

NEW
COUNTDOWN
ENHANCED BLENDED EDITION



OXFORD
UNIVERSITY PRESS

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Published in Pakistan by
Oxford University Press
No. 38, Sector 15, Korangi Industrial Area,
PO Box 8214, Karachi-74900, Pakistan

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Third Edition (Enhance Blended) published in 2026

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ISBN 9786275227649

Preface



Early childhood experiences are the main determinants for future achievement. During the first five years, the brain is highly sensitive to environmental influences. These include quality of interaction with peers, teachers, and family members and whether a stimulating environment that supports cognition, language, and executive functioning is provided to children.

The new New Countdown series for pre-primary: Pre-nursery, Nursery and Kindergarten, has been revamped with new activities, games, and flashcards – to provide pupils with a solid foundation in mathematics and prepare them for primary. The new edition follows a structured teaching approach to nurture cognitive development.

This series aims to nurture physical, social, emotional, and intellectual development with the aim to transition from rote learning to hands-on, play-based activities – in alignment with the National Curriculum of Pakistan. The curriculum is structured to develop learning through purposeful activities and content curated for differentiated learning styles. The activities are carefully designed with research-backed practices to develop knowledge, skills, confidence and pro-social behaviour.

Effective Pedagogy in Mathematics

- ▶ Provide a stimulating environment with diverse learning opportunities to encourage holistic development
- ▶ Pupils learn through play, observation, and expression to form familiar and new experiences
- ▶ Encourage positive contribution, exploration, and well-being
- ▶ Facilitate pro-social behaviour – respect for others, fairness, and justice

The books have been structured to facilitate visual, auditory, and tactile-kinaesthetic development. The following features are also included:

- ▶ **Flashcards** *that are concept-rich, designed for playful practice and learning through hands-on engagement*
- ▶ **Game-based activity sheets** to consolidate learning through group activities
- ▶ **Fold-out Picture Hunt** *scene where children can spot, count and revise everything have learned through playful discovery*
- ▶ **Perforated sheet** *that wraps up learning by bringing every concept to life through visual exploration*
- ▶ **Teacher's Resource Guides** *aligned with ECCE pedagogy, step-by-step support and hands-on strategies*

Scope and Sequence

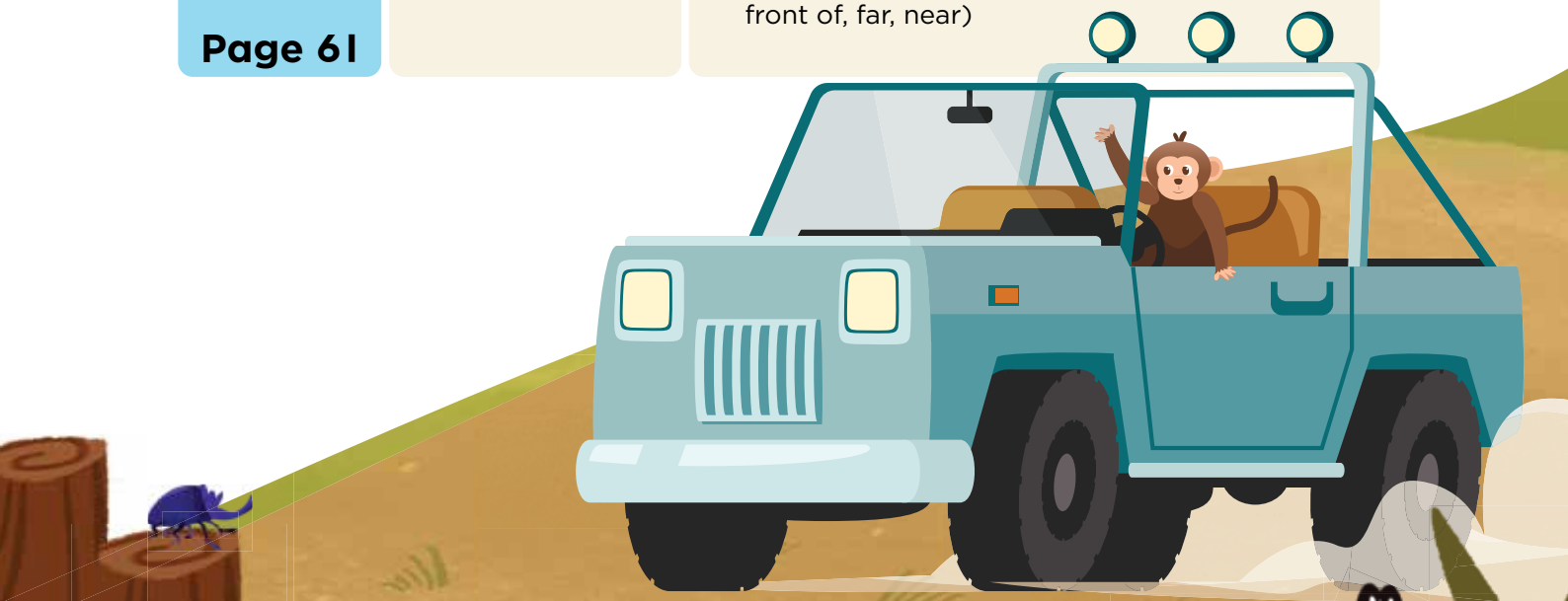
Kiki



UNIT	NAME	LEARNING OBJECTIVES
1 Page 2	Numbers	<ul style="list-style-type: none">• Count, identify and trace numbers up to 50• Order and sequence numbers 0-50• Count objects saying the number names in the standard order, pairing each object with one and only one number name• Compare less and more quantities and make them equal• Count backwards from 20-1• Count and make sets of 5, 10 and 15 objects• Use ordinal numbers 1st to 10th indicating position in a sequence• Identify the numeral which represents the number of objects in a set• Identify the number that comes before or after a given number to 20• Count to compare two sets of objects to determine which set has more or less
2 Page 14	Shapes	<ul style="list-style-type: none">• Recognise and name 2-D and 3-D shapes and objects such as sphere, cube, cuboid, cylinder and cone using features such as number of faces (flat or curved)• Combine and take apart shapes to make other shapes• Order shapes from smallest to largest (e.g. order various circle sizes)
3 Page 20	Patterns	<ul style="list-style-type: none">• Create patterns using concrete materials
4 Page 26	Addition	<ul style="list-style-type: none">• Add one object to change the number in a group of objects• Explain the difference between addition and subtraction
5 Page 32	Subtraction	<ul style="list-style-type: none">• Add one object to change the number in a group of objects• Explain the difference between addition and subtraction



UNIT	NAME	LEARNING OBJECTIVES
<p style="font-size: 48px; text-align: center;">6</p> <p style="text-align: center;">Page 38</p>	<p style="text-align: center;">Measurement</p>	<ul style="list-style-type: none"> • Explore measuring tools (e.g. cup, glass, ruler) and use nonstandard units of measure for comparison • Describe and compare objects using length, weight, height and temperature (hot & cold) as measurement attributes
<p style="font-size: 48px; text-align: center;">7</p> <p style="text-align: center;">Page 45</p>	<p style="text-align: center;">Time</p>	<ul style="list-style-type: none"> • Sequence events in chronological order using language (day and night, before and after, next, first; today, yesterday, tomorrow; morning, afternoon, evening) • Recognise and use language relating to days of the week and months of the year • Compare, describe and solve practical problems for measuring time (quicker, slower, earlier, later) • Recognise informal time units and know that clocks and calendars mark the passage of time • Solve time problems with totals smaller than ten using concrete materials
<p style="font-size: 48px; text-align: center;">8</p> <p style="text-align: center;">Page 55</p>	<p style="text-align: center;">Comparison</p>	<ul style="list-style-type: none"> • Compare quantities (e.g. knowing that two is more than one and using vocabulary such as more/less/same as) • Compare less and more quantities and make them equal • Use comparative language (tall, taller, tallest; short, shorter, shortest)
<p style="font-size: 48px; text-align: center;">9</p> <p style="text-align: center;">Page 61</p>	<p style="text-align: center;">Position</p>	<ul style="list-style-type: none"> • Use language related to location (prepositions such as above, below, under, over, behind, in front of, far, near)



Numbers

Student Learning Outcomes	Suggested time: 5 Lessons
<p>Recall: Numbers 1-30</p> <ul style="list-style-type: none">• Count, identify and trace numbers up to 50• Order and sequence numbers 0-50• Count objects saying the number names in the standard order, pairing each object with one and only one number name• Compare less and more quantities and make them equal• Count backwards from 20-1• Count and make sets of 5, 10 and 15 objects• Use ordinal numbers 1st to 10th indicating position in a sequence• Identify the numeral which represents the number of objects in a set• Identify the number that comes before or after a given number to 20• Count to compare two sets of objects to determine which set has more or less	

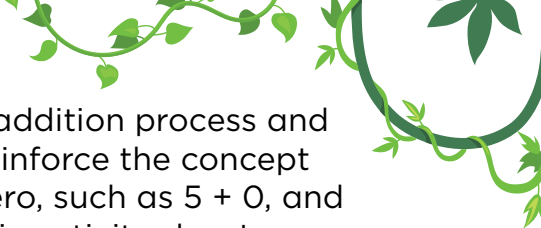
Main Activity

In this engaging activity, number cards from 1-30 are hidden in various places around the classroom, and the class is divided into two groups. One student from each group is called to participate, and a number is announced, such as 12. The students then search the classroom to find the corresponding number card. The group whose student finds the card first gets to keep it. This process is repeated with different numbers and students until all 30 number cards are found. The group that collects the most cards wins.

This activity promotes teamwork, problem-solving, and number recognition skills, while encouraging students to move around and engage with their learning environment. By making number recognition a fun and competitive activity, students are motivated to participate and learn.

