

# International Pre-Primary

# Maths

## Teaching Guide Year 2 Workbook A and B



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# Introduction

The International Pre-Primary series of workbooks provides and consolidates key mathematical skills and concepts for pre-primary children.

Each focused unit has a variety of activities presented with clear instructions and images to support children's understanding.

This teaching guide is a helpful tool for teaching maths to young learners.

Each workbook page has a lesson plan and group (large and small) and individual activities that help the teacher to develop his/her teaching strategy well before the class.

The activities in these workbooks are part of a child's wider experience in learning mathematical skills and concepts, and support the importance of using models, images, and language to help their understanding. The activities in the guides build on these to consolidate learning.

Both class work and home assignments are given so that parents can also gauge the progress made by their child. The Student Learning Objectives page in the workbooks is a check for the progress the child makes.

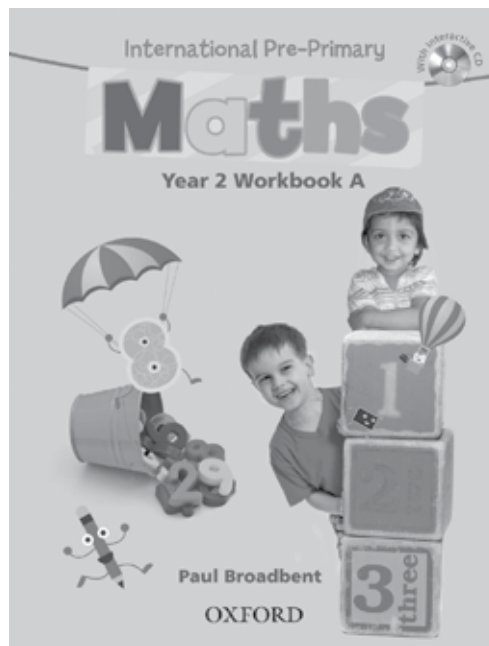
Classroom resources should be arranged prior to the session planned. The use of number flashcards and picture cards is essential at this age level. Make sure they have practical resources available to use alongside the workbooks. The pictures throughout the workbooks giving rich opportunities for talk. Additional worksheets in the guides are resources that the teacher may need to use.

The time suggested for teaching each topic can vary according to the school calendar. And teachers may arrange lesson plans according to their requirement.

Enjoy teaching the young learners!

# Teaching Guide

## Year 2 Workbook A



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# Contents

## Introduction

iii

<b>Unit 1</b>	<b>Sorting and matching</b>	
Objectives:	<ul style="list-style-type: none"><li>• sort objects according to their colour, size, use, and type; link objects as a pair</li><li>• observe objects that are the same and that are different</li><li>• match numbers to a quantity of objects</li></ul>	2-5
<b>Unit 2</b>	<b>Numbers up to 10</b>	
Objectives:	<ul style="list-style-type: none"><li>• count and trace/write numbers 1 to 10</li><li>• link numbers to their number words</li></ul>	6-8
<b>Unit 3</b>	<b>Counting</b>	
Objectives:	<ul style="list-style-type: none"><li>• count and write numbers 1 to 10</li><li>• link numbers to their number words; judge 'how many' objects in a set without counting</li></ul>	9-11
<b>Unit 4</b>	<b>Comparing</b>	
Objectives:	<ul style="list-style-type: none"><li>• compare objects according to their similarities and differences</li><li>• compare numbers according to their value, size, length, and height</li></ul>	12-14
<b>Unit 5</b>	<b>Adding up to 5</b>	
Objectives:	<ul style="list-style-type: none"><li>• understand addition using key words such as 'one more', add, altogether, and total</li><li>• link counting to make totals</li><li>• make totals to 5 using numbers 1 to 4</li></ul>	15-18
<b>Unit 6</b>	<b>Flat shapes</b>	
Objectives:	<ul style="list-style-type: none"><li>• identify the similarities and differences between shapes</li><li>• recognize and name 2D shapes according to their properties</li><li>• draw patterns using different shapes</li></ul>	19-21
<b>Unit 7</b>	<b>Counting 1 to 12</b>	
Objective:	<ul style="list-style-type: none"><li>• count and write numbers 1 to 12 in figures and words</li></ul>	22-24
<b>Unit 8</b>	<b>Taking away</b>	
Objectives:	<ul style="list-style-type: none"><li>• understand the concept of subtraction as 'taking away'</li><li>• understand that the quantity becomes less by 'taking away' one or two objects from a group of objects (1 fewer, 2 fewer)</li><li>• subtract single-digit numbers</li></ul>	25-27
<b>Unit 9</b>	<b>Numbers 1 to 20</b>	
Objectives:	<ul style="list-style-type: none"><li>• count and write numbers 10 to 20 in figures</li><li>• write numbers 1 to 12 in words</li></ul>	28-31
<b>Unit 10</b>	<b>A look back at...</b>	32
<b>Worksheets</b>		33-37

# Unit 1

# Sorting and matching

## Introduction:

Sorting involves separating objects into groups according to their similarities. By sorting things, children will learn that things are alike in some ways and different in others. They will also learn that things can be organized into certain groups. Learning to sort at an early age is important for understanding numerical concepts of grouping numbers and making sets. Sorting enables children to think logically about objects, mathematical concepts, and aspects of everyday life in general. Children may have their own ideas of how objects are related.

**Lesson 1:** Sorting and matching

**Pages:** 2 and 3

**Suggested time:**  
30 minutes

## Objectives:

- to identify similar and the different objects according to their characteristics
- to sort objects according to size and colours

## Resources:

packs of biscuits of same and different colours or shapes; cakes or sandwiches (two each) of different shapes, sizes and colours; Workbook A

## Vocabulary:

sort, match, same, different, together, pair

## Motivational activity:

- Ask the children to sit in a circle.
- Show some of biscuits, cakes, or sandwiches and ask:
  - Which of these are the same colour or are different colours?
  - Which of these have the same shape or are shaped differently?

## Student activity:

**Unit 1 Sorting and matching**

Sort these in different ways.

Colour

Shape

Choose one way of sorting, and draw and colour the cakes here.

Teaching Notes: These activities give children the opportunity to practice sorting and matching. Encourage them to look for similarities and differences as well as attributes that link the objects, such as pairs that go together, e.g. a hat and a ball.

Colour the matching hats.

**Keywords**  
sort match same different  
together pair

Teaching notes: This page gives the concept of viewing the same object from two different angles. Explain this. The children choose a different colour for each matching pair.

2

3

Divide children into four groups and give each group a tray containing different packs of biscuits, cakes, or sandwiches of different shapes. Then ask them to sort the items according to shape.

Now show one item from a different angle and ask each group to pick biscuits/cakes/sandwiches of a similar shape from the tray.

Show page 2 and ask questions about the different cakes displayed. Invite one child to draw a pair of cakes of the same shape on the board. Invite other children to indicate the cakes that have same colours.

Show page 3 and ask questions about the different hats displayed, and draw the same hats on the board. Invite one child to match the hats, displayed in different views.

### Written work:

The children now complete page 2 of the workbook. Help where needed.

### Homework assignment:

Assign page 3 as homework; check in the next period.

**Objectives:**

- to match objects that go together
- to identify differences

**Resources:**

flashcards of different objects that go together, for example, book and pencil, table and chair, shoes and socks, etc.; cut-outs of 'find the difference pictures' from magazines, printed from the internet, or handmade; Workbook A

**Vocabulary:**

sort, match, same, different, together, pair

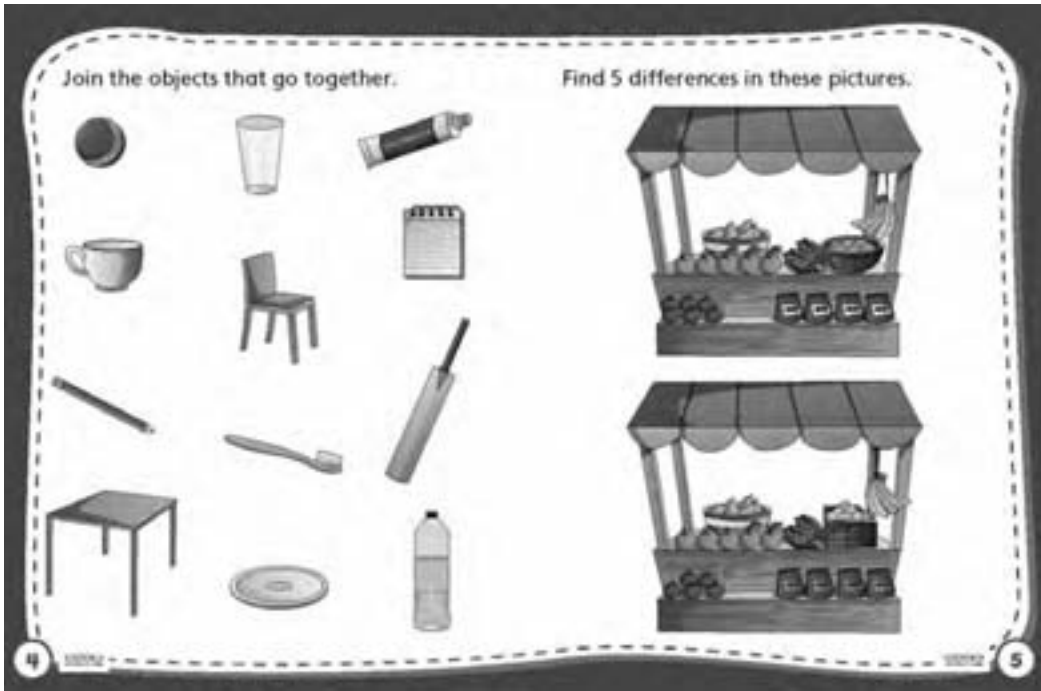
**Motivational activity:**

- Ask the children to sit in pairs.
- Ask one child in a pair to pick up a flashcard and show it to his/her partner.
- The other child will pick the flashcard of the object that goes with his/her partner's choice.
- Ask each pair to make a set of 2 to 3 objects and show their set to the class.
- Next, give each pair two seemingly identical pictures and ask them to find the difference between them.
- Each pair will present to the class the difference(s) they find in the given pictures.

**Student activity:**

Invite a few children to look for objects in the classroom that relate to one another in use, for example the marker and the board; the fan and the switch, etc.





**Written work:**

Ask the children to complete pages 4 and 5.

