbers to daily life.	
		3.5 Pretty Palindromic Patterns	**DAY 6**		“Odd or Even Corners” Call out a number and ask students to move to one corner for odd numbers and another corner for even numbers.	Palindrome construction: students take any 2- or 3-digit number, reverse and add repeatedly until they get a palindrome; record the number of steps needed and compare across the class.	CG-9 Knows and appreciates the development of mathematical ideas over a period of time and the contributions of past and modern mathematicians from India and across the world	C-9.2 Knows and appreciates the contributions of specific Indian mathematicians, such as, Baudhayana, Pingala, Aryabhata, Brahmagupta, Virahanka, Bhaskara, and Ramanujan.	• Students will construct palindromic numbers through the reverse-and-add process and record the number of steps taken.	
		3.6 The Magic Number of Kaprekar	**DAY 7**		“Number Snap” Say two numbers quickly: If they are even → clap If odd → snap fingers Example: “15… 28… 33…”	Kaprekar routine: each student performs Kaprekar's operation on their own 4-digit number (descending digits – ascending digits), repeating until they reach 6174; track steps in a table.	CG-9 Knows and appreciates the development of mathematical ideas over a period of time and the contributions of past and modern mathematicians from India and across the world	C-9.2 Knows and appreciates the contributions of specific Indian mathematicians, such as, Baudhayana, Pingala, Aryabhata, Brahmagupta, Virahanka, Bhaskara, and Ramanujan.	• Students will perform the Kaprekar routine on any 4-digit number and verify convergence to 6174.	
		3.7 Clock and Calendar Numbers	**DAY 8**		• “Pass the Number” Students pass a ball while music plays. When the music stops, the student holding the ball says any number and tells whether it is odd or even.	• Start with observation: Ask "What numbers do you see on a clock? On a calendar?" • Show 12:21, 10:01, dates like 22/02/2022. Let kids find numbers that read same forwards-backwards. • Use real clocks/calendars to spot patterns.	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	• Students will identify special numbers on clocks & calendars like palindromes. • They’ll relate numbers to dates/events • . They’ll spot patterns in daily-use numbers. • They’ll describe how numbers tell more than just value.	

		3.8 Mental Math	**DAY 9**		"Number Jodi " Goal: Warm up mental addition/subtraction before the topic Shout: "I have 50. Give me 2 small numbers that make 50!" ex: "40 + 10", "25 + 25", "60 - 10"	Mental math relay race: teams solve multi-step mental calculations (rounding, estimation, clock arithmetic) in relay format — fastest team with correct answers .	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies.	
		Figure it Out	**DAY 10**		"Number Jodi " Goal: "I have 7. Make it big! Add something." ex: "7 + 93 = 100"	Mental math relay race: teams solve multi-step mental calculations (rounding, estimation, clock arithmetic) in relay format — fastest team with correct answers wins.	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies.	
		3.9 Playing with Number Patterns	**DAY 11**		Flash & Answer ⚡ Write 3–4 numbers quickly on the board (e.g., 48, 72, 36). Ask: “Which is divisible by 4?” “Which is the largest?”	Number Line explorations: students plot sets of numbers (multiples of 3, perfect squares, Fibonacci numbers) on long number lines taped to the classroom floor and identify gaps/patterns.	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	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies. • Students will explain a winning strategy for a given mathematical game.	

		3.10 An Unsolved Mystery — the Collatz Conjecture	**DAY 12**		Guess My Number Say clues: “I am a 2-digit number” “I am divisible by 5” “I am greater than 40 but less than 60” Students guess → answer: 45, 50, 55	Collatz Conjecture exploration: students pick any positive integer and apply the rule (if even ÷ 2, if odd × 3 + 1) repeatedly; graph the 'journey' to 1. Discuss why it's an unsolved mystery.	CG-9 Knows and appreciates the development of mathematical ideas over a period of time and the contributions of past and modern mathematicians from India and across the world	C-9.2 Knows and appreciates the contributions of specific Indian mathematicians, such as, Baudhayana, Pingala, Aryabhata, Brahmagupta, Virahanka, Bhaskara, and Ramanujan.	• Students will apply the Collatz procedure to given numbers and create a graph/table of the sequence.	
		3.11 Simple Estimation	**DAY 13**		Say a statement: “72 is divisible by 8” Students show: Thumbs up for true Thumbs down for false	Game strategy session: play similar mathematical games; students analyse winning strategies and write them in their notebooks	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies. • Students will devise and explain a winning strategy for a given mathematical game.	
		3.12 Games and Winning Strategies	**DAY 14**		Number Chain 🧶 Start with a number: 5 Next student says: 5 + 3 = 8 Next: 8 × 2 = 16 Continue rapidly.	Game strategy session: play similar mathematical games; students analyse winning strategies and write them in their notebooks	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies. • Students will explain a winning strategy for a given mathematical game.	

		COMPUTA-TIONAL THINKING	**DAY 15**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will estimate sums, differences, and products of large numbers using rounding, and verify using mental math strategies. • Students will devise and explain a winning strategy for a given mathematical game.	
Unit 4	**Data Handling and Presentation**	4.1 Collecting and Organising Data	SEPTEM-BER **DAY 1**	SEPTEM-BER	• Conduct a quick class survey: ask students their favourite subject, mode of transport to school, and number of siblings. Record raw data on the board and discuss — 'How do we make sense of this messy list?'	Data collection project: students collect data from their daily lives (hours of sleep, TV watching, books read per week); they first organise data in a frequency table, then represent it in a pictograph.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will collect real-life data and organise it into a well-structured frequency table.	ASSESSMENT FOR LEARNING
		Figure it Out	**DAY 2**		• Conduct a quick class survey: ask students their favourite subject, Record raw data on the board and discuss — 'How do we make sense of this messy list?'	Data collection project: students collect data from their daily lives (hours of sleep, TV watching, books read per week); they first organise data in a frequency table, then represent it in a pictograph.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will collect real-life data and organise it into a well-structured frequency table.	
		Figure it Out	**DAY 3**		Conduct a quick class survey: ask students their favourite fruit or mode of transport to school, and Record raw data on the board and discuss — 'How do we make sense of this messy list?'	Data collection project: students collect data from their daily lives (hours of sleep, TV watching, books read per week); they first organise data in a frequency table, then represent it in a pictograph.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will collect real-life data and organise it into a well-structured frequency table.	

