

NEW
COUNTDOWN
ENHANCED BLENDED EDITION



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PREFACE

Ellie



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 flash cards – 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

Therefore, in alignment with the core competencies in the national curriculum, the books have been structured to facilitate visual, auditory, and tactile-kinaesthetic development. Teacher’s notes have been provided to equip pupils with the skills they need.

The pattern followed throughout the series ensures development in key areas of early childhood development, with emphasis on number sense, quantity, and operations, measurement, comparison, ordering, geometry, and spatial sense. The objective is to foster success, build confidence and develop positive self-image through movement-based, language-rich, play-based and narrative-led pursuits.

Scope and Sequence

Ellie



UNIT	NAME	LEARNING OBJECTIVES
1 Page 2	Comparison: Part One	<ul style="list-style-type: none">• Differentiate between 'less' and 'more'.• Compare two or more sets and identify the set which has more objects.• Use words such as 'more', 'less' to indicate differences in quantity.• Describe and compare objects using length; weight; height; and temperature (hot & cold) as measurement attributes
2 Page 9	Numbers: Part One	<ul style="list-style-type: none">• Count, identify and trace numbers up to 20.• Order and sequence numbers to 20.• Count objects saying the number names in the standard order, pairing each object with one and only one number name.• Count backwards from 10-1.• Identify nothing equates to zero in quantity.• Count and make sets of up to 10 objects.
3 Page 26	Ordinal Numbers	<ul style="list-style-type: none">• Use ordinal numbers to indicate position in a sequence, e.g. put the blue ball third.
4 Page 28	Shapes	<ul style="list-style-type: none">• Identify and name 2-D or familiar shapes e.g. circle, square, triangle, oval, rectangle etc.• Compare the shape and size of objects.• Order shapes from smallest to largest (e.g. orders various circle sizes).
5 Page 38	Patterns	<ul style="list-style-type: none">• Recognise patterns in the environment.



UNIT	NAME	LEARNING OBJECTIVES
<p>6</p> <p>Page 40</p>	<p>Numbers: Part Two</p>	<ul style="list-style-type: none"> Count at least ten objects with one-to-one correspondence. Identify the number that comes before or after a given number up to ten.
<p>7</p> <p>Page 48</p>	<p>Addition</p>	<ul style="list-style-type: none"> Recognise that when two sets combine the total number increases (more) and when sets are taken apart the total decreases (less). Recognise that an entire set of objects is more than its parts. Add and subtract with sets of objects smaller than 3.
<p>8</p> <p>Page 60</p>	<p>Subtraction</p>	<ul style="list-style-type: none"> Recognise that when sets are taken apart the total decreases (less). Recognise that an entire set of objects is more than its parts. Add and subtract with sets of objects smaller than 3.
<p>9</p> <p>Page 70</p>	<p>Time</p>	<ul style="list-style-type: none"> Recognise informal time units and know that clocks and calendars mark the passage of time. Recognise and use language relating to days of the week, months of the year.
<p>10</p> <p>Page 75</p>	<p>Comparison: Part Two</p>	<ul style="list-style-type: none"> Use language to compare the sizes of objects (e.g. 'big', 'little', 'small'). Describe and compare objects using length; weight; height; and temperature (hot & cold) as measurement attributes.
<p>11</p> <p>Page 84</p>	<p>Position</p>	<ul style="list-style-type: none"> Use language related to location (prepositions e.g. 'above', 'below', 'under', 'over' etc.).

1

Comparison: Part One

Student Learning Outcomes

- Differentiate between 'less' and 'more'.
- Compare two or more sets and identify the set which has more objects.
- Use words such as 'more', 'less' to indicate differences in quantity.
- Describe and compare objects using length; weight; height; and temperature (hot & cold) as measurement attributes

FEW AND MANY

Manipulatives

- Classroom toys, crayons, and books
- Number blocks
- Pictures of fruits and vegetables with seeds
- Containers for collecting natural objects
- Play dough
- Flashcards for reinforcement

Objective

The objective of this lesson is to introduce the foundational comparison terms “few” and “many.” Through demonstrations, guided practice, and multi-sensory learning activities, students will strengthen their understanding of how to describe small and large quantities, laying the groundwork for more advanced comparisons in future lessons.

Methodology

The lesson begins with a short discussion where the teacher engages students by asking them to recall everyday examples of few and many objects, such as stars in the sky, vehicles on the road, or leaves on trees. The teacher writes the definitions and key vocabulary on the board: “Few” means a small amount, and “Many” means a large amount. Vocabulary reinforcement is critical, so words such as *only a few*, *less*, *smaller than*, *more*, *lots of*, and *greater than* are used repeatedly throughout the activities.

Learning Curve

Children may initially confuse “few” with “less” or “many” with “more.” Through repetition, real-life examples, and hands-on demonstrations, they gradually strengthen their understanding of the difference. The transition from recognizing few/many to later comparisons such as more/less and equal is a natural developmental step.

Pre-emptive Pitfalls

Children might confuse vocabulary, using “more” instead of “many” or “less” instead of “few.” Teachers should deliberately model correct usage and ask clarifying questions to help children differentiate. Using multiple types of manipulatives and consistent questioning ensures students do not overgeneralize based on one example.

Main Activity

During circle time, the teacher presents sets of objects such as crayons, books, or toys. For example, two sets of crayons are displayed—one with many crayons and another with only a few. Pupils count both sets aloud and discuss which has more and which has less. Similar activities are repeated with number blocks, where a set of three is compared to a set of eight, prompting questions like: “Which tower has a few blocks? Which has many blocks?”

Pictures of fruits and vegetables with seeds can also be used to develop visual recognition of quantities, with children deciding whether seeds are few or many. Guided practice follows, where volunteers receive different numbers of objects to hold. The class counts aloud and compares who has more, who has less, and whether their sets are few or many. Volunteers may then sort objects into two groups, explaining their reasoning. Teachers guide them to articulate answers using key vocabulary: “I put these in this group because they are many, and those in that group because they are few.”

Textbook Practice Pages

On page 2 of the textbook, pupils look at a picture and identify which items are few and which are many, explaining how they know. On page 3, the teacher models circling few and many objects on the board, and pupils complete the exercise individually. This structured practice helps children apply the lesson to written work.

Exposition

The teacher reinforces the vocabulary by reviewing examples from the classroom: “We have a few plants here, but many books.” This practice helps children see how the terms apply to real life and encourages them to observe and compare objects in their surroundings daily.

Multi-Sensory Learning Stations

- **Auditory Learning:** Pupils sing along with songs about “few” and “many.”
- **Visual Learning:** Pupils collect pebbles, leaves, or flowers in small containers and compare in pairs: “Who has more? Who has less? Are there few or many?”
- **Tactile/Kinaesthetic Learning:** Pupils use play dough to make their favorite objects, then sort them into piles of few and many. Teachers circulate, asking questions and reinforcing vocabulary.

Real-life connection: The teacher encourages pupils to identify examples in their environment, such as “few chairs” and “many pencils,” reinforcing visual quantity recognition and subitizing skills.

Plenary

The teacher uses flashcards to help pupils match a few objects to their corresponding word, strengthening the connection between number and quantity. For home connection, children are asked to look around their house and identify examples of objects that are few and many, with the support of their parents.

Assessment for Learning

Teachers observe whether pupils can accurately identify objects as few or many and whether they can use the terminology in sentences. Success is indicated when students confidently count sets, make comparisons, and apply the vocabulary to both classroom and home environments.

SOME AND ALL

Manipulatives

- Fruits and vegetables
- Toys, blocks, and crayons
- Containers and water cups for comparisons
- Flashcards and laminated picture cards
- Play dough for tactile grouping activities
- Safe sensory items (warm and cold towels, fans, or hair dryers)
- Food props such as bread, pizza, or oranges for whole/half demonstrations

Objective

The objective of this lesson is to help children differentiate between the terms “some” and “all” while reinforcing related comparison vocabulary. Through songs, manipulatives, questioning, and multi-sensory learning, students will learn to observe, classify, and describe groups of objects accurately, strengthening both their mathematical reasoning and communication skills.

Methodology

The lesson builds upon children’s understanding of the earlier concepts “few” and “many.” Teachers first engage students by prompting them to recall real-life examples, such as seeing only a few stars in the early evening but many more later at night, or noticing the difference in the number of vehicles on the road during peak hours and quiet hours. These familiar contexts help establish a foundation for comparative thinking.

During circle time, the teacher presents tangible sets of objects such as crayons, blocks, or books. Pupils count each group aloud and identify which group has more and which has fewer, reinforcing the earlier vocabulary. Teachers extend this by showing fruits and vegetables, asking children to classify whether the seeds are few or many. Volunteers may also be asked to hold sets of objects of different sizes so the class can compare who has more, who has less, and why. As children become confident with these comparisons, the lesson shifts to explicitly teaching the words “some” and “all.” For instance, a basket of toys may be used to explain: “Some of these toys are red,” versus “All of these toys are cars.”

To expand the lesson further, the teacher may demonstrate “more,” “less,” and “equal” using cups of water filled to different levels or block towers of different heights. Visual analogies such as the “alligator mouth” (always

open towards the bigger number) help make abstract comparisons memorable. Subsequent demonstrations include safe sensory experiences to compare “hot” and “cold,” and the use of props like pizza or oranges to illustrate the difference between a “whole” object and its “half.”

Learning Curve

Children may initially confuse the terms or assume that if one object has an attribute, the whole set does too. With daily reinforcement, real-life examples, and varied manipulatives, they gradually build a deeper understanding of part-to-whole relationships and quantity comparisons.

Pre-emptive Pitfalls

Children may confuse vocabulary such as “some,” “all,” “more,” or “equal.” They may focus on one attribute, such as color, and overlook others like size or number. To address this, teachers should consistently use multiple examples, visual aids, and guided questions. Reinforcing vocabulary in daily routines—such as pointing out that “some of us are wearing shoes” but “all of us are sitting”—strengthens conceptual clarity.

Main Activity

The teacher begins by revisiting the terms “few” and “many” with classroom objects, encouraging children to count and compare. Then the teacher transitions into introducing “some” and “all.” For example, a

basket of toys is used to demonstrate: “Some of these are cars,” versus “All of these are toys.” Children are asked to identify which statements are true and why.

The teacher then progresses to related concepts. Cups with varying amounts of water demonstrate “more,” “less,” and “equal.” Fruits or picture cards show how “some” may apply when only part of a group shares

an attribute, while “all” applies when the whole group does. Additional examples extend into “hot” and “cold” using tactile objects, and “whole” and “half” using food props like oranges or bread. Each step includes guided questioning, encouraging children to explain their reasoning in their own words. Group and individual reinforcement activities—such as comparing sets, sorting, or completing textbook pages—help consolidate the learning.

Textbook Practice Pages:

Pages 2-3

Exposition

The teacher reviews the lesson by restating the meanings of “some” and “all” and connecting them to everyday life. For example: “Some of us have pencils on the desk, but all of us are in the classroom.” This connection strengthens the bridge between classroom learning and real-world application.

Multi-Sensory Learning Stations

- **Auditory Learning:** Children sing along to songs about “some” and “all.”
- **Visual Learning:** Pupils collect pebbles, leaves, or flowers in containers, then compare in pairs: “Who has more? Who has less? Are there few or many?”
- **Tactile/Kinaesthetic Learning:** Children use playdough to make objects and then sort them into “few” and “many” piles. The teacher circulates, asking questions using the target vocabulary.

Real-life connection: Key vocabulary is reinforced using classroom objects, such as pointing out that “We have a few plants but many books.” Visual recognition of quantity is emphasized to develop early subitizing skills.