Addition:

In this activity, students work in pairs and are given 10 counters each to practice addition. The teacher writes addition sums on the board, and students use the counters to represent the numbers. They start by counting out the same number of counters for each number in the sum, placing them separately on their table. Then, they combine the counters to find the total, effectively adding the numbers.



This hands-on approach helps students visualize the addition process and understand the concept of combining quantities. To reinforce the concept of zero, students can practice adding numbers with zero, such as $5 + 0$, and see that the number of counters remains the same. This activity develops students understanding of addition and builds their math skills in a concrete and engaging way.

Subtraction:

In this engaging activity, two large cardboard dice are created to play a subtraction game. Two students are chosen to throw the dice, one student for each die. After throwing, they call out the number of dots they see on top of their respective dice. The class then calculates the difference between the two numbers by subtracting the smaller number from the larger one.

This activity promotes mental math skills, subtraction practice, and teamwork. By involving the whole class in calculating the difference, students develop their problem-solving skills and build confidence in their math abilities. The game can be continued by calling out different pairs of students to throw the dice, keeping the activity fun and interactive.

Numbers 1-30:

Create a simple and engaging puzzle by cutting out heart-shaped cards with numerals on one side and corresponding dot patterns on the other. Cut each heart in half vertically, creating unique puzzle pieces. Mix the pieces and have students match the numeral side with the corresponding dot pattern side.

This activity promotes number recognition, problem-solving, and fine motor skills, while being easy to prepare and fun for students to complete.

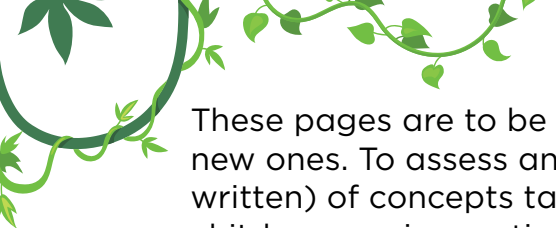
Addition/Subtraction: Refer to **page 7** of kindergarten. Let students practice addition and subtraction of numbers.

Make a group of 5 students. Provide each group with a set of number cards from 1 to 30 (The same heart shaped cut outs can be used from the previous activity) and ask them to arrange the cards in sequence. This activity can be made more engaging by using a large number line template or a hundred chart where students can place the cards in order.

As students work, they develop their understanding of number sequences and relationships, building a strong foundation for future math skills. To add an element of challenge, students can work in pairs or small groups to arrange the cards in sequence as quickly and accurately as possible.

Textbook Practice Pages:

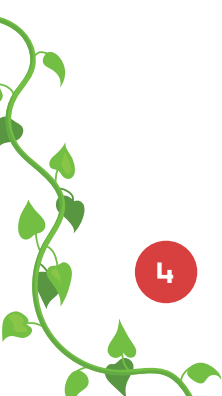
Page: 2-7



These pages are to be used for revising the concepts, before introducing new ones. To assess and improve learning, further practice (oral and written) of concepts taught at early stages becomes essential. Young children require continuous reinforcement, so that they can link their previous knowledge with the new information, and to ensure clarity of mathematical concepts introduced at this stage.

TEACHER'S REFLECTION

What impact did the teaching strategy have on students' learning? How effective was the approach in achieving the lesson objectives?



Student Learning Outcomes	Suggested time: 5 Lessons
<ul style="list-style-type: none">• Count, identify, and trace numbers up to 50.• Order and sequence numbers 0-50.	

Manipulatives:

- Number flashcards
- Beads
- Tracing sheets
- Number strips (0-50)

Methodology:

Interactive counting and sequencing activities.

Learning Curve:

- Recognition
- Tracing
- Ordering
- Sequencing

Pre-emptive pitfalls:

- Children may skip numbers.
- Confusion between similarly shaped numerals (e.g., 6 and 9).

Main Activity:

To introduce numbers 1-50, flashcards can be used to help children recognize and memorize the numerals. This can be followed up with tracing sheets where children practice writing numbers, developing their fine motor skills and hand-eye coordination. A fun and interactive way to sequence numbers is by using number strips on the floor, promoting understanding of number sequences. These activities cater to different learning styles, engaging children in a fun and interactive way while building a strong foundation for future math skills.

Textbook Practice Pages:

Page 10, 11, 13, 14, 16

Exposition:

Children recite numbers from 1-50, then identify and correct sequence errors in a group activity.



Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Tracing numbers in sand trays provides a hands-on experience, allowing students to develop their fine motor skills and number recognition.

Auditory Learning

Reciting numbers aloud in groups rhythmically promotes phonological awareness and reinforces number sequences.

Visual Learning

Matching number flashcards with correct number strips helps build recognition and memory of numbers.

Plenary:

Quick quiz by showing random flashcards to identify the numeral and position.

Student Learning Objective

- Identify the numeral representing objects in a set.

Manipulatives:

- Counting cubes
- Number cards
- Counters

Methodology:

Concrete-object counting activities and numeral-object matching.

Learning Curve:

Counting → Pairing → Matching → Identifying numerals.

Pre-emptive pitfalls:

- Double-counting or skipping objects.

Main Activity:

In this engaging activity, children are provided with counting cubes and work in groups to count objects aloud, pairing each object with one number. As they count, children match sets of objects with corresponding numeral cards placed on tables, reinforcing their understanding of the relationship between numbers and quantities. By working in groups, children can share their knowledge, learn from one another, and build their confidence in counting and number recognition. This activity lays a strong foundation for future math skills, such as addition and subtraction, and helps children develop a solid understanding of number concepts.

Textbook Practice Pages:

Page 8

Exposition:

Children demonstrate understanding by independently counting and matching objects to numerals.

Multi-Sensory Learning Stations:

- **Tactile/Kinaesthetic Learning:** Build towers with cubes corresponding to number cards.
- **Auditory Learning:**
- **Visual Learning:** Number-object matching puzzles.

Plenary:

Teacher shows objects; children write the corresponding numeral on whiteboards.

Student Learning Objective

- Compare less and more quantities and make them equal.
- Count to compare two sets of objects to determine which set has more or less.

Manipulatives:

- Plastic fruits
- Toy animals
- Small blocks.

Methodology:

Comparative counting through play.

Learning Curve:

Observation → Counting → Comparing.

Pre-emptive pitfalls:

- Misunderstanding 'equal' concept.
- Difficulty discerning 'more' and 'less'.

Main Activity:

Children engage in hands-on learning by counting two different sets of manipulatives (The teacher can opt for manipulatives of her choosing), developing their understanding of numbers and quantities. By placing objects side-by-side, they compare sets and discuss concepts of “more” and “less”. To reinforce equality, children adjust quantities to make sets equal, promoting problem-solving and critical thinking skills. This activity lays the foundation for understanding mathematical relationships and builds a strong foundation for future math concepts.

Textbook Practice Pages:

Page 8

Exposition:

After comparing and adjusting quantities, the group discusses how to check and correct their sets to ensure accuracy. This involves reviewing their work, identifying any errors, and making necessary adjustments to achieve equal sets. Through this discussion, children develop critical thinking skills, attention to detail, and an understanding of the importance of accuracy in mathematical comparisons. The group discussion also fosters collaboration, communication, and problem-solving skills, as children share their approaches and learn from one another.



Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Balancing scales with equal objects allows students to experience equality and balance firsthand, developing their understanding of equivalence through hands-on experimentation.

Auditory Learning

Reciting comparative phrases, such as “more” or “less,” or singing songs that emphasize comparisons, can reinforce auditory learning and help students internalize concepts of quantity.

Visual Learning

Picture comparisons where students circle sets with more or fewer items provide a visual representation of comparisons, enabling students to recognize and apply concepts of quantity and difference. By incorporating these multisensory approaches, students can develop a deeper understanding of comparisons and cater to their individual learning styles.

Plenary:

Children select and explain two sets, identifying which is more/less and equalize them practically.

Student Learning Objective

- Count backwards
- Identify the number that comes before or after a given number to 20.

Manipulatives:

- Number ladders
- Backward counting flashcards
- Floor number mats (1-20).

Methodology:

Reverse counting games and activities.

Learning Curve:

Backward counting → Before/after identification.

Pre-emptive pitfalls:

- Difficulty reversing number order.
- Incorrect identification of before/after numbers.

Main Activity:

- “Countdown Blast-off” game: Children count backward from 20 to 1.
- Jumping game: Children stand on numbered mats and move to the mat representing numbers before and after as called by teacher.

Textbook Practice Pages:

Page 15, 16

Exposition:

Children orally practice reverse counting individually and identify before/after numbers with flashcards.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Students will walk backward on a number line, physically experiencing the concept of counting down.

Auditory Learning

Students will chant backward counting rhymes, reinforcing the sequence through rhythm and repetition.


Visual Learning

Students will complete missing numbers on reverse counting charts, recognizing patterns and relationships between numbers.

These approaches cater to diverse learning styles, promoting a deeper understanding of reverse counting concepts.

Plenary:

Rapid-fire quiz on backward counting and before/after numbers with quick oral responses.



Student Learning Objective

- Count and make sets of 5, 10, and 15 objects.

Manipulatives:

- Coloured beads
- Counters
- Toy cars.

Methodology:

Counting and Grouping Objects

Learning Curve:

Counting → Grouping

Pre-emptive pitfalls:

- Ensuring students understand the concept of sets and grouping
- Managing classroom noise and activity levels during toy car races

Main Activity:

Students will engage in two hands-on activities to practice counting and grouping objects into sets. First, they'll work with coloured beads and counters, grouping them into sets of 5, 10, and 15, while circulating around the room for assistance and feedback. Next, they will count and group the cars into sets, such as 5, 10 or 15.

