



ESSENTIAL CODING

Basic 1 Facilitator's Guide





Essential Coding

Basic 1

Facilitator's Guide

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Introduction

Overview of the Essential Coding Series and Facilitator's Guide

The books in the **Essential Coding** series introduce young learners to the foundations of computational thinking and early coding skills through engaging visual activities and problem-solving tasks. These activities encourage learners to observe carefully, think logically, recognise patterns, and solve challenges step by step.

The content is organised into four progressive levels that gradually develop learners' thinking abilities—from basic reasoning to algorithmic thinking. Each level focuses on important skills such as counting, comparison, classification, pattern recognition, logical reasoning, and step-by-step problem solving.

Every activity includes a “**Completed in ____ Min.**” section to help teachers manage classroom time effectively and encourage learners to develop focus and time awareness. The book also includes **QR codes** linked to educative videos that support better understanding of concepts through visual learning and guided explanation.

At the end of each level, learners complete a **Coding Challenge** activity to apply the skills learned through observation, reasoning, and logical thinking.

The book also includes a **Progress Report** section to help teachers evaluate learners' development in four key computational thinking areas:

- ❖ Reasoning
- ❖ Critical Thinking & Analysis
- ❖ Data Processing
- ❖ Algorithmic Intelligence

Teachers can use this section to record progress, provide feedback, and identify areas where additional support may be needed.

Using This Facilitator's Guide Effectively

This Facilitator's Guide is designed to help teachers conduct lessons in a structured and meaningful manner. Before teaching, teachers are encouraged to read the “Overview Section”, “How This Book Teaches Coding Without Computers”, and “Structure of Learning Levels” sections to understand the learning approach and progression.

For every concept, teachers should follow the sequence provided in the guide:

- ❖ **Diagnostic Assessment:** (includes Diagnostic Check, Remediation Support, and Extension Activities)
- ❖ **Facilitator's Page-wise Teaching Instructions:** (includes Teacher Instructions, Teacher-Learner Interaction, Teacher Guidance, Reinforcement, Coding Link, and Review Exercise)
- ❖ **Level Completion Components:** (includes Review Exercise, Differentiated Learning, and Teacher Closure)

This structured flow helps teachers introduce concepts clearly, observe learner understanding, provide support where needed, and connect activities with computational thinking and early coding skills.

How This Book Teaches Coding Without Computers

■ Building Foundations for Coding

- ❖ Coding starts with thinking, not typing
- ❖ Every activity builds a coding skill
- ❖ Learners are developing computational thinking
- ❖ These skills prepare learners for real programming

■ Teaching Philosophy

Coding does not begin with computers. It begins with thinking.

This book develops computational thinking skills, which are the foundation of coding:

- ❖ Observation
- ❖ Logical reasoning
- ❖ Pattern recognition
- ❖ Sequencing
- ❖ Decision-making

Every activity in this book is intentionally designed to build a coding skill.

■ What Teachers Must Understand

Coding = Giving clear instructions to solve a problem

Learners are already “coding” when they:

- ❖ Count
- ❖ Follow steps
- ❖ Identify patterns
- ❖ Make decisions

Your role is to help learners see the connection.

■ Coding Link

Whenever you see this icon, explain to learners how the activity relates to coding.

■ Teaching Strategy

Every lesson should follow this flow:

- ❖ Introduce concept (real-life example)

- ❖ Demonstrate activity
- ❖ Guide learners step-by-step
- ❖ Ask questions
- ❖ Reinforce learning
- ❖ Explain Coding Link

■ Classroom Strategy

- ❖ Encourage learners to think aloud
- ❖ Allow trial and error
- ❖ Use real objects when possible
- ❖ Keep lessons interactive

■ Professional Positioning

Teachers should communicate clearly:

“This is not just an activity. This is coding thinking.”

■ Final Note for Teachers

By teaching this book well, you are not just teaching activities.

You are:

- ❖ Building problem solvers
- ❖ Developing logical thinkers
- ❖ Preparing future programmers

Every activity is a step into coding

■ Inclusive Learning Statement

This Facilitator’s Guide promotes inclusive and learner-centred education by encouraging teachers to support learners with diverse learning needs through differentiated instruction, peer collaboration, visual aids, oral participation, hands-on activities, movement-based learning, and flexible assessment strategies. Teachers should ensure that all learners, including learners requiring additional learning support, are actively involved in classroom activities, discussions, problem-solving tasks, and coding-related experiences in a respectful and supportive learning environment.

Structure of Learning Levels

Level 1: Reasoning

This level develops learners' basic observation and reasoning skills. Activities focus on recognising numbers, identifying shapes, and understanding simple patterns.

■ 1.1: Numbers

Learners are introduced to basic number recognition and counting. Through visual activities such as counting objects, writing missing numbers, and sequencing numbers, learners understand how numbers represent quantity and order.

■ 1.2: Shapes

This concept helps learners identify basic geometric shapes such as circle, triangle, square, and rectangle. Activities involve tracing, colouring, matching objects with shapes, and counting shapes to strengthen visual recognition.

■ 1.3: Patterns

Learners explore repeating sequences using numbers, letters, and colours. By identifying and completing patterns, learners develop early logical thinking and prediction skills.

..... Coding Challenge - 1: Find the Pair!

This challenge strengthens observation skills by asking learners to match similar objects (such as socks) to form pairs.

Level 2: Critical Thinking & Analysis

This level helps learners develop analytical and comparison skills by observing details, identifying differences, and solving puzzles.

■ 2.1. Even and Odd Numbers

Learners understand how numbers can be grouped into even numbers (complete pairs) and odd numbers (one item left unpaired). Colouring activities reinforce this concept.

■ 2.2. Same or Different

This concept develops visual comparison skills. Learners identify pictures that are exactly the same or different, improving attention to detail.

■ 2.3. Odd One Out

Learners analyse groups of pictures or words and identify the item that does not belong. This builds classification and reasoning abilities.

■ 2.4. Find the Difference

Learners compare two similar pictures and locate small differences, enhancing observation and concentration skills.

■ 2.5. Picture Puzzle

This activity helps learners arrange pieces correctly to complete a picture, developing spatial reasoning and problem-solving skills.

■ 2.6. Directions

Learners follow paths in a maze or map to reach a goal, helping them understand movement, directions, and path-finding.

■ 2.7. Logical Thinking

Learners solve simple real-life problems by analysing clues and choosing the correct option.

..... Coding Challenge - 2: Fly High

Learners observe arrows and count birds moving in different directions, strengthening understanding of direction and comparison.

Level 3: Data Processing

This level introduces learners to the idea of organising and interpreting information through classification, grouping, and decoding activities.

■ 3.1. What Goes Together

Learners identify objects that are related or used together, helping them understand how information can be grouped logically.

■ 3.2. Belonging

Learners classify objects based on where they belong, such as sky, water, or kitchen, introducing the concept of categorisation.

■ 3.3. Follow the Clues

Learners solve puzzles by analysing clues, which develops reasoning and inference skills.

■ 3.4. Secret Message

Learners decode hidden messages using a code chart, introducing the idea of coding and decoding information.

..... Coding Challenge - 3: Animal Hunt

Learners carefully observe a picture to identify hidden animals, strengthening visual perception and attention.

Level 4: Algorithmic Intelligence

This level introduces learners to algorithmic thinking, which is the foundation of coding.

■ 4.1. Step-by-Step

Learners understand that tasks can be completed by following steps in a specific order. Activities include arranging steps and drawing pictures step by step.

■ 4.2. Decision Making

Learners practise making choices based on situations (Yes/No questions), helping them understand how decisions are made logically.

■ 4.3. Loops: Repetition

Learners learn that some actions repeat again and again, such as the movement of a Ferris wheel or a clock. This introduces the concept of loops in coding.

..... Coding Challenge - 4: Hidden Number

Learners identify numbers hidden behind pictures, applying observation and logical reasoning.

Diagnostic Assessment

Level 1: Reasoning

Concept 1.1: Numbers

(LB Pages 8–12)

⇒ Activity A: Count and Circle

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Count numbers from 1–5 orally.
- ❖ Identify numbers shown on flashcards.
- ❖ Count classroom objects such as pencils, books, or crayons.
- ❖ Match numbers with groups of objects.

Observe learners who:

- ❖ Skip numbers while counting.
- ❖ Count the same object more than once.
- ❖ Cannot match numbers with quantities.
- ❖ Need help recognising numerals.

Remediation Support

For learners struggling with counting:

- ❖ Use bottle tops, beads, or blocks for hands-on counting.
- ❖ Allow learners to touch each object while counting.
- ❖ Count slowly together as a group.
- ❖ Arrange objects in straight rows for easy counting.

For learners struggling with number recognition:

- ❖ Use large colourful number flashcards.
- ❖ Match numeral cards with picture cards.
- ❖ Practise tracing numbers using fingers or in sand.

Extension Activity

(Work in Pairs / Groups)

Ask fast learners to:

- ❖ Count backwards from 10.
- ❖ Count additional classroom objects independently.
- ❖ Group objects into equal sets.
- ❖ Create their own counting groups for classmates.

⇒ Activity B: Count the Fingers

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Show numbers using their fingers.
- ❖ Count fingers raised by the teacher.
- ❖ Identify numbers from 1–10.
- ❖ Match finger quantities with numerals.

Observe learners who:

- ❖ Confuse finger quantities.
- ❖ Count too quickly and make mistakes.
- ❖ Experience difficulty recognising matching numbers.
- ❖ Require additional guidance while counting.

Remediation Support

For learners struggling with counting fingers:

- ❖ Use finger rhymes and counting songs.
- ❖ Encourage learners to count their own fingers slowly.
- ❖ Demonstrate counting from left to right.
- ❖ Pair learners for peer practice.

For learners struggling with number writing:

- ❖ Provide number tracing practice.
- ❖ Use dotted numerals for guided writing.
- ❖ Practise air-writing numbers together.

Inclusive Support

- ❖ Allow learners requiring additional learning support to count using physical objects such as counters, bottle tops, or number cards.
- ❖ Encourage learners to use verbal counting before writing numbers.
- ❖ Allow learners with physical disabilities to point, speak, or respond orally where writing may be difficult.
- ❖ Use enlarged finger-count visuals and classroom demonstrations for learners with visual support needs.
- ❖ Pair learners requiring additional support with supportive peers during counting activities.

- ❖ Use finger rhymes, songs, and movement activities to support learners who benefit from multi-sensory learning experiences.
- ❖ Give additional time to learners requiring extended counting or writing support.

Extension Activity

(Work in Pairs)

Ask fast learners to:

- ❖ Show numbers using different finger combinations.
- ❖ Add two finger groups together.
- ❖ Play quick finger-count games with classmates.
- ❖ Write the numbers independently.

➞ Activity C: Complete the Number Path

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Recite numbers from 1–10 in order.
- ❖ Identify missing numbers orally.
- ❖ Arrange number cards sequentially.
- ❖ Count forward step by step.

Observe learners who:

- ❖ Reverse number order.
- ❖ Cannot continue counting sequences.
- ❖ Need prompting to identify missing numbers.
- ❖ Skip numbers while counting.

Remediation Support

For learners struggling with sequencing:

- ❖ Use a floor number line.
- ❖ Practise counting aloud together.
- ❖ Give shorter sequences first (1–5).
- ❖ Allow learners to move physically along number cards.

For learners needing visual support:

- ❖ Display a classroom number chart.
- ❖ Use colour-coded number sequences.
- ❖ Point to numbers while counting together.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Complete sequences beyond 10.
- ❖ Create their own number paths.
- ❖ Fill missing numbers independently.
- ❖ Count backwards along the path.

➞ Activity D: Count the Objects

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Count groups of classroom objects.
- ❖ Match numbers with quantities.
- ❖ Identify which group has more or fewer objects.
- ❖ Count objects one by one.

Observe learners who:

- ❖ Lose track while counting.
- ❖ Count objects randomly.
- ❖ Count the same object twice.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with counting:

- ❖ Encourage one-to-one pointing while counting.
- ❖ Separate objects into rows or groups.
- ❖ Use smaller groups first.
- ❖ Count aloud together slowly.

For learners struggling with quantity recognition:

- ❖ Compare two groups visually.
- ❖ Use real classroom objects.
- ❖ Practise matching quantities with numerals.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Compare quantities between groups.
- ❖ Arrange groups from smallest to largest.
- ❖ Create their own counting sets.
- ❖ Write number names beside quantities.

⇒ Activity E: Complete the Number Sequences

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify numbers before and after.
- ❖ Complete oral counting patterns.
- ❖ Arrange number cards in order.
- ❖ Read number sequences aloud.

Observe learners who:

- ❖ Cannot predict the next number.
- ❖ Forget sequence order.
- ❖ Need repeated clues.
- ❖ Skip numbers in sequences.

Remediation Support

For learners struggling with sequences:

- ❖ Use number charts and number lines.
- ❖ Practise forward counting repeatedly.
- ❖ Begin with shorter sequences.
- ❖ Encourage counting aloud step by step.

For learners needing extra support:

- ❖ Use coloured counters to represent numbers.
- ❖ Cover one number at a time.
- ❖ Provide guided sequence practice.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Create their own number sequences.
- ❖ Complete backward counting patterns.
- ❖ Identify missing numbers in longer sequences.
- ❖ Challenge classmates with number puzzles.

Concept 1.2: Shapes

(LB Pages 13–18)

⇒ Activity: Introduction to Basic Shapes

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Name common shapes seen in the classroom.
- ❖ Point to circles, triangles, squares, and rectangles.

- ❖ Trace shapes in the air using their fingers.
- ❖ Identify shapes from flashcards.

Observe learners who:

- ❖ Confuse shape names.
- ❖ Cannot identify sides or corners.
- ❖ Need repeated visual support.
- ❖ Struggle to distinguish between square and rectangle.

Remediation Support

For learners struggling with shape recognition:

- ❖ Use real classroom objects to demonstrate shapes.
- ❖ Provide shape cut-outs for touching and tracing.
- ❖ Repeat shape names through rhymes and games.
- ❖ Compare one shape at a time.

For learners struggling with understanding sides and corners:

- ❖ Count sides together using fingers.
- ❖ Point to corners while naming them.
- ❖ Use large floor shapes for demonstration.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Find shapes around the classroom.
- ❖ Draw additional examples of each shape.
- ❖ Describe shapes using sides and corners.
- ❖ Create simple pictures using shapes.

⇒ Activity A: Trace, Draw, and Name the Shapes

Diagnostic Check

(Work Individually)

Before the activity, ask learners to:

- ❖ Identify the shapes shown by the teacher.
- ❖ Trace shapes in the air.
- ❖ Match shapes with classroom objects.
- ❖ Hold and use pencils correctly.

Observe learners who:

- ❖ Struggle to trace neatly.
- ❖ Cannot identify shapes correctly.
- ❖ Need support with pencil control.
- ❖ Forget shape names while drawing.

Remediation Support

For learners struggling with tracing:

- ❖ Use dotted tracing sheets.
- ❖ Guide hand movement gently.
- ❖ Allow extra tracing practice on slates or paper.
- ❖ Demonstrate tracing slowly step by step.

For learners struggling with naming shapes:

- ❖ Repeat shape names aloud together.
- ❖ Use shape flashcards regularly.
- ❖ Match shape cards with real objects.

Extension Activity

(Work Individually)

Ask fast learners to:

- ❖ Draw shapes independently without tracing.
- ❖ Create pictures using different shapes.
- ❖ Label shapes correctly on their own.
- ❖ Draw objects that match each shape.

⇒ Activity B: Colour the Shapes and Count Them

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify circles, triangles, and squares.
- ❖ Recognise the given colour code.
- ❖ Count small groups of shapes.
- ❖ Match colours with instructions.

Observe learners who:

- ❖ Ignore colour instructions.
- ❖ Miscount shapes.
- ❖ Confuse shape types.
- ❖ Need help following directions.

Remediation Support

For learners struggling with shape identification:

- ❖ Count one type of shape at a time.
- ❖ Highlight shapes using finger pointing.
- ❖ Compare shapes before counting.
- ❖ Use coloured shape cut-outs.

For learners struggling with counting:

- ❖ Count aloud together slowly.
- ❖ Mark counted shapes lightly with a finger.
- ❖ Use smaller groups first.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Compare which shape appears the most.
- ❖ Create their own colour code activity.
- ❖ Count additional hidden shapes in the picture.
- ❖ Draw and colour their own shape picture.

⇒ Activity C: Connect the Objects with the Correct Shapes

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Match familiar objects with shapes.
- ❖ Identify objects that are round, square, or triangular.
- ❖ Sort classroom objects by shape.
- ❖ Name shapes correctly.

Observe learners who:

- ❖ Cannot relate objects to shapes.
- ❖ Guess answers without observing carefully.
- ❖ Need repeated teacher guidance.
- ❖ Confuse similar shapes.

Remediation Support

For learners struggling with object-shape matching:

- ❖ Use real-life classroom objects.
- ❖ Compare one object and one shape at a time.
- ❖ Discuss shape features clearly.
- ❖ Encourage learners to touch and observe objects.

For learners needing extra support:

- ❖ Demonstrate examples slowly.
- ❖ Use picture cards for matching practice.
- ❖ Repeat shape vocabulary regularly.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Draw more objects for each shape.
- ❖ Explain why objects match certain shapes.
- ❖ Sort classroom items into shape groups.
- ❖ Create their own matching activity.

⇒ Activity D: Counting Different Shapes

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify triangles, circles, squares, and rectangles.
- ❖ Count small groups of shapes accurately.
- ❖ Sort shapes into categories.
- ❖ Compare groups with more or fewer shapes.

Observe learners who:

- ❖ Experience difficulty identifying shapes while counting.
- ❖ Count the same shape more than once.
- ❖ Experience difficulty distinguishing between rectangles and squares.
- ❖ Require additional guidance during counting activities.

Remediation Support

For learners struggling with counting:

- ❖ Count one shape type at a time.
- ❖ Use coloured markers or counters for tracking.
- ❖ Encourage one-to-one pointing while counting.
- ❖ Demonstrate counting slowly.

For learners struggling with shape recognition:

- ❖ Review shapes before counting.
- ❖ Use shape flashcards and cut-outs.
- ❖ Compare shapes side by side.

Inclusive Support

- ❖ Use enlarged shape cards and classroom displays for learners with visual support needs.
- ❖ Allow learners requiring additional learning support to sort physical shape cut-outs before completing workbook activities.
- ❖ Encourage learners to use one-to-one pointing or tracing while counting shapes.

- ❖ Pair learners requiring additional support with supportive peers during group activities.
- ❖ Allow oral identification of shapes before written responses where appropriate.
- ❖ Use colour coding and hands-on materials to support learners who benefit from tactile and visual learning experiences.
- ❖ Give additional time to learners requiring extended support during counting and shape recognition tasks.
- ❖ Allow learners with physical disabilities to point, sort, or respond verbally where drawing or writing may be difficult.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Compare totals of different shapes.
- ❖ Create simple shape graphs.
- ❖ Design their own mixed-shape picture.
- ❖ Identify which shape appears the least or most.

⇒ Activity E: Counting and Colouring Shapes

Diagnostic Check

(Work Individually)

Before the activity, ask learners to:

- ❖ Read numbers aloud.
- ❖ Count shapes correctly.
- ❖ Follow simple colouring instructions.
- ❖ Match quantities with numerals.

Observe learners who:

- ❖ Colour more or fewer shapes than required.
- ❖ Forget the target number.
- ❖ Miscount while colouring.
- ❖ Need repeated teacher reminders.

Remediation Support

For learners struggling with counting:

- ❖ Encourage counting aloud while colouring.
- ❖ Tick counted shapes lightly first.
- ❖ Use smaller groups before larger groups.
- ❖ Demonstrate one example together.

For learners struggling with following instructions:

- ❖ Repeat the target number clearly.
- ❖ Use finger tracking while counting.
- ❖ Check work together step by step.

Extension Activity

(Work in Pairs / Groups)

Ask fast learners to:

- ❖ Create their own counting-and-colouring activity.
- ❖ Count beyond the given target number.
- ❖ Explain the counting strategy they used.
- ❖ Challenge classmates with new shape groups.

Concept 1.3: Patterns

(LB Pages 19–23)

⇒ Activity: Understanding Patterns

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Observe simple repeating object patterns.
- ❖ Clap simple rhythm patterns.
- ❖ Continue oral patterns such as red-blue-red-blue.
- ❖ Identify what comes next in a sequence.

Observe learners who:

- ❖ Cannot recognise repetition.
- ❖ Break the sequence order.
- ❖ Guess randomly without observing carefully.
- ❖ Need repeated examples to understand the pattern.

Remediation Support

For learners struggling with patterns:

- ❖ Use coloured blocks or beads to show patterns.
- ❖ Demonstrate simple AB patterns repeatedly.
- ❖ Use body movements such as clap-stomp-clap-stomp.
- ❖ Encourage learners to say patterns aloud.

For learners needing visual support:

- ❖ Use large picture cards.
- ❖ Point to each item while reading the pattern.
- ❖ Cover completed sections and focus on one step at a time.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own repeating patterns.
- ❖ Extend patterns independently.
- ❖ Predict missing items in patterns.
- ❖ Use classroom objects to make new sequences.

⇒ Activity A: Write the Missing Number to Complete the Pattern

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Read simple number patterns aloud.
- ❖ Identify repeated numbers in sequences.
- ❖ Continue counting patterns orally.
- ❖ Recognise what comes next in a sequence.

Observe learners who:

- ❖ Cannot identify the repeating rule.
- ❖ Guess answers randomly.
- ❖ Skip numbers while reading patterns.
- ❖ Need oral prompts repeatedly.

Remediation Support

For learners struggling with number patterns:

- ❖ Use counters or number cards.
- ❖ Repeat patterns aloud together.
- ❖ Start with simple two-number patterns.
- ❖ Point to each number while reading.

For learners needing additional support:

- ❖ Use colour coding for repeated numbers.
- ❖ Demonstrate one example step by step.
- ❖ Allow learners to build patterns using objects.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Create their own number patterns.
- ❖ Complete longer number sequences.
- ❖ Explain the repeating rule to classmates.
- ❖ Identify patterns using skip counting.

⇒ Activity B: Write the Missing Letter

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Recognise alphabet letters correctly.
- ❖ Read repeating letter patterns aloud.
- ❖ Identify repeated letters in a sequence.
- ❖ Predict the next letter in a pattern.

Observe learners who:

- ❖ Confuse letter names.
- ❖ Cannot continue the pattern correctly.
- ❖ Forget the sequence order.
- ❖ Need visual or oral prompts.

Remediation Support

For learners struggling with letter patterns:

- ❖ Use alphabet flashcards.
- ❖ Repeat letter patterns orally together.
- ❖ Highlight repeating letters using colours.
- ❖ Practise short two-letter patterns first.

For learners needing extra support:

- ❖ Arrange letter cards physically.
- ❖ Trace letters while reading the sequence.
- ❖ Encourage learners to say patterns slowly.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Create their own alphabet patterns.
- ❖ Use three-letter repeating patterns.
- ❖ Predict missing letters independently.
- ❖ Challenge classmates with new patterns.

⇒ Activity C: Observe, Colour, and Complete the Patterns

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify colour sequences.

- ❖ Predict the next colour or shape.
- ❖ Observe repeating shape patterns.
- ❖ Follow simple colour instructions.

Observe learners who:

- ❖ Miss the repeating rule.
- ❖ Colour shapes randomly.
- ❖ Need repeated demonstrations.
- ❖ Cannot identify repeated colours or shapes.

Remediation Support

For learners struggling with colour patterns:

- ❖ Use coloured blocks or counters.
- ❖ Explain one pattern row at a time.
- ❖ Point to each colour while reading the sequence.
- ❖ Encourage learners to say colours aloud.

For learners struggling with shape patterns:

- ❖ Use shape cards for demonstration.
- ❖ Compare repeating groups carefully.
- ❖ Repeat patterns together slowly.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Create complex colour and shape patterns.
- ❖ Explain the pattern rule independently.
- ❖ Design their own repeating sequences.
- ❖ Extend patterns using additional shapes or colours.

⇒ Activity D: Same or Different Patterns

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Compare two simple patterns.
- ❖ Identify matching pictures in sequences.
- ❖ Observe sequence order carefully.
- ❖ Explain similarities between patterns.

Observe learners who:

- ❖ Focus on only one picture instead of the whole pattern.
- ❖ Ignore changes in sequence order.

- ❖ Guess answers quickly without comparing carefully.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with comparison:

- ❖ Compare one picture at a time.
- ❖ Point to matching pictures while discussing.
- ❖ Use simpler two-item patterns first.
- ❖ Read patterns aloud together.

For learners needing extra support:

- ❖ Cover parts of the sequence and compare slowly.
- ❖ Use physical objects for pattern comparison.
- ❖ Encourage learners to trace patterns with fingers.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create matching and non-matching patterns.
- ❖ Explain why patterns are same or different.
- ❖ Challenge classmates with pattern comparisons.
- ❖ Design longer repeating sequences independently.

Coding Challenge – 1: Find the Pair!

(LB Page 24)

⇒ Activity: Match the Socks

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Match identical classroom objects.
- ❖ Compare colours, patterns, and designs carefully.
- ❖ Identify pairs of similar pictures.
- ❖ Sort objects by similarity.

Observe learners who:

- ❖ Connect incorrect pairs randomly.
- ❖ Miss small details in colours or patterns.
- ❖ Struggle to compare objects carefully.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with matching:

- ❖ Use simple matching card games first.
- ❖ Compare one pair of socks at a time.
- ❖ Highlight colours and patterns clearly.
- ❖ Encourage learners to point to matching details before connecting.

For learners struggling with observation:

- ❖ Use real socks or classroom objects for demonstration.
- ❖ Ask learners to describe colours and designs aloud.
- ❖ Guide learners step by step during comparison.
- ❖ Allow peer support during the activity.

For learners needing additional practice:

- ❖ Provide extra matching worksheets with fewer objects.
- ❖ Use large visual examples.
- ❖ Repeat matching activities through classroom games.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own matching-pair activity using drawings.
- ❖ Sort socks by colour, size, or pattern.
- ❖ Explain how they identified the matching pairs.
- ❖ Complete the matching challenge within a time limit.
- ❖ Design new sock patterns for classmates to match.

Level 2: Critical Thinking & Analysis

Concept 2.1: Even and Odd Numbers

(LB Pages 26–27)

⇒ Activity: Understanding Even and Odd Numbers

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Count objects from 1–10.
- ❖ Make pairs using classroom objects such as pencils or blocks.
- ❖ Identify numbers they already know.
- ❖ Group objects into twos.

Observe learners who:

- ❖ Cannot form pairs correctly.
- ❖ Leave objects uncounted.
- ❖ Confuse even and odd numbers.
- ❖ Need physical objects for support.

Remediation Support

For learners struggling with pairing:

- ❖ Use bottle tops, beads, or counters for hands-on pairing.
- ❖ Demonstrate pairing slowly step by step.
- ❖ Allow learners to touch and move objects while pairing.
- ❖ Start with smaller numbers such as 2, 4, and 6.

For learners struggling with even and odd recognition:

- ❖ Use visual pair grouping charts.
- ❖ Explain that even numbers make complete pairs.
- ❖ Show that odd numbers leave one object alone.
- ❖ Repeat examples using real objects.

For learners needing additional support:

- ❖ Pair learners for group practice.
- ❖ Use number songs and counting games.
- ❖ Practise sorting numbers into even and odd groups.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Identify even and odd numbers beyond 10.
- ❖ Create their own even and odd number chart.
- ❖ Sort classroom numbers into two groups.
- ❖ Explain why a number is even or odd.
- ❖ Play quick even-and-odd sorting games.

⇒ Activity A: Colour the Kites

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Read numbers shown inside the kites.
- ❖ Identify simple even and odd numbers orally.
- ❖ Match numbers with pairs of objects.
- ❖ Recognise the given colour code.

Observe learners who:

- ❖ Colour kites incorrectly.
- ❖ Forget the colour code.
- ❖ Cannot decide if a number is even or odd.
- ❖ Need repeated teacher support.