Plenary

The teacher concludes with a flashcard matching activity where pupils match objects to the correct “some” or “all” category. To extend learning at home, pupils are asked to identify examples of objects that are “some” and “all” in their environment with the help of their parents.

MORE, LESS, AND EQUAL

Manipulatives

- Random toys, blocks, and counters
- Containers and cups filled with varying amounts of water
- Fruits and vegetables for set comparisons
- Flashcards with numbers and dot patterns
- Laminated picture cards
- Sand trays and playdough for tactile demonstrations

Objective

The objective of this lesson is to build upon students' prior understanding of "few" and "many" and introduce them to the more precise comparative terms: "more," "less," and "equal." Through hands-on demonstrations, guided questioning, and multisensory activities, students will learn to make meaningful comparisons of quantities and recognize when groups are the same.

Methodology

The lesson begins with a recap of the previous concepts "few" and "many," asking students if they noticed examples at home. The teacher then writes the keywords *more*, *less*, and *equal* on the board. Using simple manipulatives such as cups of water, blocks, or snacks, the teacher demonstrates how to identify which group has more, which has less, and whether two groups are equal. Children are encouraged to count aloud, make comparisons, and verbalize their reasoning. By connecting language with real, observable situations, students internalize these relational concepts.

Learning Curve

Initially, students may confuse the vocabulary or believe that "equal" only applies to identical objects rather than equal quantities. With repetition, guided demonstrations, and group practice, children gradually become comfortable distinguishing between "more," "less," and "equal." The progression from "few/many" to "more/less/equal" provides a natural scaffold for developing comparative thinking and mathematical language.

Pre-emptive Pitfalls

Children may confuse "less" with "few" or think that "equal" only applies when items look the same. They might also focus solely on size or visual features rather than actual quantities. Teachers should use a wide variety of manipulatives and reinforce vocabulary consistently in daily routines. Repetition, visual aids, and peer discussions will help strengthen conceptual understanding.

Main Activity

The teacher introduces the terms “more,” “less,” and “equal” by showing three cups filled with different amounts of water. Students are asked to observe, compare, and explain which cup has more water, which has less, and whether any two cups are equal. The teacher reinforces vocabulary by repeating phrases such as, “This cup has more,” “That cup has less,” and “These two are equal.”

Next, tactile activities are introduced. For example, one child may build a tall tower of blocks while another builds a shorter one, prompting the class to compare: “Which tower has more blocks? Which has less? Are any towers equal in height?” The teacher may extend the activity by pouring sand into trays, comparing piles, or distributing snacks unevenly to different students and asking the class to describe the differences. Throughout the activity, the emphasis remains on children verbalizing their reasoning and applying the correct vocabulary.

Textbook Practice Pages:

Page 4

Exposition

The teacher reviews the vocabulary by asking students to restate the meanings of “more,” “less,” and “equal.” Real-world examples are highlighted, such as comparing the number of pencils and erasers in the classroom or the length of two rulers. By drawing on everyday experiences, the lesson reinforces the idea that these terms are not limited to mathematics but are part of daily life.

Multi-Sensory Learning Stations

- **Auditory Learning:** Play songs or chants about comparison words and encourage students to sing along.
- **Visual Learning:** Use the dot strategy with number cards and dot cards, asking students to match and compare.
- **Tactile-Kinaesthetic Learning:** Call volunteers to build block towers. The class then discusses: “Which tower has more blocks? Which has less? Which two are equal?” This hands-on approach reinforces vocabulary while engaging multiple senses.

Plenary

The session concludes with a flashcard activity where children match sets of objects to “more,” “less,” or “equal.” The teacher then connects the concept to the home environment by assigning a task: pupils should look around their house with their parents and identify examples of objects that are more, less, or equal in number. This extends learning beyond the classroom and reinforces practical application.

HOT AND COLD

Manipulatives

- Laminated picture cards of hot/cold objects
- Bowls of hot and cold water with towels
- Pebbles soaked in hot and cold water
- Fan and hair dryer (used with strict supervision)
- Ice cubes
- Toy props (tea, coffee, sun, snow, etc.)

Objective

The objective of this lesson is to develop children’s sensory understanding of temperature by providing hands-on experiences with contrasting hot and cold objects. Students will strengthen their observation skills, vocabulary, and ability to categorize items based on temperature.

Methodology

The lesson begins by asking pupils if they can think of any hot or cold objects they know from daily life. The teacher then introduces laminated picture cards of hot and cold objects, explaining that “hot” means a high temperature (examples: sunlight, tea, coffee, fire) and “cold” means a low temperature (examples: ice, water, freezer, fridge). Key vocabulary such as *hot*, *cold*, *warm*, *cool*, *boiling*, *freezing*, *melting*, *hotter than*, *colder than*, *warmer*, and *cooler* is written on the board and reinforced throughout the activities.

Hands-on sensory experiences form the main activity sequence. First, the teacher demonstrates the **two bowls activity** with one bowl of warm water and another of cold water, soaking towels in each and letting children feel the difference, while asking: “Which towel feels hot? Which feels cold?

Which is warmer or cooler?” In the **pebble activity**, rocks soaked in hot and cold water are passed around for pupils to compare. Next, pupils are taken **outside versus inside** the classroom to contrast warm outdoor air with cool indoor air-conditioning.

The concept is reinforced with visual examples like **summer and winter clothing**—pictures of warm coats versus light summer clothes. The teacher explains that winter is cold so we wear warm clothes, and summer is

hot so we wear cool clothes. Under supervision, a **fan and hair dryer** are demonstrated from a safe distance to compare cooler air from the fan with hotter air from the hair dryer. An **ice cube melting activity** shows that ice

changes state when it gets warmer. Sorting activities with props and picture cards (e.g., tea, coffee, sun, snowflake, ice cream) encourage children to classify items into “hot” and “cold” categories.

Learning Curve

Children may initially confuse “hot” with “warm” or think that “cold” only applies to ice. With repeated experiences and clear comparisons, they will begin to recognize temperature as a scale with gradations.

Pre-emptive Pitfalls

Children may assume all warm items are hot or all cool items are cold. Teachers should model precise vocabulary and highlight in-between words such as warm and cool. Safety precautions are essential whenever using heat-related demonstrations.

Textbook Practice Pages

On page 6, students are introduced to Ellie’s two stalls—one selling cold items and the other hot items. The teacher guides children in identifying which objects belong in each stall before they attempt the task independently.

Exposition

The teacher reinforces learning by asking: “What do you understand by hot and cold? Can you name objects around you that are hot? Can you name some that are cold?” Real classroom props are used for quick classification.

Plenary

The lesson concludes with questioning using flashcards or props. Students are asked to categorize objects into hot and cold and explain their reasoning. This quick review helps the teacher assess understanding and ensures pupils can use the vocabulary correctly.

WHOLE AND HALF

Manipulatives

- Real food props (bread, pizza, fruit, cupcakes, cookies)
- Shape cut-outs (circle, square, rectangle, triangle)
- Play dough for modeling halves and wholes
- Picture cards of half and whole objects

Objective

The objective of this lesson is to introduce children to the part-whole relationship by teaching them the concept of dividing objects into halves. Students will learn that halves must be equal and that combining two halves restores the whole.

Methodology

The lesson begins with definitions written on the board: “Half means dividing an object into two equal parts” and “Whole means two halves make a whole, showing the complete object.” Using real-life food props such as fruit, pizza, bread, and cupcakes, the teacher demonstrates whole objects and then shows what happens when they are cut or divided into halves. Shape cut-outs of circles, squares, rectangles, and triangles are shown as wholes, then folded in half to demonstrate equal division.

During circle time, the **“Would you like?” activity** is introduced. The teacher offers props with prompts such as: “Would you like half an orange or whole? Would you like half a pizza or whole?” Pupils then role-play with partners, asking and answering questions using the target vocabulary. This interactive exchange helps children internalize the concepts of whole and half.

Learning Curve

Children may confuse “half” with any part of a whole, not necessarily equal. Teachers must emphasize that halves are always two equal parts. With repeated hands-on practice, pupils gradually refine this understanding.

Pre-emptive Pitfalls

Children may think that cutting into any two pieces makes halves. Teachers should highlight the importance of equal division by showing unequal pieces and asking: “Are these really halves?”

Main Activity

The teacher demonstrates whole and half using props and cut-outs, guiding children to fold, cut, or divide objects themselves. Pupils role-play with food props, offering each other “half” or “whole” items. They then engage in multisensory activities where they make wholes and halves from play dough and identify halves and wholes in picture cards.

Textbook Practice Pages

On page 7, the teacher models matching halves to wholes by drawing on the board, and pupils complete the activity individually. On page 8, the pizza exercise is introduced. Pupils color pizza toppings according to a given key (mushrooms gray, onions purple, capsicum green/yellow/red, tomatoes/pepperoni red). After coloring, they count toppings and answer guided questions:

- How many pizza slices are there?
- Is this half a pizza or whole?
- If you divide it in half, how many slices do you get?
- Are there more mushrooms than tomatoes?
- Are there more onions than mushrooms?
- Is there an equal number of anything?
- What shape is pepperoni? What shape is a pizza slice?

This exercise integrates mathematical reasoning with observation and vocabulary.

Exposition

The teacher reviews by asking: “How many halves make a whole? What happens when we put two halves together? Can you show me something in this room that can be divided into halves?”

Plenary

The session ends with reflection and questioning. Pupils are asked to recall key ideas and identify objects around them that can be described as whole or half. This reinforces the application of the concept to everyday life.

TEACHER'S REFLECTION

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

2

Numbers: Part One

Student Learning Outcomes

- Numbers 1–10
- Numbers 11–20

Unit 2 Numbers

Manipulatives

- Chalk and slates
- Beads, pebbles, and counters
- Number cards and strips
- Tracing sheets
- Ice cream sticks with numbers or pictures
- Playdough for modeling numbers and sets

Objective

The objective of this lesson is to build on students' prior knowledge of numbers 1–10 and extend their understanding to numbers 11–20. The lesson focuses on interactive and engaging activities to help children recognize, trace, and count these numbers in order, while reinforcing concepts of sequencing and quantity recognition.

Methodology

The teacher begins by revising numbers 1–10 to refresh students' memory. Since children at this stage require consistent reinforcement, teachers must continuously connect new learning with familiar concepts. A variety of interactive strategies are used to engage the whole class, small groups, and individuals.

In whole-class settings, students may participate in circle time, where they bring objects from a classroom basket (such as chalk) and count them aloud together. The teacher shows random number cards, and students respond by showing the corresponding number of fingers. Another activity involves distributing ice cream sticks with numbers or pictures, and children are asked to find their matching partners.

For small-group activities, teachers may set up a washing line across the classroom and provide number cards for children to peg in sequence. Students practice sequencing by rearranging mixed-up number cards in the correct order. They may also bring small pouches filled with pebbles or beads from home, count the objects, and record the numbers on paper. Disposable cups labeled with numerals can also be used, where students place counters inside to match the given number.

Individual activities include tracing numbers in sand trays, using chalk on slates, or forming numbers with playdough. Pupils may also make playdough balls to represent quantities and arrange them into the shape of a caterpillar, numbering each segment correctly.

Learning Curve

Children are already familiar with numbers 1-10 and can both count and write them. However, they may face challenges when extending to larger numbers, such as skipping numbers or confusing numerals with similar shapes (e.g., 6 and 9, or 12 and 21). Consistent practice, daily reinforcement, and engaging activities help overcome these difficulties.

Pre-emptive Pitfalls

Children may skip numbers when counting in sequence or confuse similarly shaped digits such as 6 and 9. Teachers should emphasize oral repetition, sequencing exercises, and the correct formation of numerals during tracing. Careful observation and correction are essential at this stage.