Throughout the activities, students will be observed and questioned to assess their understanding of counting and grouping. To cater to different learning needs, additional support will be provided to struggling students, while advanced students will be challenged with larger sets or more complex grouping tasks.

Textbook Practice Pages:

Pages 30-32

Exposition:

Demonstrate understanding by independently grouping objects such as beads or toys.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Threading different coloured beads in groups of 5, 10, and 15 provides a hands-on experience, allowing students to develop their fine motor skills and understand number relationships through tactile exploration.

Auditory Learning

Listening to number rhymes or songs that emphasize counting and grouping in sets of 5, 10, and 15 can reinforce auditory learning and help students internalize number patterns and relationships.

Visual Learning

Displaying number charts or hundreds of charts with highlighted sets of 5, 10, and 15 provides a visual representation, enabling students to recognize and apply number patterns and relationships. By incorporating these multi-sensory approaches, students can develop a deeper understanding of numbers and cater to their individual learning styles.

Plenary:

- Observe students during the activities and note their ability to count and group objects into sets.
- Ask questions throughout the activities to assess their understanding.

TEACHER'S REFLECTION

What impact did the teaching strategy have on students' learning? How effective was the approach in achieving the lesson objectives?



2

Shapes

Student Learning Outcomes:

- Recognise and name basic 2-D shapes: circle, square, triangle, rectangle.
- Recognise and name basic 3-D shapes: sphere, cube, cylinder, cone using their faces (flat or curved).
- Combine and take apart shapes to make other shapes.
- Order shapes from smallest to largest (e.g., various circle sizes).

Manipulatives

- Shape cut-outs (circle, square, triangle, rectangle)
- Shape-sorting mats labelled with each shape
- Large floor shape posters
- Shape Flashcards

Objective:

- Recognise and name basic 2-D shapes: circle, square, triangle, rectangle.

Methodology

Guided discovery → Shape hunt → Naming practice

Objective

Students will identify and verbally name four 2-D shapes in their environment and on worksheets.

Learning Curve


Shape exposure → Attribute discussion → Name recall

Pre-emptive pitfalls

- Confusing square and rectangle (both have four sides)
- Mispronouncing “rectangle”

Main Activity

The teacher introduces the shapes by showing each cut-out and highlighting its distinct features, such as the number of sides and corners. The teacher names each shape, using vocabulary like “square,” “circle,” “triangle,” and “rectangle.”



Students observe and listen attentively, beginning to recognize and associate the shape names with their characteristics. Students are divided into small groups and given clipboards to search for real-world examples of each shape in the classroom. Students explore the classroom, identifying and recording examples of shapes on their clipboards, such as a square tile or a circular clock.

Group members work together, sharing their findings and discussing the shapes they've discovered.

Students work individually, placing the shape cut-outs on a matching mat that displays the corresponding shape names.

As students match each cut-out to its name, they practice saying the shape name aloud, reinforcing their recognition and pronunciation. This activity reinforces students' understanding of shape names and their ability to identify and articulate them correctly.

Textbook Practice Pages:

Page: 40, 41

Exposition

"Welcome, young explorers! Today, we're going to learn all about shapes! Let's gather around our matching mat, where shapes come alive! Who can tell me the name of this shape?" (points to a shape). The teacher can then point to the **Unit Chapter Opener** to further reinforce the shapes they have just learned.

Multi-Sensory Learning Stations:

- **Tactile/Kinaesthetic Learning:** Trace shape outlines in sand trays with fingers.
- **Auditory Learning:**
- **Visual Learning:** Show flashcards with basic shapes and say their names aloud.

Plenary

The teacher leads the children on a slow walk around the classroom, encouraging children to point out different shapes and say their name out loud.

Objective:

Recognise and name basic 3-D shapes: sphere, cube, cylinder, cone using their faces (flat or curved).

Methodology

Object exploration → feature discussion → naming drill



Learning Curve

Tactile exploration → face identification → verbal naming

Manipulatives

- Solid models of sphere, cube, cylinders, cone
- Feature cards (“flat face,” “curved face”)
- Shape-feature sorting trays

Pre-emptive pitfalls

- Calling a cylinder a “tube”
- Overlooking curved faces on 3D shapes

Main Activity

Students pass around 3D models of various shapes, such as cubes, spheres, and cones. As students handle each model, they note the number of flat and curved faces, developing their spatial awareness and tactile skills. Students observe and feel the shapes, beginning to recognize and distinguish between different features.

Students work in pairs, matching feature cards to each 3D model. For example, a cube would match with a card that says, “2 long faces.” Students think critically about the features of each shape, making connections between the model and its corresponding features. Pairs discuss and agree on the correct matches, promoting communication and teamwork.

The teacher shows a 3D model, and students respond with a specific phrase, such as “This is a cube; it has 6 faces.” Through repetition, students reinforce their understanding of shape names and features, developing their ability to describe and identify shapes accurately.

Textbook Practice Pages:

Page 37-39

Exposition

Using a “Shape Detective” hat, teacher invites a child to inspect a hidden model and name it based on felt faces.

Multi-Sensory Learning Stations:

- **Tactile/Kinaesthetic Learning:** Roll spheres and cylinders to feel curves.
- **Auditory Learning:**
- **Visual Learning:** Match 3-D shape pictures to their names on a wall chart.

Plenary

Children hold a 3-D model and tell the class its name and one feature.

Student Learning Outcome:

- Combine and take apart shapes to make other shapes.

Manipulatives

- Large magnetic 2-D shapes (triangles, squares, rectangles)
- Velcro shape-building boards
- 3-D shapes Lego blocks

Methodology

Hands-on composition → guided deconstruction → creation challenge

Objective

Students will join two or more shapes to form a new shape and conversely split a composite shape into components.

Learning Curve

Component recognition → composition → decomposition

Pre-emptive pitfalls

- Forcing mismatched edges when combining
- Losing track of original shapes when decomposing

Main Activity

The teacher demonstrates how two triangle shapes can fit together to make a square shape. Use big, colourful shapes that are easy to see.

“Look! Two triangles make a square!”

Use simple language and encourage kids to repeat the phrase.

Students observe the relationship between the triangles and the resulting square, beginning to understand how shapes can be composed. This demo introduces the concept of composition, showing students that shapes can be combined to form new shapes.

Students work with composite shapes on Velcro boards, taking them apart to identify the individual shapes. As students deconstruct the shapes, they recognize and name each part, reinforcing their understanding of shape names and properties. This activity develops students’ spatial awareness and ability to visualize shapes as composed of smaller parts.

Students work in teams to build a designated target shape given by the teacher using magnetic shapes. For example, they might need to create a rectangle using two squares. Teams use problem-solving skills to figure



out how to combine the shapes to meet the target shape requirement. Students apply their knowledge of shape composition and properties to create the target shape, reinforcing their understanding of shape relationships.

Textbook Practice Pages:

Page: 44, 45

Exposition

Draw a big composite shape on chart paper; call on volunteers to outline and name the hidden component shapes.

Multi-Sensory Learning Stations:

- **Tactile/Kinaesthetic Learning:** Snap 3-D blocks apart and reassemble into a new solid.
- **Auditory Learning:** Chant “take apart, put together” rhythm as shapes are moved.
- **Visual Learning:** Sequence picture cards showing step-by-step composition of a shape.

Plenary

Each team presents one composite they created, naming the parts and the new shape.

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?



Manipulatives

- Combined set of all previous manipulatives
- Review-task cards for each skill
- Station-sign posters

Revision:

All above; integrated practice.

Methodology

Station rotation → mixed-review tasks → reflection circle

Objective

Students will apply naming, feature-identification, composition, and ordering skills in a multi-activity review.

Learning Curve

Skill recall → mixed application → peer feedback

Pre-emptive pitfalls

- Task confusion when rotating quickly
- Skipping steps in multi-part stations

Main Activity

Rotate through four stations (5 min each):

- **Naming Station:** Name 2-D/3-D shapes from flashcards.
- **Compose/Decompose Station:** Build or take apart shapes on Velcro boards.
- **Order Station:** Sequence shapes by size.
- **Feature Station:** Match face-feature cards to 3-D models.

Exposition

Circle time: Each child shares one favourite station and explains what they learned.

Multi-Sensory Learning Stations:

- **Tactile/Kinaesthetic Learning:** Hands-on at each physical station.
- **Auditory Learning:** Review chant combining shape names and size words.
- **Visual Learning:** Station posters with pictorial instructions.

lenary:

Ask students to look around for different shapes at their home.

Student Learning Outcomes:

- Create simple repeating patterns (AB) using concrete materials.

Manipulatives

- Sets of coloured counters or beads (at least two colours)
- Pattern strips (laminated cards showing AB blanks)
- Large pocket chart

Methodology

- Demonstration
- Guided partner work
- Independent creation

Objective

Students will build and replicate an AB pattern (e.g., red, blue-red, blue) using tangible items.

Learning Curve


- Pattern exposure
- Guided replication
- Independent creation

Pre-emptive pitfalls

- Repeating single-color runs instead of alternating
- Losing track of the sequence when adding many items

Main Activity

The Pattern Block Activity is a hands-on and engaging way to help students recognize and create AB patterns using coloured counters. The activity begins with a teacher demonstration, where the teacher creates a simple AB pattern on a pocket chart using red and blue counters, narrating the pattern as they go. This demonstration helps students understand the concept of an AB pattern and how it can be created using different colours.



Following the demonstration, students work in pairs during the guided partner work segment. One child selects two coloured counters and places them on a pattern strip to create an AB pattern, while their partner replicates the pattern and extends it two more times. This guided practice allows students to work together, share ideas, and build confidence in creating patterns.