		Figure it Out	**DAY 4**		Show of Hands Survey Ask a simple question like “Who likes cricket?” or “Who likes drawing?” Students raise their hands, and one student tells the class the total number.	Step-by-step bar graph construction: teacher models drawing a bar graph on the board (choosing scale, labelling axes, drawing bars, giving a title); students replicate on graph paper and then modify with their own data.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will collect real-life data and organise it into a well-structured frequency table.	
		4.2 Pictographs	**DAY 5**		“Count and Tell” Ask students to count simple things in the classroom such as boys and girls, windows, bags, or bottles. Then they speak about the numbers, for example, “There are 12 boys and 10 girls in the class.”	Step-by-step bar graph construction: teacher models drawing a bar graph on the board (choosing scale, labelling axes, drawing bars, giving a title); students replicate on graph paper and then modify with their own data.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will create accurate pictographs with an appropriate key and title.	
		4.2 Drawing a Pictographs	**DAY 6**		Show of Hands Survey Ask a simple question ” Your favourite subjects Students raise their hands, and one student tells the class the total number.	• Comparison activity: students are given the same dataset and asked to represent it as (a) a pictograph and (b) a bar graph. Discuss which is more appropriate and why	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will create accurate pictographs with an appropriate key and title.	
		Figure it Out	**DAY 7**		Tallies Around Us Ask students to observe objects in the class such as red bags, blue bottles, or black shoes. They count them and speak about which item is more or less.	Comparison activity: students are given the same dataset and asked to represent it as (a) a pictograph and (b) a bar graph. Discuss which is more appropriate and why	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will create accurate pictographs with an appropriate key and title.	
		4.3 Bar Graphs	**DAY 8**		**Feel what a bar graph is before defining it** How to do: Ask: "Who came by bus? Stand in a line here. By auto? Line here. Walking? Line here." Step back: "Look down from my bench — which line is tallest? Say: "We just made a bar graph with our bodies.	Draw bars on graph paper — teach scale, axes, equal width, gaps. Compare: "Which bar tells us most/least?" Use color for clarity. Move from pictograph → bar graph to show why bars are better for large numbers..	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will be able to collect and organize simple data. They’ll draw a bar graph with proper scale and labels. They’ll read a bar graph to find most/least, compare quantities. They’ll explain what a given bar graph shows in 1-2 sentences.	

		4.4 Drawing a Bar Graph	**DAY 9**		"Follow the Bar" (Eye Tracking + Drawing) Draw a simple bar graph on the board (3–4 bars, different heights). Ask students: "Without moving your head, only eyes—trace the tallest bar from bottom to top." "Now jump your eyes to the shortest bar." Then ask: "Which bar did your eyes go highest on?"	Draw bars on graph paper — teach scale, axes, equal width, gaps. Compare: "Which bar tells us most/least?" Use colour for clarity. Move from pictograph → bar graph to show why bars are better for large numbers..	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will be able to collect and organize simple data. They'll draw a bar graph with proper scale and labels. They'll read a bar graph to find most/least, compare quantities. They'll explain what a given bar graph shows in 1-2 sentences.	
		Figure it Out	**DAY 10**		Air Drawing Bars" Say data like: Apples = 3 Mangoes = 5 Bananas = 2 👉 Students use their finger in the air and draw bars while following with their eyes. Then ask: "Which one was tallest in your drawing?"	Aesthetic exploration (Section 4.5): students design a 'Beautiful Bar Graph' that is accurate AND visually appealing — they consider colour, scale, alignment, and artistic elements. Display on class notice board	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will construct bar graphs with correct scale, labelled axes, and a suitable title on graph paper.	
		Figure it Out	**DAY 11**		"Blink When Highest" Show a quick bar graph. Students: Blink when your eyes reach the tallest bar Clap when they see the smallest	Aesthetic exploration (Section 4.5): students design a 'Beautiful Bar Graph' that is accurate AND visually appealing — they consider colour, scale, alignment, and artistic elements.	CG-5: Collects, organises, represents (graphically and in tables), 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	• Students will construct bar graphs with correct scale, labelled axes, and a suitable title on graph paper.	

		4.5 Artistic and Aesthetic Considerations in Data Presentation	**DAY 12**		"Invisible Graph Builder" Say: "Close your eyes. Imagine 3 bars… one small, one medium, one tall." Then: "Open eyes—draw quickly in notebook (10–15 sec)" Concept link: Visualization → drawing	How 2 bar graphs of same data: one messy, one neat + colourful. Ask: "Which one do you like to read? Why?" Teach use of proper scale, neat labels, equal gaps, colours to highlight, clear title. Stress: Good data should be easy + nice to look at. Practice by redoing a rough graph neatly.	CG-7 Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them	C-7.2 Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving	• Students will present data neatly with titles, labels & scale. They'll use colours/spacing to make graphs readable & attractive. They'll compare messy vs. neat graphs and explain why clarity matters. They'll value that how we show data is as important as the data itself.	
		Info graphics	**DAY 13**		"Invisible Graph Builder"Say: "Close your eyes. Imagine 3 bars… one small, one medium, one tall." Then:"Open eyes—draw quickly in notebook (10–15 sec)"Concept link:Visualization → drawing	Discussion: what happens to the 'story' of a graph when the scale is changed? Students redraw the same bar graph using two different scales and compare the visual impression.	CG-5 Collects, organises, represents (graphically and in tables), 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	• Students will interpret bar graphs and pictographs to answer specific questions and draw at least 3 conclusions. • Students will evaluate the appropriateness of a graphical representation for a given dataset and suggest improvements.	
		Figure it Out	**DAY 14**		"Blink When Highest" Show a quick bar graph. Students: Blink when your eyes reach the tallest bar Clap when they see the smallest	Discussion: what happens to the 'story' of a graph when the scale is changed? Students redraw the same bar graph using two different scales and compare the visual impression.	CG-5: Collects, organises, represents (graphically and in tables), 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	Students will classify that the choice of scale can affect the visual impression of a graph (importance of honest data presentation	
		COMPUTA-TIONAL THINKING	**DAY 15**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	Students will classify that the choice of scale can affect the visual impression of a graph (importance of honest data presentation	ASSESSMENT OF LEARNING

							(CT) CG-2: Develop spatial and visual reasoning.			
Unit 5	**Prime Time**	5.1 Common Multiples and Common Factors (Idli-Vada Game)	NOVEMBER **DAY 1**	NOVEMBER	Teacher will say numbers one by one from 1 to 50. Children have to listen carefully and respond quickly: 👉 If the number comes in the table of 3, a child will say 'Idli' 👉 If the number comes in the table of 5, a child will say 'Vada' 👉 If the number comes in both tables (3 and 5), a child will say 'Idli Vada' For all other numbers, just stay silent!"	Sieve of Eratosthenes activity: students use a printed 100-grid to cross out composites by circling multiples of 2, 3, 5, 7 — the remaining numbers are primes. Discuss the pattern of primes found.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	• Students will identify multiples, common multiples, and the LCM of two or more numbers using the listing method and prime factorisation. .	
		Figure it Out	**DAY 2**		Teacher will say numbers one by one from 1 to 50. Children have to listen carefully and respond quickly: 👉 If the number comes in the table of 2, a child will say 'Idli' If the number comes in the table of 4, a child will say 'Vada' 👉 If the number comes in both tables (2 and 4), a child will say 'Idli Vada' For all other numbers, just stay silent!"	Sieve of Eratosthenes activity: students use a printed 100-grid to cross out composites by circling multiples of 2, 3, 5, 7 — the remaining numbers are primes. Discuss the pattern of primes found.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	• Students will express any composite number as a product of its prime factors using factor trees.	
		5.2 Prime Numbers	**DAY 3**		"Quick Group Game" Call out a number like 2, 3, or 4. Students quickly make groups of that many children.	Sieve of Eratosthenes activity: students use a printed 100-grid to cross out composites by circling multiples of 2, 3, 5, 7 — the remaining numbers are primes. Discuss the pattern of primes found.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	• Students will determine whether a number is prime or composite and use the Sieve of Eratosthenes to list primes up to 100.	