Main Activity

The main activity is conducted through whole-class, small-group, and individual participation. Whole-class circle time involves collective counting of classroom objects, matching numbers with fingers, and finding partners with numbered sticks. Small groups work on sequencing activities using washing lines and number cards, as well as counting pebbles in pouches and recording the totals. Individually, students trace numbers in sand trays, use chalk on slates, or create playdough balls to represent quantities. These activities combine fun and interactive approaches while strengthening number recognition, sequencing, and fine motor control.

Textbook Practice Pages

Students practice numbers 11-20 by completing activities on the textbook pages, which include tracing, counting, and sequencing exercises. The teacher demonstrates one example on the board before students attempt their exercises independently.

Exposition

At this stage, the teacher gathers students to recite numbers from 11-20 aloud. A group activity follows, where children identify and correct sequencing errors when numbers are displayed out of order. This allows teachers to assess understanding and reinforce the correct order of numbers.

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic Learning:** Tracing numbers in sand trays provides a hands-on experience and builds fine motor skills.
- **Auditory Learning:** Singing number songs and chanting sequences aloud reinforces counting rhythm and memory.
- **Visual Learning:** Pupils match flashcards with number strips to strengthen recognition, sequencing, and memory.

Plenary

The session concludes with a quick quiz where the teacher flashes random number cards and asks pupils to identify the numeral and its correct position in the sequence. Children respond either verbally, with fingers, or by showing matching counters. This recap ensures reinforcement and checks learning outcomes effectively.

TEACHER'S REFLECTION

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

3

Ordinal Numbers

Student Learning Outcomes	Suggested time: 2 Lessons
<ul style="list-style-type: none">Use ordinal numbers to indicate position in a sequence, e.g. put the blue ball third	

Manipulatives

- Toys for sequencing
- Number blocks for stacking and ordering
- Ordinal number flashcards

Objective

The objective of this unit is to introduce students to ordinal numbers and help them distinguish them from cardinal numbers. Children will learn to use ordinal numbers accurately in real-life contexts, both within the classroom and beyond, reinforcing their ability to describe position and order in everyday situations.

Methodology

The lesson begins with an **ordinal number song** to capture interest and introduce the vocabulary in an engaging way. During **circle time**, children arrange their favorite toys in a line. The teacher points to each toy and states its position: “This is the first toy. This is the second toy,” and so on up to the tenth. Pupils repeat after the teacher, reinforcing pronunciation and familiarity. Flashcards with ordinal numbers are shown, and children are asked to repeat the names while the teacher introduces sequencing words such as *before*, *after*, and *next*.

Through **Math Talk**, the teacher prompts students with guided questions such as, “This is the first toy. What comes after first? This is the second toy. What comes after second?” In another activity, children are lined up based on their birthdays, starting from January and moving through the months. The teacher reinforces vocabulary by saying, “His birthday comes first. Her birthday comes second. Whose birthday comes next?”

In the **playground activity**, children line up for the slide or swing. The teacher asks questions like, “Who is first in line? Who is second? Who is next? Who will go after him/her?” This reinforces ordinal numbers in a fun and physical context. The concept is extended into **real-life connections**, such as lining up for snacks in the canteen and asking, “Who is first in line for the snacks? Who is next?”

Learning Curve

Students may initially confuse cardinal numbers with ordinal numbers or say “oneth” or “twoth” instead of “first” and “second.” They may also confuse left-to-right with right-to-left order. Repetition, visual aids, flashcards, and daily reinforcement in routines help resolve these confusions. Teachers should gently correct mispronunciations and consistently model left-to-right order.

Pre-emptive Pitfalls

Children might confuse ordinal and cardinal numbers or mix up order directions. They may also mispronounce ordinal terms. Teachers should emphasize differences using manipulatives and visuals, consistently reinforce vocabulary, and provide repeated practice in multiple contexts.

Main Activity

The main activities include toy sequencing during circle time, birthday lineup sequencing, and playground lining up for swings or slides. Each activity provides opportunities for children to practice ordinal numbers in practical, engaging contexts. Teachers guide pupils with questions like, “Who is first? Who comes after second? Who is next?” and encourage children to repeat ordinal terms aloud for reinforcement.

Textbook Practice Pages:

Page 26-27

Differentiation

For pupils struggling to identify positions, provide individual support using fewer objects (e.g., first three toys only). Reinforce vocabulary through flashcards and oral repetition. Scaffolding ensures all children progress at their own pace.

Multi-Sensory Learning Stations

- **Auditory Learning:** Pupils listen to and sing along with ordinal number songs and rhymes.

- **Visual Learning:** Groups of five students stack blocks, and the teacher asks, “Which block is first? Which is second?” to reinforce positional vocabulary.
- **Tactile-Kinaesthetic Learning:** Pupils play hopscotch. The teacher calls out, “Jump to the third square!” or “Stand on the fifth square,” giving them physical practice of ordinal positions.

Exposition

The teacher reinforces key vocabulary by restating ordinal positions during everyday activities. For example, “You are the first in line, she is the second, he is the third.” Daily application ensures pupils embed ordinal numbers into their language use.

Plenary

The lesson ends with flashcards showing objects or animals in a sequence. Pupils are asked questions such as: “Which object is first? Which one is second? Which one is next? What comes after third?” This quick review allows the teacher to assess understanding and reinforce vocabulary.

TEACHER’S REFLECTION

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

4

Shapes

Student Learning Outcomes	Suggested time: 2 Lessons
<ul style="list-style-type: none">• Identify and name 2-D or familiar shapes e.g. circle, square, triangle, oval, rectangle etc.• Compare the shape and size of objects.• Order shapes from smallest to largest (e.g. orders various circle sizes).	

Manipulatives

- Large shape cut-outs (square, rectangle, triangle, circle)
- Chart paper with outlines of large shapes for tracing
- Ice cream sticks for building shapes
- Playdough and sand trays
- Real-life props (story books, windows, doors, balls, etc.)
- Newspaper clippings of 2D shapes
- Flashcards with shape names

Objective

The objective of this unit is to introduce children to 2D shapes step by step, focusing on one shape per day to avoid confusion. Students will explore the attributes of each shape through visual, tactile, and kinesthetic activities, progressing from recognition to application in real-life contexts. The final lesson introduces the sphere to help students distinguish between 2D and 3D forms.

Methodology

The teacher introduces each shape with a tangible cut-out, explaining its attributes and repeating its name aloud. Vocabulary is reinforced daily through tracing, building, sorting, and shape hunts. Each shape lesson includes tactile activities such as tracing with fingers, using playdough, or building shapes with sticks. Real-life connections are emphasized by pointing out objects in the classroom and playground. Activities culminate in textbook practice where children consolidate their learning by tracing, coloring, and solving riddles.

Learning Curve

Children may initially confuse 2D and 3D shapes, calling a ball a circle or a box a square. They may overgeneralize by associating shapes only with certain colors. New shape names may also be tricky to remember. With consistent repetition, daily practice, and multisensory reinforcement, students gradually learn to differentiate shapes based on attributes like sides and corners, rather than color or size.

Pre-emptive Pitfalls

- Confusing circles with spheres and squares with rectangles.
- Overgeneralizing shapes based on color or context.
- Difficulty remembering new vocabulary.
- Teachers should address these by using a variety of colored shapes, teaching one shape per day, modeling language repeatedly, and providing opportunities for hands-on exploration.

Main Activities

Square

The teacher shows a large square cut-out and explains: “A square is a flat shape with four sides and four corners. All sides are equal.” Students repeat the word “square” while the teacher points to its letters on the board. Groups of pupils trace squares within a large chart paper outline. In the ice cream stick activity, each student uses four sticks to construct a square. Pupils then go on a shape hunt to find square objects like storybooks. In tactile practice, they form or trace squares using playdough or sand trays.

Rectangle

The teacher introduces a rectangle cut-out: “A rectangle has four sides and four corners. Opposite sides are equal, with two long sides and two short sides.” Children repeat the name aloud. Groups trace rectangles on chart paper and work in teams to create a **rectangle mural collage** by cutting out small rectangles and pasting them together. Pupils go on a **shape hunt** to spot rectangles like windows, doors, desks, and boards. Playdough and sand trays are used for tracing rectangles.

Triangle

A triangle cut-out is shown: “A triangle is a flat shape with three sides and three corners.” Students repeat the name and trace large outlines on chart paper. In the **sandwich activity**, children bring sandwiches and cut them diagonally to make two triangles, reinforcing the concept that a square cut diagonally becomes triangles. Pupils search for triangles in the classroom, then create or trace them in playdough or sand trays.

Circle

The teacher introduces a circle cut-out: “A circle is a flat shape with no sides and no corners. It is round.” Pupils trace large circles on chart paper and go on a **shape hunt** to spot circles in the classroom. In tactile practice, they trace or create circles in playdough or sand trays. The **find the shape activity** uses a basket of newspaper clippings. Each group searches for a designated shape (square, rectangle, triangle, or circle) within a set time, promoting quick recognition.

Recap: The teacher reviews all 2D shapes using large cut-outs and asks pupils to describe attributes.

Textbook Practice:

Pages 28-31

3D SHAPES

Sphere

The teacher introduces real objects like a ball labeled “sphere.”

Exposition:

“A sphere is a solid shape with no corners and no sides. A circle is flat, but a sphere is solid.” Pupils roll a ball to see that it cannot be stacked but can roll. They then go on a shape hunt to find spheres around the classroom and playground. Tactile practice includes making spheres with playdough or sand trays.

Multi-Sensory Learning Stations

- **Auditory Learning:** Children sing along with shape songs and rhymes.
- **Visual Learning:** Pupils identify shapes in the playground, answering: “How do you know it’s a circle, square, rectangle, or triangle?”
- **Tactile-Kinaesthetic Learning:** Children trace shapes in sand trays, make them with playdough, and build them with ice cream sticks.

3D Shapes

Manipulatives

- Real-life 3D objects (boxes, dice, balls, bottles, cones, eggs, etc.)
- Playdough and sand trays
- Laminated flashcards of 3D shapes
- Mystery bag for “hidden shapes” game

Objective

The objective of this unit is to introduce children to 3D shapes through hands-on experiences, real-life examples, and multisensory activities. Students will develop their ability to classify solid shapes based on attributes such as sides, corners, and surfaces, while distinguishing them from 2D shapes.

Methodology

Each day, one shape is introduced through circle time with tangible props. Teachers present a real object, explain its attributes, and guide children in naming and repeating the vocabulary. Pupils handle the shape to explore whether it can roll or stack. The teacher reinforces learning with multisensory activities, including auditory reinforcement through songs, visual hunts for real-life shapes, and tactile construction with playdough or sand trays. Activities culminate in whole-class games and textbook

practice, ensuring students can transfer their knowledge to written exercises.

Learning Curve

Students may initially confuse 2D and 3D shapes, for example calling a sphere a circle or assuming a square and a cube are the same. New vocabulary may be challenging, and attributes such as edges, corners, or curved surfaces may be overlooked. Consistent modeling, tactile handling, and real-life examples will strengthen understanding.

Pre-emptive Pitfalls

- Confusion between similar shapes (cube vs. cuboid, sphere vs. ovoid).
- Forgetting attributes such as corners, edges, or curved surfaces.
- Mispronouncing new shape names.
- Teachers should gently correct mistakes, emphasize distinct attributes, and use real-life connections daily.

Main Activities

Sphere

The teacher introduces real objects like a ball labeled “sphere.”