Finally, during the independent creation segment, each student uses counters on their strip to create a new AB pattern, demonstrating their understanding of the concept. Students then show their pattern to a peer for verification, promoting peer-to-peer learning and feedback. This activity helps students develop pattern recognition and creation skills, problem-solving and critical thinking abilities, and collaboration and communication skills. By working in pairs and independently, students build confidence and creativity in creating their own patterns, laying a strong foundation for future mathematical concepts.

Textbook Practice Pages:

Exposition

Circle time: Invite volunteers to the pocket chart to build an AB pattern aloud, emphasizing the alternating rule.

Multi-Sensory Learning Stations

To cater to different learning styles, the following multisensory approaches can be used to teach AB patterns:

Tactile/Kinaesthetic Learning

- Threading red and blue beads on a pipe cleaner in AB order provides a hands-on experience for students to understand and create patterns.
- This tactile activity helps students develop fine motor skills and hand-eye coordination while learning about patterns.
- By manipulating the beads, students can visualize and internalize the pattern, making it easier to replicate and extend.

Auditory Learning

- Chanting “clap-snap, clap-snap” while placing counters reinforces the concept of alternation in AB patterns.
- The auditory cue of the chant helps students develop their auditory processing skills and associate the sound with the pattern.
- This approach enables students to recognize and create patterns through sound and movement.



Visual Learning

- Matching picture cards, such as apple-banana, in an AB sequence on a board provides a visual representation of patterns.
- This approach helps students recognize and create patterns using visual cues, developing their ability to identify and extend patterns.
- By using picture cards, students can visualize the pattern and make connections between the images, reinforcing their understanding of AB patterns.

Plenary

Teacher holds up an AB pattern; students call out “red, blue” and predict the next two items.

Student Learning Outcomes:

- Create more complex repeating patterns (AAB, ABC) using concrete materials.

Manipulatives

- Triplet sets of colored counters or shape tiles
- Pattern→building mats labeled for AAB and ABC sequences
- Picture→sequence cards in three→color groups

Methodology

Exploration → scaffolded challenge → sharing gallery

Objective

Students will construct and name AAB and ABC patterns (e.g., red, red, blue, red, green, blue) using tangible objects.

Learning Curve

Identify pattern type → scaffolded modeling → independent challenge

Pre-emptive pitfalls


- Misplacing the third element in ABC patterns
- Compressing AAB into AB by mistake

Main Activity

The pattern recognition activity is designed to help students understand and identify different pattern types, specifically AAB and ABC sequences. The activity begins with an exploration segment, where the teacher shows students examples of AAB and ABC patterns using shapes, describing each pattern as they go. This introduction helps students develop an understanding of the structure and characteristics of each pattern type.

Following the exploration, students participate in a scaffolded challenge, where they choose between AAB or ABC mats and use counters or tiles to build each pattern three times. The teacher provides prompts and support as needed, allowing students to work at their own pace and build confidence in creating patterns. This activity enables students to develop their problem-solving skills and apply their understanding of pattern structures.

The activity concludes with a sharing gallery, where students display their patterns on a classroom table and walk around to identify and name each pattern type. This segment encourages students to recognize and verbalize the patterns they've created, reinforcing their understanding of AAB and ABC sequences. By sharing their work and discussing the patterns, students



develop their communication skills and build a sense of community in the classroom. Overall, this activity provides a comprehensive and engaging approach to teaching pattern recognition, allowing students to explore, create, and share their understanding of different pattern types.

Textbook Practice Pages:

Exposition

On the carpet, teacher shuffles mixed→type patterns; class identifies “Who can find the AAB pattern?”

Multi-Sensory Learning Stations

To engage students and cater to different learning styles, various multisensory approaches can be employed to teach pattern recognition. Here are some examples:

Tactile/Kinaesthetic Learning

- Creating AAB patterns with coloured blocks on floor rugs in a large format allows students to engage in hands-on learning, developing their tactile and kinaesthetic skills.
- By manipulating blocks, students can visualize and internalize patterns, making it easier to recognize and extend them.
- This approach enables students to explore patterns in a physical and interactive way, promoting a deeper understanding of pattern structures.

Auditory Learning

- Using rhythmic patterns, such as clapping two times and stomping once for AAB or clapping, stomping, and snapping for ABC, reinforces pattern recognition through sound and movement.
- This auditory approach helps students develop their ability to recognize patterns through sound and associate them with specific sequences.
- By incorporating movement and sound, students can engage with patterns in a fun and interactive way, enhancing their understanding and retention.



Visual Learning

- Completing worksheets that involve cutting and pasting shapes into AAB and ABC rows provides a visual representation of patterns, allowing students to recognize and create patterns using visual cues.
- This approach helps students develop their ability to identify and extend patterns, reinforcing their understanding of pattern structures.
- By working with shapes and visual patterns, students can build their spatial reasoning and visual processing skills.

Plenary

Each student describes one pattern they saw and names its type (AAB or ABC).

TEACHER'S REFLECTION

What impact did the teaching strategy have on students' learning? How effective was the approach in achieving the lesson objectives?

Student Learning Outcome:

- Add one object to change the number in a group of objects.

Manipulatives

- Red, black and white chart papers.
- Number flashcards
- Dice
- Ten Frame

Methodology

Demonstration → Guided Manipulation → Independent Exploration

Objective

Students will add exactly one object to a small set (up to 5) and state how the total changes.

Learning Curve

Identify initial quantity → Add one → Recount and describe change

Pre-emptive pitfalls:

- Accidentally adding more than one object
- Forgetting to recount the entire set after adding

Main Activity:

Students will practice their addition skills by rolling two dice to create a number sentence, and then placing the corresponding number of dots on a ladybug's wings. The teacher will provide a large ladybug drawing and dot cutouts, and students will work in pairs or small groups to roll the dice, create the number sentence, and count the total number of dots on the ladybug's wings. For example, if the numbers rolled are 4 and 2, students will place 4 dots on the left wing and 2 dots on the right wing and then count the total number of dots to find the answer, which is 6. This activity allows students to visualize the addition process and develop their problem-solving skills, while having fun with the ladybug theme. As students work, the teacher will circulate around the room to provide guidance and support as needed and encourage students to share their answers with the class.



Textbook Practice Pages:

Page 50

Exposition:

Gather on the carpet; use a hat—pull out 2 toy animals, then add one more to the hat, asking “How many now?”

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Students engage in hands-on learning by placing pom-poms on a ten-frame and then adding one more, feeling the change in quantity.

Auditory Learning

Through scanning a QR code, learners access a number song about addition, reinforcing their understanding through music and audio cues.

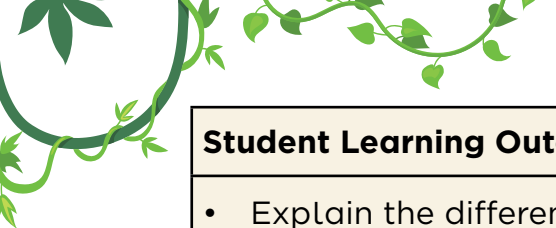
Visual Learning

By sliding an extra picture tile into a sequence strip and pointing to the new total, students visually reinforce their grasp of addition concepts.

This multi-sensory approach caters to different learning styles, promoting a deeper understanding of addition.

Plenary:

Quick round: Teacher calls a starting number (1–5); students show fingers, add one, and hold up the new total.



Student Learning Outcome:

- Explain the difference between addition and subtraction.

Manipulatives

- Two baskets labelled “Add” and “Take Away”
- Counters or blocks
- Picture cards illustrating adding or removing objects

Methodology

Think aloud contrasts → paired sorting → group discussion

Objective

Students will verbally distinguish “adding” (making more) from “subtracting” (making less) using concrete examples.

Learning Curve

Understand action intent → link to vocabulary → articulate difference

Pre-emptive pitfalls:


- Using “subtract” to mean “add” or vice versa
- Confusion when actions happen quickly

Main Activity:

The lesson begins with a think-aloud contrast activity, where the teacher demonstrates the concepts of addition and subtraction using physical objects, such as apples. The teacher shows three apples, adds one, and narrates the action as “addition: more,” emphasizing that addition increases the quantity. Then, the teacher removes one apple, narrating the action as “subtraction: less,” highlighting that subtraction decreases the quantity. This activity helps students understand the fundamental difference between addition and subtraction.

Following the demonstration, students participate in a paired sorting activity, where they receive mixed picture cards and are tasked with placing each card under the correct basket labelled “Add” or “Take Away.” Students work in pairs to sort the cards, explaining their reasoning for each placement. This activity encourages students to think critically about the concepts of addition and subtraction and develop their problem-solving skills.

The lesson concludes with a group discussion, where volunteers demonstrate one “add” action and one “subtract” action using counters at the front of the classroom. Students clearly label each action, reinforcing their understanding of the concepts. This activity provides an opportunity



for students to share their knowledge and learn from one another, while the teacher can assess their understanding and provide feedback. By incorporating these activities, students develop a solid foundation in addition and subtraction and build a strong understanding of the relationship between these two mathematical operations.

Textbook Practice Pages:

Exposition:

Use a simple story: “Sara had 5 stickers, got one more—she’s happy because she added. Then she gave one away—she subtracted.” Class repeats definitions.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Students engage in physical movement by stepping forward on a number line rug to represent addition and stepping back to represent subtraction, internalizing these concepts through action.

Auditory Learning

Through call-and-response activities, learners reinforce their understanding of addition and subtraction with phrases like “When we add, we make more!” and “When we subtract, we make less!”


Visual Learning

By flipping a two-sided card showing “+” on one side and “-” on the other, students visually connect the symbols to the actions of addition and subtraction, solidifying their understanding.

This multi-sensory approach caters to different learning styles, promoting a comprehensive grasp of mathematical concepts.