## Unit 2

# Numbers up to 10

### Introduction:

Counting is usually the first basic maths skill that young children learn. At this stage, children may have no understanding that numbers represent quantities and have relationships to other numbers, but it is important to help them understand that the last number in any counting represents the quantity of objects in a group.

**Lesson 1:** Numbers up to 10

**Pages:** 6 and 7

**Suggested time:** 1 hour

### Objectives:

- to review numbers 1 to 10
- to count up to 10 objects

### Resources:

bottle caps (10 to 12); number flashcards with numbers and words (up to 10); Workbook A

### Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten

### Motivational activity:

- Make 10 pairs of students.
- Put number flashcards in front of them.
- Ask each pair in turn to pick one flashcard, read the number, and show its number name. The pair then counts and picks up the same number of bottle caps.
- Provide any necessary help during the activity.
- Continue till all numbers from one to ten have been counted.

## Student activity:

**Unit 2 Numbers up to 10**

Count the birds. Trace the numbers.

one 1 1 1 1 1 1  
two 2 2 2 2 2 2  
three 3 3 3 3 3 3  
four 4 4 4 4 4 4  
five 5 5 5 5 5 5

six 6 6 6 6 6 6  
seven 7 7 7 7 7 7  
eight 8 8 8 8 8 8  
nine 9 9 9 9 9 9  
ten 10 10 10 10 10 10

1 2 3 4 5 6 7 8 9 10

**Key words**  
number count one two three four  
five six seven eight nine ten

Teaching Notes: Show the children how to trace numbers in the air as well as in a sand tray to help them practise before writing. Check that children start at the correct position and relate each written number to the last number in the count.

Turn to pages 6 and 7 and write the numbers on the board. Explain how each number is formed. Ask volunteers to write the numbers on the board. Repeat with several children.

## Written work:

Help the children to complete the task on pages 6 and 7. Emphasize that the last number in any counting is the quantity of objects, in this case, the birds.

**Lesson 2:** Numbers up to 10

**Pages:** 8 and 9

**Suggested time:**  
30 minutes

## Objectives:

- to review numbers 1 to 10
- to count up to 10 objects

## Resources:

ice cream cups; beads; flashcards; Workbook A

## Vocabulary:

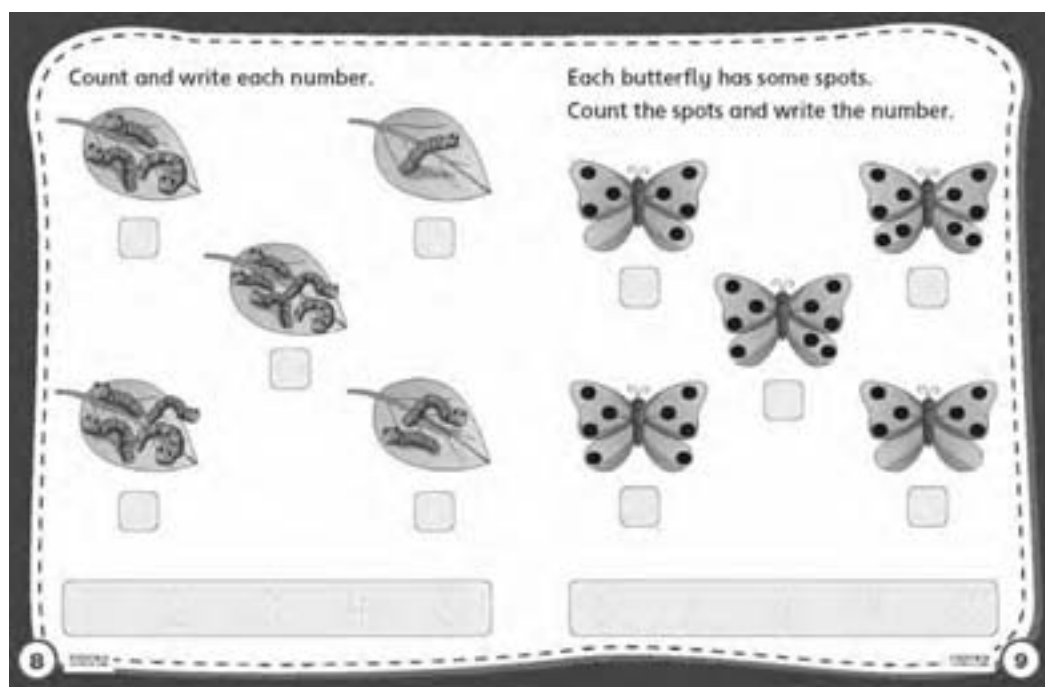
number, count, one, two, three, four, five, six, seven, eight, nine, ten

### Motivational activity:

- Invite a pair of students to come to the resource table.
- Give them the flashcards, the beads, and an ice cream cup.
- Now say aloud any number from 1 to 10.
- The pair picks the number card of the given number and puts the same number of beads in the ice cream cup.
- The same activity should be done for any 3 or 4 numbers between 1 and 10 with different pairs.
- Provide any necessary help during the activity.

### Student activity:

Explain the work on page 8 by drawing a similar picture on the board.



### Written work:

Help the children to complete the task on page 8.

### Homework assignment:

Assign page 9 for homework.

# Unit 3

# Counting

## Introduction:

Counting plays an important part in the learning of numbers as children move from 1 to 10 and beyond. It is important for them to understand that the last number in any count represents that quantity. It is also important for children to learn to observe at a glance how many items are in a particular group or set. They may be able to recognize 3 or 4 objects in a set. It is important to develop mental maths skills which will help in number operations later.

**Lesson 1:** Counting

**Pages:** 10 and 11

**Suggested time:**  
30 minutes

## Objectives:

- to review numbers 1 to 10
- to count up to 10 objects
- to learn the spelling of and write number words

## Resources:

baskets of different objects like bottle caps, lollipop sticks, straws, etc; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, how many, set

## Motivational activity:

- Ask the children to stand in a circle.
- Sing a numbers song like 'One two, buckle my shoe...' and write the numbers in words on the board in order to help the children learn the spellings. Ask each child to observe how the number names are written. The letters they have learned to write in their English lessons will be used here.

Give them each a worksheet with four lines and numbers one to ten written in words; they trace over these.

- Now ask the children to sit in a circle.
- Play a game. Put different items on the floor, asking the children to look and quickly say how many there are of each. For example, first put down three lollipop sticks; ask them to say how many there are. Then put eight straws, and then five bottle caps, etc.

## Student activity:

**Unit 3 Counting**

Count and write the number of shells in each group.

Count these beads.

How many beads are there in the boxes?

**Key words**  
count number how many set order

10 11

Turn to page 10 and draw similar items on the board. Ask the children to count how many of each object there are and say the number.

### Written work:

Help the children to complete the tasks on page 10.

### Homework assignment:

Assign page 11 as homework.

**Lesson 2:** Counting

**Pages:** 12 and 13

**Suggested time:**  
30 minutes

### Objectives:

- to review numbers 1 to 10
- to count up to 10 objects
- to learn and write the spelling of number words

### Resources:

snakes and ladders game; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten

## Motivational activity:

- Ask the children to sit in groups of four. Provide a snakes and ladders game for each group.
- Help the children to play the game.
- When the die is rolled, each child counts the dots on the die and moves the counter the same number of squares on the board. This is a good activity to reinforce counting and children learn best through such activities.

## Student activity:

Draw lines to match the balls to the correct number.

Write the missing numbers.

Write the number words.

- Ask the children to sit in pairs.
- Provide a small white board for each pair and ask them to sing a number song (any number rhyme like 'One two, buckle my shoe...' or 'Five little ducks,' and as they sing, write the number words on their boards.
- Turn to page 12 and draw a similar picture on the board. Ask children to take turns to come and count and match the balls to the correct numbers.

## Written work:

Ask the children now to complete the task on page 12 independently.

## Homework assignment:

Assign page 13 for homework; check that they have written the letters neatly in the next period.

# Unit 4

# Comparing

## Introduction:

In daily life, children observe things with different attributes like trees of different heights, people of different heights, small and large bags. The children directly compare the attributes of length, area, weight/mass, capacity, and/or relative temperature. In later classes they use comparative language to solve problems and answer questions. In this unit, children are expected to compare and order two or three objects according to size, length, and height (for example: large and small, tallest and shortest).

**Lesson 1:** Comparing

**Pages:** 14 and 15

**Suggested time:** 1 hour

## Objectives:

- to differentiate between sizes, lengths, and heights
- to compare objects according to their physical features

## Resources:

pencils; boxes of different sizes; Workbook A

## Vocabulary:

compare, the largest, the smallest, the tallest, the shortest, the longest

## Motivational activity:

- Ask the children to sit in a circle.
- Invite three children to stand in front of the class and ask which child is the tallest and which is the shortest?
- Show boxes of different sizes and ask:
  - Which box is the largest?
  - Which box is the smallest?



## Student activity:

**Unit 4 Comparing**

Tick (✓) the largest in each set.  
Cross (x) the smallest in each set.

Colour the tallest red.  
Colour the shortest blue.

**Keywords**  
compare largest smallest tallest  
shortest longest coin rupee

Teaching Note: When comparing objects, children need to identify similarities and differences. Use language related to size, length, and height. Introduce coins so that children can compare their features.

14 15

Show pages 14 and 15 and ask questions about the objects shown. You could draw a few items on the board to make it clearer, and encourage participation from the class.

Ask:

- Which is the largest leaf in the set?
- Which is the smallest leaf in the set?

Similarly point to another object and ask questions:

- Which is the tallest building?
- Which is the smallest building?

### Written work:

The children now turn to the workbook and complete pages 14 and 15. Provide help where needed.

### Homework assignment:

Assign page 16 as an assignment for homework; check the work in the next period.