Exposition:

“A sphere is a solid shape with no corners and no sides. A circle is flat, but a sphere is solid.” Pupils roll a ball to see that it cannot be stacked but can roll. They then go on a shape hunt to find spheres around the classroom and playground. Tactile practice includes making spheres with playdough or sand trays.

Cube

During circle time, the teacher introduces the cube, explaining: “A cube is a solid shape with 6 faces, 8 corners, and 12 sides.” Pupils pass around real cubes, such as dice, Rubik’s cubes, and blocks. They are asked: “Can you roll this? Why or why not? Can you stack it? Yes.” In multisensory stations, pupils sing shape songs, go on a shape hunt to spot cubes in the classroom, and create cubes with playdough or sand trays.

Cuboid

The teacher introduces a cuboid: “A cuboid is a solid shape with 6 faces, 8 corners, and 12 sides. It looks like a stretched cube.” Real cuboids such as cereal boxes, tissue boxes, and toothpaste boxes are passed around. Pupils test whether the shapes can roll or stack. Multisensory activities include songs, visual hunts for cuboids in the classroom, and tactile practice making cuboids with playdough.

Cone

Circle time begins with a cone, explained as “a solid shape with one curved surface and a circular base.” Pupils handle party hats or ice cream cones, comparing whether they can roll or stack. The teacher guides discussion: “Can it roll? Can it stack?” Multisensory activities include singing, visual hunts for cones (e.g., traffic cones, funnels), and tactile playdough modeling.

Cylinder

The teacher introduces a cylinder: “A cylinder has two parallel circular bases connected by a curved surface.” Pupils handle canisters or bottles, comparing rolling and stacking. They conclude: “It can roll and it can stack.” Multisensory activities include songs, shape hunts, and tactile practice creating cylinders with playdough.

Oval

The teacher introduces an ovoid: “An ovoid is a solid shape that looks like an extended circle, like an egg. It has no sides and no corners.” Pupils handle egg props, discussing whether the shape can roll or stack. They conclude: “Yes, it can roll. No, it cannot stack.” Multisensory activities include songs, visual hunts for ovoids in the classroom, and tactile modeling with playdough. A **hidden shapes game** is played, where pupils pull shapes from a mystery bag, guess their names, and explain how they knew. In a **whole-class activity**, pupils use their bodies to form shapes or find corresponding objects in the classroom.

Textbook Practice:

Page 32-34

Exposition

The teacher reviews daily by restating the differences between 2D and 3D shapes. For example: “A cube is solid, but a square is flat. A sphere is solid, but a circle is flat. An oval is shaped like an egg.” This repeated contrast helps children solidify understanding.

Multi-Sensory Learning Stations

- **Auditory Learning:** Pupils sing along with 3D shape songs.
- **Visual Learning:** Pupils go on classroom and playground shape hunts, pointing out cubes, cuboids, cones, cylinders, and ovoids.
- **Tactile-Kinaesthetic Learning:** Pupils make 3D shapes with playdough or trace them in sand trays.

Plenary

At the end of each lesson, pupils participate in quick review games. Using flashcards or real-life props, the teacher asks: “What is this shape? Can it roll? Can it stack? How many corners does it have?” Pupils answer verbally, reinforcing vocabulary.

ORDERING SHAPES

Manipulatives

- Cut-outs of 2D shapes in varying sizes
- Real-life objects of different sizes (blocks, containers, books)
- Flashcards for reinforcement
- Large printed maze for textbook practice demonstration

Objective

The objective of this lesson is to strengthen students' understanding of comparative language by arranging and ordering shapes based on size. Pupils will develop the ability to visually discriminate between sizes, describe size relationships accurately, and apply these skills in both group activities and individual practice.

Methodology

The teacher begins by demonstrating the size of real objects or cut-out shapes. Using clear modeling language, the teacher introduces vocabulary step by step: "This shape is small. So, it goes first. This shape is smaller. So, it goes second. This shape is the smallest. So, it goes third." Similarly, for larger sizes, the teacher explains: "This shape is big. This shape is bigger.

This shape is the biggest." Pupils repeat after the teacher to reinforce correct terminology. Guided questioning is used to check understanding: "Which shape is small? Which one is smaller? Which one is the smallest? Which shape is big? Which one is bigger? Which is the biggest?"

In the **group activity**, students are divided into groups of four or five. Each group receives a set of similar shapes in different sizes. They are asked to arrange one set from *small to smallest* and the other set from *big to biggest*. Teachers circulate and guide discussions, encouraging pupils to use comparison vocabulary as they justify their choices.

Learning Curve

Children may initially confuse *smaller* with *smallest* or *bigger* with *biggest*. They may also focus on color or orientation rather than actual size. With consistent modeling, hands-on sorting, and oral repetition of vocabulary, students gradually strengthen their ability to compare accurately.

Pre-emptive Pitfalls

Children may misidentify shapes by attributes other than size, such as color or position. They may also use incorrect vocabulary (e.g., saying *more small* instead of *smaller*). Teachers should model correct language

repeatedly, prompt students to explain their reasoning, and consistently emphasize size comparisons.

Main Activity

The main activity includes teacher modeling of comparative vocabulary with real objects, followed by group sorting tasks. Each group arranges shapes in ascending and descending size orders. Teachers ask guided questions to reinforce language, e.g., “Which shape is the smallest in your group? Which one is bigger than this one?” Pupils are encouraged to explain their reasoning, strengthening both vocabulary and conceptual understanding.

Textbook Practice Pages:

Page 35-37

Differentiation

For pupils who struggle, the teacher provides additional support using fewer shapes and larger, clearer cut-outs. One-on-one guidance and extra visual aids help reinforce vocabulary and reduce confusion.

Exposition

The teacher reinforces vocabulary by restating comparisons during the activities: “This block is small. This one is smaller. That one is the smallest.” Real-life examples in the classroom are highlighted, such as comparing books of different sizes or water bottles.

Multi-Sensory Learning Stations

- **Auditory Learning:** Pupils repeat comparative vocabulary aloud and chant phrases like “small, smaller, smallest” or “big, bigger, biggest.”
- **Visual Learning:** Pupils identify and order cut-outs, flashcards, or shapes in the classroom, describing them using size vocabulary.
- **Tactile-Kinaesthetic Learning:** Pupils physically arrange objects by size in small groups, handle props, and trace or compare shapes with their hands.

Plenary

The lesson concludes with the **Shape Detective** game. The teacher hides part of a shape in a bag, shows only a portion, and asks pupils to guess the name and size relationship: “Is this the smallest? Is it bigger than the others?” Other plenary games include **Simon Says** or **I Spy**, e.g., “I spy something shaped like a rectangle. Which one is it? Is it the biggest or smallest?” These activities consolidate learning in a fun and interactive way.

TEACHER'S REFLECTION

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

5

Patterns

Student Learning Outcomes	Suggested time: 2 Lessons
• Recognise patterns in the environment	

Manipulatives

- Number blocks in different colors
- Laminated 2D and 3D shapes
- Playdough for hands-on pattern building
- Laminated animal/nature pattern cards
- Real classroom objects for pattern-making

Objective

The objective of this lesson is to help students understand the concept of patterns as repeated arrangements. Pupils will develop the ability to recognize, predict, and extend patterns in different contexts, building foundational skills for logical reasoning, sequencing, and early algebraic thinking.

Methodology

The teacher begins by gathering pupils in circle time with a variety of objects of different colors and shapes. Using the keywords *repeat*, *again*, *next*, and *the same*, the teacher introduces the concept of a pattern.

Questions such as “Who remembers patterns from last year? What is a pattern? What happens in a pattern?” are asked to activate prior knowledge.

The teacher then explains: “*Patterns are repeated arrangements of objects, colours, shapes, and sounds. They are repeated in a series. Let’s look at this pattern.*” Using number blocks, the teacher demonstrates an **ABAB pattern** with green and blue blocks: “*Green, blue, green, blue—what comes next?*” Pupils respond together. Similarly, using laminated shape cut-outs, the teacher demonstrates a **circle, square, circle, square** sequence and asks: “*Which shape will come next? What is happening here? Why do you think so?*”

The process is repeated with 3D shapes, moving gradually from **AB patterns** to **AAB** and **ABC patterns**, ensuring complexity is introduced slowly. Pupils are then asked to create their own patterns with teacher guidance: “Let’s start with one block. What should we place next to make a pattern?” The teacher pauses at intervals, asking pupils to predict the next object.

Discussion is extended to **patterns around us**: pupils brainstorm natural examples such as animal stripes, butterfly wings, leaves, and bird feathers. Pictures of zebras, leopards, giraffes, parrots, and butterflies are displayed on the board or screen. Finally, **patterns in daily life** are introduced,

such as routines (wake up, eat breakfast, go to school) and time cycles (morning, afternoon, evening, night).

Learning Curve

Students may initially focus on superficial attributes like color alone, ignoring the repetition sequence. They may also confuse AAB with AB or ABC patterns. With careful scaffolding—starting with simple AB patterns and moving to more complex sequences—students gain confidence in identifying and creating patterns across different contexts.

Pre-emptive Pitfalls

Pupils may determine patterns by focusing on colors only or by rushing ahead without checking for repetition. Teachers should deliberately mix shapes, colors, and objects to emphasize attributes beyond color. Patterns should be taught gradually, beginning with AB, then AAB, and finally ABC. Indoor and outdoor discussions should reinforce the concept, ensuring comprehension rather than memorization.

Main Activity

Circle time activities include teacher-led demonstrations of AB, AAB, and ABC patterns using blocks, shapes, and real-life objects. Pupils actively predict the next element in a sequence. In small groups, children create their own patterns using blocks, playdough, or cut-outs. Pupils are encouraged to chant the series aloud: “Green, blue, green, blue” or “Clap, clap, jump.” The teacher prompts reflection: “How do you know what comes next?” The lesson extends into outdoor exploration, where pupils search for natural or environmental patterns in plants, playground equipment, or classroom materials.

Textbook Practice Pages:

Page 38-39

Exposition

The teacher summarizes by revisiting key vocabulary: *“Patterns are repeated. They follow a rule. They can be made with shapes, colors, sounds, and even our daily routines.”* Natural examples and routines are emphasized again to connect learning with real life.

Multi-Sensory Learning Stations

- **Auditory Learning:** Play and sing along to pattern-themed songs. Pupils repeat rhythmic chants such as *“Clap, stomp, clap, stomp.”*
- **Visual Learning:** Pupils search for patterns outdoors in the playground, noticing stripes, designs, and repeating structures in their environment.
- **Tactile-Kinaesthetic Learning:** Pupils create patterns with body movements, e.g., *stomp-stomp-clap* or *clap-clap-jump*. They also arrange blocks and cut-outs physically to extend patterns.

Plenary

The teacher concludes by asking reflective questions: *“How do we know something is a pattern?”* Pupils respond: *“It repeats.”* Children recall the patterns they made during the lesson and identify any repeating arrangements around the classroom. A quick round of *“I Spy a Pattern”* helps consolidate understanding before closing the lesson.

TEACHER’S REFLECTION

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

6

Numbers: Part Two

Student Learning Outcomes	Suggested time: 6 Lessons
<ul style="list-style-type: none">• Recognize, count, and trace numbers 21–30.• Order and sequence numbers from 21 to 30.• Match quantities with numerals up to 30.	

Manipulatives

- Number cards (21–30)
- Number line chart
- Counters, beads, pebbles
- Disposable cups labeled 21–30
- Chalk and slates
- Playdough for modeling numbers and sets
- Tracing sheets

Objective

The objective of this lesson is to extend students' knowledge of numbers beyond 20, helping them confidently recognize, trace, and count numbers up to 30. Through interactive whole-class, small-group, and individual activities, students will strengthen their skills in sequencing and associating numerals with quantities while building accuracy in number recognition and writing.