Plenary:

Teacher calls an action (“add” or “subtract”) and a number; students perform the action with counters and say the result.



Student Learning Outcome:

- Count to compare two sets of objects to determine which has more

Manipulatives

- Counters, blocks, and ten-frames
- Action picture cards (+1 story scenes). Flash cards can be used for this purpose.
- Mini whiteboards and markers

Methodology

Integrated station rotation → mixed-activity review → reflective sharing

Objective

Students will apply—adding one and distinguishing add—in varied contexts and explain their reasoning.

Learning Curve

Skill recall → contextual application → verbal explanation

Pre-emptive pitfalls:

- Mixing up their count of objects
- Explaining one skill but performing the other

Main Activity:

Students work with a small group of objects, such as blocks, to understand the concept of adding one object to change the number in the group. Students start by counting and recording the initial number of objects, then add one more object and recount to find the new total. Through this hands-on experience, students visualize how adding one object increases the number. A key part of this activity is discussing the difference between addition and subtraction, where addition involves combining objects to increase the total, and subtraction involves removing objects to decrease the total. This activity helps students develop a concrete understanding of these fundamental math concepts.

Textbook Practice Pages:

Page 51, 52 & 53

Exposition:

Students will demonstrate their understanding of adding one object to a group by independently completing tasks and explaining how it changes the number.

MULTI-SENSORY LEARNING STATIONS

Tactile/Kinaesthetic Learning

Students engage in hands-on learning by using beads on a string, sliding one bead forward to represent addition and backward to represent subtraction. This tactile approach helps students visualize and internalize the concepts.

Auditory Learning

In the “Whisper Chain” activity, students pass a counter while whispering “add”, reinforcing their understanding of these operations through auditory cues.

Visual Learning

Students match action cards (showing addition or subtraction) to result cards (showing final quantities), developing their visual recognition of mathematical relationships.

Plenary:

In the plenary session, students reflect on their learning experiences, discussing how each activity helped them understand addition and subtraction. This reflection solidifies their understanding and highlights the connections between different learning approaches.

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?



5

Subtraction

Student Learning Outcome:
<ul style="list-style-type: none">Take away objects from a set to represent zero.

Manipulatives

- Small bowls containing up to 5 counters
- “Zero” numeral card
- Empty trays labelled 0

Methodology

The lesson begins with teacher demonstration, where the concept is introduced step by step and clearly modelled for the class. This is followed by guided removal, during which pupils participate with teacher support to practice the idea collaboratively. Finally, children progress to independent modelling, where they apply the concept on their own to show understanding and confidence.

Learning Curve

The learning progression moves from recognizing and working with a full set of objects to experiencing gradual removal, helping children observe the decreasing quantity step by step. This process leads to the recognition of an empty set, reinforcing the foundational idea that “nothing” or “zero” represents the absence of objects.

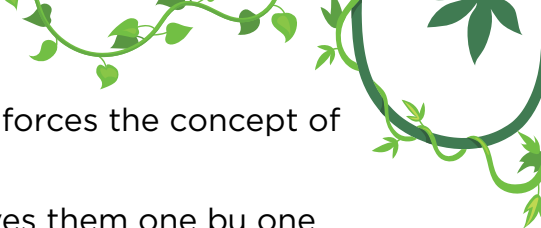
Pre-emptive pitfalls

- Failing to count after each removal
- Misnaming “zero” as “nothing” without linking to numeral

Main Activity

The lesson begins with the teacher demonstrating a bowl of 4 counters, removing one at a time, and narrating the subtraction process (“4 minus 1 is 3,” etc.) until the bowl is empty. The teacher then holds up a “0” flash card and says “zero,” introducing the concept of zero as a representation of nothing.

Next, students work in pairs with a bowl of counters, taking turns removing one counter at a time, counting aloud after each removal, and displaying



the “0” card when the bowl is empty. This activity reinforces the concept of subtraction and the meaning of zero.

Finally, each child starts with 3-5 counters and removes them one by one to an empty tray. When finished, they place the “0” flash card and practice saying the counting sequence backwards, ending with “zero” (“three, two, one, zero!”). This activity solidifies students’ understanding of subtraction and the concept of zero.

Textbook Practice Pages:

Exposition

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning: Scoop counters from a bowl into an “empty” bucket, feeling the weight change to zero.

Auditory Learning: Whisper countdown from starting number to zero.

Visual Learning: Watch a short animation of counters disappearing one by one until none remain.

Plenary

Quick round: teacher shows a bowl (0-3 counters) hidden under cloth; students guess how many remain, then lift to reveal and say “zero” when empty.

Student Learning Outcome:

- Remove one object to change the number in a group of objects.

Methodology

The teaching approach follows a gradual release model that begins with teacher-led think-aloud modelling, where the teacher demonstrates the skill or concept while verbalizing the thought process. This is followed by partner practice, allowing students to rehearse the concept collaboratively in pairs, supporting one another through dialogue and shared problem-solving. Finally, pupils transition to individual responses, where they apply the concept independently, demonstrating their personal understanding and mastery. Students will remove one object from a set and state the new total (within 5).

Learning Curve

Students begin by counting a given set of objects carefully, ensuring one-to-one correspondence. After establishing the initial total, they remove one object from the set and are asked to count again. This process highlights how the quantity changes when one item is taken away. Pupils are then encouraged to articulate the change in their own words, such as, “There were five, now there are four,” reinforcing both the counting process and the language of subtraction.

Manipulatives

- Sets of 3–6 counters per child
- “–1” flash cards
- Mini ten-frames

Pre-emptive pitfalls

- Removing more than one by mistake
- Forgetting to recount full set after removal

Main Activity

The lesson begins with a **Think-Aloud Model**, where the teacher demonstrates subtraction using 5 counters, removing one and verbalizing the process, “5 minus 1 is 4,” while modelling the recount on a ten-frame. This explicit modelling helps students understand the concept of subtraction and how it affects the quantity.

Next, students engage in **Partner Practice**, working in pairs to apply the concept. One child selects a set of counters, removes one, and their partner counts the remainder. After each turn, they swap roles, allowing both students to practice subtracting and counting. This collaborative activity



promotes peer learning and reinforces the concept of subtraction.

Finally, in **Individual Response**, each student works independently with a ten-frame and counters. They remove one counter, draw the remaining count on a whiteboard, and write the corresponding subtraction equation, such as “ $5 - 1 = 4$.” This activity assesses students’ understanding of subtraction and their ability to apply it in a concrete and symbolic way. By progressing from modelled to guided to independent practice, students develop a solid grasp of subtraction concepts.

Textbook Practice Pages:

Kindergarten Pg 56–57

Exposition

Using a story: “Leo had 4 pebbles, one rolled away—how many now?” Children act out with real pebbles.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Students step back one space on a number line rug to represent “minus 1,” physically embodying the concept of subtraction and developing a deeper understanding through movement.

Auditory Learning

Visual Learning

By covering one image in a 5-picture strip and counting the visible pictures, students visualize the concept of subtraction, connecting the physical removal of an object to the resulting quantity.

This multi-sensory approach enables students to grasp subtraction from different angles, fostering a more comprehensive understanding of the concept.

Plenary

Teacher calls random starting numbers (2–6); students show fingers, fold one down, and state remaining count.

Student Learning Outcome:

- Solve subtraction problems with totals smaller than ten using concrete materials.

Manipulatives

- Illustrated subtraction story cards
- Counters and ten-frames
- Problem mats with “Read → Model → Solve” sections

Methodology

Start with story problems using props. Demonstrate removal: “I have 3 apples. I eat 1. How many left?” Model crossing out in drawings. Connect to subtraction number sentences.

Objective

Students will interpret simple subtraction stories (total < 10), model with counters, and state the solution.

Learning Curve

Children first experience subtraction physically (taking away). Then, they move to pictorial representation (crossing out) and abstract symbols.

Pre-emptive pitfalls

- Confusing subtraction context with addition
- Skipping modelling step and guessing

Main Activity

Rotate through three stations (8 min each):

The learning activity is structured around three interactive stations. At the **Modelling Station**, students follow a narrative on a card, such as “7 birds on a branch, 2 fly away,” and respond by removing counters and verbalizing the corresponding subtraction equation, “ $7 - 2 = 5$.” This station provides a concrete representation of subtraction.

At the **Draw & Solve Station**, students illustrate the story on mats, place counters to represent the scenario, and write the subtraction sentence, connecting visual and symbolic representations.

In the **Partner Quiz Station**, students exchange story cards with a partner, model the scenario, and quiz each other with questions like “What’s $6 - 3$?” This station encourages peer-to-peer learning, reinforces understanding, and builds confidence in applying subtraction concepts. By rotating through these stations, students engage with subtraction in diverse and interactive ways.

Textbook Practice Pages:

Pages 58–60

Exposition

Class reconvenes; volunteers share one story they solved, modelling on the big ten-frame and explaining their steps.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

Students engage in hands-on learning by acting out story-problems with toy figures, removing them from a play scene to represent subtraction. This interactive approach helps students internalize the concept of taking away.

Auditory Learning

Through whisper-chain retellings of the story, students reinforce their comprehension of the narrative before modelling the subtraction problem. This auditory approach strengthens their understanding of the story context.

Visual Learning

By matching story picture cards to the correct subtraction equation cards, students visually connect the narrative to the mathematical representation. This activity solidifies their understanding of subtraction as a concept and helps them recognize the symbolic representation of subtraction equations.

This multi-sensory approach enables students to grasp subtraction concepts through diverse learning pathways, fostering a deeper and more comprehensive understanding.

Plenary

Quick game: Show a group of counters, remove some behind your back, ask pupils to guess “how many left?” Summarize: *“Subtraction means taking away.”*

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?