							between numbers.			
		Figure it Out	**DAY 4**		Ask: "What are some famous jersey numbers in Team India?" Kids: "10, 7, 18, 45..." Say: "Let's check 7. Factors? Only 1 & 7 → Silent. 10? 1,2,5,10 → Clap. So 7 is Prime!" Hook: "Just like special players, some numbers are special. We call them Prime Numbers."	Start with factor activity using counters/bottle caps. Make rectangles: 12 = 3×4, 2×6, 1×12. Try for 7 = only 1×7. Define: Prime = exactly 2 factors: 1 & itself. Use Eratosthenes sieve 1-50 on board with class. Stress on 1 is not prime, 2 is only even prime.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	Students will define prime numbers using Indian examples. They'll identify primes up to 50 by finding factors. They'll explain why 2 is the only even prime. They'll see primes in daily Indian life.	
		5.3 Co-prime Numbers for Safekeeping Treasures	**DAY 5**		Show a large number (e.g., 2,310) and challenge the class: 'Can you break this number into its smallest building blocks? What are they?' This activates intuition about prime factorisation	Co-prime exploration: students test pairs of numbers for co-primness using HCF = 1 condition. Connect to the textbook's treasure-sharing story: why co-prime numbers ensure fair distribution without common divisors.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	• Students will determine whether two numbers are co-prime and explain its practical significance.	
		Figure it Out	**DAY 6**		Show a large number (e.g., 34,865) and challenge the class: 'Can you break this number into its smallest building blocks? What are they?' This activates intuition about prime factorisation	Co-prime exploration: students test pairs of numbers for co-primness using HCF = 1 condition. Connect to the textbook's treasure-sharing story: why co-prime numbers ensure fair distribution without common divisors.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3 C-1.4: Explores and understands sets of numbers and their properties	• Students will determine whether two numbers are co-prime and explain its practical significance.	
		Co- Prime art	**DAY 7**		• "Sit or Stand" Say different numbers aloud. If the number is even, students stand. If the number is odd, students sit. Later, you can connect this to divisibility and factors.	Co-prime exploration: students test pairs of numbers for co-primness using HCF = 1 condition. Connect to the textbook's treasure-sharing story: why co-prime numbers ensure fair distribution without common	CG-7 Engages with puzzles and mathematical problems and develops own creative methods and strategies to solve them	C-7.2 Engages in and appreciates the artistry and aesthetics of puzzle-making and puzzle-solving	• Students will determine whether two numbers are co-prime and explain its practical significance.	

						divisors.				
		5.4 Prime Factorisation	**DAY 8**		Write 36 on board. Say: "This number is strong. Let's **todo** (in hindi) it — break it!"Ask: "Give me any 2 numbers that multiply to 36." Kids: "6×6", "4×9", "3×12"Pick one: "4×9. Can we break 4? 2×2. Can we break 9? 3×3. Now 36 = 2×2×3×3"Say: "We broke it till we got only Prime Players — 2 and 3. That's Prime Factorization!"	Factor trees: students construct factor trees for numbers like 360, 252, 1260 and compare different trees for the same number to observe that prime factorisation is unique (Fundamental Theorem of Arithmetic — discussed informally).	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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 in order to solve problems where such techniques of computational	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation, particularly prime numbers and powers of 3 C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations (prime factorisation	• Students will identify factors, common factors, and the HCF of two or more numbers.	
		Figure it Out	**DAY 9**		1. Clap for Prime" 👉 Teacher calls out numbers (1–30) If the number is prime → students clap once. If composite → clap twice. If 1 → stay silent Example: 2 → clap once 4 → clap twice 1 → silence	Factor trees: students construct factor trees for numbers like 360, 252, 1260 and compare different trees for the same number to observe that prime factorisation is unique (Fundamental Theorem of Arithmetic — discussed informally).	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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, particularly prime numbers and powers of 3	• Students will identify factors, common factors, and the HCF of two or more numbers.	
		Figure it Out	**DAY 10**		"Prime or Not?" Rapid Fire 👉 Say numbers quickly Students respond: "Prime!" "Not Prime!" Make it fast and competitive.	Factor trees: students construct factor trees for numbers like 360, 252, 1260 and compare different trees for the same number to observe that prime factorisation is unique (Fundamental Theorem of Arithmetic —	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships	C-1.2: Discovers, identifies, and explores patterns in numbers and describes rules for their formation, particularly prime numbers and powers of 3	• Students will identify factors, common factors, and the HCF of two or more numbers.	

						discussed informally).	between numbers.			
		5.5 Divisibility Tests	**DAY 11**		“Secret Number Game” 👉 Say: “I am a number between 1 and 20. I have only 2 factors. Guess me!” Students guess → (Answer: any prime like 13)	Divisibility test discovery: present several large numbers; students apply and verify divisibility rules for 2, 4, 5, 8, 10 — and explain why the rule works (briefly, using place value logic).	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective.	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations (prime factorisation as an algorithm)	• Students will apply divisibility tests for 2, 3, 4, 5, 6, 8, 9, and 11 to solve problems.	
		Figure it Out	**DAY 12**		“Secret Number Game” 👉 Say: “I am a number between 21 and 50. I have only 2 factors. Guess me!”	Divisibility test discovery: present several large numbers; students apply and verify divisibility rules for 2, 4, 5, 8, 10 — and explain why the rule works (briefly, using place value logic).	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective.	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations (prime factorisation as an algorithm)	• Students will apply divisibility tests for 2, 3, 4, 5, 6, 8, 9, and 11 to solve problems.	
		5.6 Fun with Numbers	**DAY 13**		“Finger Prime Check” 👉 Say a number Students show fingers: 2 fingers → Prime 3+ fingers → Composite (They think of factors quickly)	Number theory puzzle: students identify twin primes, within 1–100 — discuss patterns and open questions in number theory.	CG-8: Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective.	C-8.1: Approaches problems using programmatic thinking — iteration, symbolic representation, and logical operations (prime factorisation as an algorithm)	• Students will apply divisibility tests for 2, 3, 4, 5, 6, 8, 9, and 11 to solve problems.	