Remediation Support

For learners struggling with even and odd numbers:

- ❖ Use counters to form pairs for each number.
- ❖ Demonstrate one kite example together.
- ❖ Encourage learners to say “pair” or “one left” aloud.
- ❖ Practise with numbers from 1–10 first.

For learners struggling with following instructions:

- ❖ Repeat the colour code slowly.
- ❖ Use visual colour reminders on the board.
- ❖ Check one number at a time together.

For learners needing additional support:

- ❖ Use peer pairing activities.
- ❖ Provide smaller practice exercises before colouring the full page.
- ❖ Encourage finger counting while deciding.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Colour and classify larger numbers.
- ❖ Create their own even-and-odd colouring activity.
- ❖ Write additional even and odd numbers independently.
- ❖ Explain the rule for identifying even and odd numbers.
- ❖ Challenge classmates with quick number-sorting tasks.

Concept 2.2: Same or Different

(LB Pages 28–29)

⇒ Activity A: Find the Twin Tortoises

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Compare two classroom objects.
- ❖ Identify matching pictures.
- ❖ Observe colours, shapes, and patterns carefully.
- ❖ Find objects that look exactly the same.

Observe learners who:

- ❖ Miss small details while comparing.
- ❖ Guess answers quickly without observing carefully.
- ❖ Confuse similar-looking pictures.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with comparison:

- ❖ Compare one feature at a time such as shell pattern, size, or colour.
- ❖ Use matching picture cards for practice.
- ❖ Encourage learners to point to details while comparing.
- ❖ Demonstrate one matching example slowly.

For learners struggling with observation:

- ❖ Use enlarged pictures for clearer viewing.
- ❖ Guide learners to compare from left to right.
- ❖ Ask learners to describe what they see aloud.
- ❖ Repeat comparison activities using classroom objects.

For learners needing additional support:

- ❖ Pair learners for observation activities.
- ❖ Use real objects to compare similarities and differences.
- ❖ Provide simpler matching activities first.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Draw two matching objects.
- ❖ Create their own “same or different” activity.
- ❖ Explain which features make the tortoises identical.
- ❖ Find matching objects around the classroom.
- ❖ Compare more complex picture sets independently.

👉 Activity B: Find the Matching Picture

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Observe a picture carefully.
- ❖ Identify matching colours, shapes, and patterns.
- ❖ Compare objects step by step.
- ❖ Point to pictures that look exactly the same.

Observe learners who:

- ❖ Focus on only one feature.
- ❖ Miss small differences in patterns or colours.
- ❖ Guess without comparing carefully.
- ❖ Need repeated prompts.

Remediation Support

For learners struggling with matching:

- ❖ Compare one picture row at a time.
- ❖ Use finger tracking while observing pictures.
- ❖ Highlight important details such as colour or shape.
- ❖ Demonstrate how to compare systematically.

For learners struggling with attention to detail:

- ❖ Ask learners to describe the first picture aloud.
- ❖ Cover extra pictures and compare slowly.
- ❖ Use simple picture pairs first before moving to complex ones.

For learners needing extra support:

- ❖ Provide matching card games.
- ❖ Use classroom objects for real-life comparison.
- ❖ Encourage peer discussion during matching.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Create their own matching-picture challenge.
- ❖ Draw pictures with small differences for classmates.
- ❖ Explain why pictures are same or different.
- ❖ Complete matching activities within a time limit.
- ❖ Identify similarities and differences independently.

Concept 2.3: Odd One Out

(LB Pages 30–31)

⇒ Activity A: Find the Odd One Out

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Group similar classroom objects together.
- ❖ Identify categories such as animals, clothes, or furniture.
- ❖ Compare objects and explain similarities.
- ❖ Identify which object does not belong in a group.

Observe learners who:

- ❖ Cannot identify common features in a group.
- ❖ Choose answers randomly.
- ❖ Need repeated teacher prompts.
- ❖ Struggle to explain their reasoning.

Remediation Support

For learners struggling with classification:

- ❖ Use real classroom objects for grouping practice.
- ❖ Discuss one category at a time.
- ❖ Compare objects step by step.
- ❖ Ask simple guiding questions such as “Which object is different?”

For learners struggling with observation:

- ❖ Highlight similarities among the matching objects first.
- ❖ Encourage learners to describe each picture aloud.
- ❖ Use smaller groups with fewer pictures.

For learners needing additional support:

- ❖ Use picture sorting games.
- ❖ Pair learners for discussion and comparison.
- ❖ Repeat practice using familiar objects.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own odd-one-out picture groups.
- ❖ Explain why an object does not belong.
- ❖ Group objects into more complex categories.
- ❖ Identify more than one possible grouping rule.
- ❖ Challenge classmates with new classification activities.

⇒ Activity B: Find the Word that Does Not Rhyme

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Say simple rhyming words aloud.
- ❖ Listen carefully to ending sounds.
- ❖ Identify words that sound similar.
- ❖ Repeat picture names clearly.

Observe learners who:

- ❖ Experience difficulty identifying rhyming sounds.
- ❖ Confuse picture names during oral activities.
- ❖ Require additional oral guidance during listening activities.
- ❖ Experience difficulty identifying the word with a different ending sound.

Remediation Support

For learners struggling with rhyming:

- ❖ Practise rhyming words orally using simple examples.
- ❖ Repeat ending sounds slowly and clearly.
- ❖ Use picture-word cards for matching rhymes.
- ❖ Clap when hearing matching sounds.

For learners struggling with pronunciation:

- ❖ Say each word slowly together as a class.
- ❖ Encourage learners to repeat words individually.
- ❖ Use visual picture support while pronouncing words.

For learners needing additional support:

- ❖ Start with two rhyming words at a time.
- ❖ Use songs and rhyming games.
- ❖ Pair learners for listening practice.

Inclusive Support

- ❖ Use enlarged picture-word cards and visual displays for learners with visual support needs.
- ❖ Allow learners requiring additional support to repeat rhyming words orally before identifying answers.
- ❖ Encourage pair listening and speaking activities during rhyme practice.
- ❖ Use songs, clapping, and movement activities to support learners who benefit from multi-sensory learning experiences.
- ❖ Allow learners with speech or writing difficulties to respond orally where appropriate.
- ❖ Give additional time during listening and pronunciation activities where necessary.

Extension Activity

(Work in Pairs / Groups)

Ask fast learners to:

- ❖ Create their own rhyming word sets.
- ❖ Identify additional rhyming words from the classroom.
- ❖ Make simple rhyme chains orally.
- ❖ Explain why a word does not rhyme.
- ❖ Challenge classmates with new rhyming groups.

Concept 2.4: Find the Difference

(LB Pages 32–33)

⇒ Activity A: Find the Six Differences

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Compare two simple pictures carefully.
- ❖ Identify visible changes between pictures.
- ❖ Describe objects and picture details.
- ❖ Observe pictures from left to right.

Observe learners who:

- ❖ Rush through comparison without observing carefully.
- ❖ Miss obvious differences.
- ❖ Focus on only one part of the picture.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with observation:

- ❖ Compare one section of the picture at a time.
- ❖ Guide learners from top to bottom and left to right.
- ❖ Point to objects while discussing similarities and differences.
- ❖ Demonstrate one example difference clearly.

For learners struggling with concentration:

- ❖ Use finger tracking while comparing pictures.
- ❖ Encourage learners to pause and observe carefully.
- ❖ Allow learners to work with a partner.
- ❖ Use enlarged picture sections if needed.

For learners needing additional support:

- ❖ Begin with pictures having fewer differences.
- ❖ Ask simple guiding questions such as “What changed here?”
- ❖ Use classroom objects to compare similarities and differences.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Draw two similar pictures with small differences.
- ❖ Challenge classmates to identify differences.
- ❖ Count and record differences independently.
- ❖ Explain each difference they find.
- ❖ Create their own observation puzzle.

⇒ Activity B: Colour and Spot the Six Differences

Diagnostic Check

(Work Individually)

Before the activity, ask learners to:

- ❖ Colour neatly within boundaries.
- ❖ Observe details carefully in pictures.
- ❖ Compare two pictures step by step.
- ❖ Identify visible changes between images.

Observe learners who:

- ❖ Colour carelessly and miss details.
- ❖ Focus only on colouring and ignore comparison.
- ❖ Struggle to identify differences.
- ❖ Need repeated visual guidance.

Remediation Support

For learners struggling with colouring:

- ❖ Demonstrate neat colouring techniques.
- ❖ Encourage slow colouring using light strokes.
- ❖ Use larger crayons or pencils if needed.
- ❖ Colour one section at a time.

For learners struggling with identifying differences:

- ❖ Compare one object at a time.
- ❖ Ask learners to describe each picture aloud.
- ❖ Use finger pointing while comparing.
- ❖ Guide learners systematically through the picture.

For learners needing additional support:

- ❖ Use simpler picture comparison tasks first.
- ❖ Allow peer discussion during observation.
- ❖ Highlight one example difference before independent work.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own “spot the difference” pictures.
- ❖ Explain all differences independently.
- ❖ Compare pictures within a time limit.
- ❖ Add extra details to make comparisons harder.
- ❖ Design observation games for classmates.

Concept 2.5: Picture Puzzle

(LB Pages 34–35)

⇒ Activity: Arrange the Puzzle Pieces

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Match picture halves correctly.
- ❖ Observe colours, shapes, and patterns in pictures.

- ❖ Identify corner and edge pieces in simple puzzles.
- ❖ Arrange simple picture sequences.

Observe learners who:

- ❖ Place pieces randomly without observing carefully.
- ❖ Ignore colours or picture details.
- ❖ Struggle to identify matching edges.
- ❖ Need repeated teacher support.

Remediation Support

For learners struggling with puzzle arrangement:

- ❖ Use puzzles with fewer pieces first.
- ❖ Begin with corner and edge pieces.
- ❖ Encourage learners to observe colours and patterns carefully.
- ❖ Demonstrate one piece placement step by step.

For learners struggling with observation:

- ❖ Ask learners to describe picture parts aloud.
- ❖ Compare puzzle pieces side by side.
- ❖ Use finger tracing along puzzle edges.
- ❖ Guide learners one section at a time.

For learners needing additional support:

- ❖ Allow learners to work in pairs.
- ❖ Use larger puzzle pieces for easier handling.
- ❖ Provide extra time for observation and matching.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Complete puzzles independently within a time limit.
- ❖ Create simple picture puzzles for classmates.
- ❖ Explain how they identified correct puzzle positions.
- ❖ Rearrange mixed puzzle pieces quickly.
- ❖ Design and colour their own puzzle picture.

⇒ Activity A: Match the Puzzle Pieces

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify missing parts in pictures.
- ❖ Match picture pieces based on colours and shapes.

- ❖ Observe numbered spaces carefully.
- ❖ Compare puzzle pieces step by step.

Observe learners who:

- ❖ Guess piece positions randomly.
- ❖ Ignore picture details.
- ❖ Confuse numbered spaces.
- ❖ Need repeated visual guidance.

Remediation Support

For learners struggling with matching pieces:

- ❖ Compare one puzzle piece at a time.
- ❖ Highlight colours and patterns in the picture.
- ❖ Encourage learners to look at edges and shapes carefully.
- ❖ Demonstrate one matching example together.

For learners struggling with spatial understanding:

- ❖ Use physical puzzle pieces for practice.
- ❖ Guide learners to rotate and compare pieces mentally.
- ❖ Ask learners to describe what part of the picture they see.

For learners needing additional support:

- ❖ Provide puzzles with fewer missing spaces.
- ❖ Allow partner discussion during matching.
- ❖ Use enlarged images for clearer observation.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Match puzzle pieces independently.
- ❖ Explain why a piece belongs in a certain position.
- ❖ Create numbered puzzle challenges for classmates.
- ❖ Complete matching activities within a time limit.
- ❖ Design their own picture puzzle activity.

Concept 2.6: Directions

(LB Pages 36–37)

⇒ Activity A: Find the Correct Path

Diagnostic Check

(Work Individually / in Pairs)

Before the activity, ask learners to:

- ❖ Identify left and right directions.
- ❖ Follow simple classroom directions.

- ❖ Trace paths using fingers.
- ❖ Identify starting and ending points in a maze.

Observe learners who:

- ❖ Confuse directions.
- ❖ Lose track while tracing paths.
- ❖ Rush through the maze without checking.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with directions:

- ❖ Use floor arrows for movement practice.
- ❖ Demonstrate left, right, up, and down physically.
- ❖ Encourage learners to trace the maze with fingers first.
- ❖ Guide learners step by step through the maze.

For learners struggling with maze solving:

- ❖ Start with simple mazes having fewer turns.
- ❖ Ask learners to stop and check each path carefully.
- ❖ Explain the meaning of dead ends clearly.
- ❖ Use coloured pencils to track the path.

For learners needing additional support:

- ❖ Pair learners for maze activities.
- ❖ Practise directional games in the classroom.
- ❖ Use verbal instructions while tracing.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Solve more complex mazes independently.
- ❖ Create their own maze for classmates.
- ❖ Give verbal directions to reach a destination.
- ❖ Design directional arrow games.
- ❖ Complete maze challenges within a time limit.

⇒ Activity B: Help Lolo the Lion Find Roro the Tiger

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Identify maze pathways.
- ❖ Follow directional instructions.

- ❖ Trace routes from start to finish.
- ❖ Recognise blocked or dead-end paths.

Observe learners who:

- ❖ Choose paths randomly.
- ❖ Struggle to follow the maze carefully.
- ❖ Forget the starting point.
- ❖ Need repeated prompts while tracing.

Remediation Support

For learners struggling with maze navigation:

- ❖ Encourage finger tracing before drawing.
- ❖ Guide learners through one section at a time.
- ❖ Demonstrate checking for dead ends.
- ❖ Use simple directional words repeatedly.

For learners struggling with concentration:

- ❖ Break the maze into smaller sections.
- ❖ Allow learners to pause and observe carefully.
- ❖ Use coloured markers for tracing paths.
- ❖ Encourage verbal thinking while solving.

For learners needing additional support:

- ❖ Use simpler maze worksheets first.
- ❖ Pair learners for discussion and guidance.
- ❖ Provide repeated practice with directional activities.

Extension Activity

(Work Individually / in Groups)

- ❖ Ask fast learners to:
- ❖ Solve the maze independently.
- ❖ Explain the path they followed.
- ❖ Create animal maze games for classmates.
- ❖ Add extra paths to make the maze harder.
- ❖ Use directional words while describing movement.

Concept 2.7: Logical Thinking

(LB Pages 38–39)

⇒ Activity A: Choose the Games That Can Be Played Indoors

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Identify indoor and outdoor games.
- ❖ Discuss simple weather situations.

- ❖ Make choices based on conditions.
- ❖ Explain why certain games are played indoors.

Observe learners who:

- ❖ Choose answers without reasoning.
- ❖ Confuse indoor and outdoor games.
- ❖ Need repeated explanation.
- ❖ Struggle to explain their choices.

Remediation Support

For learners struggling with logical choices:

- ❖ Use real-life examples from daily life.
- ❖ Discuss indoor and outdoor games separately.
- ❖ Ask simple yes/no guiding questions.
- ❖ Explain weather-related situations clearly.

For learners struggling with reasoning:

- ❖ Encourage learners to explain “why.”
- ❖ Compare safe and unsafe activities.
- ❖ Use picture cards for sorting games.

For learners needing additional support:

- ❖ Pair learners for discussion.
- ❖ Use role-play activities.
- ❖ Provide simpler choice-making situations first.

Extension Activity

Ask fast learners to:

- ❖ Suggest more indoor games.
- ❖ Explain reasons for their choices independently.
- ❖ Create their own situation cards.
- ❖ Compare indoor and outdoor activities.
- ❖ Design simple decision-making games.

⇒ Activity B: Identify Who Broke the Window

Diagnostic Check

Before the activity, ask learners to:

- ❖ Observe picture clues carefully.
- ❖ Identify objects and actions in a picture.
- ❖ Discuss cause and effect situations.
- ❖ Explain simple conclusions.

(Work in Groups)

(Work in Groups)

Observe learners who:

- ❖ Respond before carefully observing picture details.
- ❖ Experience difficulty identifying important picture details.
- ❖ Require additional guidance during picture discussions.
- ❖ Experience difficulty explaining their reasoning clearly.

Remediation Support

For learners struggling with identifying clues:

- ❖ Guide learners to observe one clue at a time.
- ❖ Ask questions about objects and actions shown.
- ❖ Highlight important picture details.
- ❖ Encourage learners to describe the scene aloud.

For learners struggling with logical reasoning:

- ❖ Discuss cause and effect using simple examples.
- ❖ Demonstrate how picture clues can help solve problems.
- ❖ Compare possible answers step by step.

For learners needing additional support:

- ❖ Use simpler clue-based activities first.
- ❖ Allow peer discussion before answering.
- ❖ Demonstrate logical thinking using classroom examples.

Inclusive Support

- ❖ Use enlarged picture displays for learners with visual support needs.
- ❖ Encourage learners requiring additional support to discuss observations orally before answering.
- ❖ Allow learners to point to objects or actions in the picture while explaining their ideas.
- ❖ Pair learners requiring additional support with supportive peers during group discussions.
- ❖ Use guided questioning to support learners who experience difficulty with reasoning activities.
- ❖ Allow additional time where necessary during observation and discussion tasks.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Create their own clue-based mystery picture.
- ❖ Explain how they identified the correct answer.
- ❖ Suggest different possible situations.
- ❖ Design simple detective games for classmates.
- ❖ Solve additional picture clue challenges independently.

⇒ Activity: Observe the Flying Birds**Diagnostic Check***(Work in Pairs)*

Before the activity, ask learners to:

- ❖ Identify directional arrows.
- ❖ Count moving objects carefully.
- ❖ Compare quantities such as more or fewer.
- ❖ Recognise up, down, left, and right directions.

Observe learners who:

- ❖ Confuse directional arrows.
- ❖ Miscount birds.
- ❖ Struggle to compare quantities.
- ❖ Need repeated teacher support.

Remediation Support

For learners struggling with directions:

- ❖ Use body movement activities for directions.
- ❖ Demonstrate arrows physically in the classroom.
- ❖ Repeat direction names aloud together.
- ❖ Use arrow flashcards for practice.

For learners struggling with counting:

- ❖ Count birds together slowly.
- ❖ Point to each bird while counting.
- ❖ Compare groups visually before deciding.

For learners needing additional support:

- ❖ Use smaller groups of objects first.
- ❖ Practise more/fewer activities using counters.
- ❖ Allow peer support during counting tasks.

Extension Activity*(Work in Groups)*

Ask fast learners to:

- ❖ Create their own directional bird activity.
- ❖ Compare more and fewer independently.
- ❖ Draw arrows showing movement directions.
- ❖ Count larger groups of moving objects.
- ❖ Design simple direction-based games for classmates.

Level 3: Data Processing

Concept 3.1: What Goes Together?

(LB Pages 42–43)

⇒ Activity A: Identify Related Objects

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Match commonly used classroom objects.
- ❖ Identify objects used together in daily life.
- ❖ Explain the use of familiar objects.
- ❖ Group related items into categories.

Observe learners who:

- ❖ Cannot identify relationships between objects.
- ❖ Match objects randomly.
- ❖ Need repeated explanation.
- ❖ Struggle to explain their choices.

Remediation Support

For learners struggling with identifying related objects:

- ❖ Use real classroom objects for demonstration.
- ❖ Show how objects are used together in daily life.
- ❖ Compare one object pair at a time.
- ❖ Encourage learners to explain object functions aloud.

For learners struggling with grouping:

- ❖ Use sorting trays or baskets.
- ❖ Demonstrate simple matching activities first.
- ❖ Use picture cards with familiar objects.

For learners needing additional support:

- ❖ Pair learners for matching activities.
- ❖ Repeat practice using classroom materials.
- ❖ Give verbal clues while matching.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create additional object pairs.
- ❖ Explain why objects belong together.

- ❖ Group objects into more categories.
- ❖ Draw their own related object sets.
- ❖ Challenge classmates with matching games.

⇒ **Activity B: Match the Related Objects**

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Observe pictures carefully.
- ❖ Match objects used together.
- ❖ Explain how objects are connected.
- ❖ Identify object functions.

Observe learners who:

- ❖ Respond before carefully observing object relationships.
- ❖ Experience difficulty explaining object relationships.
- ❖ Experience difficulty distinguishing related and unrelated objects.
- ❖ Require additional visual guidance during matching activities.

Remediation Support

For learners struggling with matching:

- ❖ Use real-life examples for demonstration.
- ❖ Discuss one object pair at a time.
- ❖ Encourage learners to describe object use aloud.
- ❖ Use finger pointing while matching.

For learners struggling with understanding relationships:

- ❖ Demonstrate how objects are used in real-life situations.
- ❖ Show pictures of objects in real situations.
- ❖ Use simple matching games first.

For learners needing additional support:

- ❖ Allow peer discussion during matching.
- ❖ Use enlarged picture cards.
- ❖ Repeat object-pairing activities regularly.

Inclusive Support

- ❖ Use enlarged picture cards and visual displays for learners with visual support needs.
- ❖ Allow learners requiring additional support to handle real objects before matching pictures.

- ❖ Encourage learners to discuss object relationships orally before drawing matching lines.
- ❖ Pair learners requiring additional support with supportive peers during pair and group activities.
- ❖ Use finger pointing and guided questioning to support learners during matching tasks.
- ❖ Allow additional time where necessary during observation and matching activities.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create new matching object pairs.
- ❖ Explain object relationships independently.
- ❖ Group related items into categories.
- ❖ Draw and label matching objects.
- ❖ Design simple “what goes together” games.

Concept 3.2: Belonging

(LB Pages 44–45)

⇒ Activity A: Circle the Things that Belong to the Sky

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Identify things seen in the sky.
- ❖ Sort picture cards into sky, land, and water groups.
- ❖ Name flying objects or animals.
- ❖ Describe different environments.

Observe learners who:

- ❖ Misclassify sky objects.
- ❖ Confuse land and sky items.
- ❖ Need repeated teacher prompts.
- ❖ Struggle to explain choices.

Remediation Support

For learners struggling with classification:

- ❖ Use pictures of sky, land, and water separately.
- ❖ Discuss one environment at a time.
- ❖ Demonstrate examples using posters or charts.
- ❖ Encourage learners to describe objects aloud.

For learners struggling with observation:

- ❖ Compare objects side by side.
- ❖ Highlight features such as flying or floating.
- ❖ Use sorting activities with real pictures.

For learners needing additional support:

- ❖ Use simple sorting games.
- ❖ Allow partner discussion during classification.
- ❖ Repeat environment vocabulary regularly.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Draw additional things found in the sky.
- ❖ Explain why objects belong in the sky.
- ❖ Create sky-land-water sorting charts.
- ❖ Group more objects independently.
- ❖ Design environment picture collages.

⇒ Activity B: Circle the Things that Belong to Water

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Identify animals or objects found in water.
- ❖ Compare water and land environments.
- ❖ Name common water animals.
- ❖ Sort picture cards into groups.

Observe learners who:

- ❖ Confuse land and water animals.
- ❖ Need repeated explanation.
- ❖ Choose answers randomly.
- ❖ Struggle to identify water environments.

Remediation Support

For learners struggling with water classification:

- ❖ Use pictures of ponds, rivers, and oceans.
- ❖ Discuss water animals one by one.
- ❖ Compare land and water objects visually.
- ❖ Encourage learners to describe where animals live.

For learners struggling with observation:

- ❖ Highlight water-related features.
- ❖ Use real-life examples and stories.
- ❖ Repeat sorting activities using picture cards.

For learners needing additional support:

- ❖ Use simple environment matching games.
- ❖ Pair learners for discussion activities.
- ❖ Practise sorting objects repeatedly.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Draw more objects or animals found in water.
- ❖ Create water-environment charts.
- ❖ Explain why certain objects belong in water.
- ❖ Compare land and water animals.
- ❖ Design simple classification games.

⇒ Activity C: Circle the Things Found in the Kitchen

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Identify common kitchen objects.
- ❖ Explain how kitchen tools are used.
- ❖ Sort household objects into rooms.
- ❖ Name items used for cooking or eating.

Observe learners who:

- ❖ Confuse kitchen and non-kitchen items.
- ❖ Need repeated guidance.
- ❖ Cannot explain object functions.
- ❖ Guess answers randomly.

Remediation Support

For learners struggling with kitchen classification:

- ❖ Use real kitchen utensils or picture cards.
- ❖ Discuss cooking and eating activities.
- ❖ Compare kitchen and classroom objects.
- ❖ Encourage learners to describe object use aloud.

For learners struggling with observation:

- ❖ Show one object at a time.
- ❖ Highlight objects commonly seen in kitchens.
- ❖ Use sorting games with household pictures.

For learners needing additional support:

- ❖ Allow peer discussion during sorting.
- ❖ Use simple matching activities first.
- ❖ Repeat vocabulary related to kitchen items.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Draw additional kitchen items.
- ❖ Create categories for household objects.
- ❖ Explain why items belong in the kitchen.
- ❖ Compare objects used in different rooms.
- ❖ Design their own classification activity.

Concept 3.3: Follow the Clues

(LB Pages 46–47)

⇒ Activity A: Explore the Maze and Link the Rhyming Words

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Say simple rhyming words aloud.
- ❖ Listen carefully to ending sounds.
- ❖ Identify matching picture names.
- ❖ Follow simple maze paths using fingers.

Observe learners who:

- ❖ Cannot recognise rhyming sounds.
- ❖ Confuse picture names.
- ❖ Struggle to follow maze paths.
- ❖ Need repeated oral guidance.

Remediation Support

For learners struggling with rhyming words:

- ❖ Practise rhyming words orally using simple examples.
- ❖ Repeat ending sounds slowly and clearly.

- ❖ Use picture-word cards for matching rhymes.
- ❖ Encourage learners to say words aloud together.

For learners struggling with maze navigation:

- ❖ Ask learners to trace the path with fingers first.
- ❖ Guide learners step by step through the maze.
- ❖ Use simpler maze activities before complex ones.
- ❖ Demonstrate one rhyming pair example clearly.

For learners needing additional support:

- ❖ Pair learners for discussion and maze tracing.
- ❖ Use songs and rhyming games for practice.
- ❖ Highlight picture clues visually.

Extension Activity

(Work Individually / in Groups)

- ❖ Ask fast learners to:
- ❖ Create their own rhyming word pairs.
- ❖ Build simple rhyme chains.
- ❖ Design mini rhyming mazes for classmates.
- ❖ Explain why words rhyme.
- ❖ Solve maze activities independently within a time limit.

⇒ Activity B: Find Kwaku Using the Clues

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Observe picture clues carefully.
- ❖ Identify emotions, colours, and activities in pictures.
- ❖ Follow simple spoken clues.
- ❖ Compare details step by step.

Observe learners who:

- ❖ Experience difficulty identifying important clues.
- ❖ Respond before carefully analysing the clues.
- ❖ Require additional teacher guidance during clue-following activities.
- ❖ Experience difficulty combining multiple clues to reach an answer.

Remediation Support

For learners struggling with clue-following:

- ❖ Read one clue at a time slowly.
- ❖ Discuss each clue separately before combining them.

- ❖ Encourage learners to point to matching details.
- ❖ Demonstrate simple elimination strategies step by step.

For learners struggling with observation:

- ❖ Highlight important picture details such as colours or actions.
- ❖ Ask learners to describe what they see aloud.
- ❖ Compare possible answers one by one.

For learners needing additional support:

- ❖ Use simpler clue-based activities first.
- ❖ Pair learners for clue discussions.
- ❖ Demonstrate how to eliminate incorrect answers.

Inclusive Support

- ❖ Use enlarged picture displays for learners with visual support needs.
- ❖ Encourage learners requiring additional support to discuss clues orally before answering.
- ❖ Allow learners to point to matching colours, emotions, or actions while explaining their ideas.
- ❖ Pair learners requiring additional support with supportive peers during clue discussions.
- ❖ Use guided questioning and step-by-step demonstrations to support learners during reasoning activities.
- ❖ Allow additional time where necessary during observation and clue-following tasks.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own clue-based puzzle.
- ❖ Write clues for classmates to solve.
- ❖ Explain how they found the correct answer.
- ❖ Identify multiple clues independently.
- ❖ Design simple detective-style activities.