Lesson 2: Sorting and matching

Page: 17

Suggested time:  
30 minutes

### Objectives:

- to compare objects according to their physical features.
- to compare coins

**Resources:**

real 1, 2, and 5 rupee coins in bowls; Workbook A

**Vocabulary:**

compare, the largest, the smallest, the tallest, the shortest, the longest, coin, rupee

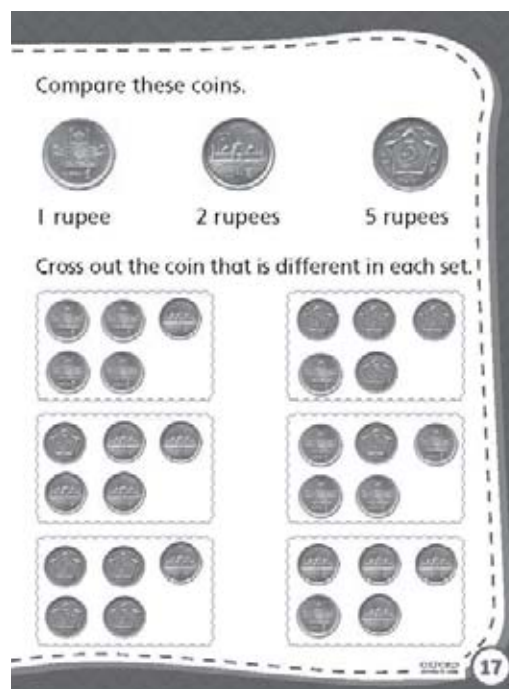
**Motivational activity:**

- Ask the children to sit in a circle.
- Show 1, 2, and 5 rupee coins and ask:
  - Which coin is the smallest?
  - Which coin is the largest?

**Student activity:**

- Now make groups of four and give each group a bowl of coins and ask the children to make sets of 1, 2, and 5 rupee coins.
- Help each group during the activity.
- Ask the groups to show their collections.

Explain the task on page 17.

**Written work:**

Ask the children to complete the task on page 17 independently.

# Unit 5

# Adding up to 5

## Introduction

Counting is usually the first basic maths skill that young children learn. At this stage, children may have no understanding that numbers represent quantities and have relationships to other numbers. Addition helps children understand how numbers and quantities relate to one another. Basic addition skills give pre-nursery children a framework for mastering maths in later classes.

**Lesson 1:** Adding up to 5

**Pages:** 18, 19 and 20

**Suggested time:** 1 hour

## Objectives:

- to count objects
- to add one and two more objects

## Resources:

bottle caps, number flashcards; cards of signs for addition (+) and 'is equal to' (=); Workbook A

## Vocabulary:

add, one more, two more, altogether, number, count

## Motivational activity:

- Ask the children to sit in a circle.
- Show one bottle cap, then put the addition sign card (+), then add 1 more bottle cap and ask:
  - If there is one bottle cap and we add one more, how many bottle caps are there altogether?
  - Ask any child to answer and invite him/her to pick that number card.
  - Put the 'is equal to' (=) card and then the number 2 card.
- Show two bottle caps. then put the addition sign card (+), then add 1 more bottle cap and ask:
  - If there are two bottle caps and we add one more, how many bottle caps are there altogether?
  - Ask another child to answer and invite him/her to pick that number card.
  - Put the 'is equal to' (=) card and then the number 3 card.

- Divide the children into four groups; ask them to do the same activity for the following:

- $3 + 1 =$
- $4 + 1 =$
- $1 + 2 =$
- $2 + 2 =$
- $3 + 2 =$

**Student activity:**

**Unit 5 Adding up to 5**

Draw one more caterpillar on each leaf. Count how many that makes altogether.

1 and 1 more is

2 and 1 more is

3 and 1 more is

4 and 1 more is

1 2 3 4 5

Draw two more spots on each leaf. Count how many that makes altogether.

Write the numbers.

1 more 1 more 1 more

2 more 2 more

**Keywords**  
add 1 more 2 more altogether number count

Show pages 18 and 19 and ask questions about the objects shown. You could draw a few items on the board to make it clearer, and encourage class participation.

**Written work:**

Help the children to complete the task on pages 18 and 19 independently. Explain how to count the two sets together in the activity given on page 20.

**Homework assignment:**

Assign page 20 for homework.

### Objectives:

- to tell the number story of 5
- to add one and two more to given objects

### Resources:

blocks of any two colours; number flashcards; cards of addition sign (+) and 'is equal to' (=) sign; Workbook A

### Vocabulary:

add, how many, one more, two more, altogether, number, count

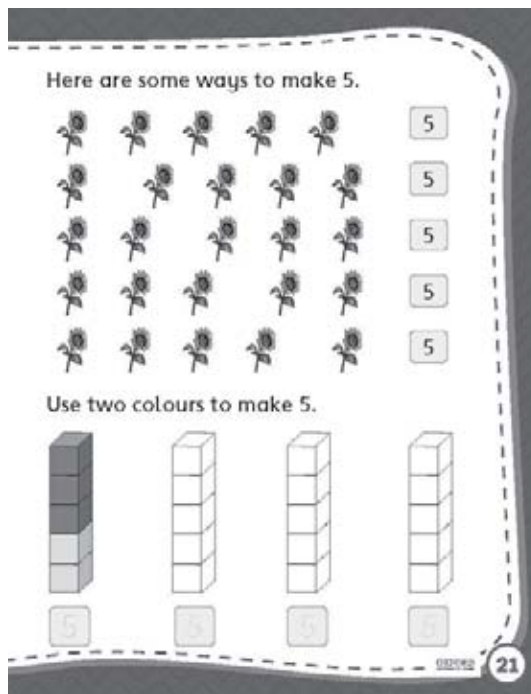
### Motivational activity:

- Ask the children to sit in a circle.
- Put a block of any colour and ask:
  - How many blocks? A child will answer 1.
  - Ask, how many more blocks must we add to it to make 5?
  - Start adding blocks of a different colour till the total is 5.
  - Write this story sum with the help of the flashcards, i.e.,  $1 + 4 = 5$ .
- Then repeat the activity starting with two blocks.

### Students activity

- Divide the children into four groups and ask them to do the same activity for the following.
  - $1 + 4 = 5$
  - $2 + 3 = 5$
  - $3 + 2 = 5$
  - $4 + 1 = 5$
- Observe the activity and help the children as required.

**Student activity:**



Turn to page 21 of the workbook and draw the same picture on the board and explain the task.

**Written work:**

The children complete the task on page 21 independently.

# Unit 6

# Flat shapes

## Introduction:

Babies in cradles and cots are often exposed to mobiles hanging over them. From the very start the child is excited to see these shapes. They see a ball, a star, or different-shaped objects. In their pre-primary years they will learn that there are names to distinguish shapes. Children need to know the names of shapes so that they can identify them orally and in writing, and compare them and how they are used. These are basic skills that they will use for the rest of their lives.

**Lesson 1:** Flat shapes

**Pages:** 22 and 23

**Suggested time:** 1 hour

## Objectives:

- to identify flat shapes
- to design different objects using shapes
- to make patterns with flat shapes

## Resources:

flat shapes (squares, circles, rectangles, triangles) of different sizes and colours (can be made from biscuit cartons) placed in small baskets or trays; Workbook A

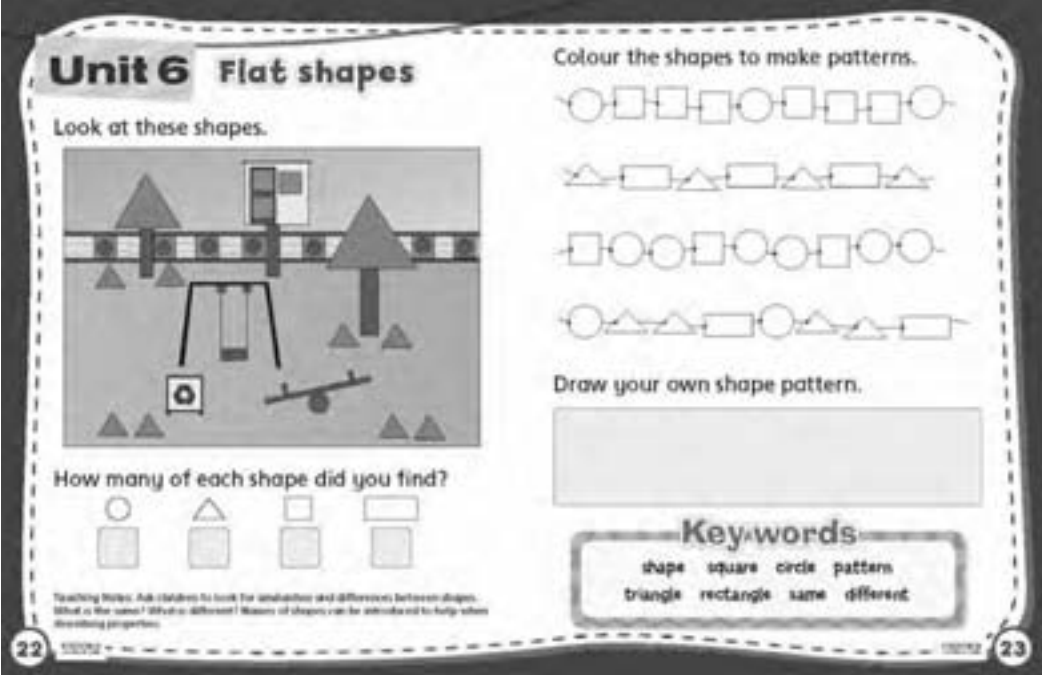
## Vocabulary:

shape, square, circle, triangle, rectangle, same, different, pattern

## Motivational activity:

- Ask the children to sit in a circle.
- Show them the four baskets of shapes, one for squares, another for circles, and so on.
- Show them how to make objects using these shapes, for example a car, a house, a boy, tree, etc. Help them do this.
- Different scenes can also be made using these shapes, for example, two or three mountains, a couple of trees, a house, a car, etc.

## Student activity:



**Unit 6 Flat shapes**

Look at these shapes.

How many of each shape did you find?

Teaching Notes: Ask children to look for similarities and differences between shapes. What is the same? What is different? Names of shapes can be introduced to help when describing properties.

Colour the shapes to make patterns.

Draw your own shape pattern.

**Key words**  
shape square circle pattern  
triangle rectangle same different

22 23

- Divide the children into four groups and provide each group with a set of four baskets.
- Ask them to create objects from these shapes.
- Give help where required.
- Each group shares its work.
- Now turn to page 22 of the workbook. Ask children to look for similarities and differences between the shapes. Names of the shapes can be introduced to help when describing properties. Explain the task. The children should count similar shapes and write the numbers.

### Written work:

- Using the four shapes, square, circle, rectangle, and triangle, make different patterns. Ask children to take turns to make patterns using these shapes.
- Help the children to complete the task on page 23 independently.