		COMPUTA-TIONAL THINKING	**DAY 14**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective. (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will determine whether a number is prime or composite and use the Sieve of Eratosthenes to list primes up to 100. • Students will express any composite number as a product of its prime factors using factor trees. • Students will apply LCM and HCF to solve at least 3 different types of real-life word problems.	
Unit 6	**Perimeter and Area**	6.1 Perimeter (of Rectangles, Squares, Triangles, Polygons)	NOVEM-BER **DAY 1**	NOVEM-BER	**Human Rectangle Activity** – All students stand in rows & columns to form a big rectangle. Say: "Boundary students, raise hands → You are Perimeter." "Inside students, clap once → You are Area." Explain: "Boundary = length around. Inside = space covered."	Perimeter exploration: students measure perimeters of irregular shapes drawn on centimetre grid paper using string (to follow the boundary) and ruler; they develop the formula by summing side lengths.	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	• Students will calculate the perimeter of rectangles, squares, triangles, and irregular polygons.	
		Figure it Out	**DAY 2**		Step the Shape" Ask 4 kids to stand at corners of a tile on the floor. Tell one kid: "Walk along the edges and come back. Count steps." Ask class: "Those total steps = Perimeter of this square tile." Hook: "Perimeter is just counting steps around any shape!"👉 Works for: Triangle = 3 kids, Rectangle = 4 kids. Zero prep, uses classroom floor.	Perimeter exploration: students measure perimeters of irregular shapes drawn on centimetre grid paper using string (to follow the boundary) and ruler; they develop the formula by summing side lengths.	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; develops strategies to find the areas of composite 2D shapes	• Students will calculate the perimeter of rectangles, squares, triangles, and irregular polygons.	

		Matha Pachchi	**DAY 3**		GAME	Use rope/thread around objects + Human Rectangle. Show perimeter = add all sides. Derive formulas: Rectangle = 2(l+b), Square = 4×side, Triangle = sum of 3 sides.	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; develops strategies to find the areas of composite 2D shapes	• Students will define perimeter as total boundary length. • They'll calculate perimeter of rectangle, square, triangle & polygons. • They'll apply it to real cases like fencing.	
		Perimeter of a regular polygon	**DAY 4**		Prompt: "Hello! I am a __ (name of shape). Let me tell you about myself…" Students must include: Description of the shape Number of sides (for polygons) Whether all sides are equal (regular polygon or not) Perimeter explanation How to find their perimeter Example with numbers	Show regular shapes: square tile, stop sign, honeycomb. Measure 1 side with scale. Ask: "All sides equal?" Yes → "So why add again & again?" Derive: Perimeter = Number of sides × Length of one side. Use thread around shapes to verify. Compare square: 4×side vs rectangle: l+b+l+b.	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; develops strategies to find the areas of composite 2D shapes	• Students will identify a regular polygon has all sides equal. They'll calculate perimeter using n × side. They'll solve problems like fencing a regular hexagonal park. One-liner: Regular polygon = equal sides → Perimeter = sides × one side.	
		Split and re-join	**DAY 5**		Give 1 A4 sheet. Tear into 2 parts → "We split it". Join back with tape → "We join it". Ask: "Did area change? No. Did perimeter change? Yes!" Hook: "Cutting & joining changes the border, not the floor."	Use 2 square tiles. Join them: Area adds, but perimeter ≠ double. Split 1 rectangle into 2: Area same, perimeter increases. Draw L-shapes on graph paper → count squares for area, count boundary for perimeter. Stress: Joining hides edges, Splitting creates new edges.	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; develops strategies to find the areas of composite 2D shapes	• Students will explain that splitting/joining changes perimeter but area stays same. They'll find area of combined shapes by adding. They'll find perimeter by tracing outer boundary only, not inner joints.	
		6.2 Area (of Squares, Rectangles, Composite Shapes on Grid)	**DAY 6**		"Tile Count" – 1 min Show a square floor tile. Ask: "How many small 1-inch tiles fit inside?" Hook: "The number of tiles = Area. It covers the floor."	Area of triangle: use the 'enclosing rectangle' method — draw the rectangle around a triangle, observe that the triangle is exactly half the rectangle. Prove using paper folding; apply to right, acute, and obtuse angles.	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; develops strategies to find the areas of composite 2D shapes	• Students will calculate the area of rectangles and squares using formulae, and verify by counting unit squares.	

		Figure it Out	**DAY 7**		"Hand Span Rectangle" – 1 min 2 kids make a rectangle on desk with hand spans. Count spans: length = 5, breadth = 3. Ask: "Total hand-span squares inside? 5×3 = 15" Hook: "Area = rows × columns of squares."	Use graph paper: shade rectangle 4×3 → count 12 squares. Derive Rectangle = l × b, Square = side × side. Use math notebook: each box = 1 sq. unit. Cover book with sticky notes to show area. Stress: Area = surface covered, units = sq. cm, sq. m..	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	C-4.3: Constructs various designs (using tiling) on a plane surface using different 2D shapes and appreciates their appearances in art in India and around the world	• Students will define area as space covered by a shape. They'll calculate area of square = side² & rectangle = l×b. They'll find area of classroom objects using formula & unit squares.	
		6.3 Area of a Triangle	**DAY 8**		"Paper Fold" – 1 min Take a rectangular sheet. Fold diagonally & cut. Show 2 triangles. Ask: "Area of rectangle was full. Triangle is...?" → Half. Hook: "Triangle = Half of a rectangle!"	Use graph paper: Draw rectangle, cut diagonally → 2 equal triangles. Count squares to show triangle area = ½ × base × height. Use cut-outs: Any triangle fits in a rectangle. Height perpendicular distance. Stress: Base & height must be at 90°.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	C-4.3: Constructs various designs (using tiling) on a plane surface using different 2D shapes and appreciates their appearances in art in India and around the world	• Students will derive area of triangle = ½ × base × height. They'll identify base & height in any triangle. They'll calculate area of triangular objects like flags, set squares.	
		Figure it Out	**DAY 9**		"Finger Triangle" – 30 sec 3 kids make a triangle on floor with fingers touching. 4th kid makes rectangle around it. Ask: "See? Triangle fits exactly half inside." Hook: "So area of triangle = ½ of its box."	Area of triangle: use the 'enclosing rectangle' method — draw the rectangle around a triangle, observe that the triangle is exactly half the rectangle. Prove using paper folding; apply to right, acute, and obtuse angles.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	C-4.3: Constructs various designs (using tiling) on a plane surface using different 2D shapes and appreciates their appearances in art in India and around the world	• Students will derive area of triangle = ½ × base × height. They'll identify base & height in any triangle. They'll calculate area of triangular objects like flags, set squares.	
		Figure it Out	**DAY 10**		Prompt: "Hello! I am a __ (name of shape). Let me tell you about myself…" Students must include: Description of the shape Number of sides (for polygons) Whether all sides are equal (regular polygon or not) Area explanation How to find their perimeter Example with numbers	Area of triangle: use the 'enclosing rectangle' method — draw the rectangle around a triangle, observe that the triangle is exactly half the rectangle. Prove using paper folding; apply to right, acute, and obtuse angles.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	C-4.3: Constructs various designs (using tiling) on a plane surface using different 2D shapes and appreciates their appearances in art in India and around the world	• Students will derive area of triangle = ½ × base × height. They'll identify base & height in any triangle. They'll calculate area of triangular objects like flags, set squares.	