Concept 3.4: Secret Message

(LB Pages 48–49)

⇒ Activity A: Decode the Secret Message

Diagnostic Check

(Work Individually / in Pairs)

Before the activity, ask learners to:

- ❖ Identify alphabet letters correctly.
- ❖ Match pictures with letters.

- ❖ Follow simple picture-symbol codes.
- ❖ Read short words aloud.

Observe learners who:

- ❖ Confuse letters or symbols.
- ❖ Forget letter names.
- ❖ Need repeated matching support.
- ❖ Struggle to decode step by step.

Remediation Support

For learners struggling with decoding:

- ❖ Decode one symbol at a time together.
- ❖ Use enlarged code charts for easy viewing.
- ❖ Point to matching symbols and letters slowly.
- ❖ Encourage learners to say letters aloud.

For learners struggling with letter recognition:

- ❖ Revise alphabet letters using flashcards.
- ❖ Match picture cards with letters separately.
- ❖ Practise reading short words before decoding.

For learners needing additional support:

- ❖ Pair learners for decoding activities.
- ❖ Use simple two- or three-letter coded words first.
- ❖ Demonstrate one full decoding example together.

Extension Activity

(Work in Pairs / Groups)

Ask fast learners to:

- ❖ Create their own coded messages.
- ❖ Exchange secret messages with classmates.
- ❖ Decode longer words independently.
- ❖ Design picture-symbol charts.
- ❖ Write simple secret sentences using codes.

⇒ Activity B: Decode Kwesi's Secret Message

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Match shapes with letters.
- ❖ Identify colours and symbols carefully.

- ❖ Read simple decoded words.
- ❖ Follow symbol-based instructions.

Observe learners who:

- ❖ Confuse symbols and colours.
- ❖ Forget matching letters.
- ❖ Decode in the wrong order.
- ❖ Need repeated teacher guidance.

Remediation Support

For learners struggling with symbol matching:

- ❖ Match one symbol and letter at a time.
- ❖ Use colour highlighting for easier recognition.
- ❖ Repeat symbol-letter pairs orally.
- ❖ Demonstrate decoding slowly step by step.

For learners struggling with reading decoded words:

- ❖ Read decoded letters aloud together.
- ❖ Blend letters slowly to form words.
- ❖ Use short practice words before the activity.

For learners needing additional support:

- ❖ Use simpler coded messages first.
- ❖ Pair learners for symbol matching.
- ❖ Provide repeated decoding practice.

Extension Activity

(Work in Pairs / Groups)

Ask fast learners to:

- ❖ Create their own symbol code chart.
- ❖ Write and decode secret messages independently.
- ❖ Exchange coded messages with classmates.
- ❖ Design longer secret sentences.
- ❖ Explain the decoding process clearly.

Coding Challenge – 3: Animal Hunt

(LB Page 50)

⇒ Activity: Find the Hidden Animals

Diagnostic Check

(Work Individually / in Pairs)

Before the activity, ask learners to:

- ❖ Identify common animal pictures.
- ❖ Observe hidden shapes and outlines carefully.

- ❖ Describe details in pictures.
- ❖ Compare animal shapes visually.

Observe learners who:

- ❖ Miss hidden animals easily.
- ❖ Focus on only one part of the picture.
- ❖ Guess answers without observing carefully.
- ❖ Need repeated visual guidance.

Remediation Support

For learners struggling with observation:

- ❖ Guide learners section by section through the picture.
- ❖ Highlight outlines gently using finger tracing.
- ❖ Encourage learners to observe slowly and carefully.
- ❖ Demonstrate finding one hidden animal first.

For learners struggling with animal identification:

- ❖ Revise animal names using flashcards.
- ❖ Compare visible and hidden animal shapes.
- ❖ Encourage learners to describe animal features aloud.

For learners needing additional support:

- ❖ Use simpler hidden-picture activities first.
- ❖ Allow learners to work in pairs.
- ❖ Provide extra observation time.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own hidden-animal picture.
- ❖ Time themselves while finding hidden objects.
- ❖ Identify additional hidden shapes or patterns.
- ❖ Explain how they found each animal.
- ❖ Design observation games for classmates.

Level 4: Algorithmic Intelligence

Concept 4.1: Step-by-Step

(LB Pages 52–53)

⇒ Activity A: Number the Activities in the Correct Order

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Describe their daily routine.
- ❖ Arrange picture cards in sequence.
- ❖ Identify actions that happen first, next, and last.
- ❖ Explain simple step-by-step activities.

Observe learners who:

- ❖ Mix up the order of activities.
- ❖ Skip important steps.
- ❖ Need repeated teacher prompts.
- ❖ Struggle to explain sequences logically.

Remediation Support

For learners struggling with sequencing:

- ❖ Use real-life routine picture cards.
- ❖ Discuss one step at a time.
- ❖ Demonstrate a daily routine physically.
- ❖ Use words such as first, next, then, and last repeatedly.

For learners struggling with understanding order:

- ❖ Arrange short two- or three-step sequences first.
- ❖ Encourage learners to describe routines aloud.
- ❖ Compare correct and incorrect sequences visually.

For learners needing additional support:

- ❖ Pair learners for sequencing activities.
- ❖ Use classroom routines as examples.
- ❖ Repeat sequencing practice regularly.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create their own daily routine sequence.
- ❖ Arrange longer step-by-step activities.

- ❖ Explain why order is important.
- ❖ Draw and label routine sequences.
- ❖ Design sequencing games for classmates.

⇒ **Activity B: Draw a Pineapple Step by Step**

Diagnostic Check

(Work Individually)

Before the activity, ask learners to:

- ❖ Observe drawing steps carefully.
- ❖ Identify simple shapes used in drawings.
- ❖ Follow instructions in order.
- ❖ Trace dotted lines correctly.

Observe learners who:

- ❖ Skip drawing steps.
- ❖ Struggle to follow sequence order.
- ❖ Need support with pencil control.
- ❖ Rush through the activity.

Remediation Support

For learners struggling with drawing steps:

- ❖ Demonstrate each step slowly on the board.
- ❖ Allow learners to trace shapes first.
- ❖ Guide learners one step at a time.
- ❖ Repeat drawing instructions clearly.

For learners struggling with fine motor skills:

- ❖ Use larger tracing outlines.
- ❖ Encourage proper pencil grip.
- ❖ Provide extra tracing practice.
- ❖ Allow learners to practise basic shapes first.

For learners needing additional support:

- ❖ Pair learners for guided drawing.
- ❖ Use simplified drawing examples.
- ❖ Encourage learners to describe each step aloud.

Extension Activity

(Work Individually / in Pairs)

Ask fast learners to:

- ❖ Draw the pineapple independently.
- ❖ Create step-by-step drawings of other fruits or objects.

- ❖ Explain each drawing step clearly.
- ❖ Add extra details and colouring creatively.
- ❖ Design simple drawing instructions for classmates.

Concept 4.2: Decision Making

(LB Pages 54–55)

⇒ Activity A: Read and Answer Yes or No

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Answer simple yes/no questions.
- ❖ Identify good and bad choices.
- ❖ Discuss everyday situations.
- ❖ Explain reasons for their decisions.

Observe learners who:

- ❖ Rely heavily on peer responses before making decisions.
- ❖ Experience difficulty explaining their choices clearly.
- ❖ Require additional explanation during discussion activities.
- ❖ Experience difficulty distinguishing positive and negative behaviours.

Remediation Support

For learners struggling with decision making:

- ❖ Discuss one situation at a time.
- ❖ Use real-life examples from school and home.
- ❖ Ask simple guiding questions such as “Is this safe?” or “Is this helpful?”
- ❖ Explain consequences of actions clearly.

For learners struggling with reasoning:

- ❖ Use role-play activities.
- ❖ Compare good and bad behaviours visually.
- ❖ Encourage learners to explain the reasons for their answers.

For learners needing additional support:

- ❖ Use picture cards for yes/no sorting.
- ❖ Pair learners for discussion activities.
- ❖ Repeat practice using familiar situations.

Inclusive Support

- ❖ Use picture cards and visual examples for learners with visual support needs.
- ❖ Encourage learners requiring additional support to discuss answers orally before responding.
- ❖ Use role-play and guided discussions to support learners during decision-making activities.
- ❖ Pair learners requiring additional support with supportive peers during group discussions.
- ❖ Allow learners to point, speak, or demonstrate answers where writing may be difficult.
- ❖ Allow additional time where necessary during reasoning and discussion activities.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Create additional yes/no questions.
- ❖ Explain consequences of different choices.
- ❖ Suggest responsible behaviours for different situations.
- ❖ Design simple decision-making games.
- ❖ Discuss real-life examples independently.

Concept 4.3: Loops: Repetition

(LB Pages 56–58)

⇒ Activity: Understanding Repetition Through the Ferris Wheel

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Identify actions that repeat again and again.
- ❖ Observe moving objects carefully.
- ❖ Describe repeated movements in daily life.
- ❖ Follow simple movement patterns.

Observe learners who:

- ❖ Cannot recognise repetition.
- ❖ Confuse one-time actions with repeated actions.
- ❖ Need repeated teacher explanation.
- ❖ Struggle to describe movement patterns.

Remediation Support

For learners struggling with repetition:

- ❖ Demonstrate repeated actions physically such as clapping or jumping.
- ❖ Use movement games to show repeating cycles.
- ❖ Repeat examples slowly and clearly.
- ❖ Encourage learners to describe repeated actions aloud.

For learners struggling with observation:

- ❖ Point to the movement sequence step by step.
- ❖ Compare beginning and repeating positions.
- ❖ Use classroom objects that move repeatedly.

For learners needing additional support:

- ❖ Use simple repeated actions first.
- ❖ Pair learners for movement demonstrations.
- ❖ Repeat practice using familiar examples.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Identify more examples of repetition at home or school.
- ❖ Create movement patterns for classmates.
- ❖ Explain how repetition forms a loop.
- ❖ Draw repeating movement cycles.
- ❖ Design simple loop-action games.

⇒ Activity A: Identify the Loop

Diagnostic Check

(Work in Groups)

Before the activity, ask learners to:

- ❖ Observe repeated movements carefully.
- ❖ Identify actions that happen many times.
- ❖ Compare repeated and non-repeated actions.
- ❖ Follow simple movement patterns.

Observe learners who:

- ❖ Cannot identify repeated motion.
- ❖ Confuse one-time actions with loops.
- ❖ Need repeated examples.
- ❖ Struggle to explain why an action repeats.

Remediation Support

For learners struggling with loops:

- ❖ Demonstrate repeated actions physically.
- ❖ Use a swing or toy examples for demonstration.
- ❖ Repeat forward-and-backward movement slowly.
- ❖ Encourage learners to act out repeated actions.

For learners struggling with observation:

- ❖ Point to each repeating movement step.
- ❖ Compare repeated and non-repeated examples visually.
- ❖ Use simple classroom movement games.

For learners needing additional support:

- ❖ Use yes/no sorting activities for repeated actions.
- ❖ Pair learners for discussion.
- ❖ Repeat practice using familiar examples.

Extension Activity

(Work in Groups)

Ask fast learners to:

- ❖ Identify loops in daily life independently.
- ❖ Draw repeated movement cycles.
- ❖ Create classroom loop games.
- ❖ Explain why an action forms a loop.
- ❖ Compare different repeating actions.

⇒ Activity B: Pendulum and Clock

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Observe moving objects carefully.
- ❖ Identify movements that repeat continuously.
- ❖ Describe the movement of a pendulum or clock.
- ❖ Compare circular and back-and-forth movements.

Observe learners who:

- ❖ Cannot recognise continuous repetition.
- ❖ Confuse movement directions.
- ❖ Need repeated teacher guidance.
- ❖ Struggle to explain repeated motion.

Remediation Support

For learners struggling with repetition:

- ❖ Demonstrate pendulum movement physically.
- ❖ Use classroom clocks for observation.
- ❖ Repeat left-right movement examples slowly.
- ❖ Encourage learners to mimic movements.

For learners struggling with observation:

- ❖ Point to each movement direction clearly.
- ❖ Compare one-time movement and repeated movement.
- ❖ Use visual demonstrations repeatedly.

For learners needing additional support:

- ❖ Use simple repeated-action examples first.
- ❖ Allow learners to discuss observations in pairs.
- ❖ Repeat movement activities regularly.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Find more examples of loops around them.
- ❖ Draw moving objects that repeat actions.
- ❖ Explain different types of repeated movement.
- ❖ Create loop examples using classroom objects.
- ❖ Design repetition charts independently.

⇒ Activity C: Draw or Write an Example of a Loop

Diagnostic Check

(Work in Pairs)

Before the activity, ask learners to:

- ❖ Recall examples of repeated actions.
- ❖ Identify loops from home or school.
- ❖ Describe actions that happen again and again.
- ❖ Explain simple repeated activities.

Observe learners who:

- ❖ Experience difficulty thinking of examples independently.
- ❖ Experience difficulty distinguishing loops from one-time events.
- ❖ Require additional prompting during discussions.
- ❖ Experience difficulty explaining repeated actions clearly.

Remediation Support

For learners struggling with identifying loops:

- ❖ Discuss familiar examples such as fans, swings, and clocks.
- ❖ Use classroom demonstrations of repeated actions.
- ❖ Encourage learners to talk about daily routines.
- ❖ Provide picture examples for support.

For learners struggling with drawing or writing:

- ❖ Allow learners to draw simple pictures first.
- ❖ Provide sentence starters such as “A fan moves...”
- ❖ Demonstrate one example step by step together.

For learners needing additional support:

- ❖ Pair learners for brainstorming activities.
- ❖ Use oral discussion before drawing.
- ❖ Give additional visual examples.

Extension Activity

(Work Individually / in Groups)

Ask fast learners to:

- ❖ Draw detailed loop examples.
- ❖ Explain how loops work in daily life.
- ❖ Create multiple loop examples independently.
- ❖ Design simple repetition posters.
- ❖ Compare different repeating actions.

Inclusive Support

- ❖ Use enlarged picture examples and classroom demonstrations for learners with visual support needs.
- ❖ Encourage learners requiring additional support to discuss ideas orally before drawing or writing.
- ❖ Allow learners to point to or demonstrate repeated actions physically during discussions.
- ❖ Pair learners requiring additional support with supportive peers during brainstorming activities.
- ❖ Use guided questioning and sentence starters to support learners during drawing and writing tasks.
- ❖ Allow additional time where necessary during brainstorming and response activities.

⇒ Activity: Identify the Hidden Numbers**Diagnostic Check***(Work Individually / in Pairs)*

Before the activity, ask learners to:

- ❖ Recognise numbers quickly.
- ❖ Compare shapes carefully.
- ❖ Observe hidden picture details.
- ❖ Match shapes with numbers.

Observe learners who:

- ❖ Confuse similar-looking numbers.
- ❖ Guess answers without observing carefully.
- ❖ Need repeated visual guidance.
- ❖ Struggle to compare shapes accurately.

Remediation Support

For learners struggling with number recognition:

- ❖ Revise numbers using flashcards.
- ❖ Compare hidden shapes one at a time.
- ❖ Trace visible number parts with fingers.
- ❖ Demonstrate one example clearly.

For learners struggling with observation:

- ❖ Reveal hidden sections gradually.
- ❖ Encourage learners to compare number shapes carefully.
- ❖ Use enlarged examples for practice.
- ❖ Ask guiding questions about number features.

For learners needing additional support:

- ❖ Use simpler hidden-number activities first.
- ❖ Pair learners for observation practice.
- ❖ Allow extra time for careful comparison.

Extension Activity*(Work in Groups)*

Ask fast learners to:

- ❖ Create their own hidden-number drawings.
- ❖ Challenge classmates to identify hidden numbers.
- ❖ Compare similarities between number shapes.
- ❖ Design number-observation games.
- ❖ Solve hidden-number puzzles independently.

Core Competencies Mapping

LEVEL 1: REASONING

Concept	Core Competencies Developed
1.1 Numbers	Critical Thinking and Problem Solving (CP); Communication and Collaboration (CC)
1.2 Shapes	Critical Thinking and Problem Solving (CP); Creativity and Innovation (CI); Communication and Collaboration (CC)
1.3 Patterns	Critical Thinking and Problem Solving (CP); Creativity and Innovation (CI); Digital Literacy (DL)
Coding Challenge-1: Find the Pair	Critical Thinking and Problem Solving (CP)

LEVEL 2: CRITICAL THINKING AND ANALYSIS

Concept	Core Competencies Developed
2.1 Even and Odd Numbers	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)
2.2 Same or Different	Critical Thinking and Problem Solving (CP)
2.3 Odd One Out	Critical Thinking and Problem Solving (CP); Communication and Collaboration (CC)
2.4 Find the Difference	Critical Thinking and Problem Solving (CP); Personal Development and Leadership (PL)
2.5 Picture Puzzle	Critical Thinking and Problem Solving (CP); Creativity and Innovation (CI)
2.6 Directions	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)
2.7 Logical Thinking	Critical Thinking and Problem Solving (CP); Communication and Collaboration (CC); Personal Development and Leadership (PL)
Coding Challenge-2: Fly High	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)

LEVEL 3: DATA PROCESSING

Concept	Core Competencies Developed
3.1 What Goes Together?	Critical Thinking and Problem Solving (CP); Communication and Collaboration (CC)
3.2 Belonging	Critical Thinking and Problem Solving (CP); Cultural Identity and Global Citizenship (CG)
3.3 Follow the Clues	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)
3.4 Secret Message	Digital Literacy (DL); Critical Thinking and Problem Solving (CP)
Coding Challenge-3: Animal Hunt	Critical Thinking and Problem Solving (CP); Creativity and Innovation (CI)

LEVEL 4: ALGORITHMIC INTELLIGENCE

Concept	Core Competencies Developed
4.1 Step-by-Step	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)
4.2 Decision Making	Critical Thinking and Problem Solving (CP); Personal Development and Leadership (PL); Cultural Identity and Global Citizenship (CG)
4.3 Loops: Repetition	Digital Literacy (DL); Critical Thinking and Problem Solving (CP)
Coding Challenge-4: Hidden Number	Critical Thinking and Problem Solving (CP); Digital Literacy (DL)

Facilitator's Page-wise Teaching Instructions

1

Level

Reasoning

Reasoning activities help young learners develop observation, counting, pattern recognition, and logical thinking skills, which are the first steps toward understanding coding concepts.

Concept 1.1: Numbers

(LB Pages 8–12)

Teaching Intent

To help learners understand what numbers are, recognise numbers correctly, count objects carefully, and identify number sequences through engaging visual activities.

A number is a symbol used to show how many objects or items there are. Numbers help us count, compare, and organise things around us.

⇒ Activity A: Count and Circle

Teacher Instructions

- ❖ Ask learners to observe the pictures carefully.
- ❖ Explain that each group of pictures represents a certain number of objects.
- ❖ Ask learners to count the objects slowly and carefully.
- ❖ Once they find the correct number, ask them to circle it.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ How many apples do you see?
- ❖ Can we count them together?
- ❖ Which number matches the objects?

Encourage learners to count aloud.

Teacher Guidance

Help learners understand that:

- ❖ Counting tells us the quantity of objects.
- ❖ Each number represents a specific quantity.

Reinforce

Numbers help us count and understand how many objects there are.

Coding Link

This is what programmers do. Computers use numbers to count and understand how many items are there. When learners count and circle objects, they are using the same idea that computers use to work with quantities.

⇒ Activity B: Count the Fingers

Teacher Instructions

- ❖ Ask learners to work in pairs and observe the pictures carefully.
- ❖ Guide learners to count all the fingers shown in each set.
- ❖ Encourage learners to discuss the answers with their partner before writing.
- ❖ Ask learners to write the correct total number in the box provided below each picture.

Ask questions such as:

- ❖ How many fingers can you count altogether?
- ❖ Which set shows more fingers?
- ❖ Can you count the fingers aloud with your partner?
- ❖ Can you show the same number using your own fingers?

Teacher Guidance

Guide learners to:

- ❖ Count the fingers one by one carefully.
- ❖ Add the fingers from both hands together correctly.
- ❖ Recount to check whether the answer is correct.
- ❖ Compare answers with their partner.

Reinforce

Counting carefully helps learners avoid mistakes and improve number skills.

Coding Link

Computers use numbers to represent real-world things like fingers, objects, or items. When learners count and write numbers, they are converting what they see into numbers, just like a computer does.

⇒ Activity C: Complete the Number Path

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain that the chick wants to reach the hen, but the path has some missing numbers.

- ❖ Tell learners to look at the numbers already written on the path.
- ❖ Guide them to identify the counting sequence.
- ❖ Ask learners to fill in the empty circles with the missing numbers in the correct order.
- ❖ Encourage learners to count aloud from 1 to 10 while completing the activity.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What number comes after 1?
- ❖ What number comes after 3?
- ❖ What number comes between 8 and 10?

Encourage learners to count together.

Teacher Guidance

Help learners understand that:

- ❖ Numbers follow a fixed order when counting.
- ❖ Identifying missing numbers helps complete the sequence.

Reinforce

Numbers appear in order when we count from smallest to largest.

Coding Link

Computers follow numbers in a proper order step by step. When learners fill the missing numbers to complete the path, they are following a sequence just like a computer program.

⇒ Activity D: Count the Objects

Teacher Instructions

- ❖ Ask learners to observe each picture carefully.
- ❖ Explain that they need to count the objects shown in each picture and write the correct number in the blank space.
- ❖ Guide learners to count each group of objects one by one.

The pictures include:

- ❖ Flowers in a pot
- ❖ Mangoes on a tree
- ❖ Pencils in a holder

- ❖ Fishes in a fish bowl
- ❖ Encourage learners to count aloud while pointing to each object.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ How many flowers do you see?
- ❖ How many mangoes are on the tree?
- ❖ How many pencils are in the holder?
- ❖ How many fishes are in the bowl?

Encourage learners to recount to check their answers.

Teacher Guidance

Help learners understand that:

- ❖ Counting objects carefully helps find the total quantity.
- ❖ Each object should be counted only once.

Reinforce

Counting helps us know how many objects are in a group.

Coding Link

Computers count and organise different types of data separately. When learners count flowers, pencils, mangoes, and fishes, they are grouping and counting data just like a computer.

⇒ Activity E: Complete the Number Sequences

Teacher Instructions

- ❖ Ask learners to observe the caterpillar-shaped number sequences carefully.
- ❖ Explain that some numbers are already given, while others are missing.
- ❖ Tell learners to look at the numbers that are present and think about which numbers should come before and after them.
- ❖ Ask learners to write the missing numbers in the empty circles to complete the counting sequence.
- ❖ Encourage learners to count aloud while filling the numbers.

Example sequences learners will complete:

- ❖ 1, 2, 3, 4, 5
- ❖ 6, 7, 8, 9, 10

- ❖ 11, 12, 13, 14, 15
- ❖ 16, 17, 18, 19, 20

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What number comes after 1?
- ❖ What number comes before 9?
- ❖ What number comes between 13 and 15?

Encourage learners to count step by step.

Teacher Guidance

Help learners understand that:

- ❖ Numbers follow a fixed order when counting.
- ❖ Missing numbers can be found by thinking about the numbers before and after.

Reinforce

Numbers follow a pattern when counting from 1 to 20.

Coding Link

Computers complete number sequences by following patterns. When learners fill in missing numbers, they are helping complete a sequence, just like a computer follows number order.

Concept 1.2: Shapes

(LB Pages 13–18)

Teaching Intent

To help learners recognise common geometric shapes and understand their basic properties such as number of sides and corners, through visual observation and simple explanations.

Activity : Introduction to Basic Shapes

Teacher Instructions

- ❖ Begin the lesson by showing learners the shapes displayed on the page.
- ❖ Introduce each shape one by one.

Explain the shapes clearly:

- Square – has 4 sides and 4 corners.
 - Rectangle – has 4 sides and 4 corners.
 - Triangle – has 3 sides and 3 corners.
 - Circle – has no sides and no corners.
- ❖ Ask learners to observe the shapes and repeat the names of the shapes aloud.
 - ❖ Encourage learners to trace the shapes in the air using their fingers.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which shape has three sides?
- ❖ Which shape has no corners?
- ❖ Which shapes have four sides?

Encourage learners to point to the correct shapes.

Teacher Guidance

Help learners understand that:

- ❖ Shapes are forms that objects take.
- ❖ Different shapes have different numbers of sides and corners.

Reinforce

Shapes help us recognise and describe objects around us.

Coding Link

Computers use basic shapes to create pictures, animations, and designs. When learners understand shapes and their properties, they are learning how digital images are built.

⇒ Activity A: Trace, Draw, and Name the Shapes

Teacher Instructions

- ❖ Ask learners to observe the shapes shown on the page carefully.
- ❖ Explain that each box shows a shape example at the top and a dotted outline below it.
- ❖ Tell learners to follow these steps:
 1. Trace the dotted outline of the shape carefully.
 2. Draw the shape neatly.

3. Write or say the name of the shape below it.
4. Colour the shape as shown in the example.

❖ The shapes included are:

- Circle
- Rectangle
- Triangle
- Square

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which shape looks like a ball?
- ❖ Which shape has three sides?
- ❖ Which shapes have four sides?

Encourage learners to point to each shape and say its name.

Teacher Guidance

Help learners understand that:

- ❖ Shapes have different numbers of sides and corners.
- ❖ Practising drawing shapes helps learners recognise them easily.

Reinforce

Shapes help us identify objects around us.

Coding Link

Computers draw shapes step by step to create images. When learners trace and draw shapes, they are following steps just like a computer creates drawings.

Activity B: Colour the Shapes and Count Them

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain that the sandcastle picture contains different shapes.
- ❖ Show learners the colour code given below the picture:
 - Square – Yellow
 - Circle – Green
 - Triangle – Red
- ❖ Ask learners to:
 1. Identify the shapes in the sandcastle.
 2. Colour each shape according to the given colour code.

3. Count how many shapes of each type appear in the picture.
4. Write the number in the blank space beside the colour box.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Can you find the squares in the picture?
- ❖ How many circles do you see?
- ❖ Which shapes look like triangles?

Encourage learners to count each shape carefully.

Teacher Guidance

Help learners understand that:

- ❖ Shapes can be found in pictures and objects around us.
- ❖ Following colour instructions helps improve observation and accuracy.

Reinforce

Counting shapes helps us recognise patterns and numbers.

Coding Link

Computers use colours and codes to organise information. When learners colour shapes and count them, they are following instructions just like a computer program.

Activity C: Connect the Objects with the Correct Shapes

Teacher Instructions

- ❖ Ask learners to observe the pictures on the left side carefully.
- ❖ Explain that each picture represents an object with a particular shape.
- ❖ Tell learners to look at the shapes shown on the right side.
- ❖ Ask learners to draw lines connecting each object with its matching shape.

Examples learners may identify:

- Pizza slice → Triangle
- Basketball → Circle
- Envelope → Rectangle
- Gift box → Square
- Egg → Oval

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which object looks round like a circle?
- ❖ Which object looks like a triangle?
- ❖ Which object has four equal sides like a square?

Encourage learners to explain their answers.

Teacher Guidance

Help learners understand that:

- ❖ Many objects around us are based on basic geometric shapes.
- ❖ Identifying shapes helps us recognise and describe objects.

Reinforce

Shapes can be seen in many objects we use every day.

Coding Link

Computers recognise objects by matching them with shapes. When learners connect objects to shapes, they are helping identify objects just like a computer system.

⇒ Activity D: Counting Different Shapes

Teacher Instructions

- ❖ Ask learners to work in groups of four and observe the group of shapes carefully.
- ❖ Explain that different shapes are mixed together inside the boundary.
- ❖ Tell each learner to choose one shape to count.
- ❖ Guide learners to identify the shapes shown below the picture:
 - Triangle
 - Circle
 - Square
 - Rectangle
- ❖ Ask learners to:
 1. Find their selected shape in the picture.
 2. Count how many times the shape appears.
 3. Write the total number in the correct box in their own book.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Can you find all the triangles first?
- ❖ How many circles can you count altogether?