6

Measurement

Student Learning Outcome:

- Explore measuring tools (e.g., cup, glass, ruler) and use nonstandard units of measure for comparison.

Manipulatives

- Rulers (no-units marked) and strips of paper
- Plastic cups and measuring jug
- A supply of identical blocks or paper clips

Methodology

The lesson begins with hands-on exploration, where children are encouraged to manipulate everyday objects such as cups, glasses, rulers, or blocks. This is followed by guided comparison, in which the teacher supports students in examining two items side by side to identify differences in length or capacity. Finally, the session concludes with reflective discussion, allowing pupils to share observations and describe their reasoning in their own words.

Objective

Students will develop the ability to handle a variety of everyday tools—including cups, glasses, rulers, and blocks—and will learn to use nonstandard units such as paper clips or building blocks to compare the lengths or capacities of two items.

Learning Curve

The learning sequence begins with tool identification, ensuring that children can recognize and name the measuring instruments available to them. Next, they practice selecting appropriate nonstandard units for measurement. Finally, they engage in comparative measurement, using their chosen units to determine and articulate which item is longer, shorter, greater, or smaller in capacity.

Pre-emptive pitfalls

- Misaligning ruler or blocks when measuring (leading edge errors)
- Choosing nonstandard units of drastically different sizes

Main Activity

The lesson begins with a brief Tool Introduction, where the teacher showcases various tools, such as rulers, cups, and blocks, demonstrating their intended use. This introduction familiarizes students with the materials they will be working with.

Next, students participate in Guided Comparison, where they work in pairs to measure and compare the lengths of two objects, such as a pencil and a crayon, using a non-standard unit like blocks. By aligning the blocks end-to-end, students record their findings, noting that “My pencil is 6 blocks long; my crayon is 4 blocks long.” This activity helps students understand the concept of measurement and comparison.

In the Capacity Exploration segment, students investigate capacity by pouring water or sand from one container to another, using identical cups and counting scoops with a small spoon as “units.” By comparing which container holds more, students develop an understanding of volume and capacity. Through these hands-on activities, students gain practical experience with measurement concepts, building a strong foundation for future learning.

Textbook Practice Pages:

Pages 62-63

Exposition

Gather on the carpet. Teacher holds two cups of different sizes, asks “Which cup holds more blocks of sand?” Children predict, then test with scoops.

Multi-Sensory Learning Stations:

Tactile/Kinaesthetic Learning

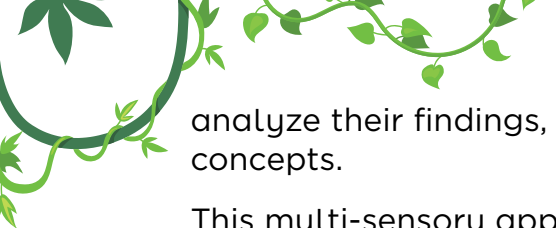
Students engage in hands-on measurement by lining up paper clips edge-to-edge to measure various classroom objects. This tactile approach helps students develop a concrete understanding of length and measurement.

Auditory Learning

Through counting aloud, students reinforce one-to-one correspondence as they measure with blocks or scoops, verbalizing each unit (“one, two, three...”). This auditory approach strengthens their understanding of numerical relationships.

Visual Learning

By color-coding measurement strips on paper to match the length of objects, students create a visual representation of measurement. Displaying these strips on a wall chart allows students to compare and



analyze their findings, solidifying their understanding of measurement concepts.

This multi-sensory approach enables students to grasp measurement concepts through diverse learning pathways, fostering a deeper and more comprehensive understanding.

Plenary

Quick share: volunteers name an object they measured, state the number of units, and whether it was longer or shorter than a partner.

Student Learning Outcome:

- Describe and compare objects using length, weight, height and temperature (hot & cold) as measurement attributes.

Manipulatives

- Two sets of objects differing in length (sticks), weight (small bags of beans), height (stacked blocks), temperature (cups of warm vs. cool water—supervised)
- Balance scale
- Thermometer toy or picture

Methodology

The lesson begins with attribute demonstration, where the teacher models how to observe and compare different features such as length, height, or weight. Children then move into paired descriptive tasks, working with a partner to practice using comparative terms while handling real objects. The session concludes with a group gallery walk, in which pupils share their comparisons with the class, reinforcing vocabulary through peer discussion and observation.

Objective

Students will learn to use simple comparative vocabulary—such as longer and shorter, heavier and lighter, and taller—to describe and compare pairs of objects or substances.

Learning Curve

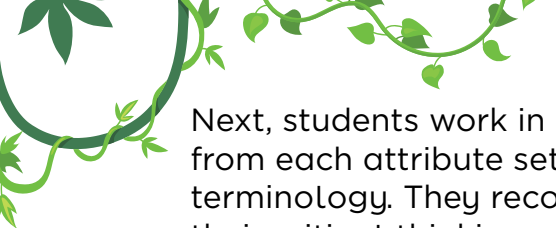
The progression begins with attribute identification, where students recognize measurable features of objects. They then practice applying comparative vocabulary accurately, moving beyond recognition to meaningful use. Finally, they advance to verbal description, articulating their observations in complete sentences to explain their comparisons confidently.

Pre-emptive pitfalls

- Confusing weight with size (e.g., a big balloon is light)

Main Activity

The lesson begins with a brief Attribute Demo, where the teacher models comparisons of different attributes, such as length (“This stick is longer than that one”), weight (“This bag is heavier than that one”), and temperature (“This cup is warmer than that cup”). This introduction familiarizes students with the vocabulary and concepts of comparison.



Next, students work in pairs during Paired Tasks, receiving one item from each attribute set and discussing the comparisons using correct terminology. They record their responses on a simple chart, developing their critical thinking and communication skills. This activity encourages students to apply the comparison concepts in a collaborative setting.

The lesson culminates in a Gallery Walk, where groups display their object pairs with labeled comparison cards. Classmates circulate, reading aloud the comparisons and reinforcing their understanding of the attributes and vocabulary.

This activity promotes peer learning, reinforces comprehension, and provides an engaging way for students to share their work. Through these activities, students develop a solid understanding of comparison concepts and vocabulary.

Textbook Practice Pages:

Page 64

Exposition

Teacher invites two volunteers to come forward and make one comparison each—length, weight, height or temperature—while class listens and repeats the sentence.

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Lift and feel weight differences on the scale.
- **Auditory Learning:** Chant comparison pairs (“longer/shorter, heavier/lighter!”) in unison.
- **Visual Learning:** Match picture icons (thermometer, scale, ruler) to each comparison card.

Plenary

“Comparison Champion”: each child describes one new comparison they heard during the gallery walk.

Student Learning Outcomes	Suggested time: 3 Lessons
<ul style="list-style-type: none">• Explore measuring tools and use nonstandard units for comparison• Describe and compare objects using length, weight, height and temperature	

Methodology

Integrated station rotation → multi-attribute measurement → reflective sharing

Objective

Students will rotate through stations that combine both SLOs—selecting appropriate tools or units, measuring attributes, and verbally comparing results.

Learning Curve

Selecting tools → measuring multiple attributes → articulating comparisons

Manipulatives

- Rulers, blocks, cups, spoons, balance scales, warm/cool water trays
- Station instruction cards
- Student measurement journals

Pre-emptive pitfalls

- Using the wrong tool for an attribute (e.g., using blocks to “measure” temperature)
- Mixing up comparative terms across attributes

Main Activity

Rotate through four stations (7 min each):

- 1. Length Station:** Measure classroom items with blocks and record “X is 8 blocks; Y is 5 blocks.”
- 2. Weight Station:** Weigh objects on the balance and note “A is heavier than B.”
- 3. Height Station:** Compare stacked blocks to find who can build taller towers.
- 4. Temperature Station:** Touch supervised cups of water, then sort “hotter” vs. “colder” using picture cards.

Textbook Practice Pages:

Primer B, pp. 67–69



Exposition

Class reconvenes; each table group names one finding (e.g., “Our pencil was longer than our eraser,” “Your water was colder than mine”).

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Hands-on with each tool and substance.
- **Auditory Learning:** Share findings aloud at each station before moving on.
- **Visual Learning:** Check-off icons in journals as each attribute is measured and compared.

Plenary

Circle time: each student states one measurement they enjoyed and why, using correct comparative language.

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?



Time

Student Learning Outcome:

- Sequence events in chronological order using language (day and night, before and after, next, first; today, yesterday, tomorrow; morning, afternoon, evening).

Manipulatives

- Picture→sequence cards illustrating a child's day (waking up, eating breakfast, playing, bedtime)
- Velcro timeline strip on the wall
- Individual mini→timelines on strips of paper

Objective

Students will understand the concept of daily routine sequencing (morning, afternoon, night) and explore the clock face with hour hand positions for 1-12.

Methodology

Use storytelling to explain the sequence of day and night. Show a clock face and move the hour hand to different numbers. Relate to real-life routines: breakfast in the morning, lunch at noon, bedtime at night.

Learning Curve


Children begin by identifying broad times of day, then gradually learn to read simple clock hours. Associating time with daily events anchors abstract concepts into real life.

Pre-emptive pitfalls

- Placing events out of logical order (e.g., dinner before lunch)
- Confusing “before” and “after” usage

Main Activity

- I. Story Sequencing (5 min):** Teacher tells a short “day in the life” story using four large cards, shuffling them, then invites volunteers to place them in order.

- 
- 2. Pair Discussion (10 min):** In pairs, students receive a shuffled set of 6 activity cards; they collaborate to sequence them on their mini→timelines and narrate using “first,” “next,” and “last.”
 - 3. Class Timeline (10 min):** Selected pairs affix their cards to the wall timeline, explaining “After breakfast comes playtime,” etc.