		Area Maze Puzzles	**DAY 11**		"Torn Poster" – 1 min Show a rectangle. Tear a corner off. Ask: "New area?" → "Old area – torn part". Hook: "To solve area puzzles, we break or subtract!"	Tiling and fractal art project: students design their own tiling pattern on A4 paper using at least two types of polygons; connect to Mughal architectural patterns and Kolam designs.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	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	• Students will calculate the area of composite shapes by partitioning them into simpler known shapes.	
		Figure it Out	**DAY 12**		"Floor Plan" – 1 min Draw an L-shape on board. Ask: "Is this a rectangle? No. But 2 L-shape joined, makes a rectangle?	Tiling and fractal art project: students design their own tiling pattern on A4 paper using at least two types of polygons; connect to Mughal architectural patterns and Kolam designs.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	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	• Students will calculate the area of composite shapes by partitioning them into simpler known shapes.	
		Figure it Out	**DAY 13**		“Perimeter vs Area” Investigation Give two shapes: Same perimeter, different areas Students: Compare algebraically Example: Rectangle 1: (x + 4) × (x + 2) Rectangle 2: (x + 3) × (x + 3)	Tiling and fractal art project: students design their own tiling pattern on A4 paper using at least two types of polygons; connect to Mughal architectural patterns and Kolam designs.	CG-4: Develops understanding of perimeter and area for 2D shapes and uses them to solve day-to-day life problems	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	• Students will calculate the area of composite shapes by partitioning them into simpler known shapes.	
		COMPUTA-TIONAL THINKING	**DAY 14**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will investigate the relationship between fixed perimeter and varying area. • Students will design and explain a tiling pattern and identify at least one example of tiling in Indian art or architecture.	

Unit 7	**Fractions**	7.1 Fractional Units and Equal Shares	DECEM-BER **DAY 1**	DECEM -BER	"Paper Fold Fun" Give each student a paper and ask them to fold it into 2 equal parts, then 4 equal parts. Ask questions like, "Show one-half" or "Show one-fourth."	Fraction strips: students cut and label paper strips representing halves, thirds, quarters, sixths, eighths, and twelfths. Use them to compare fractions, find equivalents, and add/subtract without calculation.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	Students will solve at least 4 real-life word problems involving fractions in context.	ASSESSMENT AS LEARNING
		7.2 Fractional Units as Parts of a Whole	**DAY 2**		My Fraction Name" – Divide class into 4 groups. Group 1 = ¼, Group 2 = ½, Group 3 = ¾, Group 4 = 1whole. Call out: "All ½ raise hands & say: I am 1 part out of 2 equal parts!" Ask: "If I eat ¾ pizza, who am I?" →	Use paper folding: Fold 1 sheet into 2, 4, 8 equal parts → shade 1 part = ¼, ⅛. Use chocolate bar, roti, clock. Show: Denominator = total equal parts, Numerator = parts taken. Stress: Whole must be divided equally.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	Students will define fraction as part of a whole with equal divisions. They'll identify numerator & denominator. They'll represent ½, ¼, ¾ using objects & diagrams.	
		7.3 Measuring Using Fractional Units	**DAY 3**		"Body Scale" Ask: "Measure desk using hand spans. Students will get different answers." Ex-3 kids get 5, 6, 7 spans. Ask: "Why different?" → "Hand spans not same! Explanation: "We need same scale for all → ruler, cm, m."	Fraction strips: students cut and label paper strips representing halves, thirds, quarters, sixths, eighths, and twelfths. Use them to compare fractions, find equivalents, and add/subtract without calculation.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	Students will explain need for standard units. They'll measure length using ruler in cm & m. They'll convert m ↔ cm and estimate lengths of daily objects.	
		Figure it Out	**DAY 4**		**Guess & Speak"** Show pencil. Each student guesses length in cm & speaks. Measure with ruler. Closest guess wins.	Start with non-standard units: hand, cubit, foot-step → show problem. Introduce ruler, tape: cm, m, km. Measure book, desk, board. Show 1m = 100cm using meter rod. Stress: Standard units = same for everyone.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	Students will explain need for standard units. They'll measure length using ruler in cm & m. They'll convert m ↔ cm and estimate lengths of daily objects.	

		7.4 Fractions on the Number Line	**DAY 5**		2 kids measure classroom length in foot-steps. Speak counts. Different answers. Hook: "Steps change, Meter doesn't. So we use meter."	Start with non-standard units: hand, cubit, foot-step → show problem. Introduce ruler, tape: cm, m, km. Measure book, desk, board. Show 1m = 100cm using meter rod. Stress: Standard units = same for everyone.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will represent fractions as equal parts of a whole and as points on a number line.	
		Figure it Out	**DAY 6**		Human Number Line" Ask 5–6 students to stand in a line (representing 0 to 1). Give fraction cards like 1/2, 1/4, 3/4. Students must stand at the correct position between 0 and 1.	Fraction on number line: students draw a 0-to-2 number line and place unit fractions and mixed fractions at correct positions; verify equivalent fractions appear at the same point.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will represent fractions as equal parts of a whole and as points on a number line.	
		7.5 Mixed Fractions	**DAY 7**		• "Colour the Fraction" Give simple shapes like circles or rectangles on paper. Ask students to colour half, one-third, or one-fourth of the shape.	Mixed fraction operations: students convert between mixed and improper fractions and perform addition/ Subtraction in both forms; check answers using fraction strips.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will convert between improper fractions and mixed numbers.	
		7.6 Equivalent Fractions	**DAY 8**		Same Pizza, Different Cuts" – Show 1 pizza cut into 2, eat 1 → ½. Show same pizza cut into 4, eat 2 → 2/4. Ask: "Did you eat more in 2/4? No!" Hook: "½ and 2/4 look different but fill your tummy same → Equivalent."	Equivalent fractions investigation: using multiplication and division patterns (and fraction strips), students list 5 fractions equivalent to each of 1/2, 2/3, 3/4 and spot the pattern.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will identify and generate at least 5 equivalent fractions for a given fraction.	

		Figure it Out	**DAY 9**		"Fraction Clap Game" Teacher says a fraction: If it is less than 1/2 → clap once If equal to 1/2 → clap twice If greater than 1/2 → raise hands	Equivalent fractions investigation: using multiplication and division patterns (and fraction strips), students list 5 fractions equivalent to each of 1/2, 2/3, 3/4 and spot the pattern.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will identify and generate at least 5 equivalent fractions for a given fraction.	
		Figure it Out	**DAY 10**		"Fill the Missing Point" Draw number line: 0 —— ? —— 1 Ask: What could be the fraction? 👉 Accept multiple answers (1/2, 1/3, etc.)	Equivalent fractions investigation: using multiplication and division patterns (and fraction strips), students list 5 fractions equivalent to each of 1/2, 2/3, 3/4 and spot the pattern.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line.	• Students will identify and generate at least 5 equivalent fractions for a given fraction.	
		Figure it Out	**DAY 11**		Fastest Finger First" Show 3 fractions: 1/4, 1/2, 3/4 Ask: Which is closest to 0? Which is closest to 1?	Equivalent fractions investigation: using multiplication and division patterns (and fraction strips), students list 5 fractions equivalent to each of 1/2, 2/3, 3/4 and spot the pattern.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems.	• Students will identify and generate at least 5 equivalent fractions for a given fraction.	
		7.7 Comparing Fractions	**DAY 12**		Stand in Fraction Groups Ask the class to stand in small groups. For example, if there are 8 students, ask 4 to stand and 4 to sit. Then ask, "What fraction is standing?"	Comparison activity: given pairs of fractions, students use cross-multiplication, common denominator method, and fraction strips — compare results and discuss which method is most efficient for which pair type.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems.	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips). • Students will add and subtract fractions including mixed fractions with different denominators using LCM.	