- ❖ Which shape appears the most in the picture?

Encourage learners to point to each shape while counting carefully.

Teacher Guidance

Help learners understand that:

- ❖ Counting one type of shape at a time makes the task easier.
- ❖ Each learner in the group can count a different shape.
- ❖ Careful observation helps avoid missing or repeating shapes.

Reinforce

Observing carefully and counting correctly helps learners organise information better.

Coding Link

Computers analyse and count different types of shapes in images. When learners count each shape, they are organising and analysing data like a computer.

Activity E: Counting and Colouring Shapes

Teacher Instructions

- ❖ Ask learners to observe each group of shapes carefully.
- ❖ Draw their attention to the number shown beside each group (13, 7, 9, and 11).
- ❖ Explain that learners must count the shapes and colour only the number indicated.
- ❖ Guide learners step by step:
 - First count the shapes.
 - Then colour the required number of shapes.
 - Stop colouring once the correct number is reached.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What number is written beside the shapes?
- ❖ How many shapes should we colour?
- ❖ Can we count the shapes together?

Encourage learners to count aloud.

Teacher Guidance

Help learners understand that:

- ❖ Counting carefully helps avoid mistakes.
- ❖ We must colour exactly the number given, not more or less.
- ❖ Numbers tell us how many items we should select.

Reinforce

Counting and colouring the correct number helps us connect numbers with quantities.

Coding Link

Computers use numbers to represent how many items are present. When learners count and colour shapes, they are combining counting with instructions like in coding.

Concept 1.3: Patterns

(LB Pages 19–23)

Teaching Intent

To help learners recognise and understand patterns as repeating sequences, and to identify simple patterns using letters, numbers, shapes, and pictures.

⇒ Activity: Understanding Patterns

Teacher Instructions

- ❖ Begin the lesson by explaining that a pattern is something that repeats in the same order.
- ❖ Ask learners to observe the examples shown on the page carefully.

Explain each pattern clearly:

1. Letter Pattern:

- Aa, Bb, Aa, Bb, Aa, Bb
- The sequence repeats in the same order.

2. Number Pattern:

- 4, 5, 4, 5, 4, 5
- The numbers repeat alternately.

3. Picture Pattern:

- Sun, Star, Sun, Star, Sun, Star
- The pictures repeat in a fixed order.

4. Shape–Number Pattern:

- Triangle (1), Circle (2), Triangle (1), Circle (2)
- ❖ Ask learners to say the patterns aloud to help them recognise the repeating sequence.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What comes after Aa?
- ❖ Which number comes after 4?
- ❖ Which picture comes after the sun?

Encourage learners to predict the next item in the pattern.

Teacher Guidance

Help learners understand that:

- ❖ A pattern follows a repeating rule.
- ❖ Recognising patterns helps develop logical thinking and observation skills.

Reinforce

Patterns repeat in the same order.

Coding Link

Computers look for repeating patterns to understand what comes next. When learners observe patterns, they are thinking like a computer that recognises repetition.

Activity A: Write the Missing Number to Complete the Pattern

Teacher Instructions

- ❖ Ask learners to observe the train wagons carefully.
- ❖ Explain that each train shows a number pattern.
- ❖ Tell learners that one number is missing in each pattern.
- ❖ Ask learners to:
 1. Look at the numbers already given in the wagons.
 2. Identify the repeating pattern.
 3. Write the missing number in the empty wagon.
- ❖ Encourage learners to read the pattern aloud to recognise the repetition.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What number comes after 2 in the pattern 2, 4, 2, 4, ____?
- ❖ Which number repeats again and again in the sequence?
- ❖ What number should come next to continue the pattern?

Encourage learners to explain how they found the missing number.

Teacher Guidance

Help learners understand that:

- ❖ Patterns follow a repeating rule.
- ❖ Observing the sequence carefully helps find the missing number.

Reinforce

Recognising patterns helps develop logical thinking.

Coding Link

Computers use patterns to continue sequences automatically. When learners fill missing numbers, they are predicting the next step just like a computer program.

⇒ Activity B: Write the Missing Letter

Teacher Instructions

- ❖ Ask learners to observe the rows of letters carefully.
- ❖ Explain that each row follows a repeating letter pattern.
- ❖ Tell learners that one letter is missing in each row.
- ❖ Ask learners to:
 1. Read the letters from left to right.
 2. Identify the pattern or repeating order.
 3. Write the missing letter in the empty box.

Example patterns learners may identify:

- D, B, D, B, D, B
- X, X, Y, Y, X, X
- E, F, G, E, F, G
- Z, Y, Z, Y, Z, Y
- F, X, F, X, F, X

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What letters are repeating in this pattern?
- ❖ Which letter should come next?
- ❖ What is the missing letter?

Encourage learners to say the pattern aloud.

Teacher Guidance

Help learners understand that:

- ❖ Patterns can also be made using letters of the alphabet.
- ❖ Observing the order carefully helps find the missing letter.

Reinforce

Patterns repeat in a fixed order.

Coding Link

Computers can recognise patterns in letters and symbols. When learners complete letter patterns, they are understanding how computers process sequences.

⇒ Activity C: Observe, Colour, and Complete the Patterns

Teacher Instructions

- ❖ Ask learners to observe each row of shapes carefully.
- ❖ Explain that each row follows a repeating colour or shape pattern.
- ❖ Tell learners to identify the rule of the pattern and colour the blank shapes accordingly.

Guide learners through each row:

1. **Stars:**

Pattern → Green, Blue, Green, Blue, Green, _____

Missing colour → **Blue**

2. **Cloud shapes:**

Pattern → Red, Yellow, Red, Yellow, _____

Missing colour → **Red, Yellow**

3. **Puzzle pieces:**

Pattern → Blue, Red, Yellow, Blue, Red, _____

Missing colour → **Yellow**

4. **Sun shapes:**

Pattern → Orange, Orange, Green, Green, _____

Missing colours → **Orange, Orange**

5. **Diamond shapes:**

Pattern → Purple, Purple, Blue, Blue, Purple, _____

Missing colour → **Purple**

6. Squares:

Pattern → Yellow, Green, Green, Yellow, Green, _____

Missing colour → **Green**

- ❖ Encourage learners to observe carefully before colouring.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What colour comes next in the pattern?
- ❖ Which shapes repeat again and again?
- ❖ What is the rule of this pattern?

Encourage learners to explain their reasoning.

Teacher Guidance

Help learners understand that:

- ❖ Patterns follow a specific repeating rule.
- ❖ Observing the sequence carefully helps identify the missing element.

Reinforce

Patterns repeat in the same order.

Coding Link

In coding, repeating actions again and again is called a loop. When learners complete colour patterns, they are repeating sequences just like a computer.

⇒ Activity D: Same or Different Patterns

Teacher Instructions

- ❖ Ask learners to look carefully at the two rows of pictures in each question.
- ❖ Explain that each row forms a pattern, which means the pictures appear in a repeated order.
- ❖ Guide learners to compare the two patterns step by step.
- ❖ Ask them to check whether the sequence of pictures in both rows is exactly the same.
- ❖ Learners should circle:
 - YES if the patterns are the same.
 - NO if the patterns are different.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What is the first picture in the pattern?
- ❖ What comes next?
- ❖ Does the second pattern follow the same order?

Encourage learners to point to each picture while comparing.

Teacher Guidance

Help learners understand that:

- ❖ A pattern is considered the same only if the order of pictures is identical.
- ❖ Even a small change in the sequence makes the pattern different.

Reinforce

Observing patterns carefully helps us identify similarities and differences.

Coding Link

Computers compare patterns to check if they are the same or different. When learners identify matching or different patterns, they are analysing like a computer.

Coding Challenge - 1: Find the Pair!

(LB Page 24)

Teaching Intent

To help learners strengthen observation and matching skills by identifying pairs.

⇒ Activity: Match the Socks

Teacher Instructions

- ❖ Ask learners to observe the socks carefully.
- ❖ Explain that each sock has a matching pair.
- ❖ Ask learners to connect the matching socks with a line.

Teacher Guidance

Encourage learners to:

- ❖ Compare colours and patterns carefully.

Reinforce

Matching pairs requires careful observation.

Coding Link

Computers match related items to organise information. When learners find pairs of socks, they are grouping similar items together just like a computer program.

Review Exercise

1. What do numbers help us do?
2. Name any two shapes you learned.
3. What is a pattern?
4. How do we find matching pairs?

Differentiated Lessons

Remedial Activity

- ❖ Provide learners with coloured blocks or beads.
- ❖ Ask them to count and group them.

Challenging Activity

- ❖ Ask learners to create their own pattern using shapes or colours.

Teacher Closure for Level 1

Summarise the key learning points:

Learners have learned to:

- ❖ Count objects using numbers
- ❖ Recognise shapes
- ❖ Identify patterns
- ❖ Match pairs

These activities build foundational reasoning and computational thinking skills, which prepare learners for future coding concepts.

Critical Thinking & Analysis

This level helps learners develop analytical and reasoning skills by observing patterns, comparing objects, identifying differences, solving puzzles, and following directions. These activities strengthen logical thinking, which is an important foundation for coding and problem solving.

Concept 2.1: Even and Odd Numbers

(LB Pages 26–27)

Teaching Intent

To help learners understand the difference between even and odd numbers by using visual grouping and pairing activities.

An even number can be divided into two equal groups without leaving anything behind.

An odd number leaves one item unpaired when grouped.

⇒ Activity: Understanding Even and Odd Numbers

Teacher Instructions

- ❖ Begin the lesson by showing a few objects such as pencils or blocks.
- ❖ Ask learners to form pairs of these objects.
- ❖ Explain that if every object can find a partner, the number is even.
- ❖ If one object is left without a partner, the number is odd.
- ❖ Ask learners to observe the examples shown in the Learner's Book.

Teacher–Learner Interaction

Ask questions such as:

- ❖ Can these objects be paired completely?
- ❖ Is any object left alone?
- ❖ What number do we get?

Encourage learners to demonstrate pairing using their fingers.

Teacher Guidance

Help learners understand that:

- ❖ Even numbers always form complete pairs.
- ❖ Odd numbers always leave one object without a pair.

Examples:

- 2, 4, 6, 8 → Even numbers
- 1, 3, 5, 7 → Odd numbers

Reinforce

Even numbers make pairs; odd numbers leave one alone.

Coding Link

This is what computers do when they group numbers. Computers separate numbers into different types based on rules. When learners understand even and odd numbers, they are learning how computers classify data.

⇒ Activity A: Colour the Kites

Teacher Instructions

- ❖ Ask learners to observe the numbers written inside each kite.
- ❖ Read the instructions aloud:
 - – Even numbers → Green colour
 - – Odd numbers → Red colour
- ❖ Explain that learners must check each number and colour it according to the rule.
- ❖ Guide learners step by step:
 1. Identify the number inside the kite.
 2. Decide whether it is even or odd.
 3. Colour the section with the correct colour.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Can this number be divided into pairs?
- ❖ Does any object remain without a pair?
- ❖ Is this number even or odd?

Encourage learners to use their fingers or small objects to form pairs.

Teacher Guidance

Help learners understand that:

- ❖ Even numbers can be divided into two equal groups.
- ❖ Odd numbers leave one item unpaired.

Examples:

- Even numbers: 2, 4, 6, 8, 10
- Odd numbers: 1, 3, 5, 7, 9

Reinforce

Even numbers make complete pairs, while odd numbers leave one item alone.

Coding Link

Computers follow instructions based on rules or codes. When learners colour even and odd numbers using a colour code, they are following instructions just like a computer program.

Concept 2.2: Same or Different

(LB Pages 28–29)

Teaching Intent

To help learners develop observation and comparison skills by identifying objects or pictures that are identical or different.

Activity A: Find the Twin Tortoises

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain that Joy and Troy are twin tortoises, which means they look exactly the same.
- ❖ Ask learners to compare the tortoises in the picture.
- ❖ Guide them to identify the two tortoises that have the same:
 - Shell shape
 - Colour
 - Body features
- ❖ Ask learners to circle the two tortoises that are identical.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which tortoises look similar?
- ❖ Do they have the same shell pattern?
- ❖ Are their size and colour the same?

Encourage learners to point to the tortoises while comparing them.

Teacher Guidance

Help learners understand that:

- ❖ Two objects are considered the same when all their features match.
- ❖ Careful observation helps us notice similarities and differences.

Reinforce

Looking closely helps us identify objects that are exactly the same.

Coding Link

Computers compare objects to check if they are the same or different. When learners find matching pictures, they are using comparison just like a computer.

⇒ Activity B: Find the Matching Picture

Teacher Instructions

- ❖ Ask learners to look carefully at the first picture in each row.
- ❖ Explain that they must find the picture in the row that looks exactly the same as the first one.
- ❖ Ask learners to compare:
 - Shape
 - Colour
 - Pattern or design
- ❖ Once they find the matching picture, ask them to put a tick (✓) on it.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What do you notice about the first picture?
- ❖ Which picture looks exactly the same?
- ❖ Are the colour and shape identical?

Encourage learners to point to the pictures while comparing them.

Teacher Guidance

Help learners understand that:

- ❖ A matching picture must have all the same features as the first one.
- ❖ Even small differences in colour, shape, or pattern mean the pictures are different.

Reinforce

Careful observation helps us find objects that are the same.

Coding Link

Computers scan and compare data to find matches. When learners tick the picture that is the same, they are recognising patterns just like a computer system.

Concept 2.3: Odd One Out

(LB Pages 30–31)

Teaching Intent

To help learners identify the object that does not belong in a group, strengthening classification and reasoning skills.

⇒ Activity A: Find the Odd One Out

Teacher Instructions

- ❖ Begin by explaining the meaning of “odd one out.”
- ❖ Tell learners that the odd one out is the item that is different from the others in a group.
- ❖ Ask learners to observe each group of pictures carefully.
- ❖ Guide them to think about what the pictures represent (for example: tools, furniture, animals, clothes).
- ❖ Ask learners to circle the picture that does not belong to the group.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What do most of these objects have in common?
- ❖ Which object looks different from the others?
- ❖ Why does this picture not belong to the group?

Encourage learners to explain their reasoning.

Teacher Guidance

Help learners understand that:

- ❖ Items in a group usually share a common feature or category.
- ❖ The odd one out is the item that does not share that feature.

Examples from the activity may include:

- ❖ Objects used for eating vs. an object used for writing
- ❖ Furniture items vs. a beverage can

- ❖ Clothing items vs. something different
- ❖ Animals that belong to a similar category vs. one that does not

Reinforce

The odd one out is the item that is different from the rest of the group.

Coding Link

Computers group similar items and find the one that does not belong. When learners identify the odd one out, they are doing classification and filtering like a computer.

⇒ Activity B: Find the Word that Does Not Rhyme

Teacher Instructions

- ❖ Ask learners to work with a partner and look carefully at each row of pictures.
- ❖ Tell learners to say the name of each picture aloud together.
- ❖ Explain that some words sound similar at the end. These are called rhyming words.
- ❖ Ask learners to listen carefully to the ending sounds of the words.
- ❖ In each row, three words rhyme with each other and one word is different.
- ❖ Ask learners to identify and circle the word that does not rhyme with the others.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What are the names of the pictures?
- ❖ Which words sound the same at the end?
- ❖ Which word sounds different from the others?

Encourage learners to repeat the words aloud with their partner to hear the rhyme clearly.

Examples from the activity:

- ❖ Pen – Hen – Den rhyme; Cat does not rhyme.
- ❖ Box – Socks – Fox rhyme; Book does not rhyme.
- ❖ Dog – Frog – Log rhyme; Cot does not rhyme.
- ❖ Train – Rain – Brain rhyme; Ear does not rhyme.

Teacher Guidance

Help learners understand that:

- ❖ Rhyming words have similar ending sounds.
- ❖ Words that do not share the same ending sound are the odd ones out.
- ❖ Saying words aloud makes it easier to hear rhyming patterns.

Reinforce

Listening carefully to word sounds helps learners recognise rhyming patterns.

Coding Link

Computers can recognise patterns in sounds and words. When learners find the word that does not rhyme, they are identifying patterns just like computers process language.

Concept 2.4: Find the Difference

(LB Pages 32–33)

Teaching Intent

To help learners develop careful observation, comparison, and attention-to-detail skills by identifying small differences between two similar pictures.

⇒ Activity A: Find the Six Differences

Teacher Instructions

- ❖ Ask learners to look carefully at the two pictures of the dog and its house.
- ❖ Explain that the two pictures look similar, but there are six small differences between them.
- ❖ Ask learners to compare the pictures step by step.
- ❖ Guide them to check different parts of the picture such as:
 - The sky
 - The clouds
 - The sun or moon
 - The objects around the house
- ❖ Ask learners to circle the six differences they find.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What do you see in the first picture?
- ❖ Does the second picture have the same thing?
- ❖ Which part looks different?

Encourage learners to compare the pictures from left to right and top to bottom.

Teacher Guidance

Help learners understand that:

- ❖ Small details can make two pictures different.
- ❖ Looking carefully helps us identify differences.

Reinforce

Careful observation helps us notice small changes.

Coding Link

This is what computers do when they compare images. They look carefully to find changes. When learners spot differences, they are analysing details like a computer.

⇒ Activity B: Colour and Spot the Six Differences

Teacher Instructions

- ❖ Ask learners to look at the first picture carefully.
- ❖ Tell them to colour the first picture neatly using colours of their choice.
- ❖ After colouring, ask learners to compare the first coloured picture with the second picture.
- ❖ Explain that there are six differences between the two pictures.
- ❖ Guide learners to check the pictures carefully from top to bottom and left to right.
- ❖ Ask learners to circle or point out the six differences in the second picture.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What do you see in the first picture?
- ❖ Does the second picture have the same object?
- ❖ Which part looks different?

Encourage learners to describe the differences they find.

Teacher Guidance

Help learners understand that:

- ❖ Differences can be in shapes, objects, or details in the picture.
- ❖ Careful observation helps identify even small changes.

Reinforce

Looking closely helps us notice differences and improves observation skills.

Coding Link

Computers examine pictures step by step to detect changes. When learners colour and compare images, they are observing details just like a computer system.

Teaching Intent

To help learners develop visual reasoning, spatial awareness, and problem-solving skills by arranging puzzle pieces in the correct order to form a complete picture.

⇒ Activity: Arrange the Puzzle Pieces

Teacher Instructions

- ❖ Ask learners to observe the small puzzle pieces shown at the top of the page.
- ❖ Explain that each piece is part of a bigger picture of a beautiful bird.
- ❖ Tell learners that each piece has a number.
- ❖ Ask them to place each piece in the correct position in the puzzle grid below.
- ❖ Guide learners to look carefully at:
 - The shapes of the puzzle edges
 - The colours and patterns in the picture
 - The direction of the bird's wings, head, and tail
- ❖ Ask learners to arrange the pieces step by step until the full picture is completed.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which piece shows the bird's head?
- ❖ Where might the wing piece go?
- ❖ Which pieces fit together to form the body?

Encourage learners to compare shapes and patterns before placing a piece.

Teacher Guidance

Help learners understand that:

- ❖ Puzzle pieces fit together based on their shape and image details.
- ❖ Observing the colours and patterns helps identify the correct position of each piece.

Reinforce

Careful observation and logical thinking help solve puzzles.

Coding Link

Computers solve problems by putting pieces of information together. When learners look at puzzle pieces, they are preparing to organise parts like a computer.

Activity A: Match the Puzzle Pieces

Teacher Instructions

- ❖ Ask learners to observe the puzzle picture carefully.
- ❖ Explain that some puzzle pieces are missing from the picture.
- ❖ Tell learners that each empty space in the puzzle has a number.
- ❖ The puzzle pieces below are labelled with letters (a, b, c, d, e).
- ❖ Ask learners to:
 1. Look carefully at each puzzle piece.
 2. Identify the part of the picture it belongs to.
 3. Write the correct number of the position beside the corresponding letter.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What part of the picture does this piece show?
- ❖ Does it belong near the water, the boat, or the sky?
- ❖ Which numbered space has the same colours or shapes?

Encourage learners to match the shapes and colours of the puzzle pieces.

Teacher Guidance

Help learners understand that:

- ❖ Puzzle pieces fit based on shape, colour, and picture details.
- ❖ Observing small details helps identify the correct position of each piece.

Reinforce

Careful observation and logical thinking help complete puzzles correctly.

Coding Link

Computers arrange pieces in the correct order to form a complete result. When learners complete the puzzle, they are solving a problem step by step like a computer.

Concept 2.6: Directions

(LB Pages 36–37)

Teaching Intent

To help learners develop directional awareness, problem-solving, and logical thinking skills by tracing the correct path in a maze.

⇒ Activity A: Find the Correct Path

Teacher Instructions

- ❖ Ask learners to observe the maze carefully.
- ❖ Explain that the **little** rat wants to reach the cheese, but the path is confusing.
- ❖ Tell learners to start from the rat and draw a line along the correct path that leads to the cheese.
- ❖ Encourage learners to follow the path slowly and carefully.
- ❖ Ask them to collect the small cheese pieces shown along the path while moving toward the final cheese.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Where does the rat start?
- ❖ Which path leads closer to the cheese?
- ❖ Which path should we avoid?

Encourage learners to trace the path with their finger first before drawing the line.

Teacher Guidance

Help learners understand that:

- ❖ Mazes require careful observation and decision-making.
- ❖ Sometimes a path may look correct but may lead to a dead end.

Reinforce

Following directions carefully helps solve maze problems.

Coding Link

Computers follow directions like left, right, up, and down to move objects. When learners trace a path in the maze, they are giving directions like in coding.

⇒ Activity B: Help Lolo the Lion Find Roro the Tiger

Teacher Instructions

- ❖ Ask learners to observe the maze carefully.
- ❖ Explain that Lolo the lion wants to reach Roro the tiger, but the maze has many confusing paths.
- ❖ Ask learners to start from the lion and carefully follow the maze paths to reach the tiger.

- ❖ Encourage learners to:
 - Trace the path with their finger first.
 - Then draw a line along the correct path.
- ❖ Remind learners to avoid paths that lead to dead ends.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Where does the lion start in the maze?
- ❖ Which direction should the lion go first?
- ❖ Which path leads closer to the tiger?

Encourage learners to explain how they found the path.

Teacher Guidance

Help learners understand that:

- ❖ Mazes require careful observation and logical thinking.
- ❖ Some paths may look correct but may lead to blocked routes.

Reinforce

Following directions carefully helps solve maze puzzles.

Coding Link

Computers use directions to reach a destination. When learners help the lion find the tiger, they are solving a path problem just like in computer programs and games.

Concept 2.7: Logical Thinking

(LB Pages 38–39)

Teaching Intent

To help learners develop logical reasoning and decision-making skills by analysing a situation and selecting suitable activities based on the given condition.

⇒ Activity A: Choose the Games That Can Be Played Indoors

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain the situation:
 - It is raining outside.
 - Yaw wants to play with Ebo.
 - They must decide which games can be played inside the house.

- ❖ Ask learners to look at the pictures of different games shown below.
- ❖ Guide learners to think about:
 - Which games are suitable to play indoors.
 - Which games are usually played outdoors.
- ❖ Ask learners to identify and select the games that can be played inside the house.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Why can't some games be played outside when it is raining?
- ❖ Which games are safe to play inside the house?
- ❖ Which games need a large outdoor space?

Encourage learners to explain their choices.

Teacher Guidance

Help learners understand that:

- ❖ Some games require open outdoor space.
- ❖ Some games can easily be played inside the house.

Examples:

- ❖ **Indoor games:** board games, cards
- ❖ **Outdoor games:** football, basketball, cricket

Reinforce

Thinking about the situation helps us choose the correct action.

Coding Link

Computers make decisions based on situations and conditions. When learners choose suitable games, they are using logic just like a computer program.

Activity B: Identify Who Broke the Window

Teacher Instructions

- ❖ Ask learners to work in small groups and observe the picture carefully.
- ❖ Explain that one of the windows in the house has been broken.
- ❖ Tell learners to look carefully for clues in the picture to find out who may have broken the window.

- ❖ Guide learners to examine the scene carefully:
 - Look at the children playing outside.
 - Observe what each child is doing. Notice the objects being used during play.
- ❖ Ask learners to circle the child they think most likely broke the window.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What happened to the window?
- ❖ Which child is holding something that could break the window?
- ❖ Which child is standing closest to the broken window?
- ❖ What clues in the picture helped you decide?

Encourage learners to discuss and explain their reasoning with their group members.

Teacher Guidance

Help learners understand that:

- ❖ Clues in a picture help us understand what may have happened.
- ❖ Careful observation helps us notice important details.
- ❖ Logical thinking helps learners make reasonable conclusions.

Reinforce

Looking carefully for clues helps learners solve problems logically.

Coding Link

Computers use clues to solve problems and find the correct answer. When learners identify who broke the window, they are thinking logically like a computer.

Coding Challenge-2: Fly High

(LB Page 40)

Teaching Intent

To help learners practise direction recognition and comparison using arrows and movement.

⇒ Activity: Observe the Flying Birds

Teacher Instructions

- ❖ Ask learners to observe the arrows carefully.
- ❖ Ask them to count how many birds are flying:
 - Up
 - Right
- ❖ Ask learners to circle the arrow that shows more birds.

Teacher Guidance

Explain that arrows show direction:

- ❖ Up (↑)
- ❖ Right (→)
- ❖ Left (←)
- ❖ Down (↓)

Reinforce

Directions help us understand movement.

Coding Link

Computers follow arrows and directions to control movement. When learners count and identify directions of flying birds, they are understanding movement instructions used in coding and games.

Review Exercise

1. What is an even number?
2. How do we find the odd one out?
3. Why are directions important?

Differentiated Lessons

Remedial Activity

- ❖ Give learners picture cards and ask them to group similar items.

Challenging Activity

- ❖ Ask learners to create their own puzzle or maze for their classmates.

Teacher Closure for Level 2

Summarise that learners have learned to:

- ❖ Identify even and odd numbers
- ❖ Compare objects and pictures
- ❖ Find differences
- ❖ Solve puzzles
- ❖ Follow directions
- ❖ Use logical thinking

These activities strengthen critical thinking and early computational reasoning skills.

Data processing means collecting, organising, and understanding information so that it becomes meaningful. In these activities, learners practise grouping objects, recognising relationships, following clues, and decoding information, which are foundational computational thinking skills.

Concept 3.1: What Goes Together?

(LB Pages 42–43)

Teaching Intent

To help learners understand that some objects naturally belong together because they share a common use, purpose, or relationship, and to introduce the idea of organising information into meaningful groups.

⇒ Activity A: Identify Related Objects

Teacher Instructions

- ❖ Begin the lesson by asking simple questions:
 - Which things do we use while eating?
 - Which things are used for writing?
- ❖ Explain that some objects are used together or belong to the same group.
- ❖ Ask learners to observe the pictures carefully.
- ❖ Guide them to circle the correct picture on the right that matches the object on the left.

Teacher–Learner Interaction

Ask questions such as:

- ❖ Which object is used with the cup?
- ❖ Which item belongs with a pencil?

Encourage learners to explain their choices.

Teacher Guidance

Help learners understand that:

- ❖ Objects can be grouped based on their function or relationship.
- ❖ Grouping related items helps organise information.

Reinforce

Grouping related objects helps us understand data better.

Coding Link

Computers connect related information to make sense of data. When learners match the correct pictures, they are identifying relationships just like a computer links related items.

⇒ Activity B: Match the Related Objects

Teacher Instructions

- ❖ Ask learners to work with a partner and observe all the pictures carefully.
- ❖ Explain that some objects are used together or belong to the same situation.
- ❖ Ask learners to identify pairs of objects that go together and draw a line connecting them.
- ❖ Guide learners by encouraging them to discuss their answers with their partner.

Examples learners may identify:

- Key → Lock
- Baby → Feeding bottle
- Bed → Pillow
- Hands → Gloves
- Cycle → Helmet (or cycling item)
- Badminton racket → Shuttlecock

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which object is used with a lock?
- ❖ What does a baby need for feeding?
- ❖ Which object goes together with the bed?
- ❖ What do we use when playing badminton?

Encourage learners to discuss and explain why they connected each pair.