**Lesson 2:** Flat shapes

**Pages:** 24 and 25

**Suggested time:**  
30 minutes

### Objectives:

- to identify flat shapes
- to recognize flat shapes in our surroundings



## Resources:

different flat shapes; real-life objects matching flat shapes like buttons, a coin, an envelope; Workbook A

## Vocabulary:

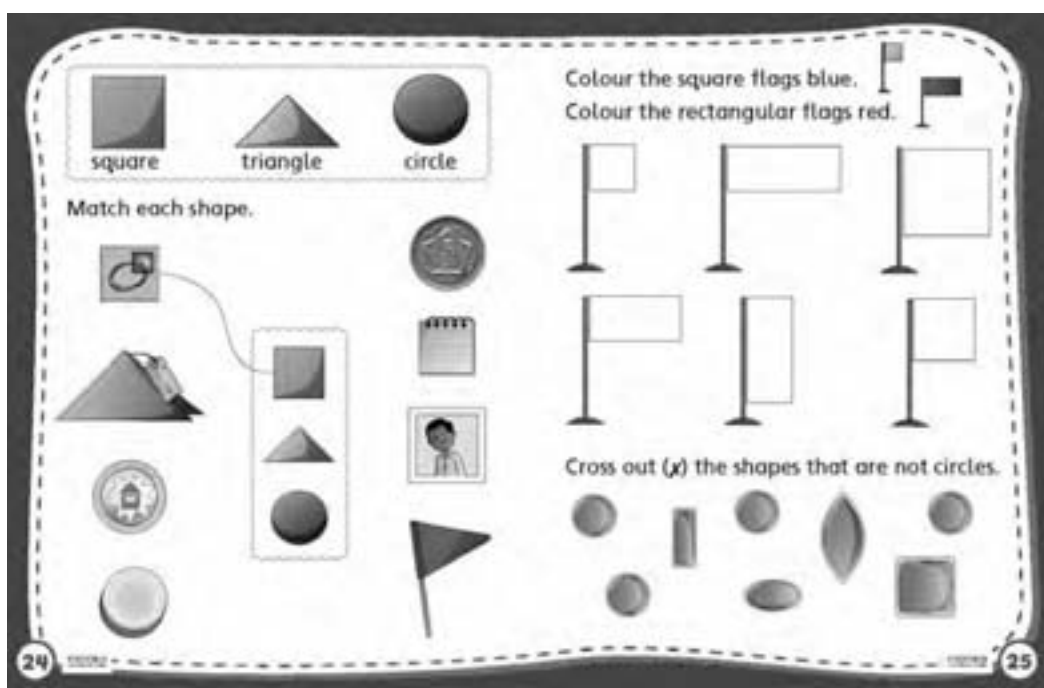
shape, square, circle, triangle, rectangle, same, different, pattern

## Motivational activity:

- Ask the children to sit in a circle.
- Put some real-life objects and shapes in front of them.
- Ask one child to pick out a flat shape and identify a real-life object matching it.
- Repeat with as many children as possible.

## Student activity:

- Turn to page 24 and 25 of the workbook. Explain the tasks.



## Written work:

Ask the children to complete page 24 of the workbook.

## Homework assignment:

Assign page 25 for homework.

# Unit 7

# Counting 1 to 12

## Introduction:

Counting plays an important role beyond the number 10. In this unit, children learn to count numbers 11 and 12. Four pages of interesting activities teach students that to count 11 we add 'one more', to 10, and so on.

**Lesson 1:** Counting 1 to 12

**Pages:** 26 and 27

**Suggested time:** 1 hour

## Objectives:

- to know numbers 11 and 12
- to count up to 12 objects
- to read and write number words eleven and twelve

## Resources:

blank square cards (made from the back of used card); markers; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, one more, two more,

## Motivational activity:

- Ask the children to stand in a circle and sing any number song. (Extend it to twelve if it is only to 10.)
- Now ask the children to sit in a circle.
- From a basket of blank cards, pick one card.
- Draw an object on it. Pick another card and write 1 on it, and on a third card write the same number in words (one).
- Repeat the activity for all numbers to twelve.

## Student activity:

**Unit 7 Counting 1 to 12**

1	2	3	4	5	6	7	8	9	10	11	12
one	two	three	four	five	six	seven	eight	nine	ten	eleven	twelve

Count and write the numbers.  
Write each number as a word.

Count and write the numbers.  
Write each number as a word.

**Keywords**  
count ten eleven twelve

Teaching Note: 11 is introduced as 1 more than 10, and 12 is introduced as 2 more than 10. Encourage the children to count in groups of 5, so 11 is 5 and 5 and 1. 'teen' numbers are easier to visualize if they can recognize 10, and breaking 10 down into 5 and 5 is a useful step towards this.

- Give the card basket to pairs of children and ask them to repeat the activity as demonstrated.
- Help the children where required.
- Pages 26 and 27 are self-explanatory but still make sure that the children know what to do.

## Written work:

Ask the children to complete pages 26 and 27 independently.

**Lesson 2:** Counting 1 to 12

**Pages:** 28 and 29

**Suggested time:**  
30 minutes

## Objectives:

- to review numbers 1 to 12
- to count up to 12 objects

## Resources:

blocks; lollipop sticks; straws; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve

### Motivational activity:

- Ask the children to sit in a circle.
- Take 10 lollipop sticks one by one, and count them as one unit, two units, and so on till ten.
- Explain that ten units makes one ten. Tie the ten lollipop sticks with a rubber band to form one unit of ten.
- Take one more lollipop stick and place it beside the one ten set of sticks. Explain that one ten and 1 more makes 11. Also emphasize that 11 is one more than 10.
- Repeat the same exercise with blocks to reinforce the concept on page 29.
- Repeat the same activity to teach counting to 12.

### Student activity:

11 is 1 more than 10.

12 is 2 more than 10.

Count and write the numbers.

Count these. Write the numbers.

- Ask the children to sit in pairs.
- Provide the children with straws, lollipop sticks, and blocks. Ask them to do the activity just demonstrated on their own.
- Turn to pages 28 and 29. Draw a similar picture on the board. Ask any children to take turns to count and write the numbers.

### Written work:

Help the children to complete the task on page 28.

### Homework assignment:

Assign page 29 for homework.

# Unit 8

# Taking away

## Introduction:

Subtraction is as important as addition. In early years, children learn this concept by 'taking away' a number of objects from a given group.

**Lesson 1:** Taking away

**Pages:** 30 and 31

**Suggested time:** 1 hour

## Objectives:

- to introduce the concept of taking away
- to demonstrate that a counted number becomes 'one fewer' or 'two fewer' when we take away one or two objects.

## Resources:

toys, for example, cars, dolls, teddy bears, balls (each toy to be similar and available in quantities of 1 to 5) etc.; Workbook A

## Vocabulary:

take away, fewer

## Motivational activity:


- Ask the children to sit in a circle.
- Tell story sums by using different toys. For example: Ali has three cars and he gives one car to his little sister. How many cars does he have now?  
Reinforce the idea by saying that Ali had three cars before but now he has 1 car fewer.

Write the following sums on the board and using a story similar to the one above, solve them with participation from the class.


- $2 - 1 = 1$
- $4 - 1 = 3$
- $1 - 1 = 0$
- $5 - 1 = 4$
- $5 - 2 = 3$
- $4 - 2 = 2$
- $3 - 2 = 1$
- $2 - 2 = 0$


## Student activity:


### Unit 8 Taking away


 There is now 1 fewer sweet.  
4 take away 1 is 3.


Cover 1 in each row with your thumb.  
Write how many you can see.

 3 take away 1 is


 5 take away 1 is

 2 take away 1 is


 1 take away 1 is


 4 take away 1 is


**Key words**  
take away fewer


 There are now 2 fewer glasses.  
5 take away 2 is 3.







Cross out 2 glasses in each row.  
Write how many glasses are left.

 3 take away 2 is

 4 take away 2 is

 2 take away 2 is

 5 take away 2 is

5	4	3	2	1	0
					

Teaching Notes: Subtraction is introduced in 'Taking away'. When taking away one object from a group of objects, explain that there is now 1 fewer or 2 fewer than the original number.

30
31

- Ask the children to sit in pairs.
- Ask one child in each pair to pick 4 or 5 toys, let's say cars.
- Ask him/her to take away one of the toys and give it to his/her partner, and then count how many toys remain. The students should be able to explain that the number remaining is one fewer than the original number.
- Repeat the activity, but this time taking away two toys.

### Written work:

Draw one of the sweetmeats from page 30 on the board and explain the task. Ask the children to complete page 30 in class.

### Homework assignment:

Assign page 31 for homework.

**Lesson 2:** Taking away

**Pages:** 32 and 33

**Suggested time:**  
30 minutes

### Objectives:

- to reinforce the concept of taking away
- to take away three or more objects

## Resources:

bottle caps, crayons, scales, storybooks etc.; Workbook A

## Motivational activity:

- Ask the children to sit in a circle.
  - Tell story sums using different classroom items. For example: Shanzay has five story books and she gives two story books to her friend. How many story books does she have now?
  - Reinforce the above by saying that Shanzay had five story books before and now she has 2 fewer.
  - Give the children some more sums and ask them to make up similar stories using other classroom items.

## Student activity:

The image shows two pages of a workbook, labeled 32 and 33, with a dashed border. Page 32 features a snake with 5 spots. The instructions are: 'Put 5 counters on the snake. Take 1 away and write the number.' Below this are five rows of subtraction problems: '5 take away 1 is', '4 take away 1 is', '3 take away 1 is', '2 take away 1 is', and '1 take away 1 is'. Each row has a small box for the answer. A tip box says 'Tip: Take away 1 counter each time.' Below the problems, it says 'Count how many spots there are and write the number. Take away 1 and draw the spots that are left. Write the number.' There are four dice, each with a 'take away 1' arrow pointing to a box for the answer. Page 33 features a snake with 5 spots. The instructions are: 'Put 5 counters on the snake. Take 2 away and write the number.' Below this are four rows of subtraction problems: '5 take away 2 is', '4 take away 2 is', '3 take away 2 is', and '2 take away 2 is'. Each row has a small box for the answer. Below the problems, it says 'Count how many spots there are and write the number. Take away 2 and draw the spots that are left. Write the number.' There are four dice, each with a 'take away 2' arrow pointing to a box for the answer.

- Ask five children to stand in a line at the front of the classroom.
- Now ask the other children to count them.
- Ask two children from the line to stand apart and now ask the class how many remain in the line. Explain/elicite that 5 take away 2 is 3. Repeat with different groups of children and different 'take away' combinations.