Methodology

The teacher begins by revising numbers 1–20 to ensure a smooth transition. As pupils are already familiar with grouping objects and sequencing, they are encouraged to make connections between the previous set (11–20) and the new set (21–30).

In whole-class activities, circle time is used to reinforce recognition and counting. The teacher displays number flashcards (21–30) randomly and asks pupils to identify the numeral. Pupils respond by holding up the correct number of fingers (with peers assisting beyond 10) or by using counters. The teacher also introduces a number line and highlights the progression from 20 to 21 and so on, emphasizing continuity.

For small-group work, a washing line activity is used, where pupils peg mixed-up number cards (21–30) in the correct sequence. Groups may also work with sets of beads or pebbles, counting out quantities up to 30 and matching them with written numerals. In another task, pupils are given disposable cups labeled with numerals 21–30 and must place the correct number of counters inside each cup.

Individual activities focus on tracing and writing numbers 21–30. Pupils use tracing sheets, chalk on slates, or sand trays to practice correct formation. With playdough, they model numbers and create matching sets of objects (e.g., 25 balls of playdough).

Learning Curve

Most pupils can already count and write numbers up to 20, but challenges arise when extending to larger numbers. Common difficulties include skipping numbers, reversing digits (e.g., writing 23 as 32), and confusing similar-looking numerals such as 21 and 12. Regular practice through sequencing, matching, and tracing activities helps overcome these difficulties.

Pre-emptive Pitfalls

Children may confuse two-digit numbers by reversing digits (e.g., 23 vs. 32) or skip numbers when sequencing beyond 20. Teachers must provide consistent oral repetition, visual reinforcement with number lines, and correction during tracing to address these pitfalls.

Main Activity

The main activity is divided into whole-class, small-group, and individual work. In circle time, students collectively count objects up to 30 and identify flashcards. Small groups arrange numbers in order on a washing line, count beads, and record totals, or match counters to cups labeled 21–30. Individually, students trace and write numbers, form playdough digits, and create sets to represent quantities. The teacher continuously reinforces sequencing by asking, “*What number comes before 25? What comes after 28?*”

Textbook Practice Pages:

Page

Exposition

The teacher gathers students to chant numbers 21–30 aloud. A group sequencing game is conducted where pupils arrange jumbled number cards and correct errors together. The teacher highlights the transition

from 20 to higher numbers, ensuring pupils grasp the idea of continuous counting.

Multi-Sensory Learning Stations

- **Tactile/Kinaesthetic:** Pupils trace numbers in sand trays, use chalk on slates, and form digits with playdough.
- **Auditory:** Number songs for 21–30 are played, with pupils repeating the sequence in rhythm.
- **Visual:** Flashcards and number strips are used for matching and ordering numbers.

Plenary

The teacher concludes with a quick-fire quiz: flashing number cards 21–30, asking “Which number is this? What comes before it? What comes after it?” Pupils respond verbally, with fingers, or with counters. This helps consolidate recognition, sequencing, and number fluency before ending the lesson.

TEACHER’S REFLECTION

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

7

Addition

Student Learning Outcomes	Suggested time: 5 Lessons
<ul style="list-style-type: none">• Recognise that when two sets combine the total number increases (more) and when sets are taken apart the total decreases (less).• Recognise that an entire set of objects is more than its parts.• Add and subtract with sets of objects smaller than 3.	

ADDITION- ONE MORE

Manipulatives

- Blocks
- Fruits
- Toys
- Counters
- Flashcards
- Number cards.

Methodology

The teacher begins by recalling prior knowledge of addition through simple, real-life examples. Using manipulatives such as toys, fruits, and blocks, the teacher introduces the concept of “one more” without symbols. Story-based sums are shared to engage pupils, and circle time is used to demonstrate how numbers increase when one more is added. The focus remains on hands-on counting and oral responses to establish understanding before introducing abstract notation.

Learning Curve

Children already know how to count in sequence but may not realize that “one more” corresponds to the next number. At this stage, they may confuse the idea of “one more” with other operations. By providing repeated practice through objects and stories, children gradually internalize the idea that “one more” means moving to the next number.

Pre-emptive Pitfalls

The plus sign (+) is abstract and should not be introduced yet. Pupils may confuse the idea of adding one more with simply placing another object without counting. Teachers should emphasize oral repetition, real-life contexts, and counting aloud to reinforce the concept.

Main Activity

During circle time, the teacher demonstrates story-based sums such as: *“Ellie has 2 gifts. She received one more. How many gifts are there altogether?”* or *“There are 3 birds on a tree. One more came. How many birds are there now?”* Pupils count the objects aloud together and explain the total.

Textbook Practice Pages:

Page 48-49

Exposition

The teacher explains: *“One more means finding the next number in the sequence, or adding one more of something to a group.”*

Multisensory Learning Stations

- **Auditory:** Pupils sing “one more” number songs.
- **Visual:** Flashcards and dice are used to reinforce the idea.
- **Tactile/Kinesthetic:** A playground activity is set up where numbers 1-9 are drawn, and pupils jump to the number that is one more than the one called out.

Plenary

The teacher holds up fingers and asks: *“What is one more than 3?”* Pupils answer orally and demonstrate using fingers or counters.

ADDITION- ONE MORE (INTRODUCING SYMBOLS)

Manipulatives

- Counters
- Number cards
- Flashcards
- Fruits
- Blocks

Methodology

The teacher begins with a recap using flashcards and songs. Then, the plus sign (+) and equals sign (=) are introduced gradually. Manipulatives are used to model each equation before moving to the abstract written form. Students see that changing the order of numbers does not change the total.

Learning Curve

Pupils may initially rely on rote memorization and struggle to connect real objects to symbols. Through repeated use of manipulatives and guided practice, they gradually transition to symbolic understanding.

Pre-emptive Pitfalls

Children may confuse the symbols or misinterpret the equal sign. Teachers must emphasize that “equal to” means “the answer” and always model using real objects before moving to written sums.

Main Activity

The teacher introduces sums such as $1 + 1 = 2$, $1 + 2 = 3$, and emphasizes that $1 + 3 = 3 + 1$. Pupils practice with manipulatives, arranging objects and then matching them to written equations.

Textbook Practice Pages:

Page 50-53

Exposition

The teacher explains: *“Addition means putting groups together to find the total. We use the plus sign to show adding, and the equal sign to show the answer.”*

Multisensory Learning Stations

- **Auditory:** Number rhymes with addition facts.
- **Visual:** Written sums with picture aids.
- **Tactile/Kinesthetic:** Pupils physically move objects into groups and count the totals.

Plenary

The teacher flashes sums on the board, and pupils answer verbally or with objects.

ADDITION WITH ZERO

Manipulatives

- Plates
- Baskets
- Boxes
- Counters
- Playdough
- Flashcards

Methodology

The teacher uses empty plates, baskets, and boxes to illustrate the meaning of zero. Through guided questioning, pupils see that adding zero does not change a number. Stories and role-play reinforce the idea in a practical context.

Learning Curve

Children already recognize zero as “nothing,” but they may not understand that adding zero does not alter a number. With repeated practice and visual demonstration, they connect this concept to addition.

Pre-emptive Pitfalls

Children may confuse the role of zero as a placeholder (e.g., in 10) with its function in addition. Teachers must emphasize that zero means “nothing” in this context.

Main Activity

The teacher asks pupils to identify when baskets or plates are empty, then shows how adding zero does not change the total. Pupils practice with story-based examples such as ducks in a pond or toys in a basket.

Textbook Practice Pages:

Page 54-57

Exposition

The teacher explains: *“Zero means nothing. When we add zero, the number does not change.”*

Multisensory Learning Stations

- **Auditory:** Songs about zero.
- **Visual:** Flashcards showing empty sets.
- **Tactile/Kinesthetic:** Pupils use playdough to model shapes, then demonstrate adding zero to show no change.

Plenary

Pupils share their own examples of addition with zero.

MAKING 5

Manipulatives

- Number blocks
- Dice
- Fingers
- Shapes
- Flashcards
- Classroom objects

Methodology

The teacher begins by revising addition with numbers 1–9. Using blocks, dice, fingers, and shapes, pupils are shown that numbers can combine in different ways to make 5. Group activities encourage collaborative discovery.

Learning Curve

Children may not initially see how different pairs combine to form the same total. Through guided exploration and correction of mistakes, they learn flexibility in number bonds.

Pre-emptive Pitfalls

Children may assume only one correct combination makes 5. Teachers should encourage multiple solutions and highlight commutativity (e.g., $2 + 3 = 3 + 2$).

Main Activity

The teacher demonstrates combinations such as $1 + 4 = 5$ and $2 + 3 = 5$ using blocks, dice, fingers, and shapes. Students work in groups of 5 with objects to discover more combinations.

Textbook Practice Pages:

Page 58-59

Exposition

The teacher explains: *“Numbers can be broken into parts and put back together. There are many ways to make 5.”*

Multisensory Learning Stations

- **Auditory:** Number songs about 5.
- **Visual:** Flashcards showing different number bonds to 5.
- **Tactile/Kinesthetic:** Hopscotch activity where children jump to numbers that complete sums to make 5.

Plenary

The teacher asks: “*What are the different ways to make 5?*” Pupils list combinations aloud.

TEACHER’S REFLECTION

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

8

Subtraction

Student Learning Outcomes	Suggested time: 5 Lessons
<ul style="list-style-type: none">• Recognise that when sets are taken apart the total decreases (less).• Recognise that an entire set of objects is more than their parts.• Add and subtract with sets of objects smaller than 3.	

ONE LESS

Manipulatives

- Blocks
- Counters
- Toys
- Number cards
- Balloons
- Lollipops
- Ice lollies
- Classroom objects
- Fingers

Methodology

The teacher begins by recalling pupils' prior knowledge of "one less" and "taking away" from the previous year. Using manipulatives such as blocks, toys, and classroom objects, the teacher demonstrates subtraction in real-life contexts. Circle time provides opportunities for pupils to observe objects being taken away and to practice backward counting. Teachers encourage pupils to use fingers, blocks, and drawings to solve subtraction problems. Story-based examples, such as Ellie giving away flowers or birds flying away, help make the concept engaging and relatable.

Learning Curve

Children may already know subtraction in an informal sense (e.g., giving away or losing an item), but connecting this understanding to the abstract symbol may be challenging. Some pupils may re-count all the objects instead of counting backward one step, while others may confuse

subtraction with addition. Regular reinforcement, practice in backward counting, and hands-on demonstrations help pupils gain confidence in identifying “one less.”

Pre-emptive Pitfalls

Some children might re-count numbers from the beginning rather than simply counting back one. Teach “count back 1” explicitly to avoid confusion. Pupils may also confuse subtraction with addition. Reinforce subtraction as “taking away” and demonstrate using real-life scenarios. If children struggle with number order, practice backward counting regularly by physically removing objects.

Main Activity

During circle time, the teacher introduces subtraction as “taking away.” Examples include:

- “I have 3 circles here. I remove one. How many are left now? We are looking for one less than 3. Let’s count backward: 3...2. One less than 3 is 2.”
- “Ellie had 4 flowers. She gave one to her friend. How many are left? We count: 4...3. One less than 4 is 3.”
- “5 birds sat on a branch. One flew away. How many are left? Count: 5...4. One less than 5 is 4.”
- The teacher also demonstrates finger-counting to show one less than 5, 4, 3, 2, and 1.

Textbook Practice Pages

- **Page 60:** Pupils count the number of balloons and solve a brain teaser.
- **Page 61:** Pupils count Ellie’s lollipops in the jar, subtract one, and state how many are left. The same is repeated for ice lollies.
- **Pages 62–63:** Individual practice exercises where pupils solve simple subtraction sums. Teachers should encourage daily practice.