Teacher Guidance

Help learners understand that:

- ❖ Objects that are related often have a common purpose or function.
- ❖ Working with a partner helps learners share ideas and compare answers.
- ❖ Grouping related items helps us organise information easily.

Reinforce

Objects that are used together usually belong together.

Coding Link

Computers group items that belong together. When learners draw lines to connect related things, they are organising data just like a computer system.

Concept 3.2: Belonging

(LB Pages 44–45)

Teaching Intent

To help learners classify objects according to the place or environment where they belong, developing categorisation skills.

⇒ Activity A: Circle the Things that Belong to the Sky

Teacher Instructions

- ❖ Ask learners to observe the pictures carefully.
- ❖ Explain that different objects belong to different places such as sky, water, or land.
- ❖ Tell learners that they need to identify the objects that belong in the sky.
- ❖ Ask learners to circle the pictures that can usually be seen in the sky.

Examples may include:

- Sun
- Birds
- Rainbow
- Kite

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which things do we see when we look up at the sky?
- ❖ Can animals or objects fly in the sky?
- ❖ Which picture shows something that stays on land?

Encourage learners to explain their choices.

Teacher Guidance

Help learners understand that:

- ❖ Some objects belong naturally in certain places.
- ❖ Observing the environment helps us classify objects correctly.

Reinforce

Classifying objects helps us organise information.

⇒ Activity B: Circle the Things that Belong to Water

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain that different objects belong to different places such as land, water, or air.
- ❖ Tell learners that they must identify the objects that live in or belong to water.
- ❖ Ask learners to circle the pictures that are usually found in water.

Examples learners may identify:

- Octopus
- Starfish
- Fish
- Shell

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which animals live in water?
- ❖ Which objects can float or stay in water?
- ❖ Which pictures belong on land instead of water?

Encourage learners to explain their choices.

Teacher Guidance

Help learners understand that:

- ❖ Some animals and objects naturally live in water environments.
- ❖ Observing the environment helps us classify objects correctly.

Reinforce

Grouping objects based on where they belong helps us organise information.

Coding Link

Computers sort items into groups based on where they belong. When learners choose things for sky or water, they are classifying items just like a computer does.

⇒ Activity C: Circle the Things Found in the Kitchen

Teacher Instructions

- ❖ Ask learners to observe all the pictures carefully.
- ❖ Explain that the kitchen is a place where food is prepared and cooked.

- ❖ Tell learners to look at each object and think about whether it is commonly used in the kitchen.
- ❖ Ask learners to circle the objects that are usually found in a kitchen.

Examples learners may identify:

- Bowl
- Blender
- Flour bag
- Spoon
- Knife
- Rice bowl

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What tools do we use to prepare food?
- ❖ Which items help us cook or eat food?
- ❖ Which objects belong in a classroom or playground instead?

Encourage learners to explain their choices.

Teacher Guidance

Help learners understand that:

- ❖ Different places have different types of objects.
- ❖ The kitchen contains items related to cooking, preparing, and serving food.

Reinforce

Grouping objects by where they belong helps organise information.

Coding Link

Computers organise data into categories to make it easy to understand. When learners identify kitchen items, they are grouping similar things like a computer program.

Concept 3.3: Follow the Clues

(LB Pages 46–47)

Teaching Intent

To develop learners' reasoning skills by solving problems using clues and logical thinking.

⇒ Activity A: Explore the Maze and Link the Rhyming Words

Teacher Instructions

- ❖ Ask learners to observe the maze carefully.
- ❖ Explain that each picture represents a word.
- ❖ Tell learners that they must follow the maze and connect pictures with rhyming words (words that sound the same at the end).
- ❖ Ask learners to:
 - Say the name of each picture aloud.
 - Listen to how the words sound.
 - Follow the maze path to connect rhyming words.

Examples of rhyming pairs learners may find:

- Wet → Jet
 - Cub → Tub
 - Mop → Top
 - Net → Pet
- ❖ Ask learners to trace the correct path from the starting point to the finish.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What word does this picture represent?
- ❖ Which word sounds the same at the end?
- ❖ Which path leads to the correct rhyming word?

Encourage learners to pronounce the words clearly.

Teacher Guidance

Help learners understand that:

- ❖ Rhyming words have similar ending sounds.
- ❖ Following clues helps solve puzzles step by step.

Reinforce

Listening carefully helps us recognise rhyming patterns.

Coding Link

Computers follow clues and patterns to reach the correct answer. When learners connect rhyming words through the maze, they are solving a problem step by step like a computer.

Activity B: Find Kwaku Using the Clues

Teacher Instructions

- ❖ Ask learners to work in groups of four and observe the picture carefully.
- ❖ Explain that they must identify Kwaku by following the given clues.
- ❖ Read the clues aloud one by one:
 1. Kwaku is happy.
 2. Kwaku does not play football.
 3. Kwaku does not like red colour.
 4. Kwaku likes to skate.
- ❖ Ask learners to observe each child carefully and check whether the clues match.
- ❖ Ask learners to circle the child who matches all the clues in their own book.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Which child is skating?
- ❖ Which child is not playing football?
- ❖ Which child is not wearing red clothes?
- ❖ Which child matches all the clues given?

Encourage learners to explain how they used the clues to find Kwaku.

Teacher Guidance

Help learners understand that:

- ❖ Each clue gives important information.
- ❖ All the clues must match the same child.
- ❖ Careful observation and logical thinking help find the correct answer.

Reinforce

Following clues carefully helps learners solve problems logically.

Coding Link

This is what programmers do. Computers check each clue one by one to find the correct answer. When learners use all the clues to find Kwaku, they are thinking logically like a computer.

Teaching Intent

To help learners develop symbol recognition, decoding skills, and logical thinking by interpreting a code chart and translating pictures into letters to reveal a hidden message.

⇒ Activity A: Decode the Secret Message

Teacher Instructions

- ❖ Ask learners to observe the code chart carefully.
- ❖ Explain that each picture represents a letter of the alphabet.
- ❖ Tell learners that they must decode the hidden message by:
 1. Looking at each picture in the message row.
 2. Finding the same picture in the code chart.
 3. Writing the corresponding letter in the box below the picture.
- ❖ Ask learners to complete all the letters to reveal the hidden word or message.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What picture do you see first?
- ❖ Can you find the same picture in the code chart?
- ❖ Which letter is written above that picture?

Encourage learners to decode the message step by step.

Teacher Guidance

Help learners understand that:

- ❖ Codes replace letters with pictures or symbols.
- ❖ Decoding means converting the symbols back into letters.

Reinforce

Codes help hide and reveal messages.

Coding Link

Computers use codes to store and share information. Each symbol or picture can represent something. When learners decode pictures into letters, they are understanding how computers read codes.

⇒ Activity B: Decode Kwesi's Secret Message

Teacher Instructions

- ❖ Ask learners to observe the symbol code charts carefully.
- ❖ Explain that each shape represents a letter.
Example from the code chart:
 - Red Hexagon → T
 - Green Star → A
 - Purple Triangle → R
 - Yellow Circle → I
 - Blue square → O
 - Light green rectangle → B
 - Red triangle → M
- ❖ Tell learners that Kwesi has written a message using these symbols.
- ❖ Ask learners to decode the message by:
 1. Looking at each symbol in the message.
 2. Finding the same symbol in the code chart.
 3. Writing the correct letter in the blank below.
- ❖ When all letters are written, learners will discover the hidden message.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What letter does this shape represent?
- ❖ Which symbol appears first in the message?
- ❖ What word do we get after writing all the letters?

Encourage learners to decode the message step by step.

Teacher Guidance

Help learners understand that:

- ❖ Codes replace letters with symbols.
- ❖ Decoding means converting the symbols back into readable letters.

Reinforce

Codes help hide messages, and decoding helps reveal them.

Coding Link

Computers convert coded information into meaningful messages. When learners match letters and decode the message, they are processing information step by step like a computer.

Coding Challenge - 3: Animal Hunt

(LB Page 50)

Teaching Intent

To help learners improve observation skills by identifying hidden objects in a picture.

⇒ Activity: Find the Hidden Animals

Teacher Instructions

- ❖ Ask learners to observe the picture carefully.
- ❖ Explain that five animals are hidden in the picture.
- ❖ Ask learners to find and name the animals.

Teacher Guidance

Guide learners to:

- ❖ Look carefully at shapes and outlines.
- ❖ Identify animals hidden in unusual places.

Reinforce

Careful observation helps solve challenges.

Coding Link

Computers scan images to find hidden objects and details. When learners look carefully to find hidden animals, they are observing and analysing just like a computer system.

Review Exercise

1. Why do we group objects together?
2. What does it mean to decode a message?
3. How do clues help solve a problem?

Differentiated Lessons

Remedial Activity

- ❖ Ask learners to group classroom objects into categories (books, toys, stationery).

Challenging Activity

- ❖ Ask learners to create their own simple secret code using pictures and letters.

Teacher Closure for Level 3

Summarise that learners have learned:

- ❖ Grouping related objects
- ❖ Classifying objects by location
- ❖ Solving clues using logical thinking
- ❖ Decoding messages
- ❖ Observing hidden objects

These activities develop early data processing skills, which help learners organise and interpret information.

Algorithmic intelligence helps learners understand how to solve problems by following steps, making decisions, and recognising repeated actions. These ideas form the basis of coding and computational thinking.

Concept 4.1: Step-by-Step

(LB Pages 52–53)

Teaching Intent

To help learners understand that many tasks can be completed by following a series of steps in the correct order, and to introduce the concept of an algorithm in a simple and relatable way.

An **algorithm** is a set of clear instructions that help us complete a task step by step.

⇒ Activity A: Number the Activities in the Correct Order

Teacher Instructions

- ❖ Ask learners to observe all the pictures carefully.
- ❖ Explain that the pictures show different activities in a child's daily routine.
- ❖ Tell learners that the activities must be arranged in the correct order from morning to later in the day.
- ❖ Ask learners to look at each picture and think about which activity happens first, next, and last.
- ❖ Guide learners to write numbers in the boxes beside each picture to show the correct order.

Example sequence learners may identify:

1. Brushing teeth
2. Taking a bath
3. Eating breakfast
4. Getting ready for school
5. Going to bed to sleep

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What do we usually do first when we wake up?
- ❖ Do we brush our teeth before or after eating?

- ❖ What do we do before going to school?

Encourage learners to describe their own daily routines.

Teacher Guidance

Help learners understand that:

- ❖ Many activities follow a specific sequence.
- ❖ Doing steps in the correct order helps complete tasks properly.

Reinforce

Following steps in order helps us complete tasks successfully.

Coding Link

Computers follow instructions in a fixed order to complete a task. When learners arrange the steps correctly, they are creating a sequence just like a computer program.

⇒ Activity B: Draw a Pineapple Step by Step

Teacher Instructions

- ❖ Ask learners to observe the pictures showing the steps for drawing a pineapple.
- ❖ Explain that each picture represents one step in the drawing process.
- ❖ Guide learners to:
 - Trace the dotted outlines carefully in each step.
 - Follow the steps in the correct order.
 - Observe how the pineapple picture gradually forms.
- ❖ After tracing the steps, ask learners to draw the pineapple again in the blank box using the same steps.
- ❖ Encourage learners to colour the pineapple after completing the drawing.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What shape do we draw first?
- ❖ What do we add after drawing the oval shape?
- ❖ What changes in the final step?

Encourage learners to describe the steps while drawing.

Teacher Guidance

Help learners understand that:

- ❖ Big tasks can be completed easily when broken into small steps.
- ❖ Following the correct order helps achieve the desired result.

Reinforce

Step-by-step instructions help us complete tasks correctly.

Coding Link

Computers perform tasks step by step to create results. When learners follow steps to draw the pineapple, they are following instructions just like a computer executes a program.

Concept 4.2: Decision Making

(LB Pages 54–55)

Teaching Intent

To help learners develop decision-making and moral reasoning skills by thinking about everyday situations and choosing the correct response.

Activity A: Read and Answer Yes or No

Teacher Instructions

- ❖ Ask learners to work with a partner and observe each picture carefully.
- ❖ Read the questions aloud one by one.

Examples:

- Should we study daily?
- Should we fight with our friends?
- Should we trust strangers?
- Should we help poor people?
- ❖ Ask learners to think carefully about each situation before answering.
- ❖ Tell learners to discuss their ideas with their partner and decide whether the answer should be Yes or No.
- ❖ Ask learners to draw a circle around the correct option beside each picture in their own book.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Why is it important to study every day?
- ❖ Is fighting with friends a good behaviour?

- ❖ Why should we be careful with strangers?
- ❖ Why should we help people in need? Encourage learners to share their thoughts and explain their answers.

Teacher Guidance

Help learners understand that:

- ❖ Some choices are right and helpful, while others may cause harm.
- ❖ Thinking carefully helps learners make good decisions.
- ❖ Discussing ideas with a partner can help learners understand situations better.

Reinforce

Good decisions help learners behave responsibly and make the right choices.

Coding Link

Computers make decisions based on conditions like yes or no. When learners choose the correct answers, they are making decisions just like a computer program.

Concept 4.3: Loops: Repetition

(LB Pages 56–58)

Teaching Intent

To help learners understand that some actions or events repeat continuously, and that such repetition is called a loop in coding.

Activity: Understanding Repetition Through the Ferris Wheel

Teacher Instructions

- ❖ Ask learners to observe the pictures carefully.
- ❖ Explain that Kojo and Mamle are enjoying a ride on the Ferris wheel at a fair.
- ❖ Guide learners to notice how the Ferris wheel moves in a circular motion.
- ❖ Ask learners to observe the sequence of movements:
 - Mamle goes up, Kojo goes down.
 - Mamle moves to the left, Kojo moves to the right.
 - Mamle goes down, Kojo goes up.
- ❖ Explain that after some time the same movements repeat again.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What happens after the Ferris wheel completes one round?

- ❖ Do the same movements happen again?
- ❖ What do we call an action that repeats again and again?

Encourage learners to describe the repeating cycle.

Teacher Guidance

Help learners understand that:

- ❖ Some activities repeat in the same order.
- ❖ This repeating cycle is called repetition.

Explain clearly:

Reinforce

Repetition of a step is known as a loop.

Coding Link

This is how computers repeat actions again and again. This repetition is called a loop in coding. When learners observe repeated movements, they are understanding loops.

Activity A: Identify the Loop

Teacher Instructions

- ❖ Ask learners to observe the pictures carefully.
- ❖ Explain that the pictures show a child swinging on a swing.
- ❖ Guide learners to notice the movement of the swing:
 - The swing moves forward.
 - Then it moves backward.
 - This motion repeats again and again.
- ❖ Ask learners to decide whether this repeated motion shows a loop.
- ❖ Tell learners to circle YES if it shows a loop and NO if it does not.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ Does the swing move only once or many times?
- ❖ Does the movement repeat again and again?

Encourage learners to relate the motion to things they have experienced.

Teacher Guidance

Help learners understand that:

- ❖ A loop happens when an action repeats continuously.
- ❖ Swinging forward and backward forms a repeating cycle.

Reinforce

Repeated actions form a loop.

Coding Link

Computers repeat actions again and again using loops. When learners identify whether an action repeats or not, they are understanding how loops work in coding.

⇒ Activity B: Pendulum and Clock

Teacher Instructions

- ❖ Ask learners to observe the picture of the clock and pendulum.
- ❖ Explain that the pendulum moves left and right repeatedly.
- ❖ Tell learners that the hands of the clock also move continuously.
- ❖ Ask learners to decide whether these movements show a loop.
- ❖ Ask them to circle YES or NO.

Teacher Guidance

Explain that:

- ❖ The pendulum moves back and forth continuously.
- ❖ The clock hands keep moving in a circular motion.

Reinforce

Continuous repeating movement is called a loop.

Coding Link

Computers recognise actions that repeat continuously. When learners observe the pendulum and clock, they are identifying repeating actions just like loops in coding.

⇒ Activity C: Draw or Write an Example of a Loop

Teacher Instructions

- ❖ Ask learners to work with a partner and recall what they learned about loops.
- ❖ Explain that a loop happens when an action repeats again and again in a cycle.
- ❖ Ask learners to think about activities at home or school that repeat regularly.

Examples learners may think of:

- A fan rotating continuously
 - A clock ticking every second
 - A swing moving back and forth
 - A school bell ringing every day
- ❖ Ask learners to draw or write one example inside the circle provided in their own book.

Teacher–Learner Interaction

Ask guiding questions such as:

- ❖ What action repeats again and again at your home?
- ❖ What happens repeatedly at school?
- ❖ Can you draw or describe the repeating action?

Encourage learners to discuss and explain their examples with their partner.

Teacher Guidance

Help learners understand that:

- ❖ Many activities in daily life repeat continuously.
- ❖ Repeating actions follow a pattern or cycle.
- ❖ These repeating actions are called loops.

Reinforce

A loop is an action or step that repeats again and again.

Coding Link

Computers use loops in many daily tasks that repeat. When learners think of their own examples, they are connecting real-life repetition to coding concepts.

Coding Challenge - 4: Hidden Number

(LB Page 59)

Teaching Intent

To help learners apply observation and reasoning skills by identifying hidden numbers and matching them correctly.

⇒ Activity: Identify the Hidden Numbers

Teacher Instructions

- ❖ Ask learners to observe the pictures of animals carefully.
- ❖ Explain that each animal is hiding a number.

- ❖ Ask learners to look at the options given below the animals.
- ❖ Guide them to circle the correct number hidden by each animal.

Teacher Guidance

Help learners to:

- ❖ Compare shapes carefully.
- ❖ Eliminate incorrect answers.

Reinforce

Careful observation helps solve coding challenges.

Coding Link

Computers solve problems by finding hidden patterns and using logic. When learners identify the hidden numbers, they are analysing clues step by step like a computer.

Review Exercise

1. What is an algorithm?
2. What does decision making mean?
3. What is a loop?
4. Give one example of repetition in daily life.

Differentiated Lessons

Remedial Activity

- ❖ Ask learners to describe a simple daily routine step by step.

Example:

1. Wake up
2. Brush teeth
3. Eat breakfast

Challenging Activity

- ❖ Ask learners to create their own simple algorithm for a daily activity such as making a sandwich or getting ready for school.

Teacher Closure for Level 4

Summarise the key learning outcomes:

Learners have learned how to:

- ❖ Follow instructions step by step (Algorithms)
- ❖ Make thoughtful choices (Decision Making)
- ❖ Identify repeating actions (Loops)
- ❖ Solve observation-based coding challenges

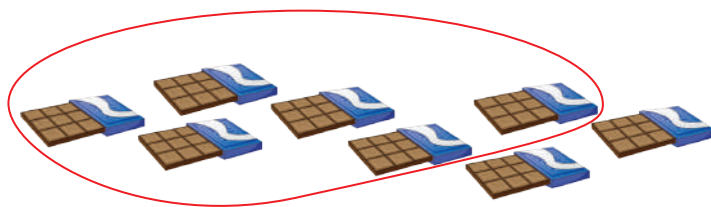
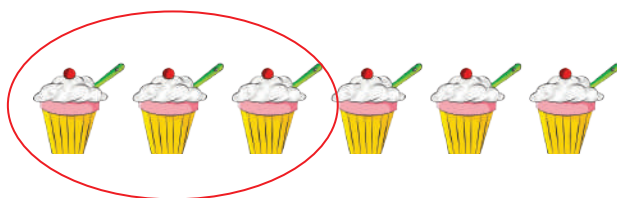
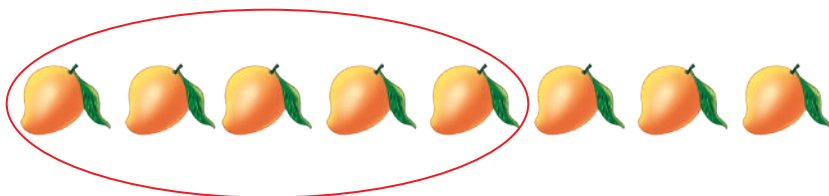
These concepts form the foundation of computational thinking and coding skills.

Answer Key

1.1

Numbers

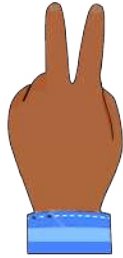
A. Count and circle. One has been done for you.



B. Work in pairs. Count the fingers together and write the number.



1



2



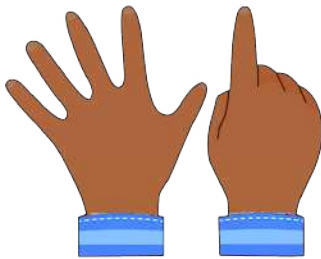
3



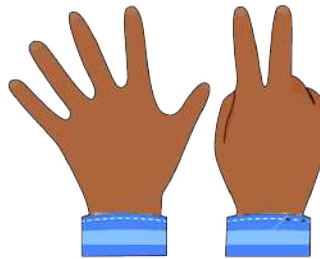
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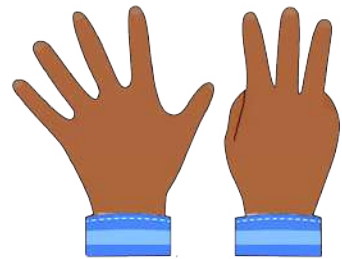
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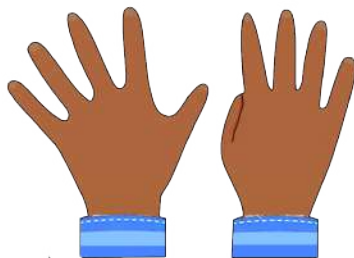
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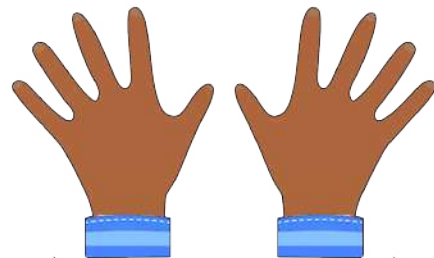
7



8

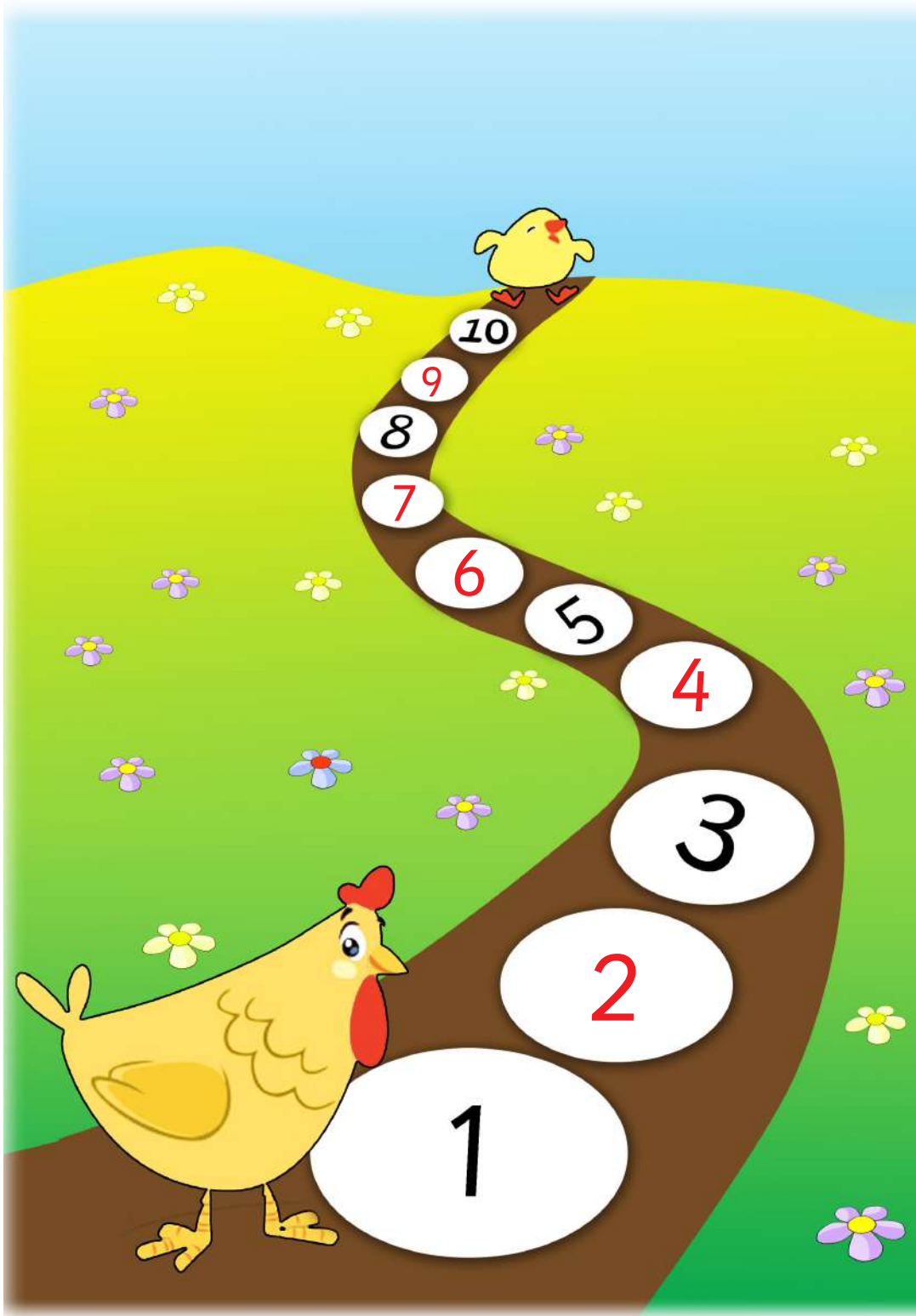


9



10

- C. Help the chick reach the hen by writing the missing numbers in the empty circles.

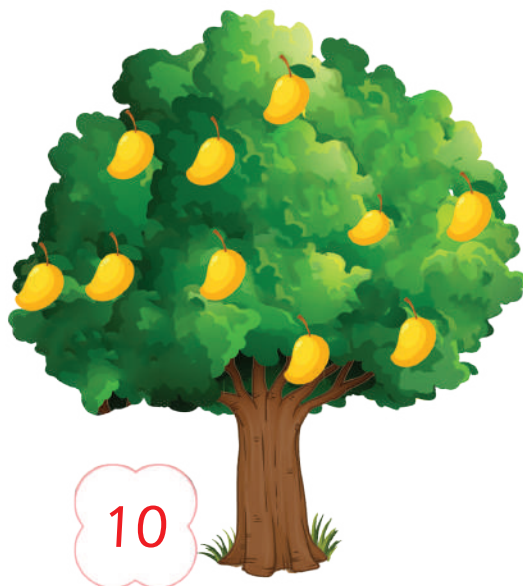


D. How many objects do you see? Count and write the number of objects in each set of pictures.

How many flowers?



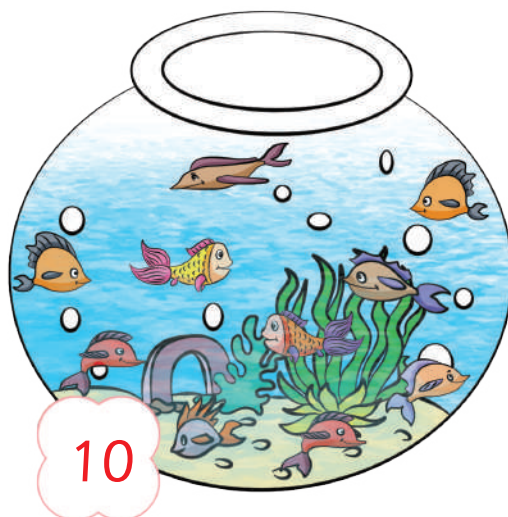
How many mangoes?