## Written work:

Ask the children to turn to page 33 and help them complete the activity.

## Homework assignment:

Assign page 32 for homework; check it in the next lesson.

# Unit 9

# Numbers 1 to 20

## Introduction:

Counting and learning to write number names are important basic mathematical skills.

**Lesson 1:** Numbers 1 to 20

**Pages:** 34 and 35

**Suggested time:** 1 hour

## Objectives:

- to introduce numbers 11 to 15
- to count up to 15 objects
- to write numbers eleven to fifteen in words

## Resources:

flashcards (numbers and number words); blocks; a chart of numbers thirteen to nineteen; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen

## Motivational activity:

- Ask the children to sit in a circle in pairs. Show the chart of 'teen' numbers and write them as words on the board.
- Show flashcards of number words thirteen to fifteen and ask the children to repeat the names after you.
- Display flashcards for numbers and number names, and blocks.
- Ask a pair to pick up the number 10 number card, its number name card, and ten blocks.
- Invite other children to repeat the activity with numbers from 11 to 15.



## Student activity:

**Unit 9 Numbers 1 to 20**

Look at these numbers.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15

10 ten  ten

11 eleven

12 twelve

13 thirteen

14 fourteen

15 fifteen

Count these.  
Write the number and the word.

**Key words**  
ten eleven twelve  
thirteen fourteen fifteen

Teaching Note: Look at the pattern of numbers in the grid and count from 1 to 15. When counting to 11, 12, 13, 14 or 15, start at 10 and count on.

34 35

- Ask the students to look at page 34.
- Meanwhile, write the number names against each number (10 to 15), one by one on the board with a blank space in which a child can copy the number name.
- Call out a child to copy the word each time you write a number name.
- Repeat for all the children if there is time.

### Written work:

Ask the children to complete the task on page 34.

### Homework assignment:

Assign page 35 as homework.

**Lesson 2:** Numbers 1 to 20

**Pages:** 36 and 37

**Suggested time:** 1 hour

### Objectives:

- to introduce numbers 16 to 20
- to count upto 20 objects
- to write in words the names of 'teen' numbers and twenty

### Resources:

flashcards (numerals and number words); charts of teen numbers and twenty; two sets of blocks of different colours; Workbook A

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty

## Motivational activity:

- Repeat the activity from lesson 1 for numbers 16 to 20.
- Make it clear when the 'teen' numbers change to twenty.

## Student activity:

Look at these numbers.

11	12	13	14	15
16	17	18	19	20

sixteen       

seventeen       

eighteen       

nineteen       

twenty       

Count these.  
Write the number and the word.

**Key words**  
sixteen    seventeen    eighteen    nineteen    twenty

- Ask the children to work in pairs.
- Give each pair sets of different coloured blocks and number and number name flashcards.
- Ask each pair to count 10 blocks of one colour and line them up.
- Next ask the pair to select one block from the other colour and put it besides the 10 blocks already counted
- Elicit that one ten and one makes eleven.
- Repeat for numbers to twenty with different pairs of children.

## Written work:

Help the children to complete the task on page 37.

## Homework assignment:

Assign page 36 for homework; check it in the next lesson.

**Objectives:**

- to review numbers 1 to 20
- to write the number names for 'teen' numbers and twenty

**Resources:**

flashcards (numerals and number words); charts of 'teen' numbers and twenty; a set of blocks; Worksheet 5 (from the Guide); Workbook A

**Vocabulary:**

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty

**Student activity:**

- Arrange the blocks on a table.
- Invite the children in groups of 10 to stand around the table. Demonstrate how to arrange the number 13 in blocks, (10 and 3).
- Ask one child at a time to repeat the activity for other numbers, (from 1 to 20).

**Motivational activity:**

- Turn to page 38 and explain the task.

**Written work:**

Ask the children to complete page 38.

**Homework assignment:**

Assign page 39 and Worksheet 5 (photocopy it from the Guide) as homework.

# Unit 10 A look back at...

- Unit 10 reviews all the concepts that have been covered in Workbook A.
- To reinforce the concepts, explain each page and help the children to complete the tasks.

## For example:

- On page 40, the topic is sorting and matching. Draw a similar activity on the board and ask a volunteer to do the task.
- Explain each page and encourage the children to complete them independently where possible.
- The revision pages can also be used for end-of-term assessments.

**Unit 10 A look back at...**

**Sorting and matching**  
How many are there of each?

Join the matching trees.

**Numbers up to 10**  
Write these numbers.

1	2	3	4	5
one	two	three	four	five
6	7	8	9	10
six	seven	eight	nine	ten

Count and write the numbers.

Count and draw a line to the correct number.

**Counting**  
Draw spots to match the numbers.

Count these and match each to the correct number.

**Comparing**  
Compare these caterpillars. Tick (✓) the longest and cross (✗) the shortest one.

Draw a caterpillar longer than the longest one.

Draw a caterpillar shorter than the shortest one.

**Challenge**  
Use coins to check the length of your caterpillars.

**Adding up to 5**  
Draw spots on each wing. Give each butterfly a total of 5 spots.

Add these together.

**Flat shapes**  
Count each shape and write the number.

Colour this shape pattern.

Draw each shape.

Use this space to draw any patterns you like.

# Worksheet 1

## Sorting and matching

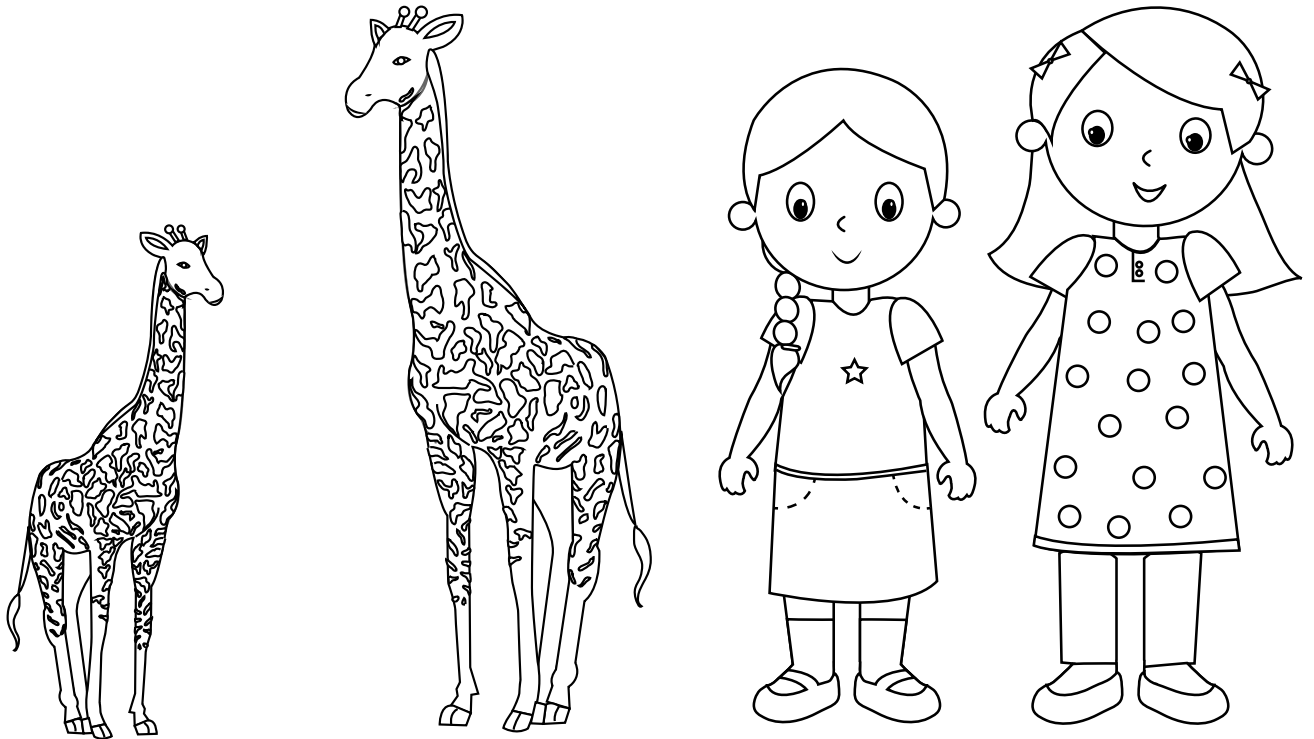
Match the clothes with the same pattern. Colour them.



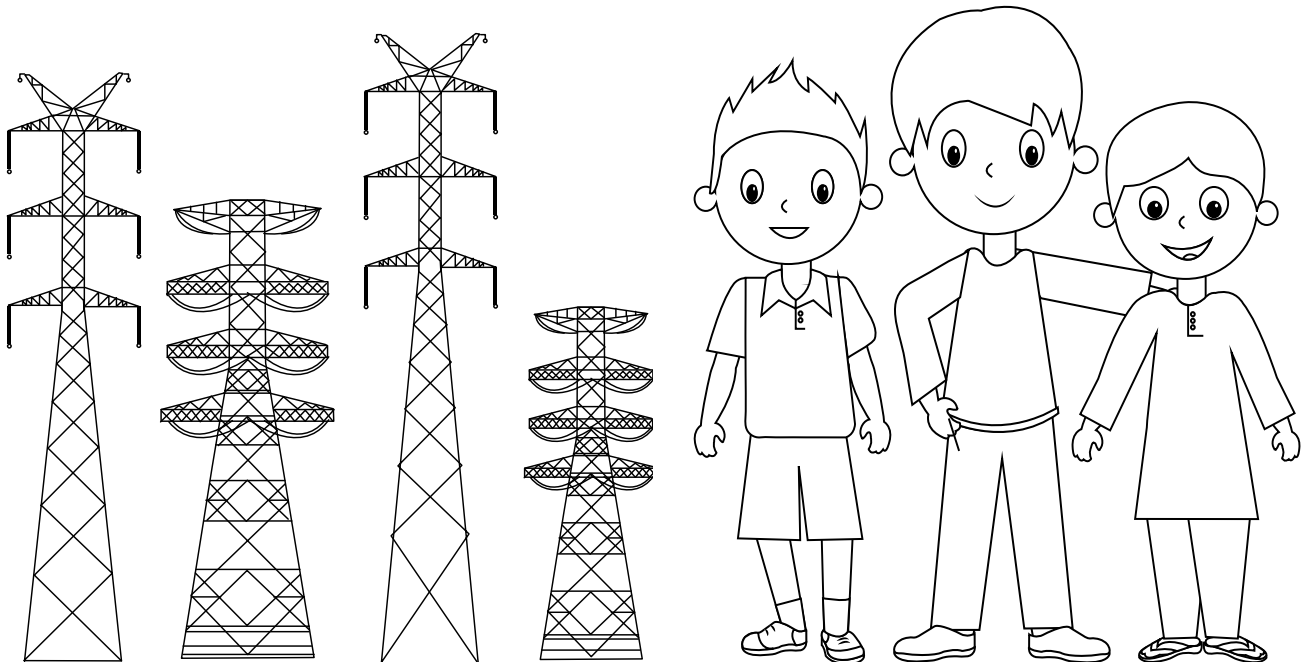
# Worksheet 2

## Comparing

Colour the taller one.