		7.8 Addition and Subtraction of Fractions	**DAY 13**		"Water Mix" – Glass 1: ½ filled. Glass 2: ¼ filled. Pour both in 1 glass. Ask: "How full now?" → "¾" • Hook: "Adding fractions = Mixing same type of liquid."	Mixed fraction operations: students convert between mixed and improper fractions and perform addition/ Subtraction in both forms; check answers using fraction strips.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.5: Explores the idea of percentage and applies it to solve problems.	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips). • Students will add and subtract fractions including mixed fractions with different denominators using LCM.	
		Brahmagupta's method for adding fractions	**DAY 14**		Whole class: Clap for 1 whole. Half class claps ½ time, then another ¼ joins. Ask: "Total claps?" → "¾ of class" Hook: "Fractions add up in real life too."	Story problem approach to addition and subtraction: students solve real-life fraction problems (splitting equally, combining amounts, finding remainders) before formalising the LCM method.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips).	
		Brahmagupta's method for Subtracting fractions	**DAY 15**		"Paper Cut Take-Away" – Take strip, shade ⅘. Cut off ⅙. Ask: "Left?" → "⅘" Hook: "Subtraction = Cutting away parts."	Story problem approach to addition and subtraction: students solve real-life fraction problems (splitting equally, combining amounts, finding remainders) before formalising the LCM method.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips).	
		Figure it Out	**DAY 16**		"Fill the Missing Point" Draw number line: 0 —— ? —— 1 Ask: What could be the fraction? 👉 Accept multiple answers (1/2, 1/3, etc.)	Story problem approach to addition and subtraction: students solve real-life fraction problems (splitting equally, combining amounts, finding remainders) before formalising the LCM method.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers.	C-1.6: Explores and applies fractions (both as ratios and in decimal form) in daily-life situations.	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips).	

		COMPUTA-TIONAL THINKING	**DAY 17**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter..	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will compare two or more fractions using multiple methods (cross-multiplication, common denominator, visual strips).	
Unit 8	**Playing with Construc-tions**	8.1 Artwork — Freehand Drawing with Circles	JANUARY **DAY 1**	JANUARY	Display Fig. 8.1 (circle-based artwork) from the textbook and challenge students to reproduce the designs freehand in their notebooks — no instruments allowed.	Artwork activity: students use only compass and ruler to create designs similar to Fig. 8.1 — overlapping circles, 'mouse face', 'spectacle' patterns. Emphasises precision and creativity simultaneously.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will create at least one geometric artwork design using compass and ruler.	ASSESSMENT AS LEARNING
		Figure it Out	**DAY 2**		Coin Circle Take any coin, ask them to trace it, now draw the same circle without coin. Hook- First we copy, then we create.	Artwork activity: students use only compass and ruler to create designs similar to Fig. 8.1 — overlapping circles, 'mouse face', 'spectacle' patterns. Emphasises precision and creativity simultaneously.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will create at least one geometric artwork design using compass and ruler.	
		8.2 Squares and Rectangles (Properties and Drawing)	**DAY 3**		Ask: 'What makes a square? Could a rectangle ever be a square?' Host a 2-minute debate; students must defend their answer with a geometric reason.	Property verification: students measure sides and angles of their drawn squares and rectangles to verify: all sides equal / opposite sides equal, all right angles. Record findings in a table.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will draw and describe the properties of squares and rectangles (sides, angles, diagonals).	

		8.3 Constructing Squares and Rectangles (Compass and Straightedge)	**DAY 4**		"String Square" – Give 1m string. Ask: "Make square. Speak: All sides equal?" Hook: "Square = All sides same + all corners 90°."	Step-by-step construction: teacher demonstrates on board and students follow — constructing a rectangle of given dimensions using compass and straightedge (not just ruler). Steps are documented in notebooks.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will draw and describe the properties of squares and rectangles (sides, angles, diagonals).	
		8.4 An Exploration in Rectangles	**DAY 5**		What's My Shape?" – Show book. Student speaks: "2 long sides, 2 short sides, 4 corners 90° → Rectangle". Show chessboard: "All sides equal, 4 corners 90° → Square".	Diagonal exploration: students draw diagonals in their constructed squares and rectangles and measure diagonal lengths, angles at intersection, and midpoints. They discover that diagonals of a rectangle are equal and bisect each other.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct squares and rectangles of given dimensions using compass and straightedge with correct labelling.	
		Construct	**DAY 6**		"Draw in the Air" Ask students to use their fingers to draw shapes in the air while others guess the shape.	Diagonal exploration: students draw diagonals in their constructed squares and rectangles and measure diagonal lengths, angles at intersection, and midpoints. They discover that diagonals of a rectangle are equal and bisect each other.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct squares and rectangles of given dimensions using compass and straightedge with correct labelling.	
		8.5 Exploring Diagonals of Rectangles and Squares	**DAY 7**		• Provide each student a sheet of dotted paper and ask them to draw 5 different rectangles in 2 minutes. Discuss: 'Did everyone draw the same ones? How many rectangles of the same area can exist?'	Exploration in rectangles: students cut rectangles and re-arrange them to form different shapes; explore how area is conserved while perimeter changes.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct squares and rectangles of given dimensions using compass and straightedge with correct labelling.	

		Construct	**DAY 8**		• "Dot-to-Dot Circle" –Put 8 dots in circle shape. Join freehand. Hook: "Many dots make a perfect circle."	Exploration in rectangles: students cut rectangles and Re-arrange them to form different shapes; explore how area is conserved while perimeter changes.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct squares and rectangles of given dimensions using compass and straightedge with correct labelling.	
		8.6 Points Equidistant from Two Given Points (Perpendicular Bisector)	**DAY 9**		"Finger Compass" – Thumb on paper = centre. Pencil tip = other end. Rotate paper, not hand. Ask: "See? Circle ban gaya!" Hook: "Hand can be a compass too."	Perpendicular bisector construction: students construct the perpendicular bisector of a given line segment; verify that every point on it is equidistant from the two endpoints using a compass.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct the perpendicular bisector of a given line segment and verify the equidistance property.	
		Construct	**DAY 10**		“Human compass” Make students stand in a circle. Pick A and B opposite each other.Ask C to stretch hands to A and B. Check with rope CA=CB Say C is at equal distance from A and B- this shows the **perpendicular bisector**.	Perpendicular bisector construction: students construct the perpendicular bisector of a given line segment; verify that every point on it is equidistant from the two endpoints using a compass.	CG-3: Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.4 Draws and constructs geometric shapes, such as lines, parallel lines, perpendicular lines, angles, and simple triangles, with specified properties using a compass and straightedge	• Students will construct the perpendicular bisector of a given line segment and verify the equidistance property.	
		COMPUT-ATIONAL THINKING	**DAY 11**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter..	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT)	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	Students will apply properties of squares and rectangles to solve area and perimeter problems.	