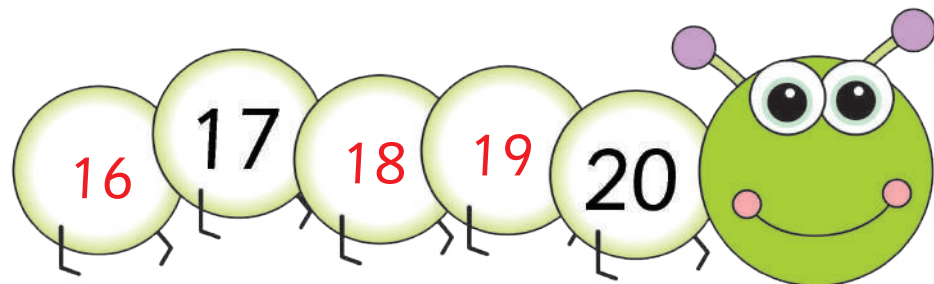
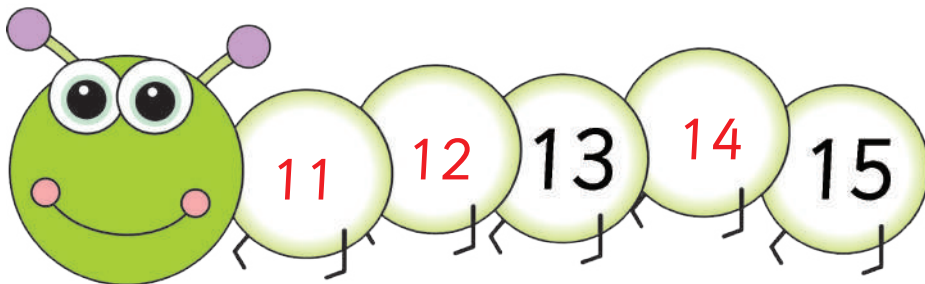
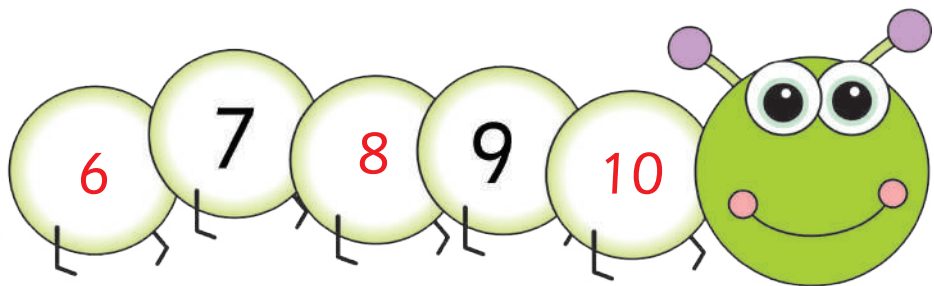
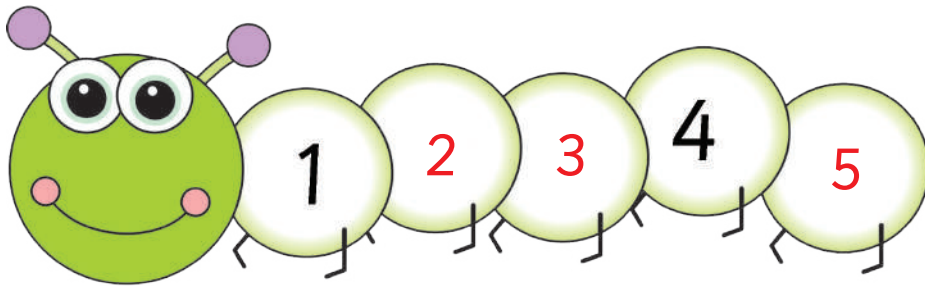
How many pencils?



How many fishes?



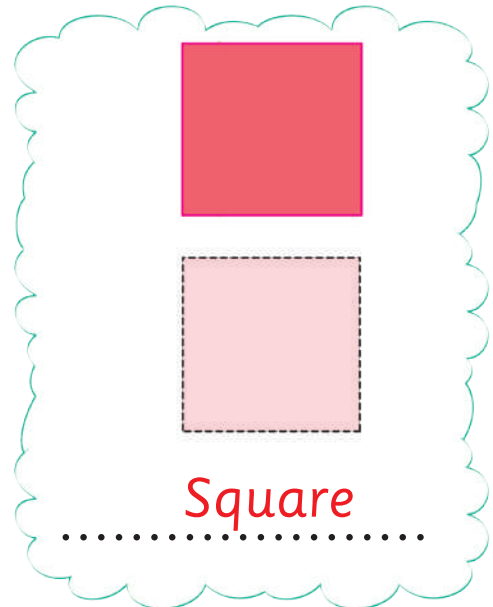
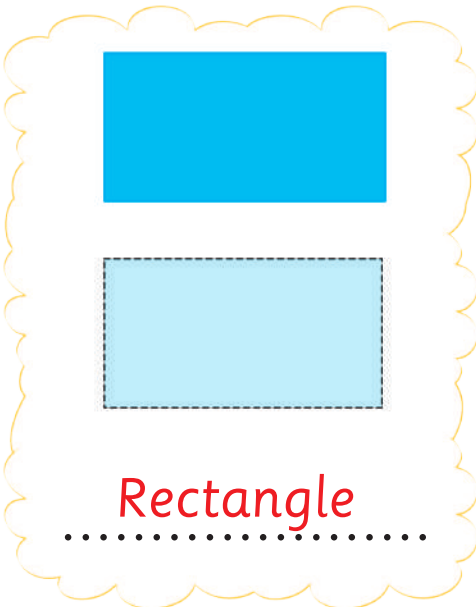
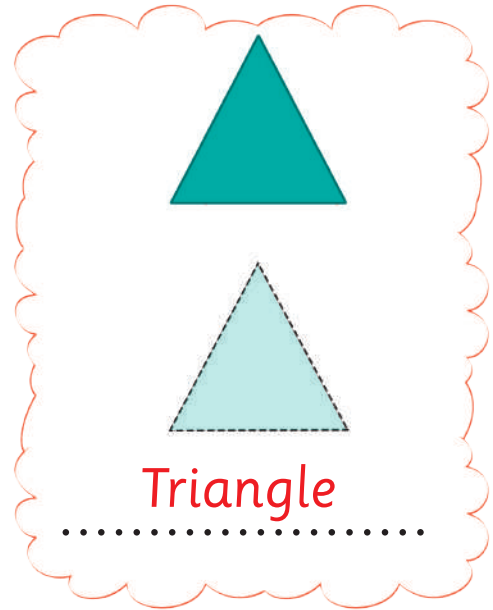
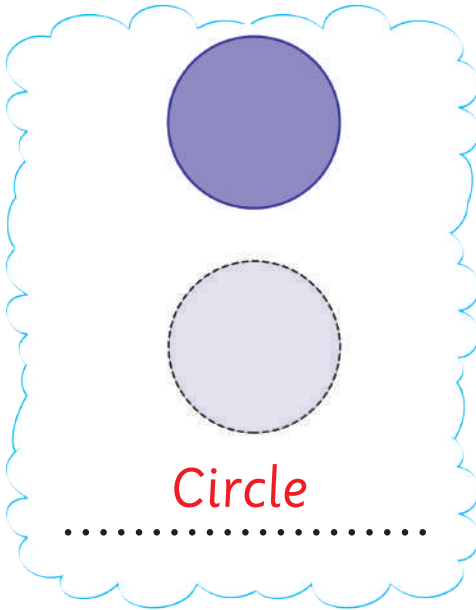
E. Write the missing numbers.



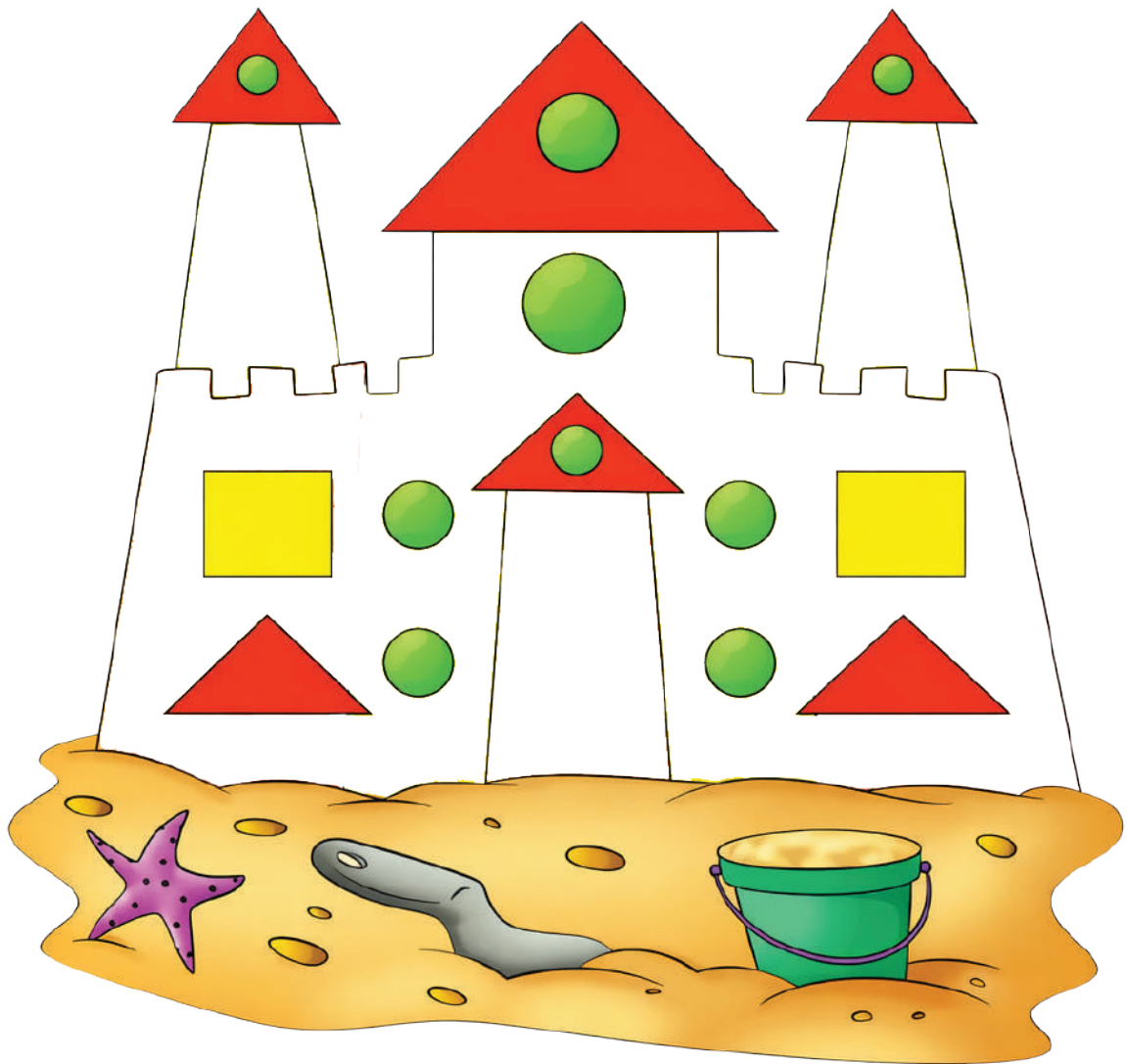
1.2

Shapes

- A.** Trace and draw the shapes as shown. Name the shapes and colour them.



- B.** Colour the shapes as per the given colour code. Count and write the number of each shape.



2

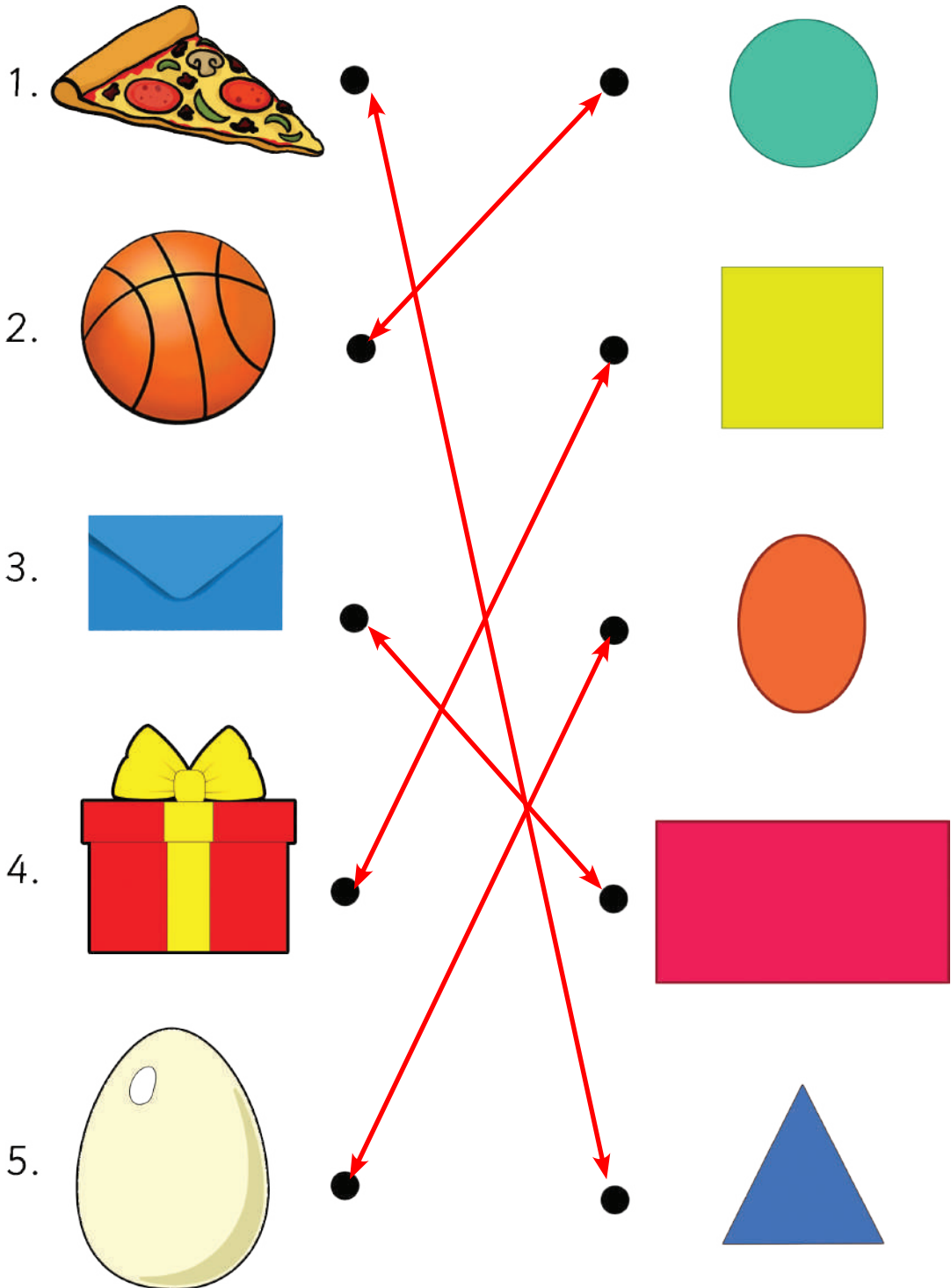


9

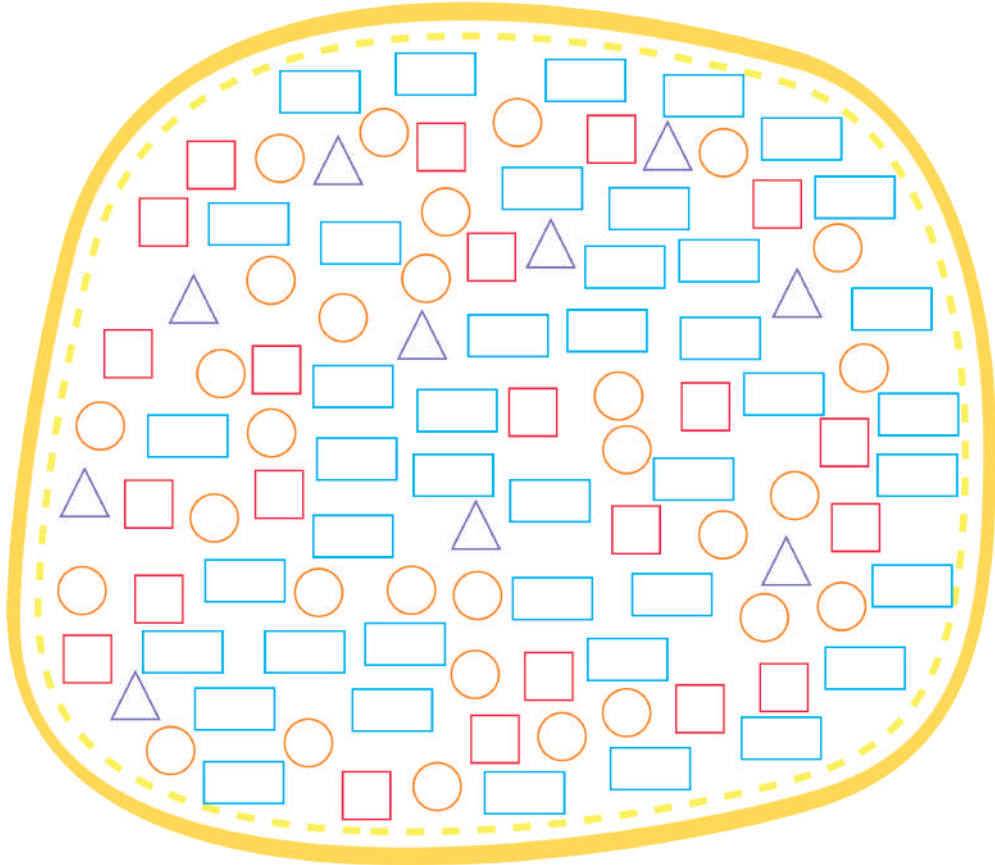


6

C. Draw lines and connect the pictures with their matching shapes.



- D.** Work in groups of four. Each learner selects one shape—triangle, circle, square, or rectangle. Count your shape and write the total in the correct box in your own book.



Triangle

10

Circle

32

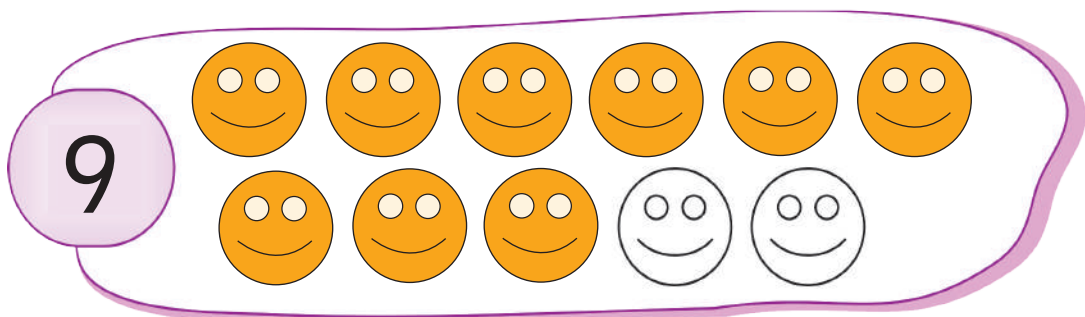
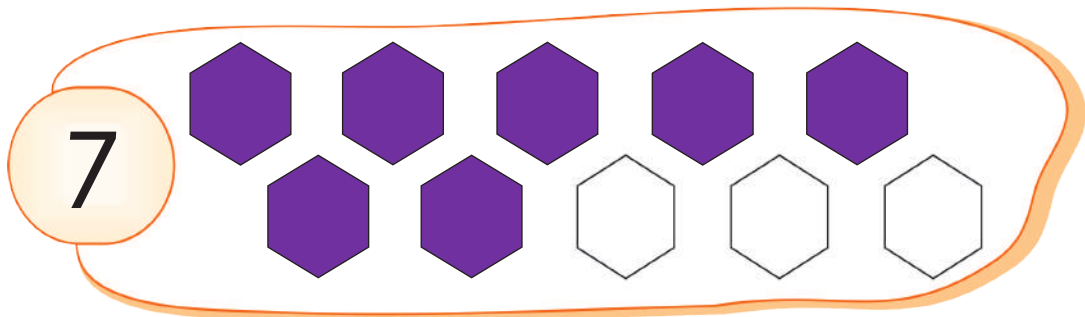
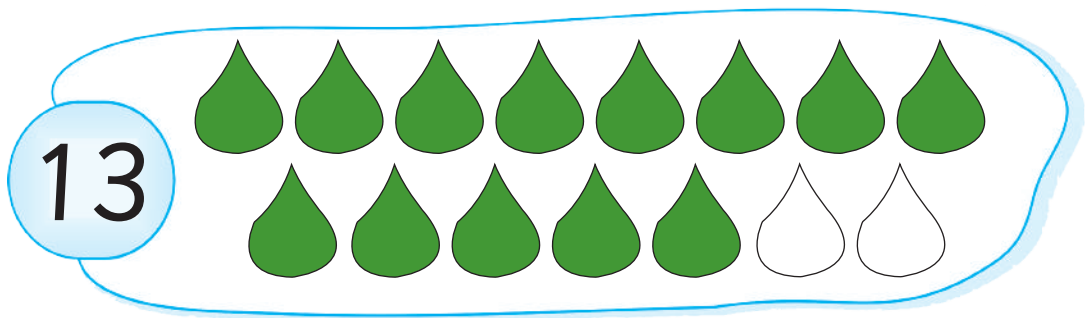
Square

22

Rectangle

42

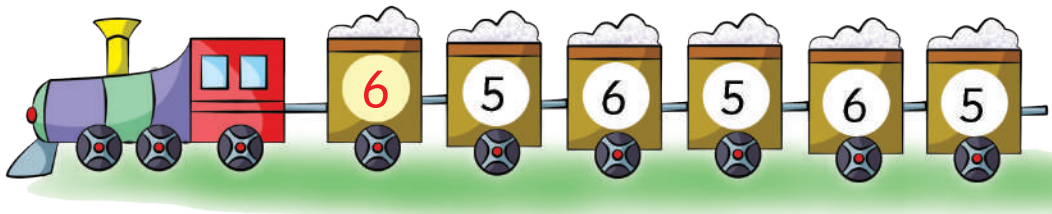
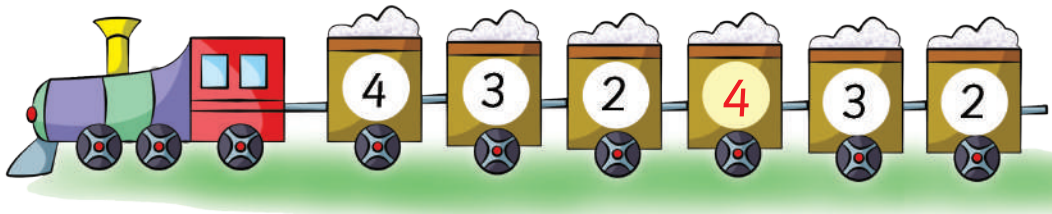
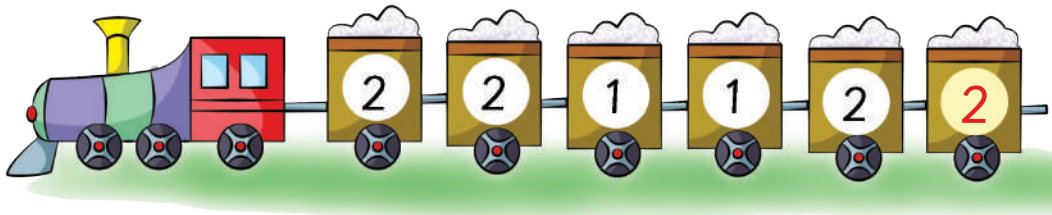
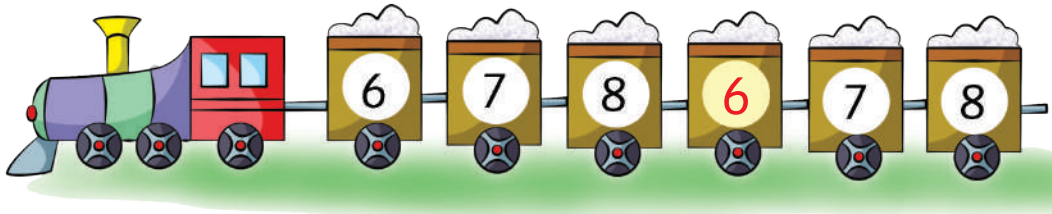
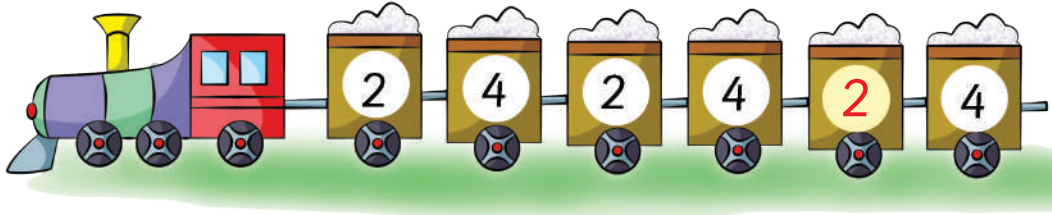
E. Count and colour the correct number of shapes in each group.