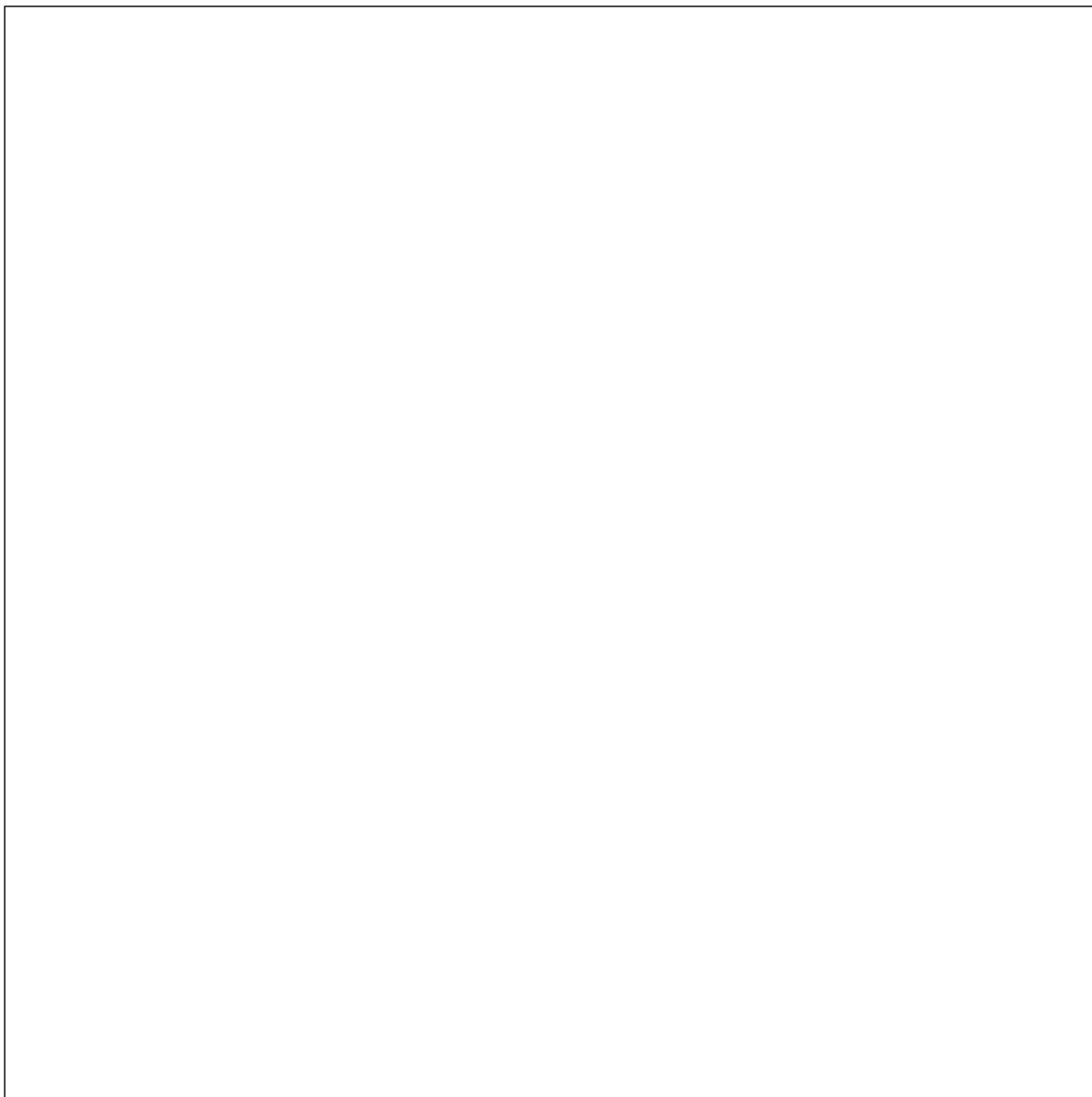
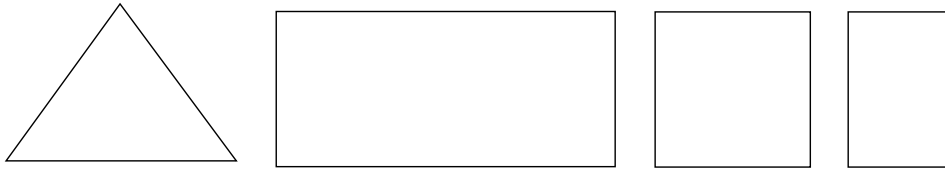
Colour the tallest one.



# Worksheet 3

## Flat shapes

Use these shapes to make a house. Colour it.

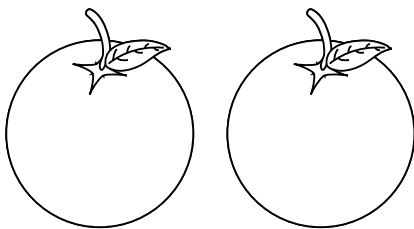
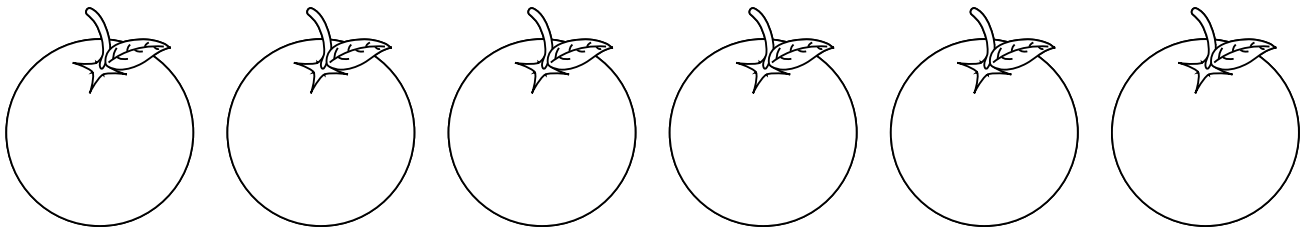
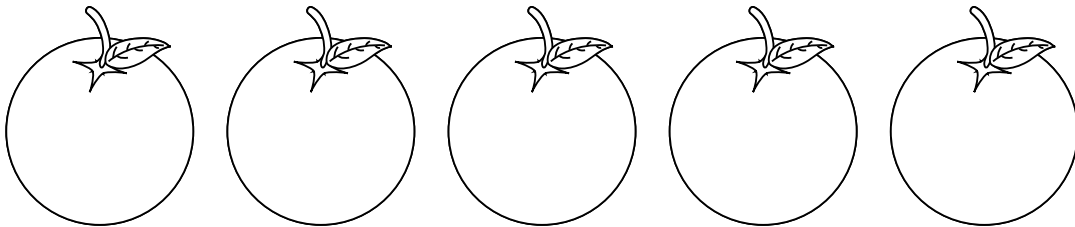
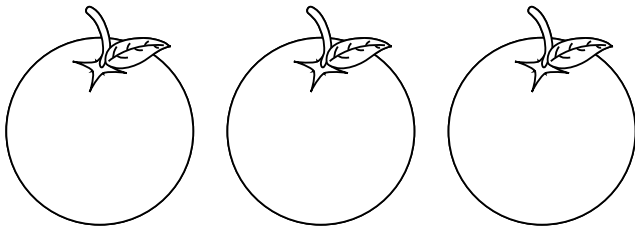


# Worksheet 4

## Taking away

Colour these oranges and then take away two from each row.

How many are left?





# Worksheet 5

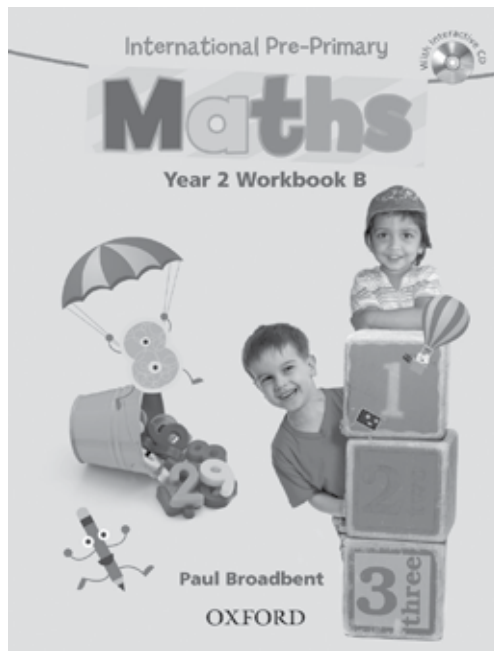
## Numbers

Count and write the numbers and number names. Colour the stars.