							CG-2: Develop spatial and visual reasoning.			
Unit 9	**Symmetry**	Introduction	JANUARY **DAY 1**	JANUARY	• Fold-and-cut activity: students fold a square paper in half (horizontal, vertical, and diagonal) and cut out shapes; unfold it, see symmetric patterns. Which fold gives which type of symmetry? Students observe and discuss.	Line symmetry identification: students are given printed shapes (regular polygons, irregular shapes, alphabets) and draw all lines of symmetry using a mirror and ruler; count them and tabulate results.	CG-10 Knows about and appreciates the interaction of Mathematics with each of their other school subjects	C-10.1 Recognises interaction of Mathematics with multiple subjects across Science, Social Science, Visual Arts, Music, Vocational Education, and Sports	• Students will identify and draw all lines of symmetry for given 2D shapes and figures.	
		9.1 Line of Symmetry	**DAY 2**		"Ink Blot Magic" – Put ink drop on paper, fold paper. Press & open. Ask: "Both sides same?" → "Yes!" Hook: "Fold line = Line of symmetry."	Line symmetry identification: students are given printed shapes (regular polygons, irregular shapes, alphabets) and draw all lines of symmetry using a mirror and ruler; count them and tabulate results.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will identify and draw all lines of symmetry for given 2D shapes and figures.	
		Reflection Symmetry	**DAY 3**		"Face Match" – Stand in front of mirror. Cover half face with paper. Ask: "Other half looks same? Yes!" Hook: "Your face has a line of symmetry down the middle."	Paper folding test: Fold shape → if 2 halves match exactly, fold = line of symmetry. Use alphabet, rangoli, butterfly cut-outs. Mirror test: Place mirror on line → if full shape seen, it's reflection symmetry. Show 0, 1, 2, many lines: circle, square, rectangle. Stress: Line of symmetry = mirror line.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will create a symmetric design by paper folding, cutting, and grid-paper reflection.	
		Activity	**DAY 4**		Symmetry" – Write A, H, M on board. Ask: "Which letters look same if folded?" Students shout: "A, H, M!" Hook: "Some letters are mirror images of themselves."	Creating symmetric designs: students fold dotted paper, draw half a design on one side, cut out, unfold — the result is a symmetric shape. They then replicate it on grid paper by reflecting.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will create a symmetric design by paper folding, cutting, and grid-paper reflection.	

		Punching Game	**DAY 5**		Paper folding activity to explain the number of symmetric lines on any shape and also by punching the folded paper.	Indian art connection: students study a printed rangoli or Kolam pattern; identify lines of symmetry and order of rotational symmetry; then create their own rangoli design with at least 4-fold symmetry.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will create a symmetric design by paper folding, cutting, and grid-paper reflection.	
		Activity	**DAY 6**		Paper folding activity by cutting it into different ways.	Indian art connection: students study a printed rangoli or Kolam pattern; identify lines of symmetry and order of rotational symmetry; then create their own rangoli design with at least 4-fold symmetry.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will create a symmetric design by paper folding, cutting, and grid-paper reflection.	
		Figure it Out	**DAY 7**		Paper folding activity by cutting it into different ways.	Symmetric shapes in nature: students collect or draw 5 natural objects with line symmetry and 5 with rotational symmetry; create a mini-poster classifying them.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will create a symmetric design by paper folding, cutting, and grid-paper reflection.	
		9.2 Rotational Symmetry (Order and Angle of Rotation)	**DAY 8**		Show images of flowers, butterflies, rangoli, and the Taj Mahal — ask students to identify lines of symmetry. How many symmetric lines does a starfish have? How many symmetric lines does a circle have?	Rotational symmetry exploration: students trace a shape, pin it at its centre, and rotate it; mark the positions where it looks identical. Count the order and calculate the angle of rotation (360 ÷ order).	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will determine the order of rotational symmetry and angle of rotation for given shapes.	
		Figure it Out	**DAY 9**		Play 'Mirror Me': students pair up; one is the 'mirror' and must reflect the other's hand/arm movements exactly. This physical activity builds understanding of reflection symmetry.	Rotational symmetry exploration: students trace a shape, pin it at its centre, and rotate it; mark the positions where it looks identical. Count the order and calculate the angle of rotation (360 ÷ order).	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will determine the order of rotational symmetry and angle of rotation for given shapes.	

		Figure it Out	**DAY 10**		Play 'Mirror Me': students pair up; one is the 'mirror' and must reflect the other's hand/arm movements exactly. This physical activity builds understanding of reflection symmetry.	Rotational symmetry exploration: students trace a shape, pin it at its centre, and rotate it; mark the positions where it looks identical. Count the order and calculate the angle of rotation (360 ÷ order).	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will define rotational symmetry & order of rotation. They'll identify order for square, rectangle, triangle, circle. They'll find angle of rotation using 360°/order.	
		Figure it Out	**DAY 11**		"Human Fan" – 30 sec3 kids stand like fan blades. Rotate slowly. Ask: "After how much turn do we look same again?" Hook: "We're a living example of order 3!"	Rotational symmetry exploration: students trace a shape, pin it at its centre, and rotate it; mark the positions where it looks identical. Count the order and calculate the angle of rotation (360 ÷ order).	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will define rotational symmetry & order of rotation. They'll identify order for square, rectangle, triangle, circle. They'll find angle of rotation using 360°/order.	
		Activity	**DAY 12**		Drawing creative symmetric designs on a grid paper	Use tracing paper: Trace shape, fix centre with pin, and rotate. Count positions where trace matches original before 360°. Show: Rectangle = order 2, Square = order 4, Circle = infinite. Stress: Angle of turn = 360° ÷ order.	CG-3 Understands, formulates, and applies properties and theorems regarding simple geometric shapes (2D and 3D)	C-3.1 Describes, classifies, and understands relationships among different types of two- and three-dimensional shapes using their defining properties/attributes	• Students will define rotational symmetry & order of rotation. They'll identify order for square, rectangle, triangle, circle. They'll find angle of rotation using 360°/order.	
		COMPUTA-TIONAL THINKING	**DAY 13**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will identify examples of line and rotational symmetry in nature, architecture, and Indian art. • Students will design an original rangoli or geometric pattern with a specified number of lines of symmetry and order of rotational symmetry. • Students will classify letters of the English alphabet by their symmetry properties.	