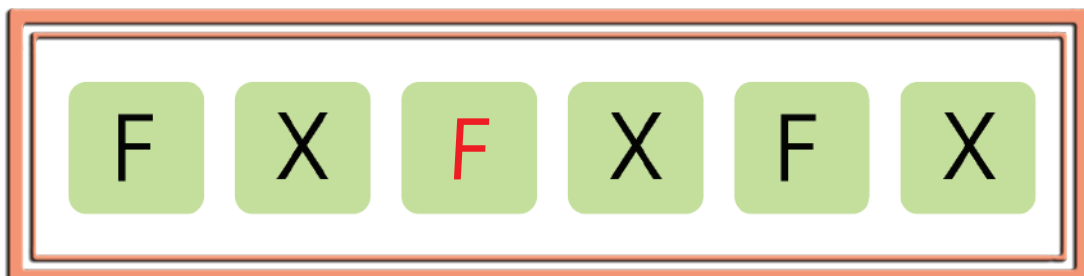
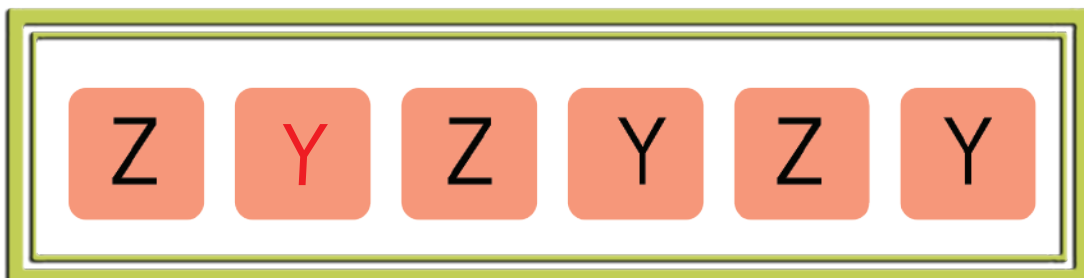
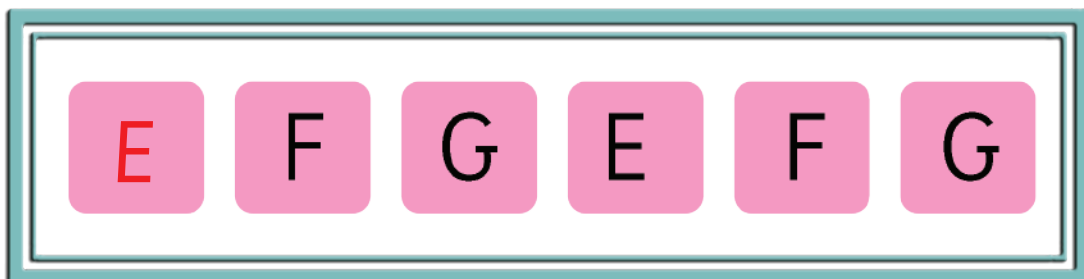
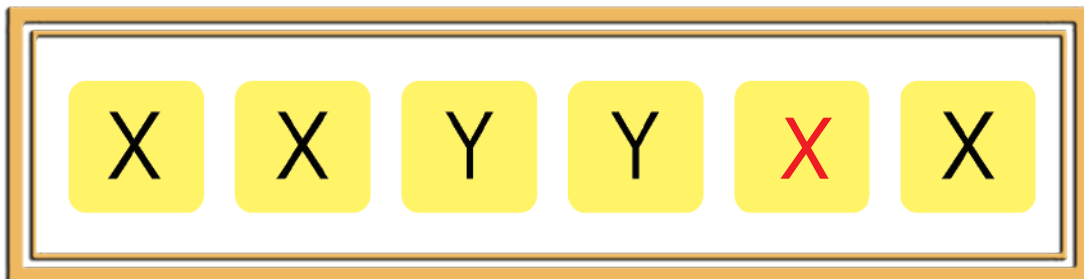
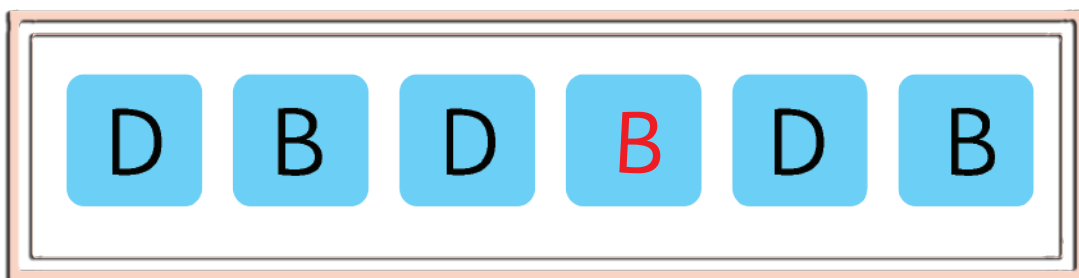
1.3

Patterns

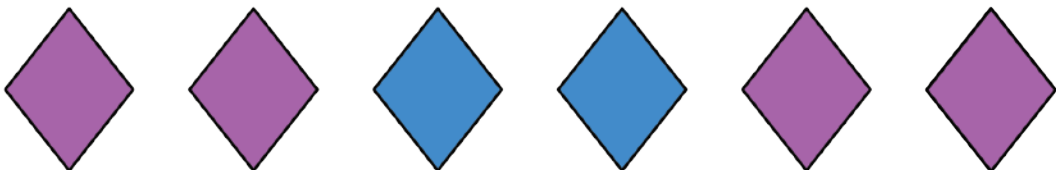
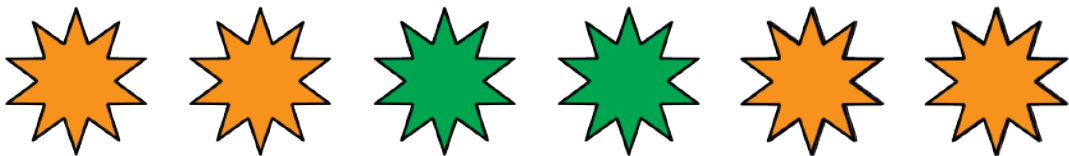
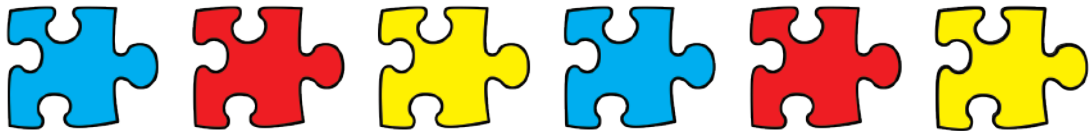
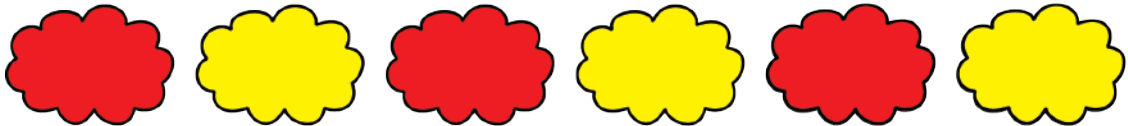
A. Write the missing number to complete each pattern.



B. Write the missing letter to complete each pattern.



C. Colour and complete the patterns.



- D. Look at the patterns given below. Circle **YES** if the two patterns are the same. Circle **NO** if the patterns are different.

1



Are these two patterns the same?

YES

NO

2

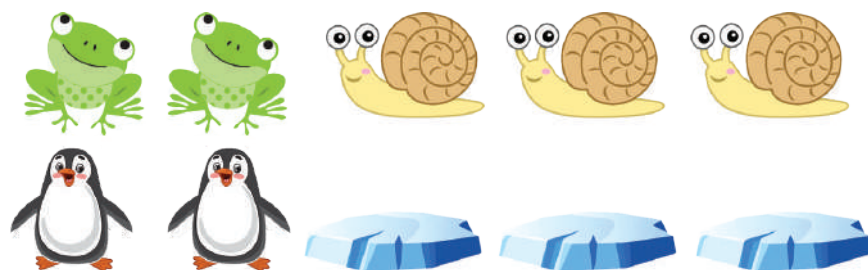


Are these two patterns the same?

YES

NO

3



Are these two patterns the same?

YES

NO

Coding Challenge-1

Find the Pair!

Help the octopus find a pair for each piece of socks. Connect each piece with a line to make a pair.



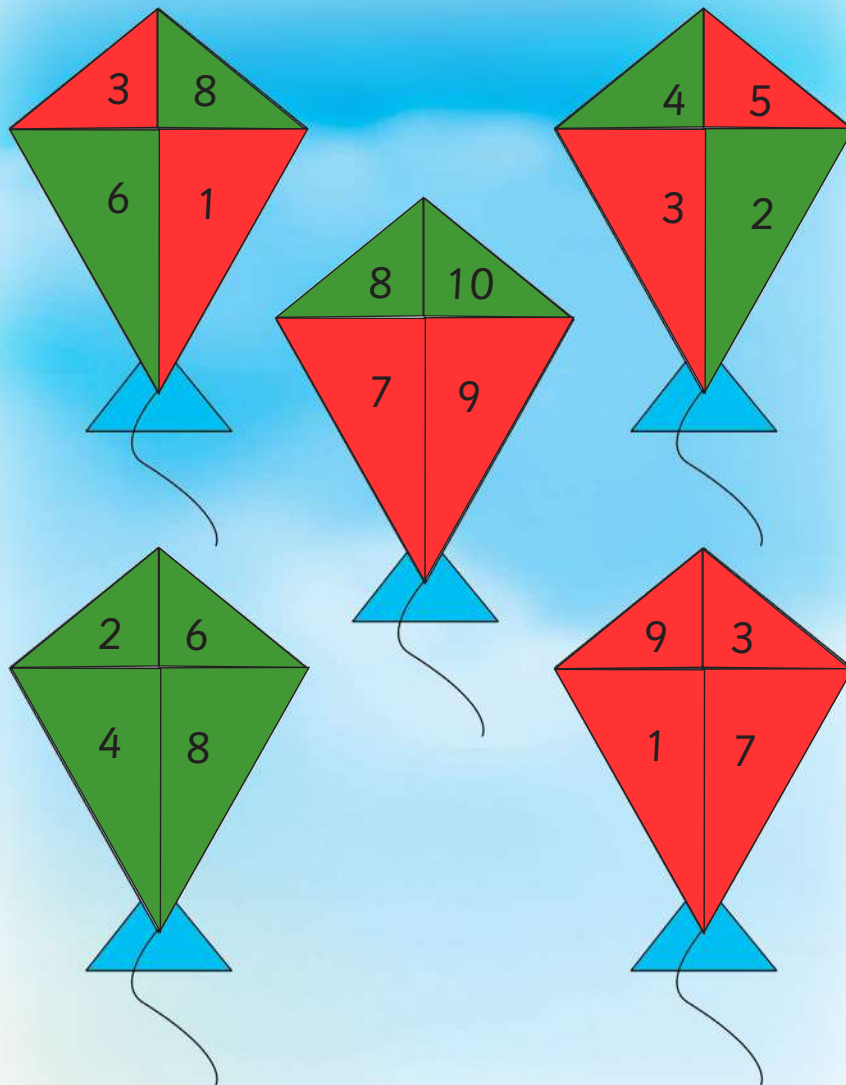
2.1

Even and Odd Number

A. Follow the code to colour the kites.

Even number : **Green colour**

Odd number : **Red colour**



2.2

Same or Different

- A. Joy and Troy are twins. Can you identify them? Circle (O) the two tortoises that are the same.



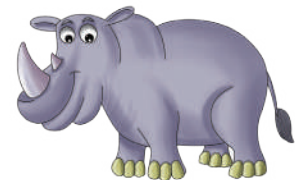
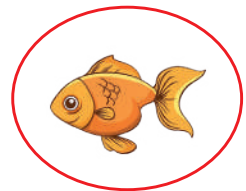
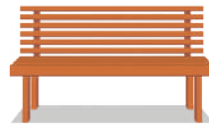
B. Identify the same pictures in each group. Put a tick (✓) on the picture in each row that is the same as the first one.

2.3

Odd One Out

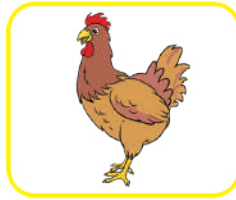
A. Circle the picture that is the odd one out in each group below.



B. Work with a partner. Say the name of each picture together. Discuss which word does not rhyme with the others in each row and circle the odd one out.



Pen



Hen



Cat



Den



Box



Book



Socks



Fox



Dog



Frog



Log



Cot



Train



Rain



Ear



Brain

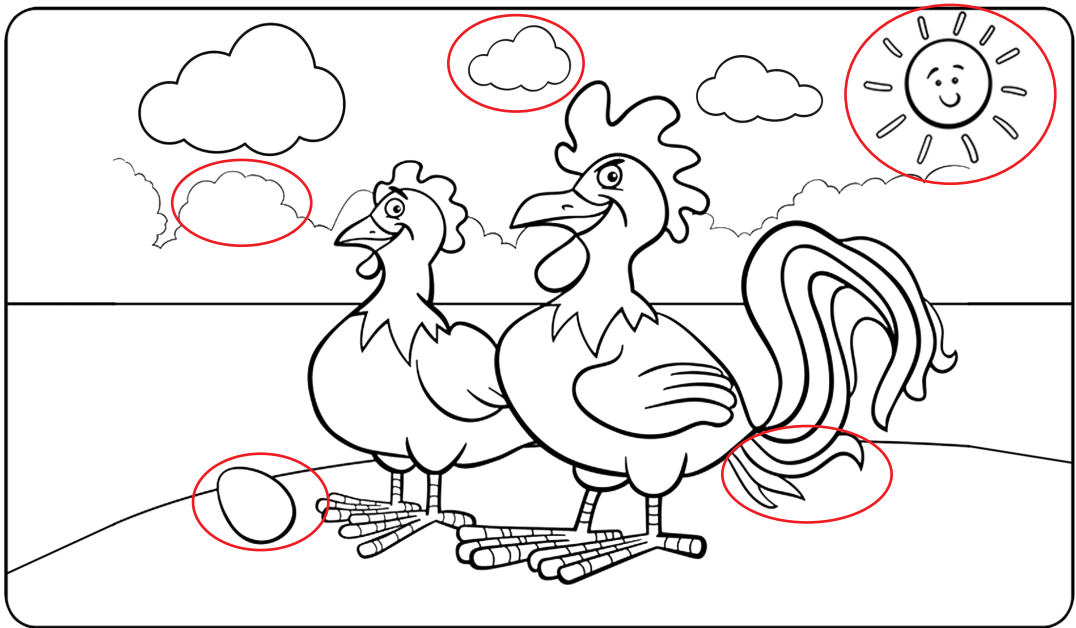
2.4

Find the Difference

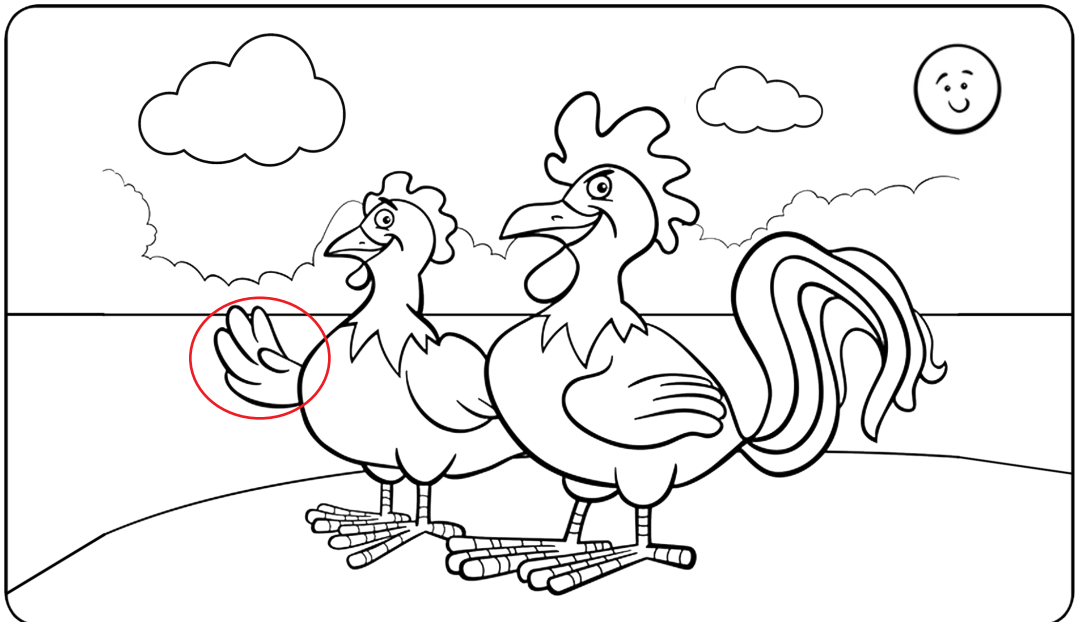
- A. Spot any six differences between the given pictures and circle them.



- B.** Colour the first picture. Find six differences in the second picture.



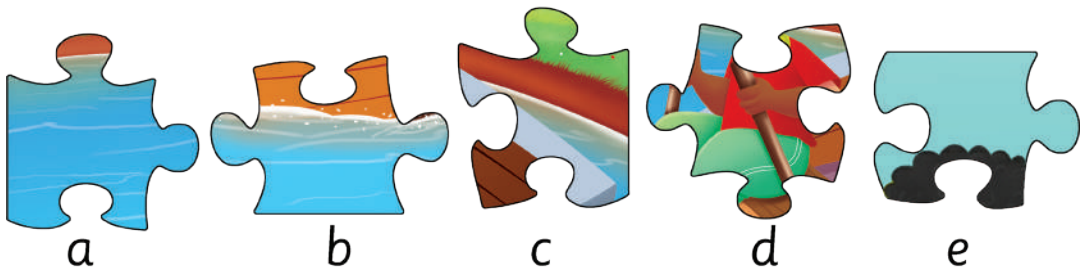
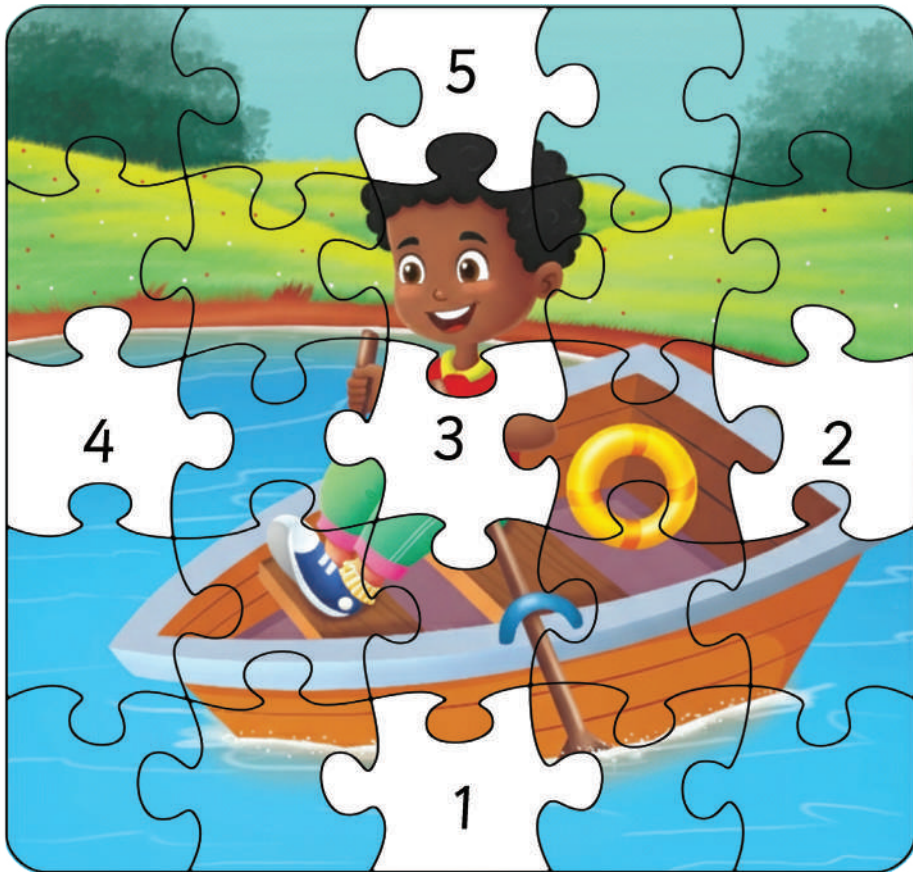
Colour Do it Yourself.



2.5

Picture Puzzle

- A.** Write the correct number in front of each letter to complete the picture.



a **4** b **1** c **2** d **3** e **5**

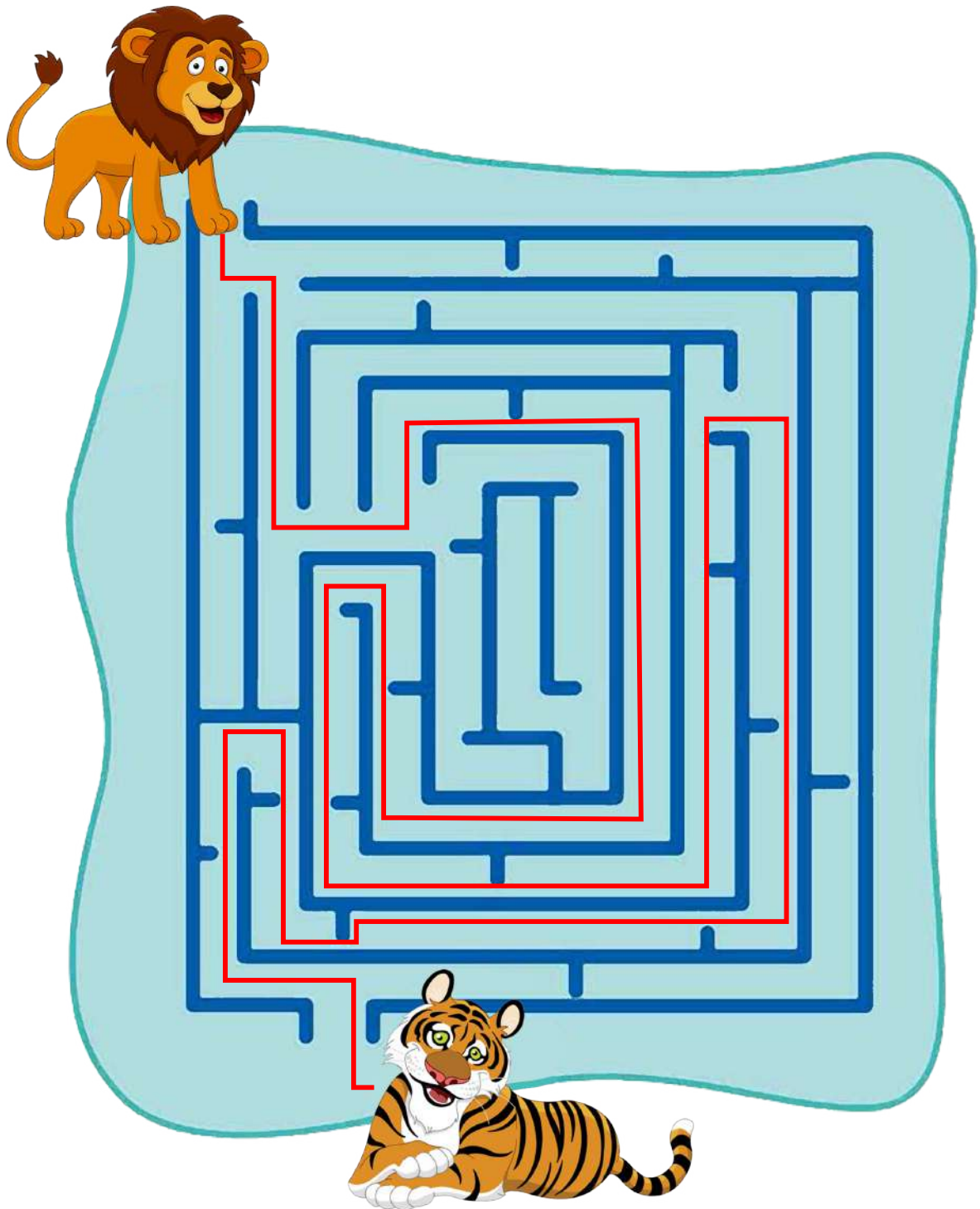
2.6

Directions

- A.** Draw a path through the maze and help the little rat find its cheese. Count the small pieces along the way.



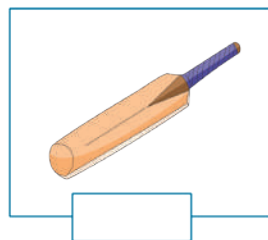
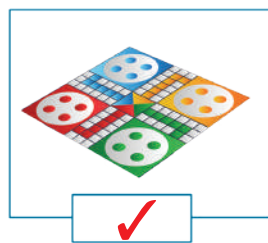
B. Help Lolo the lion to find Roro the tiger.



2.7

Logical Thinking

- A.** It is raining outside and Yaw wants to play with Ebo. Help them find which games they can play inside their home.



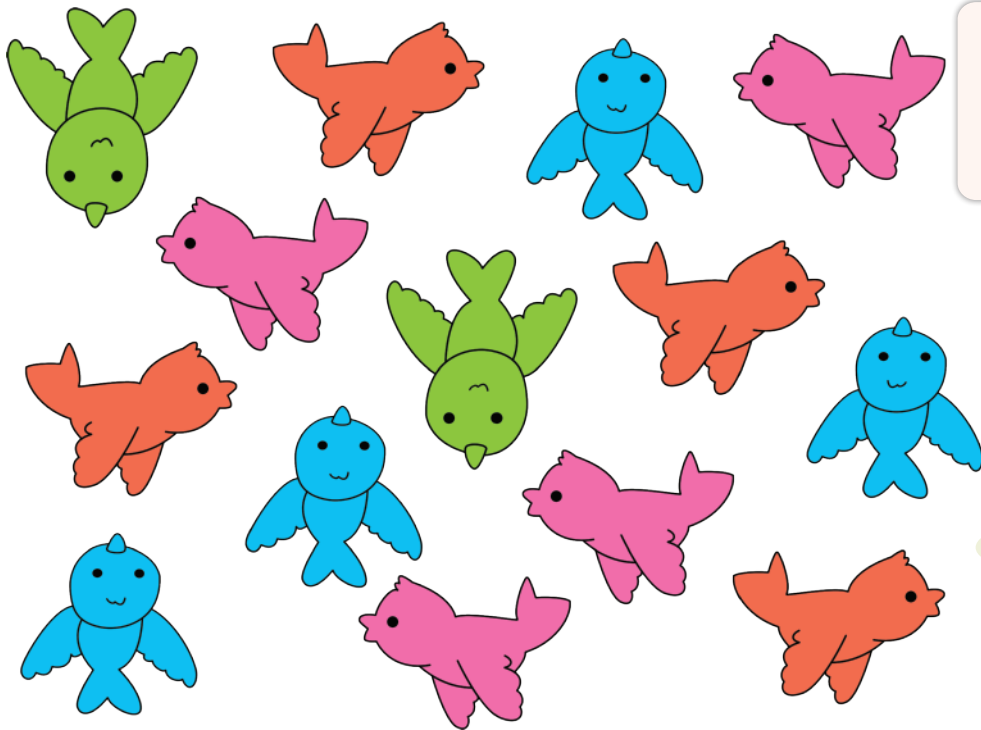
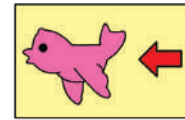
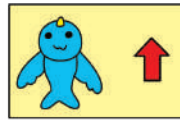
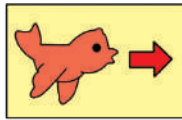
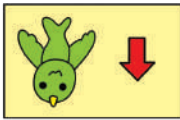
- B.** Work in small groups. Carefully observe the picture and talk about it with your classmates. In your book, circle the child you think broke the window and share your observations.



Coding Challenge-2

Fly High

The birds are flying. Use the arrows as keys and colour the birds.



I can follow the arrows and colour the birds.



1. How many birds are flying UP ↑?
2. How many birds are flying to the RIGHT →?
3. Circle (O) the arrow which shows the birds that are MORE.

Flying Left ← or Down ↓

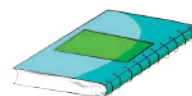
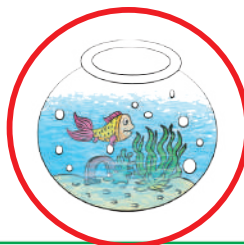
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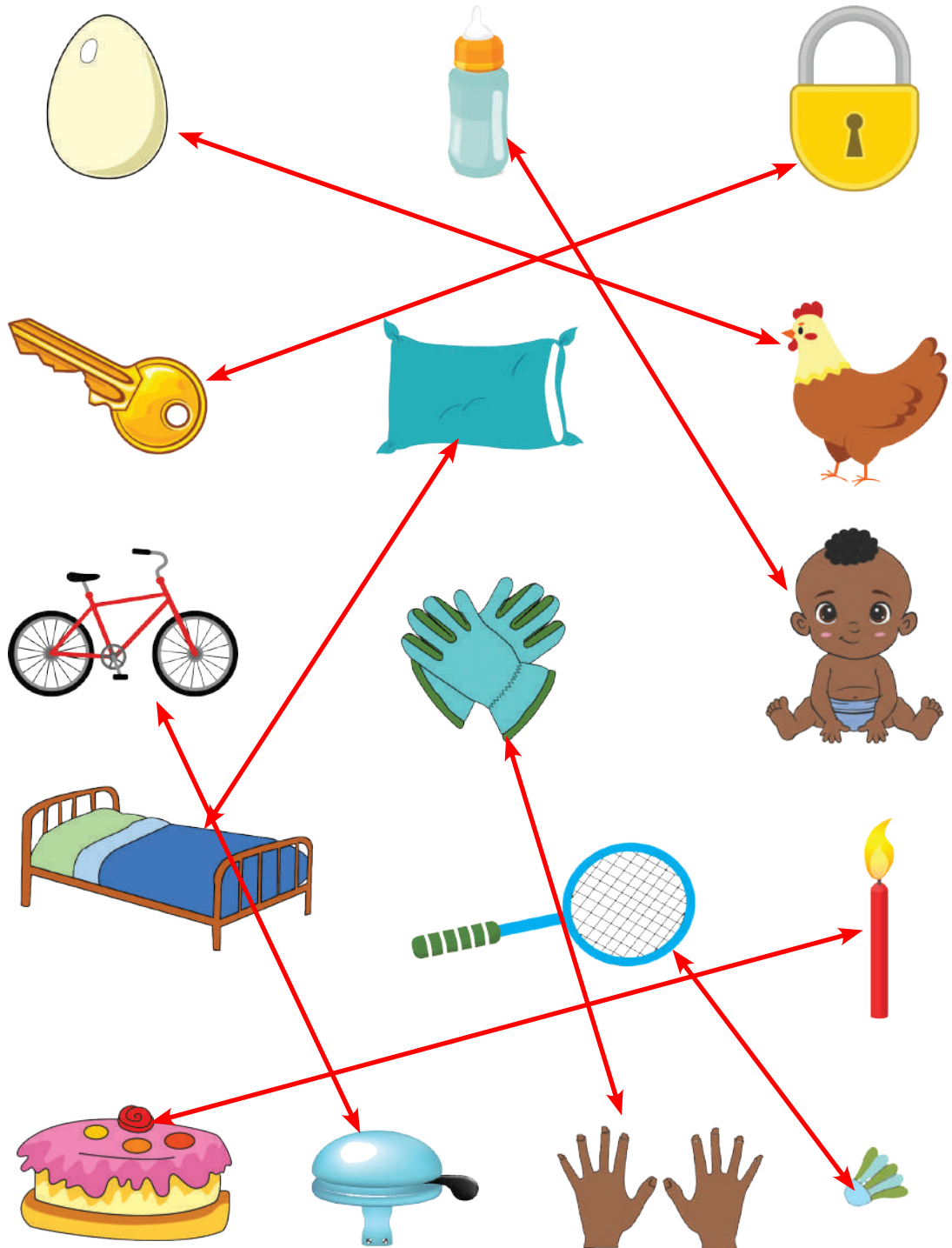
3.1

What Goes Together?