Exposition

The teacher explains: “*Subtraction means taking away from a group to find out how many are left. It is the opposite of addition.*”

Multisensory Learning Stations

- **Auditory Learning:** Pupils sing subtraction and backward counting songs.
- **Visual Learning:** Pupils work in groups with number cards (1–9). They arrange the corresponding number of blocks, then subtract one and call out the answer.

- **Tactile/Kinesthetic Learning:** In the playground, numbers 1–9 are written in jumbled order. Pupils are divided into groups and take turns jumping to the number that is one less than the number the teacher calls out.

Plenary

The teacher asks: “*What is one less than 2, 3, 4, and 5?*” Pupils answer aloud. Finally, pupils are invited to give their own examples of “one less” using classroom objects, such as pencils, erasers, or blocks.

SUBTRACTION WITH NUMBERS

Manipulatives

- Blocks for tower subtraction
- Toys (cars, animals, dolls, etc.)
- Small baskets or boxes
- Playdough balls
- Subtraction mats with pictures
- Number cards

Objective

The objective of this lesson is to introduce children to subtraction with numbers larger than 5 in a simple and concrete way. By using manipulatives such as blocks, toys, and playdough, pupils will understand that subtraction means taking away and that the total becomes smaller. The lesson reinforces backward counting, develops problem-solving through real-life stories, and strengthens the concept of subtraction as the opposite of addition.

Methodology

The teacher begins by revising “one less” from the previous lesson so pupils recall that subtraction means *taking away*. For young children, the lesson is kept concrete, using toys, blocks, and playdough balls. During circle time, children build towers or arrange toys, and then remove some to see how many are left. The teacher uses story-based examples so pupils can connect subtraction to everyday life. Backward counting is emphasized throughout.

Learning Curve

At this stage, children are just beginning to understand subtraction beyond “one less.” They may confuse subtraction with addition or struggle to count backward. Repeated practice with objects helps them see that the number becomes smaller when something is taken away. Gradual movement from physical objects to pictures in the book builds confidence and understanding.

Pre-emptive Pitfalls

Children may count all objects again instead of counting backward. Teachers should gently guide them: “*We don’t need to count all again, let’s just count one less.*” Some may confuse subtraction with addition. Reinforce subtraction as “*take away*” with clear actions, like removing toys or blocks, and always connect with stories so the meaning is obvious.

Main Activity

- **Block Tower Subtraction:** Two children build a tower of 10 blocks. Teacher asks: *“How many blocks are here?”* Then one block is removed. The teacher and class count backward: *“10...9. One less is 9.”* Repeat with 2 and 3 blocks removed, asking children to say the number of blocks left.
- **Toys Subtraction:** Place 8 toys on a desk. Teacher asks: *“How many toys do we have?”* Then removes 2 toys and asks: *“How many are left? Let’s count backward: 8...7...6.”* Repeat by removing 3 or 4 toys.
- Encourage pupils to come up and demonstrate subtraction by removing objects themselves.

Textbook Practice Pages:

Page 64-69

Exposition

The teacher explains: *“Subtraction means take away. When we take away, the number becomes smaller. It is the opposite of addition. We count backward to find the answer.”* The teacher demonstrates with examples on the board, connecting each equation to an action.

Multisensory Learning Stations

- **Auditory Learning:** Children sing a simple subtraction song with actions (e.g., *“Five speckled frogs”* where one falls off each time).
- **Visual Learning:** Pupils use subtraction mats with pictures of objects (like balloons or apples). They cover or cross out some to show subtraction.
- **Tactile/Kinaesthetic Learning:** Pupils roll playdough balls. The teacher says: *“Make 6. Now take away 2. How many are left?”* Children remove or squash balls and count the rest.

Plenary

The teacher holds up objects and asks: *“If I have 4 and take away 1, how many are left?”* Pupils answer together. Then the teacher asks: *“What did we learn today?”* Children respond: *“Subtraction means take away!”* Pupils are invited to share real examples, such as giving away pencils, snacks, or toys.

TEACHER'S REFLECTION

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

9

Time

Student Learning Outcomes

Suggested time: 6 Lessons

- Recognise informal time units and know that clocks and calendars mark the passage of time.
- Recognise and use language relating to days of the week, months of the year.

ALL AROUND THE DAY

Manipulatives

- Laminated picture cards (morning, afternoon, evening, night activities).
- Large globe and flashlight for Earth's rotation demonstration.
- Story picture sequences (wake up → brush teeth → breakfast → school → bedtime).
- Puppets or props for role-play.

Objective

The objective of this lesson is to help children understand the difference between day and night and the sequence of daily events. By engaging with picture cards, stories, and real-life connections, pupils will learn that daytime is associated with the sun and activity, while night-time is linked to the moon, stars, and rest. They will also practice sequencing words in order to explain their own daily routines.

Methodology

The teacher begins by engaging prior knowledge through questions such as *“What do you like doing during the day?”* and *“What do you do before bed?”* To establish clear contrasts, the teacher writes “Day” and “Night” on the board, supported with laminated visual aids. Through guided questioning, children brainstorm activities linked with each part of the day. Example prompts include:

- *“What do you do when you first wake up?”*
- *“Who brushed their teeth today?”*

- “*What do you do before bed?*”
- The teacher then introduces vocabulary connected to both times of day:
- **Daytime:** sun, sunlight, warm, birds, wake up, breakfast, school.
- **Night-time:** moon, stars, dark, quiet, bedtime, sleep.

Next, the teacher demonstrates Earth’s rotation with a globe and flashlight. Pupils observe that when one side of the globe faces the sun, it is daytime, while the opposite side is in darkness. The teacher explains simply that the Earth’s rotation makes daytime and night-time happen in different places at different times.

The teacher models sequencing language in context:

- “First, we wake up in the morning. Next, we brush our teeth. Then, we have breakfast. After that, we go to school. At night, the last thing we do is sleep.”

Learning Curve

Children at this stage may confuse times of the day, such as saying “dinner happens in the afternoon” or “we see stars in the morning.” They may also struggle to use sequencing words correctly. Repeated questioning, modeling, and practice with real-life connections help them refine their understanding. With consistent reinforcement, pupils will gradually be able to sequence daily activities with appropriate vocabulary.

Pre-emptive Pitfalls

Some children might confuse times of the day or link them incorrectly (e.g., dinner in the afternoon). Teachers should continuously reinforce correct sequencing through repetition, questioning, and linking to real-life experiences. Children don’t need to learn clock times at this stage—focus is on understanding order and routine.

Main Activity

The teacher shows laminated picture cards of daytime and night-time, asking children to identify what happens in each. With sequencing vocabulary, pupils describe activities in order. Using the globe and flashlight, the teacher demonstrates how Earth’s rotation causes day and night. Pupils are encouraged to share examples of their own daily routines, guided by prompts: “*What do you do first in the morning? What happens next? What do you do last at night?*”

Exposition

The teacher explains clearly: “*The sun is out during the day, and the moon and stars are out during the night. We use words like first, then, next, and*

last to talk about the order of what we do. For example: first we wake up, then we brush our teeth, next we have breakfast, and last we go to sleep.”

Multisensory Learning Activities

- **Auditory:** Play and sing along to a simple day-and-night song.
- **Visual:** Display picture cards showing different times of the day and discuss.
- **Tactile/Kinaesthetic:** Call pairs of children to act out activities (e.g., brushing teeth, going to bed). The rest of the class guesses which part of the day is being acted.

Textbook Practice Pages:

Page 71

Plenary

The teacher asks: *“What do you do after lunch? What happens in the evening? What is the last thing you do before sleeping?”* Pupils respond with their own examples, reinforcing sequencing and linking to personal routines.

CALENDAR

DAYS OF THE WEEK

Manipulatives

- Days of the Week chart
- Calendar
- Flashcards of days
- Activity markers (symbols for art, sports, picnic, etc.)

Objective

The objective of this lesson is to introduce the seven days of the week in sequence. Pupils will learn that a week has seven days, practice naming and ordering them, and connect them with real-life routines and activities for better retention.

Methodology

The teacher begins by playing a **Days of the Week song** to set the rhythm and introduce vocabulary. A **Days of the Week chart** is displayed, and pupils are asked:

- “What day is it today?”
- “What day was it yesterday?”
- “What day will it be tomorrow?”

The teacher points to the calendar while reciting each day aloud, encouraging pupils to repeat. Emphasis is placed on sequence: *“Sunday is the first day, Monday is the second...”*

Children are then guided to link days with real-life routines (e.g., *“On Monday we have Art, on Wednesday we sing songs, on Friday we go to the park”*). A marker is moved across the days to visually reinforce order.

Learning Curve

Children at this stage often confuse the order of days or struggle to remember all seven. Linking days to **routine activities** and repeating songs strengthens recall. With consistent repetition, children begin to understand sequencing (yesterday, today, tomorrow).

Pre-emptive Pitfalls

Students may find it difficult to remember or sequence the days. Teachers should avoid rote memorization at this stage; instead, link days to familiar routines and repeat songs frequently to aid recall.

Main Activity

- Play the Days of the Week song and clap along.
- Display the weekly chart, moving across days as children recite.
- Group activity: pupils create their own **Days of the Week chart**, drawing pictures for activities they do each day.

Exposition

The teacher explains: *“A week has seven days. Each day comes in order: first, second, third... We can remember days by thinking of what we do. Yesterday is the day before today, and tomorrow is the day after today.”*

Multisensory Learning Stations

- **Auditory:** Singing and clapping along with the song.
- **Visual:** Flashcards in mixed order – pupils arrange them correctly.
- **Tactile/Kinaesthetic:** Pupils match **number cards (1-7)** with the correct day of the week.

Textbook Practice Pages

- **Page 74:** Pupils answer questions based on Ellie’s weekly schedule (e.g., *“When is Ellie’s birthday? When does she go to the picnic? What day is the dentist appointment?”*).

Plenary

Ask pupils:

- “Which day comes first?”
- “Which day comes after Monday?”
- “What do you do on this day?”
- “What is your favourite day and why?”

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MONTHS OF THE YEAR

Manipulatives

- Large yearly calendar
- Month flashcards
- Sticky notes for marking months
- Birthday chart
- Season posters

Objective

The objective of this lesson is to familiarize children with the names and order of the 12 months. Pupils will associate months with seasons, festivals, and personal events, focusing on sequence and recognition rather than memorization.

Methodology

The teacher begins by asking: *“Do you know any months of the year?”* Display a **large yearly calendar** and explain: *“One year has 12 months.”* Introduce each month using flashcards and calendar visuals, encouraging children to repeat after the teacher.

The teacher then links months to meaningful events:

- “When is your birthday?”
- “When do we celebrate Eid?”
- “When do we have summer vacation?”

Important holidays are marked on the class calendar:

- 5 February - Kashmir Day
- 23 March - Pakistan Day
- 1 May - Labour Day
- 14 August - Independence Day
- 9 November - Iqbal Day
- 25 December - Quaid-e-Azam’s Birthday

Next, seasons are introduced with visuals:

- **Summer (June-Aug)** - hot, long days
- **Autumn (Sep-Nov)** - cooler, leaves fall
- **Winter (Dec-Feb)** - short, cold days
- **Spring (Mar-May)** - flowers bloom

Learning Curve

Children may not retain all months or confuse their order. Associating months with **personal milestones, holidays, and seasons** makes them easier to recall. Repetition through songs and visual aids ensures gradual familiarity.

Pre-emptive Pitfalls

Students may confuse months or struggle with recall. Teachers should not expect memorization; instead, use visuals, songs, and repeated practice. Months should always be linked to familiar contexts (birthdays, weather, festivals).