# Teaching Guide

## Year 2 Workbook B



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UNIVERSITY PRESS

# Contents

## Specific Learning Objectives

<b>Unit 1</b>	<b>Time</b>	
Objectives:	<ul style="list-style-type: none"> <li>• identify time at significant points in the day such as 'day-time' and 'night-time', 'afternoon', and 'evening' without using a clock</li> <li>• read o'clock time on an analogue clock</li> <li>• draw hands on a clock to show times</li> </ul>	<b>40-42</b>
<b>Unit 2</b>	<b>Adding up to 10</b>	
Objectives:	<ul style="list-style-type: none"> <li>• understand addition as 'one more', add, altogether and total</li> <li>• make totals up to 10</li> <li>• add single-digit numbers</li> </ul>	<b>43-46</b>
<b>Unit 3</b>	<b>Solid shapes</b>	
Objective:	<ul style="list-style-type: none"> <li>• recognize and name 3D shapes according to their properties: cube, cuboid, cylinder, sphere, cone and pyramid with a square base</li> </ul>	<b>47-49</b>
<b>Unit 4</b>	<b>Taking away</b>	
Objectives:	<ul style="list-style-type: none"> <li>• understand the concept of subtraction as 'taking away'</li> <li>• take away by crossing out and write how many are left</li> </ul>	<b>50-53</b>
<b>Unit 5</b>	<b>Patterns</b>	
Objectives:	<ul style="list-style-type: none"> <li>• recognize patterns of colours and shapes</li> <li>• create patterns using drawings</li> </ul>	<b>54-56</b>
<b>Unit 6</b>	<b>Numbers 11 to 30</b>	
Objectives:	<ul style="list-style-type: none"> <li>• recognize and read 'teen' numbers</li> <li>• count and write numbers up to 30</li> <li>• link numbers with symbols</li> </ul>	<b>57-60</b>
<b>Unit 7</b>	<b>Addition and subtraction</b>	
Objectives:	<ul style="list-style-type: none"> <li>• understand that addition and subtraction are inverse of each other</li> <li>• add and subtract single-digit numbers</li> <li>• add and subtract using the key words 'more than' and 'fewer than'</li> </ul>	<b>61-63</b>
<b>Unit 8</b>	<b>Comparison: Length and height</b>	
Objectives:	<ul style="list-style-type: none"> <li>• compare lengths using appropriate vocabulary</li> <li>• put objects in order according to their lengths</li> </ul>	<b>64-67</b>
<b>Unit 9</b>	<b>Position</b>	
Objectives:	<ul style="list-style-type: none"> <li>• recognize position of objects using appropriate vocabulary</li> <li>• compare numbers according to their position on a number line</li> </ul>	<b>68-70</b>
<b>Unit 10</b>	<b>A look back at...</b>	<b>71</b>
<b>Worksheets</b>		<b>72-76</b>

# Unit 1 Time

## Introduction:

Time is a unit of measure but it is different from the other measures in that it cannot be seen or touched. However, time affects us in everyday life, from day to night and from one season to another. There are two aspects of time that need to be taught to children at this level. First, the sequencing of events within a day, describing duration as long or short, and naming and ordering of the days of the week. Second, telling the time by the hour using analogue/digital clocks.

**Lesson 1:** Time

**Pages:** 2 and 3

**Suggested time:** 1 hour

## Objectives:

- to differentiate between day and night time activities
- to sequence events

## Resources:

cut-outs of the Sun and moon; pictures of different day and night activities; different pictures showing the sequence of any work, for example, picking up the shoes, wearing them, and tying the laces; Workbook B

## Vocabulary:

night, day, order, o'clock, time

## Motivational activity:

- Ask the children to sit in a circle.
- Put the cut-outs of the Sun on one side and the moon on the opposite side.
- Now take out and display the pictures from the resources.
- Show pictures of different activities and ask which activities take place during the day and which at night.
- Display day activities around the Sun and night activities around the moon.
- Now show three pictures of any event.
- Ask the children to number them according to the order in which the activities occur. For example, assign number 1 to the picture with food shown on a table, number 2 to the picture of a boy eating the food, and number 3 to the picture of empty plates and spoons in the wash basin.

## Student activity:

**Unit 1 Time**

night      day

Tick (✓) the day-time activities.  
Cross (x) the night-time activities.

We do some things in order.

Number these in order.

**Keywords**  
night day order o'clock time

Teaching Note: A clock should be available to look at during the day. Draw the children's attention to the face of significant points in the day such as lunchtime. Emphasise that the short hand points to the hour and concentrate on this rather than showing the minutes past the hour.

- Divide the children into four groups and provide each group, cut-outs of the Sun, moon, and different activities.
- Ask each group to repeat the task as mentioned above.
- Provide three pictures of an event to each group and ask each group to order them in the correct sequence.
- Turn to pages 2 and 3 of Workbook B. Explain what needs to be done.

## Written work:

Ask the children to complete pages 2 and 3.

**Lesson 2:** Time

**Pages:** 4 and 5

**Suggested time:**  
30 minutes

## Objectives:

- to learn to tell time

## Resources:

a round cardboard (like the one that comes with cakes), and number it from 1 to 12 (refer to any analog clock); two cardboard needles, one big and one small; Workbook B

## Vocabulary:

o'clock, time

## Motivational activity:

- Ask the children to sit in a circle.
- Show them the handmade clock and set the needles to show 1 o'clock. Explain that when the long hand is pointing at 12 and the short hand is at number 1, the time is 1 o'clock.
- Similarly demonstrate other times.

## Student activity:

The long hand is pointing to 12.  
The short hand is pointing to 3.  
This clock shows 3 o'clock.

Write these times.

o'clock    o'clock    o'clock

o'clock    o'clock    o'clock

o'clock    o'clock    o'clock

Draw hands on these clocks to show these times.

4 o'clock    10 o'clock

7 o'clock    12 o'clock

5 o'clock    8 o'clock

Colour the ones that show 5 o'clock.

- Divide the children into four groups and provide each group a handmade clock.
- Ask each group to show different times, for example, one group show 3 o'clock, another 5 o'clock, and the third group shows 9 o'clock, and so on.
- Ask the children to open pages 4 and 5 of the workbook. Explain the tasks.

## Written work:

Let the children complete page 4 in the class.

## Homework assignment:

Assign page 5 for homework.

# Unit 2

# Adding up to 10

## Introduction

Adding up to 10 is a step towards more advanced counting. The children have to understand this basic addition before they move on to bigger addition.

**Lesson 1:** Adding up to 10

**Pages:** 6 and 7

**Suggested time:** 1 hour

## Objectives:

- to review numbers 1 to 10
- to add objects up to 10 numbers

## Resources:

bottle caps; number and number words flashcards; addition and 'equal to' sign cards; Workbook B

## Vocabulary:

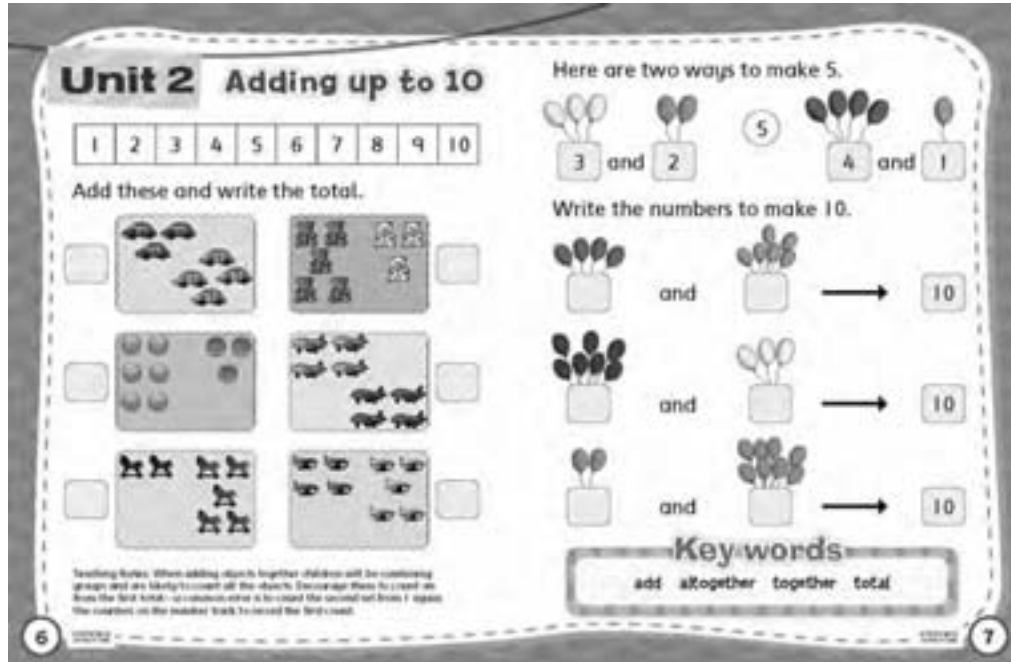
add, altogether, together, total

## Motivational activity:

- Ask the children to sit in a circle.
- Show a bottle cap and put a card of addition sign (+). Add 1 more bottle cap and ask:
  - If there is one bottle cap and one more is added, then how many bottle caps would there be altogether?
  - Ask any child to answer and invite him/her to pick the relevant number cards with '+' and '=' sign cards.
  - Ask the children to make the equation,  $1 + 1 = 2$ .
  - Now put 2 bottle caps in front of the children and a card of addition sign (+). Now put four more bottle caps and ask:
    - If there are two bottle caps and four more are added, then how many bottle caps would there be altogether?
    - Ask any child to answer and invite him/her to pick the relevant number cards with "+" and "=" sign cards.

- Ask the children to make the equation,  $2 + 4 = 6$ .
- Do a few more equations that add up to 10.

**Student activity:**



- Divide the children into four groups. Do the same activity for the following equations:
  - $6 + 4 =$
  - $9 + 1 =$
  - $8 + 2 =$
  - $7 + 3 =$
  - $5 + 5 =$

Show pages 6 and 7 of the workbook and ask questions about the object displayed. You can draw a few items on the board to make it clearer and allow participation from the class.

**Written work:**

Facilitate the children in completing pages 6 and 7.

**Lesson 2:** Adding up to 10

**Pages:** 8 and 9

**Suggested time:**  
30 minutes

**Objectives:**

- to tell a story sum for the number 10
- to add ten objects



## Resources:

blocks of any two colours; number flashcards; addition and 'equal to' sign cards; Workbook B

## Vocabulary:

add, altogether, together, total

## Motivational activity:

- Ask the children to sit in a circle.
- Put 5 blocks of any one colour in front of the children and ask:
  - How many are these? The children should answer 5.
  - How many more blocks should we add to make 6?

Repeat this activity to add up to 10.

Then write this story sum with the help of number cards, e.g.  $5 + 1 = 6$ .