A. Circle the correct picture given on the right that goes with the one on the left.



B. Work with a partner. Look carefully at the pictures and talk about which items match together. Draw lines to match the correct pairs in your own book.



3.2

Belonging

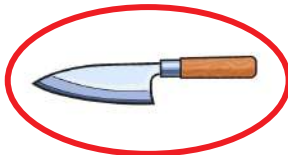
A. Circle (O) the things that belong to the sky.



B. Circle (O) the things that belong to the water.



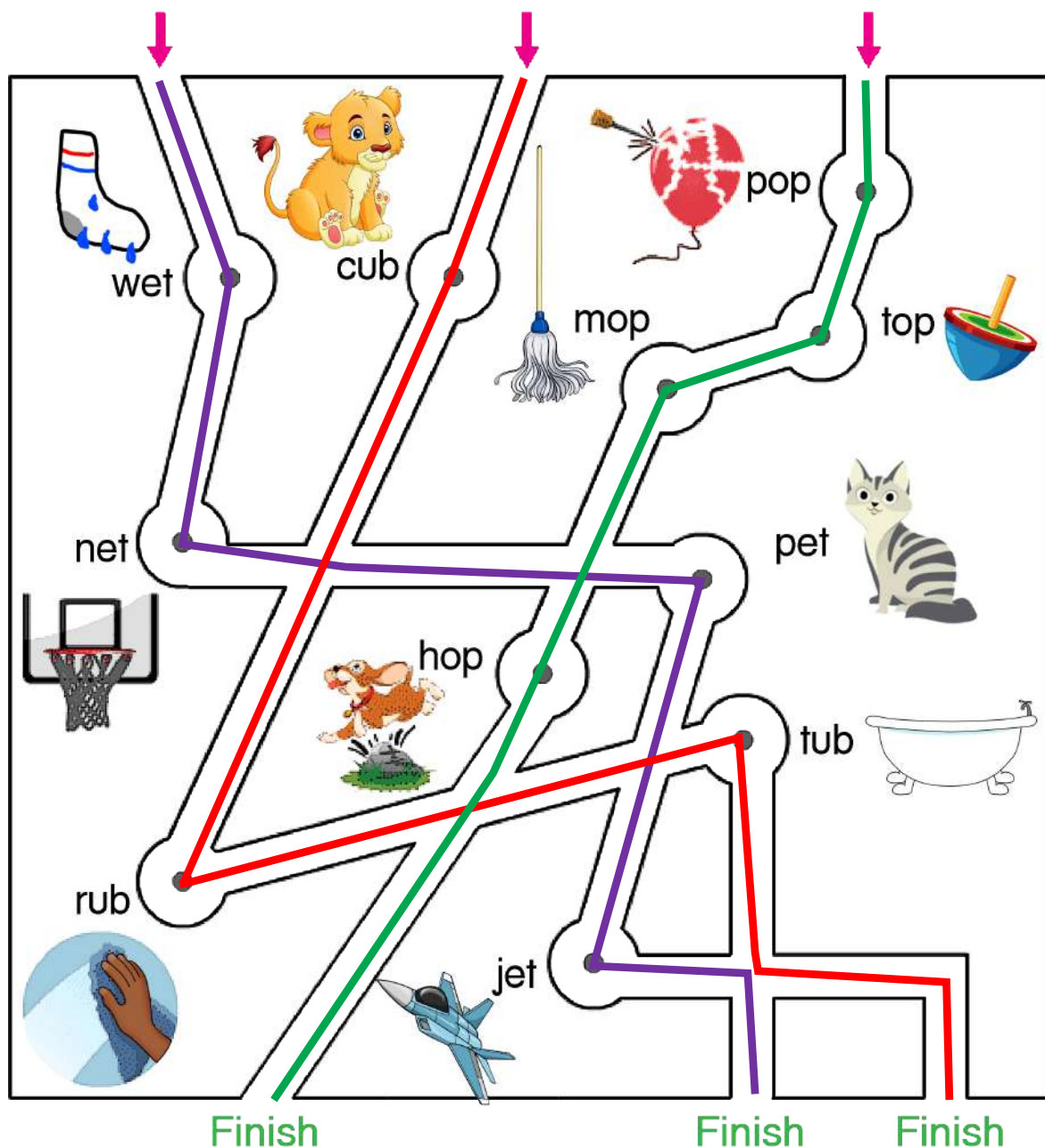
C. Circle (o) all the things that you find in the kitchen.



3.3

Follow the Clues

A. Explore the maze and link the rhyming words.



B. Work in groups of four. Take turns reading the hints aloud and discussing the pictures. In your own book, circle Kwaku.

1. Kwaku is happy.
2. Kwaku does not play football.
3. Kwaku does not like red colour.
4. Kwaku likes to skate.



3.4

Secret Message

A. Decode the hidden message below by writing a letter for each picture.

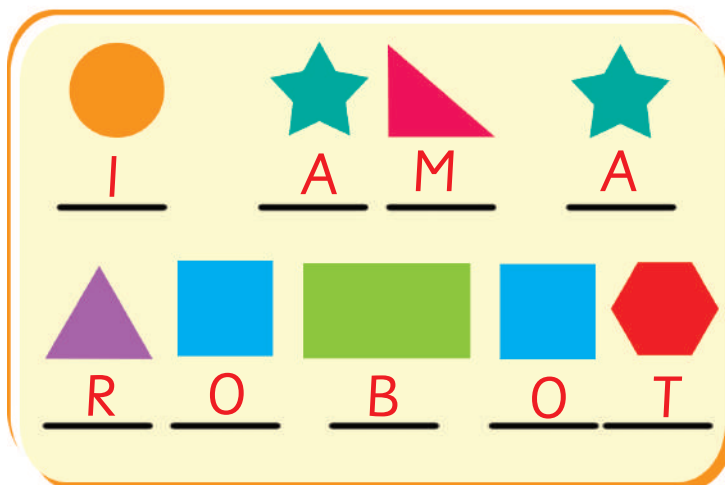
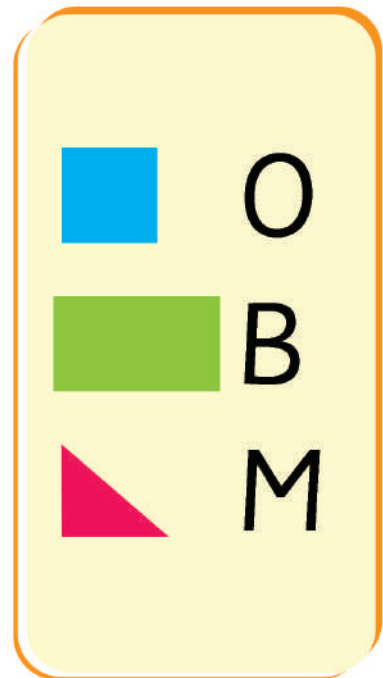


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I	L	O	V	E	T	O	S	I	N	G
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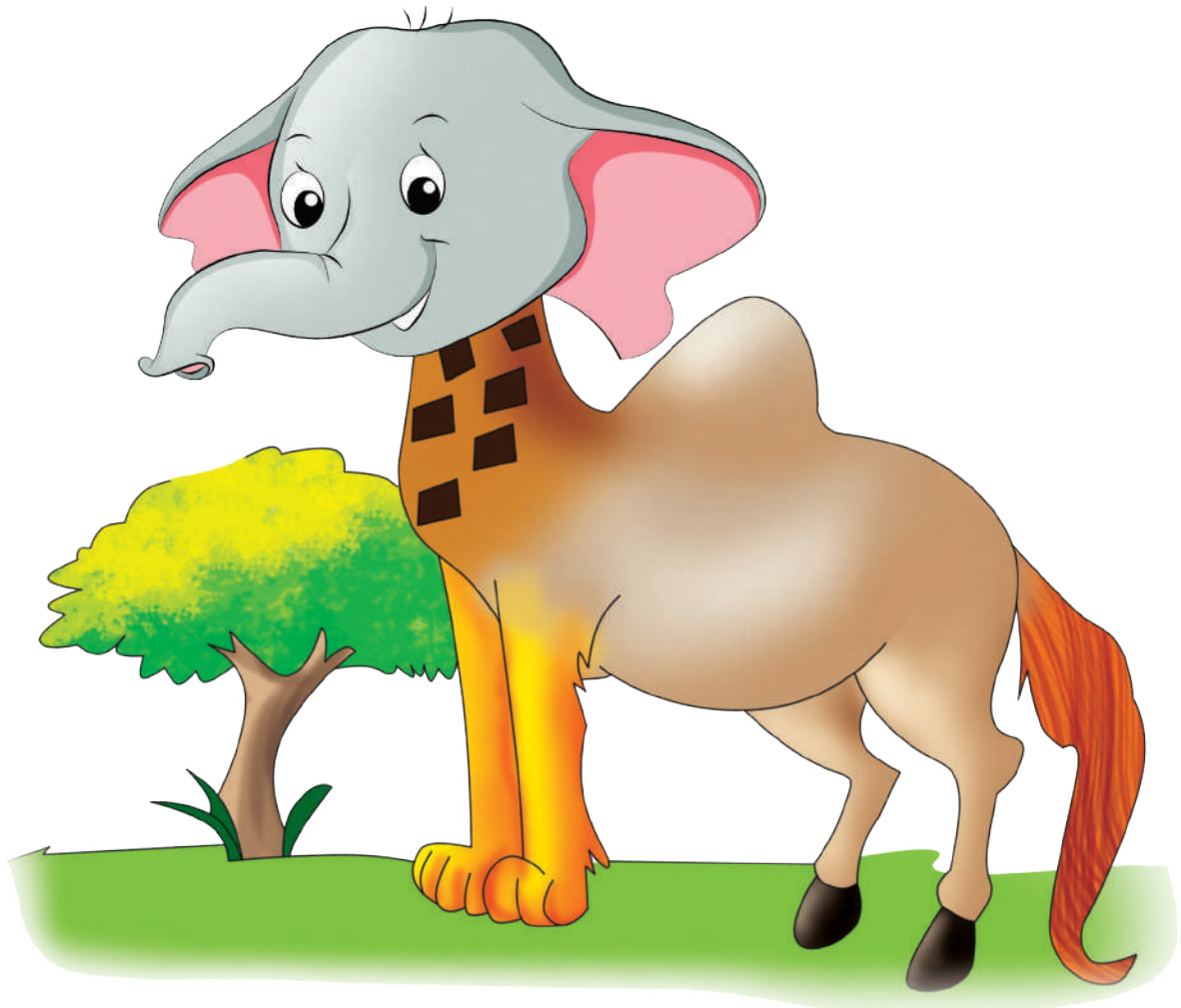
- B.** Kwesi is trying to tell you something. Use the codes given below to decode his message.



Coding Challenge-3

Animal Hunt

Look at the picture carefully. There are five animals hidden in it. Name them.



Elephant

Giraffe

Lion

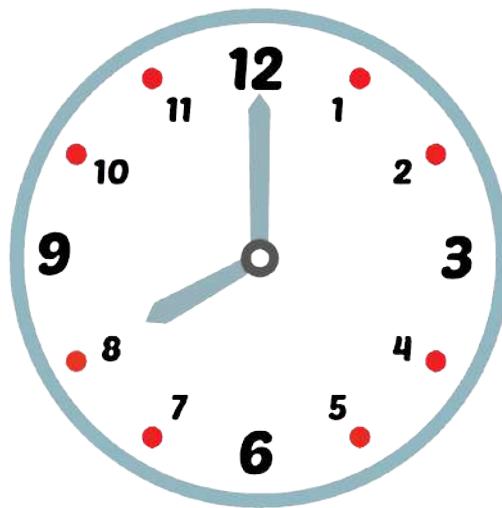
Camel

House

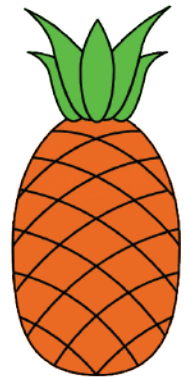
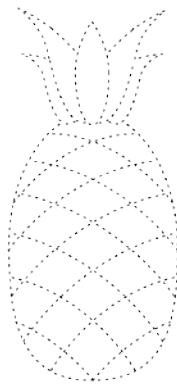
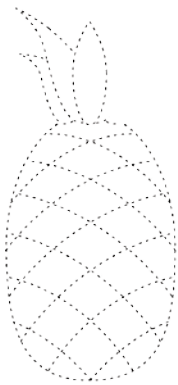
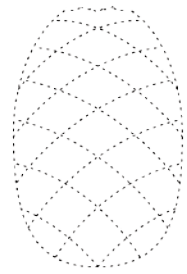
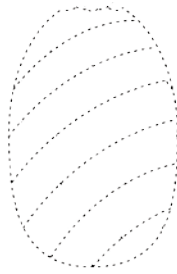
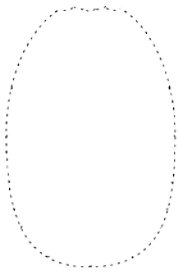
4.1

Step-by-Step

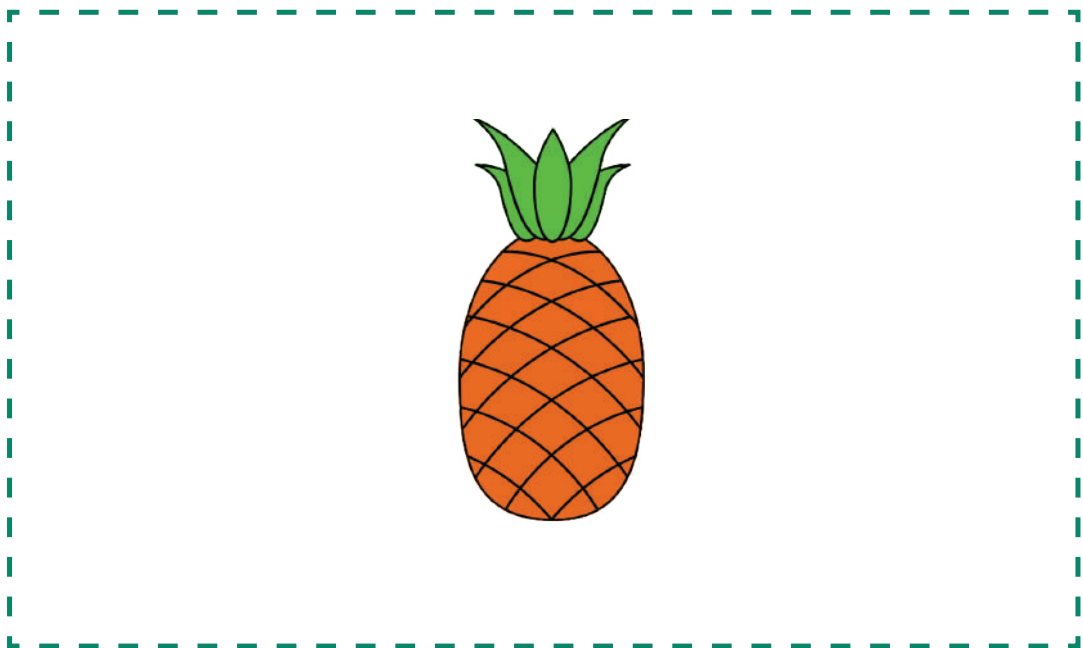
A. Number the activities in the correct order.



B. Trace the steps and learn how to draw a pineapple.



Using the same steps, complete the pineapple and colour it.



4.2

Decision Making

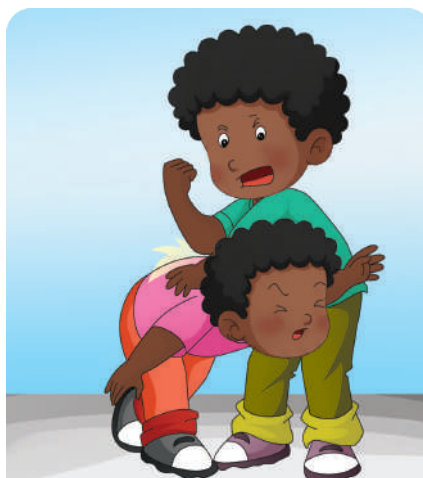
- A.** Read each question with your partner. Share your thoughts and draw a circle around **Yes** or **No** in your book.



Should we study daily?

YES

NO



Should we fight with our friends?

YES

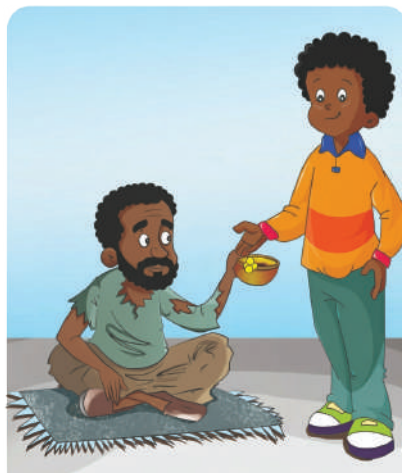
NO



Should we trust strangers?

YES

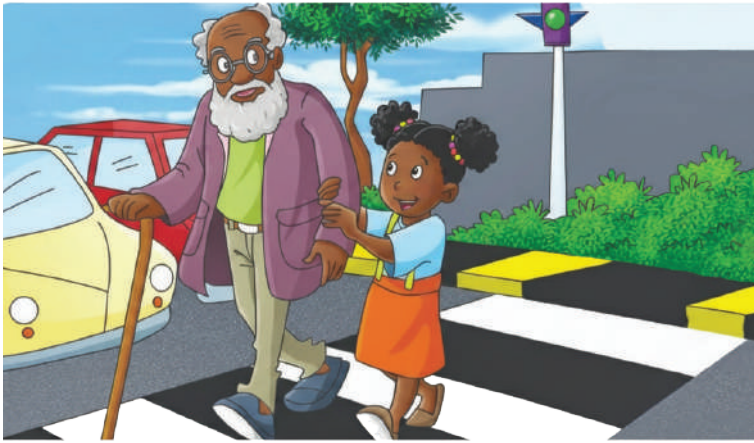
NO



Should we help poor people?

YES

NO



Should we help old citizens?

YES

NO

Should we throw the garbage on the roads?

YES

NO



Should we help our mother in the kitchen?

YES

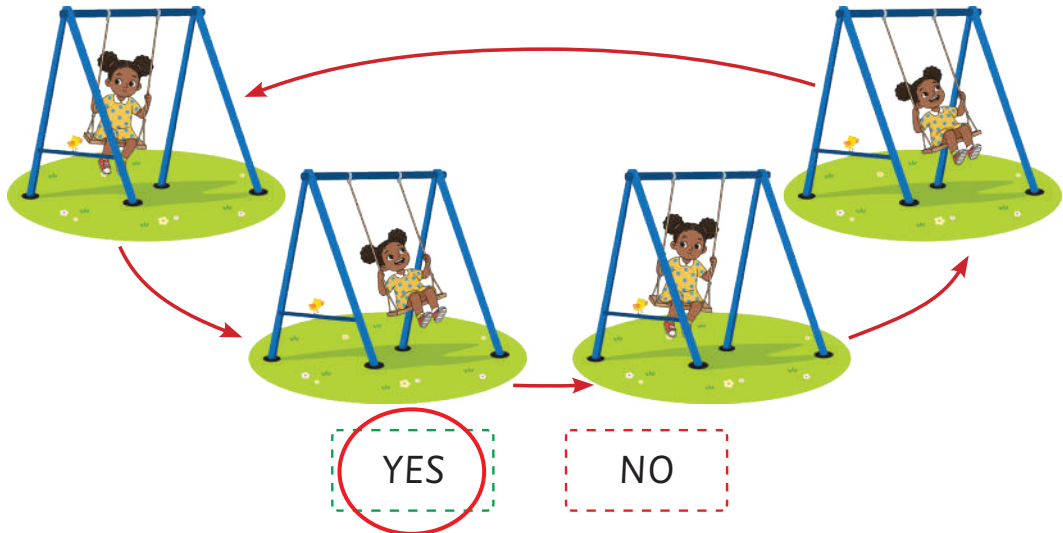
NO

The act of making a choice especially after careful thought is known as **decision making**.

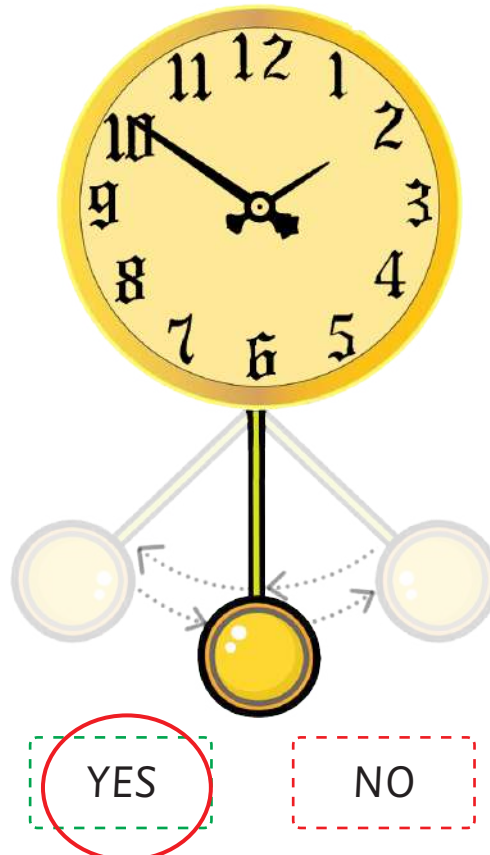
4.3

Loops: Repetition

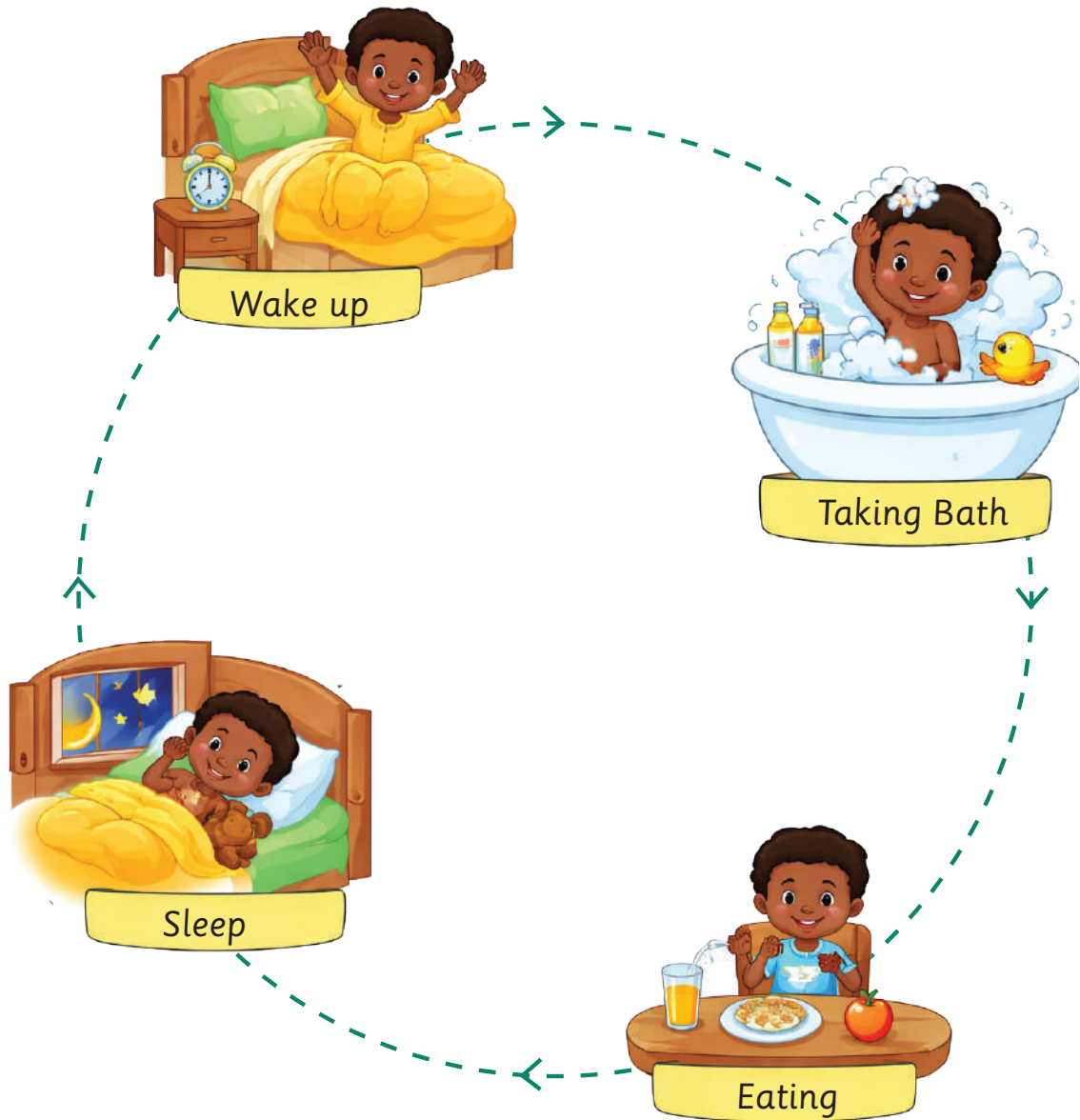
A. Does this show a loop?



B. Does the pendulum and hands of the clock show loop?



- C. Talk with your partner about loops you see at school or at home. In your book, draw or write one example in the space given.



Coding Challenge-4

Hidden Number

Which number is each animal hiding? Circle the number hidden by each animal.

1	2	3	4	
6		8		10
11		13	14	15
	17	18	19	

	7 ☒ 9		9 ☒ 7		☒ 20 18
	9 ☒ 12		☒ 5 6		☒ 16 20

ESSENTIAL CODING

Basic 1

Facilitator's Guide

In today's fast-changing digital world, coding is more than just using computers — it is about **thinking, reasoning, and problem-solving**.

The **ESSENTIAL Coding Basic 1 Facilitator's Guide** is designed to support teachers in delivering coding concepts effectively, even before learners begin programming on computers.

The **ESSENTIAL Coding Basic 1 Facilitator's Guide** provides:

- Clear, step-by-step teaching support for every lesson
- Structured lesson delivery with guided teacher–learner interaction
- **Coding Link** sections that explain how each activity connects to real coding
- Strong focus on computational thinking and problem-solving
- Classroom-ready strategies for engaging young learners
- Progress tracking and assessment support

This guide helps teachers understand that:

- Coding starts with thinking, not typing
- Every activity builds coding skills
- Learners are already “coding” when they count, follow steps, recognise patterns, and make decisions

Through this approach, teachers confidently guide learners to **think like programmers from an early stage**.

With clear instructions, reinforcement strategies, and practical examples, this guide transforms lessons into:

- Interactive learning experiences
- Logical thinking development
- Structured problem-solving sessions

Teachers are not just teaching activities —
They are building **future coders and critical thinkers**.