Main Activity

- Pupils sit in groups with jumbled month cards. They arrange them in the correct order (first group to finish wins).
- “Where’s My Month?” activity – pupils ask yes/no questions to identify each other’s months.
- Teacher leads discussion on linking months with **seasons and school events**.

Exposition

The teacher explains: *“A year has 12 months. We use months to tell when things happen. We celebrate special days in certain months. Each season comes in different months too. Let’s read the months together in order.”*

Multisensory Learning Stations

- **Auditory:** Months of the Year song.
- **Visual:** Teacher displays a “Months of the Year” poster, covers months with sticky notes, and asks pupils to reveal them in order.
- **Tactile/Kinaesthetic:** Birthday Line-Up – Pupils come forward, point to their birthday month, and form a line in sequence.

Textbook Practice Pages

- Pupils explore Ellie’s calendar activities. Teacher asks: *“Which month does Ellie go to the park? In which month is Ellie’s picnic?”*
- Pupils match holiday events with correct months.

Plenary

Ask pupils:

- “What is your favourite month? Why?”
- “When is your birthday?”

- “Which season do you like most?”
- “How many months are in a year?”

TEACHER’S REFLECTION

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

Comparison: Part Two

Student Learning Outcomes	Suggested time: 8 Lessons
<ul style="list-style-type: none"> • Use language to compare the sizes of objects (e.g. big', little', small'). • Describe and compare objects using length, weight, height, and temperature (hot & cold) as measurement attributes. 	

BIG AND SMALL

Manipulatives

- Flashcards of big and small objects
- Classroom objects (toys, books, blocks, balls)
- Two boxes labelled “Big” and “Small”
- Number blocks for tower-building activity

Objective

The objective of this lesson is to help children differentiate between big and small objects and use comparative language to describe them. Pupils will build foundational vocabulary to compare objects in terms of size, linking the concept to real-world items.

Methodology

Pre-emptive Pitfalls:

Children may mistakenly label objects based on colour, shape, or familiarity rather than size. Teachers must consistently demonstrate size differences with clear hand gestures, tone, and facial expressions. Reinforce with multiple real-life examples and manipulatives.

Conceptual Development:

The teacher writes the words *big, bigger, biggest, small, smaller, smallest* on the board and explains their meanings. During **circle time**, pupils are asked to look around the classroom and identify things that are big and small. The teacher links objects to real-life examples:

- “This is a big car. This is a small ball. The car is bigger than the ball. The ball is smaller than the car.”
- “Look at these toys. Which one is bigger? Which one is smaller?”

Pupils are encouraged to touch and handle objects, feeling the difference between big and small. Visual aids are shown, and the teacher repeats the key phrases until children grasp the vocabulary.

Main Activity:

The **Two Boxes Activity**: Two boxes labelled “Big” and “Small” are placed in the centre. Pupils are divided into two groups, one with big objects and the other with small objects. Each pupil comes forward to place their object in the correct box while describing it:

- “This is a big teddy. I am putting it in the big box.”
- “This is a small block. It goes in the small box.”

The teacher reinforces the vocabulary after each response and ensures pupils repeat the correct comparative sentences.

Learning Curve

Initially, children may only identify objects as *big* or *small*. With repeated practice and guided phrases, they begin to understand comparative terms such as *bigger*, *smaller*, *biggest*, *smallest*. Linking vocabulary to familiar objects (toys, balloons, furniture) helps deepen understanding.

Exposition

The teacher explains: “*Some objects are big, and some are small. If one object is bigger than another, it means it takes up more space. If something is smaller, it takes up less space. The biggest is the largest one, and the smallest is the tiniest one.*”

Multisensory Learning Stations

- **Tactile-Kinaesthetic**: Pupils use number blocks to build big and small towers. They describe their towers: “*My tower is big. His tower is small.*”
- **Visual**: Pupils match flashcards of big and small objects (e.g., elephant and mouse, car and bicycle).
- **Auditory**: Pupils sing along to a *Big and Small* song with actions (stretch arms wide for big, make hands small for small).

Textbook Practice Pages:

Page 75-76

Plenary

Play “*I Spy*”: Teacher says, “*I spy something big in the classroom.*” Pupils guess and point. Repeat for small.

Ask pupils:

- “Can you show me something bigger than your pencil?”
- “Can you show me something smaller than your bag?”

ROUGH AND SMOOTH

Manipulatives

- Classroom objects (balls, books, toys, blocks)
- Natural materials (leaves, bark, cotton, stones, fruits)
- Fabric samples (silk, velvet, cotton, sponge)
- Mystery bag for guessing game

Objective

The objective of this lesson is to build children’s awareness of different textures through tactile experiences. By the end of the lesson, pupils will distinguish between rough and smooth textures and begin associating them with real-world objects.

Methodology

Pre-emptive Pitfalls:

Since this topic is best learned through sensory input, children must be encouraged but not forced to touch objects—especially those with sensory sensitivity. Teachers should provide repeated modelling, consistent vocabulary, and visuals to reinforce understanding.

Introduction & Conceptual Development:

The teacher writes *rough* and *smooth* on the board and introduces their meanings with real objects. For example:

- “Rough means bumpy or uneven. It is not pleasant to touch. This bark is rough.”
- “Smooth means flat or even. It feels soft and pleasant. This silk cloth is smooth.”

During **circle time**, the teacher demonstrates different rough and smooth objects such as bark, silk, velvet, sponge, play dough, cotton balls, rice, fruits, stuffed animals, and stones. Each object is passed around (only if pupils are comfortable). The teacher uses reinforcing phrases:

- “This bark is rough. It is bumpy and hard.”
- “This silk feels smooth because it is soft and even.”
- “Does this stone feel scratchy?”
- “What about this feather? Isn’t it smooth and ticklish?”

Children are invited to repeat after the teacher in exaggerated tones: “*Smooooth!*” ... “*Roouough!*”

Learning Curve

Initially, children may only identify objects by preference (*soft things they like, hard things they don't*). With repeated modelling, they gradually learn to associate the correct vocabulary (*rough vs. smooth*) with textures. They should also begin categorizing objects as pleasant or unpleasant to touch.

Exposition

The teacher explains: *"Textures help us know how something feels. Some things are rough and scratchy. Others are smooth and soft. We use our hands to feel textures and learn about objects."*

Multisensory Learning Stations

- **Auditory:** Play songs or short videos about textures. Encourage pupils to chant "rough, smooth" as a rhythm.
- **Visual:** Take pupils for a "Texture Walk" around the classroom, playground, or nursery to spot rough and smooth objects.
- **Tactile-Kinesthetic:** Guessing Game – Pupils are divided into two groups. One child is blindfolded while their partner chooses an object from a bag. The blindfolded pupil feels and guesses whether it is rough or smooth.

Textbook Practice Pages:

Page 77

Plenary

The teacher asks: *"Can you find rough and smooth objects around the classroom?"* Pupils categorize items into two groups on the board:

- **Things I like to touch** (pleasant/smooth)
- **Things I don't like to touch** (unpleasant/rough)

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WIDE AND NARROW

Manipulatives

- Ribbons of different widths
- Straws, crayons, pencils, markers
- Toy cars, trains, planes
- Doors, windows, and cupboards in the classroom
- Masking tape for floor paths

Objective

The objective is for children to distinguish between wide and narrow objects, understand width as a measurement across, and apply this understanding to classroom and environmental objects.

Methodology

Pre-emptive Pitfalls:

Children might confuse width with length. Teachers should explicitly demonstrate the difference by rotating objects to show width perpendicular to length.

Introduction & Conceptual Development:

The teacher writes *wide* and *narrow* on the board and explains the terms with real objects such as crayons, pencils, markers, ribbons, papers, doors, and windows. For example:

- “This crayon is wide. This pencil is narrow. The crayon is wider than the pencil.”
- “The marker is the widest, and the pencil is the narrowest.”
- “Look at this door and this window. Which one is wider? Which is narrower?”

The teacher uses body movements (“*Stretch your arms wide! Now bring them close together – narrow.*”) to reinforce the concept physically.

Railway Track Activity:

Using a toy train and tunnel, the teacher demonstrates that the tunnel is wide enough for the train but not wide enough for an airplane.

Floor Path Activity:

With masking tape, the teacher creates wide and narrow paths on the floor. Pupils test with toy cars, planes, or blocks to decide which objects can move along each path.

Learning Curve

At first, children may confuse wide with long. With guided practice and repetition, they begin to accurately compare objects by width and use the correct terms (*wide, wider, widest; narrow, narrower, narrowest*).

Exposition

The teacher explains: “*Width is how broad or narrow something is from side to side. Some objects are wide, and others are narrow. We can compare them and say which is wider or narrower.*”

Multisensory Learning Stations

- **Tactile-Kinesthetic:** Floor path game – children drive toy cars along wide/narrow taped paths.
- **Visual:** Flashcards of wide and narrow objects or comparing classroom furniture.
- **Auditory:** Play a song about opposites, inserting wide/narrow vocabulary.

Textbook Practice Pages:

Page 77

Plenary

The teacher points to objects around the classroom (e.g., blackboard vs. ruler, table vs. chair) and asks: “*Which is wide? Which is narrow?*” Pupils answer chorally and individually.

THICK AND THIN

Manipulatives:

- Straws
- Books
- Ropes
- Ribbons
- Strings
- Paint brushes
- Crayons
- Markers
- Play dough
- Logs
- Twigs

Objective:

The objective of this lesson is to help children distinguish between thick and thin objects using real-life examples, sensory exploration, and comparative vocabulary.

Methodology:

Pre-emptive pitfalls include children confusing thick and thin with wide and narrow. To address this, the teacher demonstrates with objects of equal length but different breadths, such as cardboard versus paper. The teacher writes the words “Thick” and “Thin” on the board and introduces them using objects like straws, books, ropes, ribbons, strings, and paint brushes. Pupils are encouraged to touch the objects for sensory exploration. During circle time, the teacher models language such as: “This marker is thick. This pencil is thin. The marker is thicker than the pencil. The pencil is thinner than the marker.” Children are also guided to make multi-comparisons: “The marker is the thickest. The pencil is the thinnest. The crayon is thicker than the pencil but thinner than the marker.” Activities include drawing lines with different tools (pencil, crayon, marker) to compare thickness, rolling play dough into thick and thin pieces, and comparing body parts (arm vs. finger). Children also explore the playground, comparing tree trunks, branches, logs, and twigs.

Learning Curve:

Children may initially confuse thickness with width. Through repeated hands-on practice, they develop confidence in distinguishing thick from thin and in applying the correct vocabulary.

Exposition:

The teacher explains: “Thick means there is a longer distance between the sides. Thin means the opposite sides are close together. We can compare them by saying thicker or thinner.”

Multisensory Learning Stations:

Tactile-kinesthetic activities involve making thick and thin objects with play dough. Visual learning includes comparing flashcards and illustrations. Auditory learning is reinforced with a song that incorporates thick and thin vocabulary.

Textbook Practice Pages:

Page 78

Plenary:

The teacher asks: “Can you name some thick and thin objects from your home?” Pupils share examples.

LONG AND SHORT / TALL AND SHORT

Manipulatives:

- Ribbons
- Strings
- Pencils
- Bottles
- Block towers
- Spaghetti strands
- Rulers

Objective:

The objective is to help children differentiate between length and height, and to apply the terms long, short, tall, longer, shorter, taller, and tallest accurately in familiar contexts.