Textbook Practice Pages:

Page 66

Exposition

Gather on carpet; teacher points to the wall timeline and asks, “What comes after lunch?” prompting the class to reply.

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Move a “time pawn” along a floor timeline mat for each event.
- **Auditory Learning:** Chant a simple sequence rhyme (“First we wake, next we eat, after that we move our feet!”).
- **Visual Learning:** Match event pictures to temporal word cards (e.g., “tomorrow,” “yesterday”).

Plenary

Rapid→fire: teacher names an event (“bedtime”), students say “before” or “after” in relation to another event (“storytime”).

Student Learning Outcome	Suggested time: 2 Lessons
<ul style="list-style-type: none">Recognise and use language relating to days of the week and months of the year.	

Manipulatives

- Large wall calendar with movable day and month labels
- Day/week puzzle strips
- Month→name flashcards

Methodology

Song introduction → calendar exploration → partner quiz

Objective

Students will recite the seven days and twelve months in order and use them in simple sentences (e.g., “My birthday is in July”).

Learning Curve

Memorize song → locate on calendar → apply in context

Pre-emptive pitfalls

- Skipping days or months in sequence
- Mispronouncing month names (e.g., “Feb-yoo-ary”)

Main Activity

- Song Introduction (5 min):** Teach “Seven Days” and “Twelve Months” songs with hand motions for each.
- Calendar Exploration (10 min):** In pairs, students place day labels under today’s date and month label at the top, then discuss “Today is Monday in July.”
- Partner Quiz (10 min):** One student names a day or month; the partner points to it on a pocket calendar and says the preceding or following one.

Textbook Practice Pages:

Page 67-68

Exposition

Teacher asks, “What day is it tomorrow?” “Which month comes after March?” calling on volunteers.



Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Assemble a floor puzzle of days or months in sequence.
- **Auditory Learning:** Echo the days/months song back in whispers and loud voices.
- **Visual Learning:** Color→code days vs. weekends and match month flashcards to seasonal pictures.

Plenary

Role play: ask children to act out activities—brushing teeth, eating lunch, sleeping—and link them to morning, afternoon, or night.

Student Learning Outcome:

- Compare, describe and solve practical problems for measuring time (quicker, slower, earlier, later).

Manipulatives

- Sand timers (30 sec, 1 min)
- Toy stopwatch (demonstration only)
- Task cards (e.g., “Draw a circle,” “Hop ten times”)

Objective

Students will compare the durations of simple tasks—for example, running versus drawing—and will describe which activity is quicker or slower, or which occurs earlier or later, based on concrete observations.

Methodology

The lesson begins with timed activities in which students perform simple tasks such as running a short distance or drawing a basic shape. These are followed by comparative discussions where pupils reflect on which tasks took more or less time, identifying which was quicker or slower, or which happened earlier or later. Finally, the session progresses to problem-solving, where children use their observations to answer questions and make judgments about durations in real-life contexts.

Learning Curve

The learning sequence begins with pupils performing a chosen task, followed by timing the activity using a timer to establish measurable duration. They then compare durations between tasks, discussing and articulating their findings to build both temporal awareness and comparative vocabulary.

Pre-emptive pitfalls

- Not starting/stopping timer correctly
- Confusing “later” (in the future) with “slower” (time taken)

Main Activity

- 1. Timed Tasks (5 min):** Teacher times two volunteers performing different tasks, then shows timers.
- 2. Comparative Discussion (10 min):** In small groups, students perform paired tasks at stations (e.g., run vs. walk), using timers, and discuss “Running was quicker than walking.”
- 3. Problem-Solving (10 min):** Present story-problem cards (“Sara finished drawing earlier than Ali”). Groups model with timers and state which child finished first/last.



Textbook Practice Pages:

Exposition

Class sits in circle; teacher asks, “Which was slower, drawing or hopping? How do you know?”

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Move around an obstacle course and time with sand timers.
- **Auditory Learning:** Count aloud during timing to internalize duration.
- **Visual Learning:** Compare sand→timer levels side by side to see which ran out first.

Plenary

“Time Reporter”: report “Task A took longer than Task B” using “earlier/ later” language.

Student Learning Outcome:

- Recognise informal time units and know that clocks and calendars mark the passage of time.

Manipulatives

- Toy analog clocks with movable hands
- Classroom daily schedule chart
- Calendar and clock picture cards

Methodology

The lesson begins with a tool introduction, where the teacher explains the use of clocks and calendars as tools for measuring and organizing time. Students then engage in guided practice, working with the teacher to connect familiar classroom routines—such as snack time or circle time—to specific time segments. Finally, they participate in a matching game, where they pair activities with either the clock or the calendar, reinforcing their understanding of which tool is appropriate for measuring daily moments versus longer time periods.

Objective

Students will associate informal units of time, such as snack time and circle time, with corresponding segments on a clock and calendar. They will also learn to identify the difference between the two tools, recognizing when to use a clock and when to use a calendar.

Learning Curve


The progression begins with students identifying a familiar time unit, such as an activity in their daily routine. Next, they practice locating this activity on a class schedule to understand its timing. Finally, they match the activity to either the clock or the calendar, reinforcing their understanding of time measurement across different scales.

Pre-emptive pitfalls

- Believing clocks show days or calendars show hours
- Mishandling clock hands beyond hour markings

Main Activity

1. **Tool Intro (5 min):** Show a clock and calendar, explain “clocks tell hours/minutes, calendars tell days/months.”
2. **Guided Practice (10 min):** Teacher calls “Snack time”; students move clock hands to the correct hour on toy clocks, then point to snack time on the schedule chart.



3. Matching Game (10 min): In groups, students match picture cards of daily events to either a clock face showing approximate time or a calendar day block.

Textbook Practice Pages:

Exposition

Teacher holds up a clock then a calendar and asks, “Which tool would you use to know when our class holiday is? Which to know when recess starts?”

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Move large floor→clock hands by stepping on hour markers.
- **Auditory Learning:** Recite “tick-tock” chant while adjusting clock hands.
- **Visual Learning:** Place event stickers on a paper calendar and point to matching clock times.

Plenary

Quick check: volunteers identify whether “lunch” is best shown on a clock or calendar and why.

Student Learning Outcome:

- Solve time problems with totals smaller than ten using concrete materials.

Manipulatives

- Mini sand timers (1 min)
- Counters to tally minutes
- Story-problem cards with clocks and timers illustrated

Methodology

Story-problem modelling → partner stations → whole-class share

Objective

Students will use objects (e.g., mini→clocks, timers, counters) to solve simple time-based problems (e.g., “If morning play is 3 minutes and circle time is 2 minutes, how many minutes total?”).

Learning Curve

Parse problem → model with counters/timers → articulate solution

Pre-emptive pitfalls

- Ignoring total→minutes calculation
- Miscalculating the number of timer rotations

Main Activity

- 1. Model (5 min):** Teacher reads, “Playtime lasted 2 min, then we sang for 3 min—how long total?” Models with two sand→timer runs and counters (“ $2 + 3 = 5$ ”).
- 2. Partner Stations (10 min):** In pairs, students rotate through two problem cards, model with timers and counters, and write “ $2 + 4 = 6$ min.”
- 3. Whole→Class Share (10 min):** Selected pairs present one problem, demonstrate timer runs, and explain their addition of minutes.

Textbook Practice Pages:

Primer B, pp. 82–84

Exposition

On the carpet, students predict total time before teacher models, then confirm with counters.



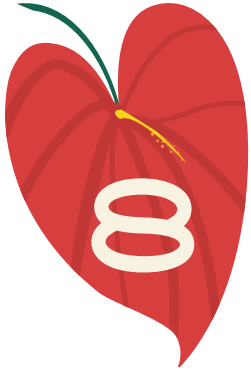
Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Flip mini-timers or run sand→timers repeatedly, feeling each minute pass.
- **Auditory Learning:** Count ticking seconds aloud in unison during timer runs.
- **Visual Learning:** Use counters to build a minute→tower for each segment, then count total height.

Plenary

TEACHER'S REFLECTION

What impact did the teaching strategy have on students' learning? How effective was the approach in achieving the lesson objectives?



Comparison

Student Learning Outcome:

- Students will compare quantities (for example, knowing that two is more than one) and use comparative vocabulary such as more, less, and same as.

Manipulatives

The teacher prepares two clear bowls with counters varying from one to five, vocabulary cards labeled “More,” “Less,” and “Same,” and comparison mats with three zones labeled *More / Less / Same*.

Methodology

The lesson begins with concrete demonstration, where the teacher shows small sets of objects and models how to compare them. This is followed by paired comparison, in which students work with a partner to practice identifying which group has more, less, or the same number of items. The session concludes with group reflection, where children share their comparisons and reasoning with the class.

Objective

Students will look at two small sets of one to five objects, decide which has more, which has less, or if they are the same, and then use the correct comparative words to describe their decision.

Learning Curve

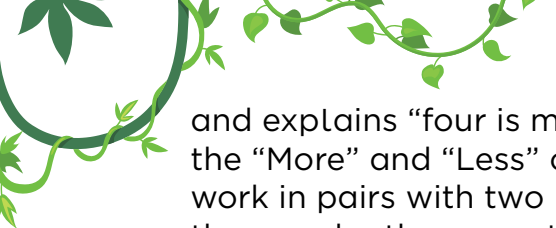
The learning progression begins with observing sets of objects, followed by counting or estimating them. Children then practice using “more,” “less,” and “same as” language to describe their findings.

Pre-emptive Pitfalls

Common challenges include children guessing without counting, which may lead to errors, and incorrectly saying “same” when numbers differ by one.