Unit 10	**The Other Side of Zero (Integers)**	Building of Fun (Introduction to Integers through a Building Model)	FEBRUARY **DAY 1**	FEBRUARY	• "Forward and Backward Steps" Ask students to stand in a line. Positive numbers mean move forward and negative numbers mean move backward. For example, +3 means three steps forward and -2 means two steps backward.	Bela's Building model: students draw a building with 5 floors above ground (Floor 1–5) and 3 floors below (Basement 1–3); they use it to interpret and solve integer addition and subtraction problems without formal rules.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations	• Students will explain the concept of integers as an extension of whole numbers to include negative numbers and zero.	ASSESSMENT FOR LEARNING
		Figure it Out	**DAY 2**		"Zero Line Jump" – Draw 0 on floor. Say: "Right = +1, +2... Left = -1, -2..." Call: "+3" → kid jumps 3 steps right & shouts "Plus 3!" Call: "-2" → jumps 2 left & shouts "Minus 2!" Hook: "Zero is home. Right = gain, Left = loss."	Bela's Building model: students draw a building with 5 floors above ground (Floor 1–5) and 3 floors below (Basement 1–3); they use it to interpret and solve integer addition and subtraction problems without formal rules.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will represent integers on a number line and compare/order a given set of integers.	

		Figure it Out	**DAY 3**		• “Forward and Backward Steps” Ask students to stand in a line. Positive numbers mean move forward and negative numbers mean move backward. For example, +3 means three steps forward and -2 means two steps backward.	Number line work: students draw an extended number line (−10 to +10) on their notebooks and perform operations by 'walking' left (subtract/negative) and right (add/positive); they connect token model results to number line movements.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will represent integers on a number line and compare/order a given set of integers.	
		Figure it Out	**DAY 4**		“Temperature Game” say different temperatures like 5°C, 0°C, or -3°C. Students raise their hands for positive temperatures and fold their arms for negative temperatures	Number line work: students draw an extended number line (−10 to +10) on their notebooks and perform operations by 'walking' left (subtract/negative) and right (add/positive); they connect token model results to number line movements.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	

		Figure it Out	**DAY 5**		“Temperature Game” say different temperatures like 5°C, 0°C, or -3°C. Students raise their hands for positive temperatures and fold their arms for negative temperatures	Number line work: students draw an extended number line (−10 to +10) on their notebooks and perform operations by 'walking' left (subtract/negative) and right (add/positive); they connect token model results to number line movements.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	
		10.2 The Token Model (Adding and Subtracting Integers using Tokens)	**DAY 6**		• Activity Name: Lift Up or Sit Down Say positive and negative numbers aloud. If the number is positive, students stand. If it is negative, students sit.	Token model activity: students use red tokens (negative) and blue tokens (positive) to model integer sums. Adding a red and a blue cancels out (zero pair). Students model at least 10 addition problems and discover the rules themselves.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will model addition and subtraction of integers using the building model and the token model.	

		Figure it Out	**DAY 7**		• Activity Name: Lift Up or Sit Down Say positive and negative numbers aloud. If the number is positive, students stand. If it is negative, students sit.	Token model activity: students use red tokens (negative) and blue tokens (positive) to model integer sums. Adding a red and a blue cancels out (zero pair). Students model at least 10 addition problems and discover the rules themselves.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers 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-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line C-2.3 Forms algebraic expressions using variables, coefficients, and constants and manipulate them through basic operations.	• Students will model addition and subtraction of integers using the building model and the token model.	
		10.3 Integers in Other Places (Temperature, Sea Level, Depth, Gain/Loss)	**DAY 8**		"Money Speak" – Give chits: +₹10, -₹5, +₹7. Student picks & speaks: "Plus 10 = I got money. Minus 5 = I owe money." Hook: "+ = I have, - = I owe."	Real-world integers: present contexts — bank account (credit/debit), temperature (above/below zero), altitude (above/below sea level), football goal difference — students write integer expressions for each and solve.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	
		Figure it Out	**DAY 9**		"Temperature Talk" – 30 sec Show thermometer pics: 30°C, -5°C. Student speaks: "30°C = Hot day, Minus 5°C = Freezing!" Hook: "Below zero = Minus, Above zero = Plus."	Real-world integers: present contexts — bank account (credit/debit), temperature (above/below zero), altitude (above/below sea level), football goal difference — students write integer expressions for each and solve.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	

		10.4 Explorations with Integers (Number Line Operations, Patterns)	**DAY 10**		"Lift Waala Game" 0 = Ground floor. Upstairs = +1, +2... Basement = -1, -2... Call: "Go to -2." Kid says: "Basement 2!" + crouches. Call: "From -1, go up 3." Kid jumps & shouts: "+2, 2nd floor!" Hook: "Basement = Minus, Floors =Plus.".	Pattern exploration (Section 10.4): students fill in an integer pattern table and discover rules for adding and subtracting integers by observing patterns (e.g., adding a negative = subtracting, subtracting a negative = adding).	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	
		An amazing grid of numbers	**DAY 11**		"Red-Black Chips" Black chips = +1, Red chips = -1. Give kid: 3 Black + 5 Red. Ask: "Cancel pairs." 3 pairs gone, 2 Red left. Kid shouts: "-2!" Hook: "Red eats Black. Whoever is left wins!"	Pattern exploration (Section 10.4): students fill in an integer pattern table and discover rules for adding and subtracting integers by observing patterns (e.g., adding a negative = subtracting, subtracting a negative = adding).	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	
		Figure it Out	**DAY 12**		"Sea-Sky Line" – 30 sec Sea level = 0. Bird at +5m, Fish at -3m. Ask: "Distance between them?" Kids measure with arms & shout: "8m!" Hook: "Above sea = Plus, Below sea = Minus."	Pattern exploration (Section 10.4): students fill in an integer pattern table and discover rules for adding and subtracting integers by observing patterns (e.g., adding a negative = subtracting, subtracting a negative = adding).	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real numbers), looks for patterns, and appreciates relationships between numbers	C-1.4: Explores and understands sets of numbers — whole numbers, fractions, integers, rational numbers, and real numbers — and visualises them on the number line	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	
		Brahmagupta’s Rules	**DAY 13**		Give & Take" – Setup: 2 students. One has 5 pencils = "Fortune". Other owes 3 pencils = "Debt". Ask: "Fortune 5 + Debt 3 = ?" Student with 5 gives 3 to clear debt →	Brahmagupta connection: share the historical context — Brahmagupta (7th century AD) first formalised rules for arithmetic with negative numbers; students compute 3 examples using each of his rules.	CG-1: Understands numbers and sets of numbers (whole numbers, fractions, integers, rational numbers, and real 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	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	

		COMPUTA-TIONAL THINKING	**DAY 14**			Using 4 simple steps: Break the problem, find the pattern, write steps like a recipe, test with new numbers. Use "Robot Steps" game: kids give one command at a time — miss a step and it stops — to show why clear steps matter.	CG-8 Develops basic skills and capacities of computational thinking, namely, decomposition, pattern recognition, data representation, generalisation, abstraction, and algorithms in order to solve problems where such techniques of computational thinking are effective (CT) CG-2: Develop spatial and visual reasoning.	C-8.1 Approaches problems using programmatic thinking techniques such as iteration, symbolic representation, and logical operations and reformulates problems into series of ordered steps (i.e., algorithmic thinking)	• Students will perform addition and subtraction of integers using the number line and state the rules discovered.	ASSESSMENT OF LEARNING