Methodology:

Pre-emptive pitfalls include difficulty in identifying start and end points. The teacher provides tangible objects with clear boundaries. “Long,” “Tall,” and “Short” are written on the board, and two lines of different lengths are drawn to explain comparisons. The teacher demonstrates that “Tall” is for vertical height (trees, buildings, people) while “Long” is for horizontal length (roads, ribbons, threads). Circle time includes phrases like: “This rope is long. This one is short.” “This bottle is tall. This cup is short.” Children are asked to find and compare objects using the vocabulary. Sorting activities with boxes labeled “long” and “short” allow children to categorize objects and justify their choices.

Learning Curve:

Children may initially confuse tall with long, but with consistent reinforcement and practical examples, they develop the ability to differentiate and apply the vocabulary accurately.

Exposition:

The teacher explains: “Tall means high from bottom to top. Long means stretched out from one end to another. Short means less in height or length. We compare to see which is longer, shorter, taller, or shorter.”



Multisensory Learning Stations:

Auditory learning is reinforced through songs. Visual learning includes laminated templates and object comparisons. Tactile-kinesthetic learning involves using play dough to create long, short, tall, and short objects.

Textbook Practice Pages:

Page 79-80

Plenary:

The teacher asks: “Find something longer than your pencil in the classroom.” Pupils search and respond.

LIGHT AND HEAVY

Objective:

The objective is for children to use real objects and tools to identify and compare heavy and light, and to apply these terms accurately.

Methodology:

The teacher begins with a recap from the previous year, asking children to name heavy and light objects. “Heavy” and “Light” are written on the board, with real objects like feathers, stones, leaves, toys, fruits, and books used for demonstrations. Circle time includes modeling language: “This feather is light. I can lift it with one finger. This rock is heavy. It is hard to hold.” The teacher demonstrates a pan balance scale, comparing objects and encouraging predictions about which side will go down. Activities include guessing the weight of objects, tower building with heavy and light items, and observing floating/sinking objects in water.

Learning Curve:

Children may assume size determines heaviness, but with practice they learn that weight is the deciding factor. Using scales helps them refine this understanding.

Manipulatives:

- Feathers
- Stones
- Leaves
- Toys
- Blocks
- Fruits
- Books
- Pan balance scale
- Water bucket

Exposition:

The teacher explains: “Heavy means difficult to lift. Light means easy to lift. We can compare them by saying heavier or lighter.”

Multisensory Learning Stations:

Tactile-kinesthetic activities involve lifting objects and using balance scales.

Visual learning includes water activities showing floating and sinking.
Auditory learning is reinforced with songs about heavy and light.

Textbook Practice Pages:

Page 81

Plenary:

The teacher asks: “Can you think of heavy and light objects at your house?”

NON-STANDARD UNITS

Manipulatives:

- Blocks
- Pencils
- Crayons
- Mats
- Classroom objects

Objective:

The objective is for pupils to understand the concept of measuring length or height using non-standard units and to practise consistent measuring.

Methodology:

The teacher begins by recalling “long,” “short,” and “tall” using classroom objects. The concept of measurement is introduced: “Why do we measure things?” Children learn that while rulers are standard, we can measure with non-standard units. Demonstrations include measuring towers with handspans, mats with footspans, and objects with pencils or crayons. The teacher highlights that different results may occur depending on the unit used. Group activities allow children to measure classroom objects, record results, and share with peers. A scavenger hunt challenges children to find objects of specific measurements (e.g., “3 pencils tall,” “5 blocks long”).

Learning Curve:

Children learn that consistent use of one unit is necessary for accurate measurement. With practice, they apply non-standard units confidently.

Exposition:

The teacher explains: “We can measure how tall or long something is by using the same object repeatedly. Today we use our hands, feet, pencils, and blocks.”

Multisensory Learning Stations:

Tactile-kinesthetic: Pupils measure objects with hands and feet.

Visual: Results are recorded and compared on the board.

Auditory: Children discuss results in groups.

Textbook Practice Pages:

Page 82-83

Plenary:

The teacher asks: “What did you learn about different ways to measure objects?”

11

Position

Student Learning Outcomes	Suggested time: 3 Lessons
<ul style="list-style-type: none">Use language related to location (prepositions above, below, under, over, etc)	

UP AND DOWN

Manipulatives

- Box
- Basket
- Vase
- Pencil holder
- Table and chairs
- Bookshelf
- Toys
- Flashcards with positional vocabulary
- Placards with labels

Objective

The objective of this unit is to help the students develop spatial awareness and foundational language for describing where objects are in relation to one another. Activities like placing objects “on top” or “under” a box, or moving “around” a circle, integrate movement with learning, reinforcing concepts kinesthetically.

Methodology

Conceptual understanding: Start by playing a song. Next, explain the following with gestures by pointing up and down. Demonstrate the terms using various manipulatives. For example, use balloons and balls. Get pupils to repeat the vocabulary.

- Up means - going upward, towards the sky
- Down means - going downward, towards the ground
- The balloon is going up.

- The plane is taking off – going up. The plane is landing – going down.
- The bird is flying up. The bird is flying down to her nest.
- The ball is coming down.
- We go up the stairs. We go down the stairs.
- The car is going up the hill. The car is going down the hill.
- The leaves are falling.
- He fell.

Nature walk: Take children to the playground, under strict supervision. Explain the terms up and down by calling out pupils to climb the slide stairs, then go down the slide; the see-saw going up and down, etc. Ensure safety.

Simon Says: Get pupils to stand and arrange their chairs. Then provide instructions – Simon Says:

- Stand up
- Jump up and down
- Bend down

Object manipulation: Call two pupils to the front desk to build a block tower. Ask the first one to point at the block that is up. Ask the second child to point at the block that is down. Use toy airplanes to demonstrate going up – taking off – and going down – landing. Show balloons going up and balls going down. Stack toys, or paper cups, and ask students to guess which ones are up and which ones are down.

Drawing: Sort students into pairs. Have them draw things that go up and down, in two separate columns. After completion, get them to display their drawings and label the objects, using the vocabulary.

Learning Curve

The learning curve for teaching pre-primary children the concept of position begins with simple exposure to spatial vocabulary such as “in,” “on,” “under,” and “next to,” often through playful, hands-on activities. As children become familiar with these terms, they progress to applying them in context—following directions, identifying positions in stories or games, and using the words in conversation. With continued practice, learners begin to confidently describe and reason about object placement, both verbally and visually. This gradual progression—from recognition to application to expression—builds a strong foundation for spatial awareness, early math skills, and effective communication.

Pre-emptive pitfalls: Pupils may not be able to fully grasp positional vocabulary, unless lessons are movement-based. Use various manipulatives for demonstration, within and outside the classroom. Use consistent, clear language with gestures.

Main Activity

The **Positional Treasure Hunt** is a highly engaging and developmentally rich activity to introduce and reinforce spatial vocabulary in a playful, hands-on way.

To begin, the teacher prepares the classroom by hiding small objects or picture cards in various locations that lend themselves to positional descriptions—such as under the table, behind the bookshelf, next to the window, or inside the box. These hiding spots are chosen intentionally to reflect key positional terms being taught. The teacher then gives verbal clues using these terms, prompting children to listen attentively and move around the room to locate the hidden items.

As children search, they are actively applying their understanding of spatial concepts through physical exploration, which strengthens both their comprehension and kinesthetic memory. Once an item is found, the learner is encouraged to describe its location using the correct positional language—for example, “I found the card behind the chair.” This verbal reflection reinforces vocabulary and builds expressive language skills. To extend the activity, children can take turns giving clues to their peers, which fosters confidence, peer interaction, and deeper mastery of the terms.

The simplicity of the setup—requiring only small objects and a few hiding spots—makes it ideal for any classroom environment. It supports auditory, visual, and kinesthetic learners simultaneously, and can be adapted to different levels by introducing more complex clues or incorporating number and color descriptors.

Multisensory Learning Stations

Tactile-Kinesthetic Learning

Pupils raise their hands up and down while repeating positional vocabulary, physically reinforcing the meaning through movement and muscle memory.

Visual Learning

Laminated templates showing objects in “up” and “down” positions are displayed one at a time. Pupils observe and respond by identifying the correct positional term, strengthening visual recognition.

Auditory Learning

Songs and sing-along activities are used to introduce and reinforce positional vocabulary through rhythm, melody, and repetition, supporting auditory memory and engagement.

Textbook Practice Pages:

Pages: 84-85

Plenary

Demonstrate objects going up and down. Ask students to give the correct answer.

INSIDE AND OUTSIDE

Recap the concept of 'Up and Down' using random objects from the classroom. Mention that today, we are going to learn about objects that are inside or outside.

Conceptual understanding: Begin with a brief discussion about the location of things.

Ask: Where do you keep your toys? Where do you keep your books? Where do you sleep at night? Where do you eat your meals? Explain the following vocabulary using manipulatives, gestures, and visual aids –

- **Inside** – means within something, for example, box, bin, house, container.
- **Outside** – means beyond boundaries or around something, for example playground, garden.

Sorting activity: Arrange toys (one for each pupil) labelled with 'INSIDE' and 'OUTSIDE'. On a mat, place a basket with placards of the same label – one inside the basket and one outside the basket. Line up pupils and call them out one at a time to pick any toy and place it in the relevant location. Correct gently wherever required. Keep reinforcing the vocabulary and use questions: Is it inside or outside?

Outdoor activity: Take pupils to the nursery or playground to reinforce the concept. Ask pupils questions.

Multisensory Learning Stations

- **Auditory Learning:** Play songs and sing along.
- **Visual learning:** Display pictures of objects that are typically found inside or outside. Show each picture one by one and ask students to guess. Ask why they think so.
- **Tactile-Kinesthetic Learning: Scavenger Hunt:** Arrange a scavenger hunt around the classroom. Place some objects within boxes, baskets, and containers. Divide pupils into groups of 4-5. Have each group find objects that are inside, in different corners of the classroom. Time them 30 seconds. The group with the most amount of objects wins!

Textbook practice pages

- **Page 86:** Look at the picture. Can you spot Ellie? Is she inside or outside the tent? What about her friend? Students then attempt the exercise individually.

Plenary

Ask pupils what they learned about 'inside' and 'outside'. What do you keep inside your bag? What do you see outside your classroom?

ABOVE AND BELOW

Conceptual development: Begin by playing a number song. Explain the following terms using visual aids, manipulatives and gestures.

- **Above** – means higher than another object. The sun is above us. The clouds are above us. The birds are above the trees.
- **Below** – means lower than another object. The floor is below our feet.

Object placement: Demonstrate verticality by positioning objects above your head, above the table or chair and below the table or chair. Explain: I placed the ball above my head. Place the ball under the chair and ask: Where is the ball now? Repeat this step with various other toys.

Picture sorting: Divide students into groups of 4-5. Hand out picture cards of objects that are above and below to each pupil. Place 2 baskets labelled ABOVE and BELOW on the front desk. Call each group one by one to place the picture cards in the relevant basket. Ask them why they chose that basket.

Name the objects: Ask students to look around the classroom and name objects that are above or below something.

Multisensory Learning Stations

Play songs that include positional vocabulary and encourage children to sing along. This helps reinforce concepts through rhythm, repetition, and melody, supporting auditory memory and engagement.

Visual Learning

Use a “Simon Says” style game where pupils follow instructions like “Put the toy above the table” or “Place the ball below the chair.” This allows learners to visually interpret and act out positional cues in real time.

Tactile-Kinesthetic Learning

Take children on a nature walk to explore their surroundings. Ask them to identify objects and describe whether they are above or below something, combining movement, observation, and language in a real-world context.

Textbook Practice Pages:

Page 87

Plenary

Show picture cards and ask if the objects are above or below. Emphasise correct vocabulary usage.

TEACHER'S REFLECTION

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