Main Activity

The sequence starts with a five-minute demonstration, where the teacher displays two bowls containing two and four counters, counts each aloud,



and explains “four is more than two.” The bowls are then placed under the “More” and “Less” cards. In the paired comparison phase, students work in pairs with two mystery bags of counters, empty them, and place them under the correct zone on the comparison mat, stating, “This is more/less/same as that.” In the final group reflection, volunteers share one comparison with the class, explaining their reasoning—for example, “I counted both and saw three is less than five.”

Textbook Practice Pages

Pages 85–86.

Exposition

During carpet time, the teacher shows two hidden bowls covered with cloth. Children guess whether they contain “more,” “less,” or “same,” and then the bowls are revealed to confirm.

Multi-sensory Learning Stations

For tactile and kinaesthetic learning, students place counters in balance scales to feel the difference between “heavier” (more) and “lighter” (less). For auditory learning, they chant “more and less” rhythmically as they sort sets. For visual learning, they slide transparent counters over printed dots on mats to compare fill levels.

Plenary

The teacher calls out two numbers, such as “three and four,” and students quickly respond by shouting “more” or “less” while holding up the correct vocabulary card.

Student Learning Outcome:

- Compare less and more quantities and make them equal.

Manipulatives

Materials include pairs of small trays with differing numbers of counters (one to six), spare counters for adjustment, and mini balance scales.

Methodology

The lesson follows a sequence of guided balancing, where the teacher models the process of equalizing sets, followed by partner adjustment in which children practice with a peer, and concludes with independent equalizing tasks.

Objective

Students will identify which of two sets is smaller and then make both sets equal either by adding counters to the smaller group or by removing from the larger.

Learning Curve

The sequence begins with comparing two sets, deciding what adjustment is needed, executing addition or removal, and finally re-comparing to confirm equality.

Pre-emptive Pitfalls

Potential errors include adding too many counters when trying to equalize or removing counters from the wrong set.

Main Activity

The session begins with a guided balancing demonstration, where the teacher shows five versus three counters and models adding two to the smaller set to reach “five and five.” In the partner adjustment stage, students work in pairs with trays of unequal counters, count them, and decide whether to add or remove counters to make the sets equal, checking their results on the mini scale. During independent equalizing, each child works with a preset unequal pair and records the process as an addition or subtraction sentence, for example, “ $3 + 2 = 5$.”

Textbook Practice Pages

Primer B, pages 87–88.

Exposition

The teacher invites a volunteer to equalize two groups of counters on the big balance scale in front of the class, narrating each step for reinforcement.



Multi-sensory Learning Stations

In tactile/kinaesthetic activities, children physically move counters between trays until balanced. For auditory learning, they chant “make them the same” while adjusting. For visual learning, they match pictorial before-and-after cards that illustrate the equalizing process.

Plenary

Students work in pairs to quiz each other with the question, “How many to add (or remove) to make them equal?” and respond aloud.

Student Learning Outcome:

- Use comparative language (tall, taller, tallest; short, shorter, shortest).

Manipulatives

Materials include sets of three sticks or ribbons of varying lengths, a height-measuring chart on the wall, and a comparative vocabulary banner.

Methodology

The lesson begins with real-world measurement demonstrations, followed by ranking activities where students order objects by size, and ends with descriptive sharing in which children present their findings.

Objective

Students will compare three objects by height or length and use the terms “short,” “shorter,” “shortest,” and “tall,” “taller,” and “tallest” accurately.

Learning Curve

The progression begins with observing three items, determining their relative sizes, and then applying the correct comparative form to describe them.

Pre-emptive Pitfalls

Students may confuse “taller” with “tallest” or fail to rank all three objects when required.

Main Activity

The teacher begins with real-world measurement, using three pencils to demonstrate “shortest,” “shorter,” and “tallest” and showing their placement on the chart. In the ranking activity, students in groups of three receive ribbons of different lengths, arrange them in order on the floor, and label them with flags. In descriptive sharing, groups present their ribbons to the class, using full comparative sentences such as “This is the tallest, this is shorter, this is the shortest.”

Textbook Practice Pages

Primer B, pages 89–90.

Exposition

The teacher holds up three blocks and asks guiding questions like “Which is taller than this one? Which is the tallest?” prompting children to respond in full sentences.



Multi-sensory Learning Stations

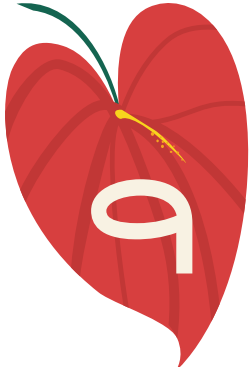
For tactile/kinaesthetic learning, three students stand in a row by height and wear caps labeled “short,” “taller,” and “tallest.” For auditory learning, the class recites a chant: “Short, shorter, shortest... tall, taller, tallest.” For visual learning, children color-code bars on a paper graph to represent the three lengths.

Plenary

The teacher names two objects, such as a pencil and a crayon, and children respond in chorus with sentences like “The pencil is taller” or “The crayon is shorter,” reinforcing proper use of comparative language.

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?



Position



Student Learning Outcome:

- Students will use location language with the prepositions *above*, *below*, *under*, *over*, *behind*, and *in front of*.

Manipulatives

A small toy such as a teddy bear serves as the reference object, along with a variety of props like blocks, scarves, and boxes. A large picture book with a blank scene is also used to support illustration and contextualization.

Methodology

The lesson begins with guided demonstration, where the teacher introduces each preposition through direct modeling. This is followed by paired placement, in which students work with a partner to practice positioning objects relative to a reference. Finally, students move into location-statement practice, applying the terms independently to describe positions in writing or orally.

Objective

Students will place objects relative to a reference item and accurately describe their position using the target prepositions.

Learning Curve

The learning sequence begins with an introduction of the terms, continues with teacher modeling through physical placement of objects, and progresses to student practice with independent articulation.

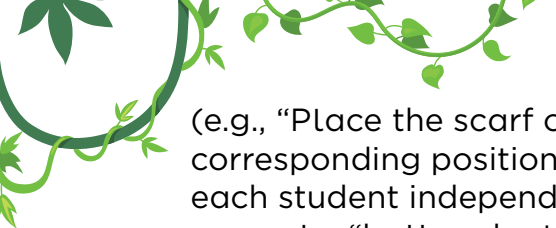
Pre-emptive Pitfalls

Students may confuse terms such as “under” versus “below,” and may mix up “behind” and “in front of” when objects overlap.

Main Activity

The activity sequence begins with a five-minute demonstration in which the teacher places a block above the teddy bear, then under, behind, and so forth, narrating each action aloud. In the paired placement stage, students work with a partner: one arranges a prop relative to the bear as instructed





(e.g., “Place the scarf over the bear’s head”), while the other states the corresponding position sentence. Finally, in location-statement practice, each student independently draws a simple scene in their book—for example, “ball under table”—and writes or dictates the matching sentence.

Textbook Practice Pages

Primer B, pages 91–92.

Exposition

During a whole-class discussion on the carpet, the teacher shows a picture of a cat with a bird above it and asks, “Where is the bird?” The class responds in unison using the correct preposition.

Multi-sensory Learning Stations

For tactile and kinaesthetic learning, students move physically under and over large cardboard arches on the floor, calling out each term. For auditory learning, they perform movements while echo-chanting prepositions such as “Over, under, behind, in front!” For visual learning, they match word cards to illustrated scenes that show each position.

Plenary

In a rapid-fire round, the teacher calls out a preposition, and students quickly place a block accordingly and state the matching sentence.

Student Learning Outcome:

- Students will use location language with *far* and *near*, while also reviewing *above*, *below*, *under*, *over*, *behind*, and *in front of*.

Manipulatives

Classroom objects such as books, pencils, and toys are placed at varying distances. Signs labeled “Near” and “Far” are provided, along with a large floor map of a simple room.

Methodology

The lesson begins with a scavenger hunt, where students identify and describe classroom objects as near or far. This is followed by group mapping, in which teams use cut-outs to place objects on a giant floor map according to positional prompts. Finally, the lesson concludes with reflective narration, where each student describes a placement aloud using complete sentences.

Objective

Students will identify and describe objects as near or far, while also applying the full set of target prepositions in contextual sentences.

Learning Curve

The progression begins with locating items, followed by comparing their distances, and finally applying the complete range of prepositions in accurate descriptive statements.

Pre-emptive Pitfalls

Students may confuse “far” with “behind,” or overlook the preposition “over” when an object is just slightly above.

Main Activity

The activity sequence starts with a scavenger hunt in which the teacher asks prompts like, “Find something near the door” or “Find something far from the window,” and volunteers identify objects and state their positions. In group mapping, teams place cut-outs of objects on a giant floor map according to positional cards, for example: “pencil in front of desk,” “book near chair,” “ball behind sofa,” or “Lamp over table.” During reflective narration, each student selects one placement from the map and presents it to the class using a full sentence such as, “The lamp is over the table and far from the window.”

Textbook Practice Pages

Primer B, pages 93–94.



Exposition

The teacher projects the completed floor map and asks targeted questions such as “What is under the table?” or “What is near the door?” to elicit full-sentence responses from students.

Multi-sensory Learning Stations

For tactile/kinaesthetic learning, children walk to different positions in the room as the teacher calls them out, for example, “Stand behind the chair.” For auditory learning, they play “Simon Says” with prepositional commands, such as “Simon says put your hand under your chin.” For visual learning, students complete a worksheet by matching photographs of children in various poses (e.g., over, below) to the correct word.

Plenary

In the “Position Presenter” activity, a volunteer describes three different object placements to the class, using at least two prepositions and one “near/far” term.

TEACHER’S REFLECTION

What impact did the teaching strategy have on students’ learning? How effective was the approach in achieving the lesson objectives?