- Repeat the same activity for following story sums:
  - $5 + 2 = 7$
  - $5 + 3 = 8$
  - $5 + 4 = 9$
  - $5 + 5 = 10$

## Student activity:

The worksheet is divided into four sections:

- Count the spots. Write the totals.** This section shows two columns of dice. The first column has three pairs of dice with 2 and 4 spots, 3 and 4 spots, and 1 and 5 spots. The second column has three pairs of dice with 5 and 2 spots, 1 and 6 spots, and 6 and 1 spots. Each pair has a small square box below it for writing the total.
- Add these.** This section shows four pairs of blocks. The first pair has a tall block of 5 and a short block of 1, with the text "5 add 1 make" and a box. The second pair has a tall block of 5 and a block of 2, with the text "5 add 2 make" and a box. The third pair has a tall block of 5 and a block of 3, with the text "5 add 3 make" and a box. The fourth pair has a tall block of 5 and a block of 4, with the text "5 add 4 make" and a box.
- Draw spots. Make each total equal to 8.** This section shows three pairs of blocks. Each pair has two boxes for drawing spots. The first pair has 2 blocks, the second has 3 blocks, and the third has 4 blocks.
- Draw lines to join the numbers that make 10.** This section shows a collection of numbers in various shapes: 6 (circle), 5 (circle), 4 (circle), 3 (circle), 8 (star), 7 (circle), 1 (circle), 2 (circle), and 4 (circle). A line is drawn connecting the number 6 and the number 4.

- Divide the children into four groups and ask them to repeat the activity as described above.
- Observe the children for doing the activity correctly and help where needed.
- Turn to pages 8 and 9 of the workbook and explain the tasks.

**Written work:**

Ask the children to complete page 8.

**Homework assignment:**

Assign page 9 as homework.

# Unit 3

# Solid shapes

## Introduction

As a daily routine, children see and use objects that are shaped differently. The play with a ball; they eat on a circular plate; they use a rectangular pencil box. Teaching about solid shapes is essential for developing sensory skills.

**Lesson 1:** Solid shapes

**Pages:** 10 and 11

**Suggested time:** 1 hour

## Objectives:

- to learn about solid shapes
- to identify solid shapes from our surroundings

## Resources:

empty carton boxes of different shapes (of cereals, chocolates, cookies, shoes); a cone-shaped birthday cap; a big die; a can; a football or a basketball; Workbook B

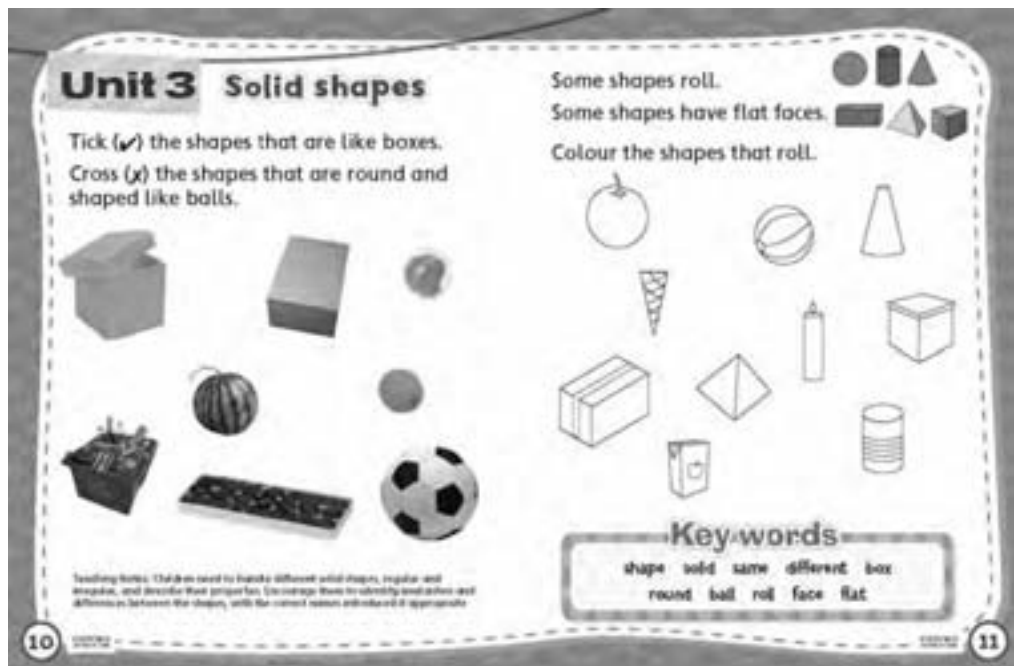
## Vocabulary:

shape, same, different, solid, box, round, ball, roll, face, flat

## Motivational activity:

- Ask the children to sit in a circle.
- Show them the objects from the class resources.
- Discuss each object and its shape.
- Invite a child and blindfold him or her.
- Place an object in his/her hand and ask the following questions:
  - What is the object?
  - What shape does it have?
- Repeat the activity for some more objects.

## Student activity:



- Divide the children into four groups.
- Blindfold one child in each group.
- Hand over a box containing any object to the blindfolded child.
- The other children in the group will give hints so the blindfolded child could identify the shape of the object in the box.
- Keeping the time in mind, try to ensure that each child gets to play the game blindfolded.
- Now turn to pages 10 and 11 of the workbook and explain the tasks.

### Written work:

Ask the children to complete page 10.

### Homework assignment:

Assign page 11 for homework.

**Lesson 2:** Solid shapes

**Pages:** 12 and 13

**Suggested time:** 30 minutes

### Objectives:

- to learn about solid shapes
- to identify solid shapes from our surroundings

### Resources:

empty carton boxes of different shapes of cereals, chocolates, or cookies; a cone-shaped birthday cap; big die; a can; football/basketball; flashcards of different shapes; five big hoola hoop rings; plain sheets of paper of A4 size; Workbook B

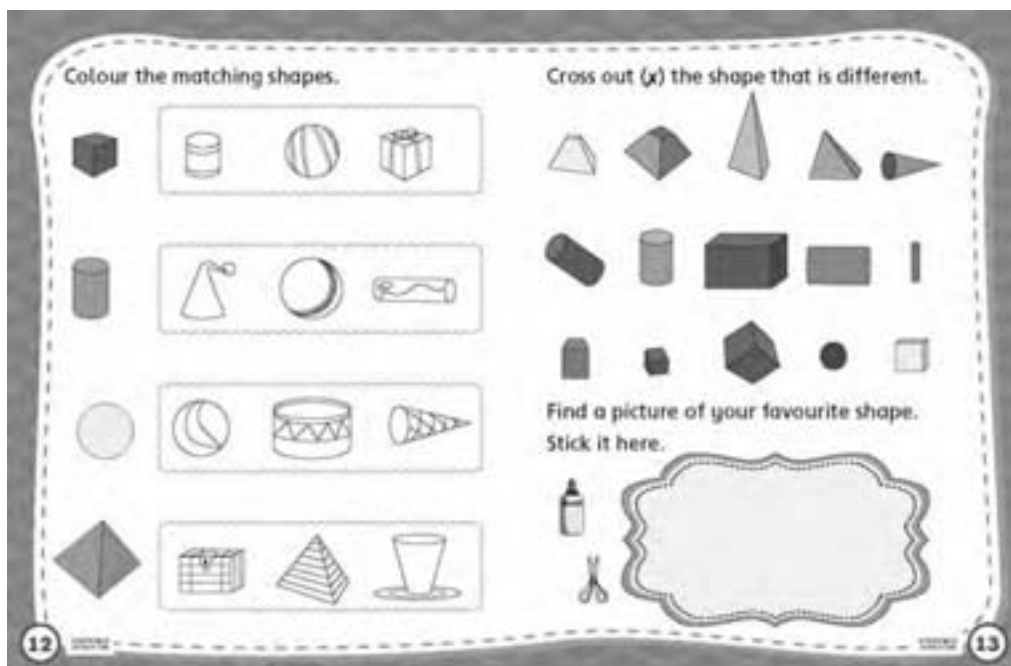
## Vocabulary:

shape, same, different, solid, box, round, ball, roll, face, flat

## Motivational activity:

- Ask the children to sit in a circle.
- Show them different objects and boxes of different shapes.
- Discuss the names of the objects and the shapes of the boxes and ask where they might have seen them.
- Put five Hoola hoop rings on the floor and place each flashcard in a different ring, for example, the circle flashcard in one ring, cone in another, and so on.
- Ask the children to place the objects into the rings according to their shape.

## Student activity:



- Ask the children to make groups of five.
- Give each child in the group a plain sheet of A4 paper.
- Assign each group a shape and ask them to draw it. For example, group A, is given a football and each child draws it on the sheet.
- Now turn to pages 12 and 13 of the workbook. Explain the activities. Reinforce the names of shapes while describing their properties.

## Written work:

The children complete page 12.

## Homework assignment:

Assign page 13 as homework.

# Unit 4

# Taking away

## Introduction

Taking away is the reverse of adding one more. Subtraction is taught best this way. Take away one or more objects at a time from a group. The result will be 'how many are left'.

**Lesson 1:** Taking away

**Pages:** 14 and 15

**Suggested time:** 1 hour

## Objectives:

- to introduce the concept of taking away
- to make children learn that a given number becomes smaller when we take away one, two, or more objects

## Resources:

bottle caps; toys; subtraction equations flashcards; Workbook B

## Vocabulary:

take away, fewer, left

## Motivational activity:

- Ask the children to sit in a circle.
- Tell story sums by using different objects. For example: Shayyan has six caps and he takes away two caps. How many caps are left with him?
- In the same way, make story sums for these equations by using different toys:
  - $5 - 3 = 2$
  - $6 - 4 = 2$
  - $7 - 3 = 4$
  - $8 - 3 = 5$
  - $7 - 5 = 2$
  - $9 - 6 = 3$
  - $10 - 4 = 6$
  - $10 - 1 = 9$
  - $10 - 10 = 0$
  - $10 - 8 = 2$
  - $10 - 5 = 5$
  - $10 - 0 = 0$

## Student activity:

### Unit 4 Taking away

6 take away 2 is 4.

Take away by crossing out. Write how many are left.

5 take away 3 is <input type="text"/>	8 take away 3 is <input type="text"/>
6 take away 4 is <input type="text"/>	7 take away 5 is <input type="text"/>
7 take away 3 is <input type="text"/>	9 take away 6 is <input type="text"/>

Teaching notes: Subtraction as 'taking away' is easier for children to understand if it is handled practically. For each example use counters or cubes if possible to take one number away from a given starting number.

Put counters on the snake.  
Take counters away to answer these:

10 take away 4 is	<input type="text"/>
10 take away 1 is	<input type="text"/>
10 take away 10 is	<input type="text"/>
10 take away 8 is	<input type="text"/>
10 take away 5 is	<input type="text"/>
10 take away 0 is	<input type="text"/>

**Keywords**  
take away left fewer

- Make the children sit in groups of four.
- Give each group, a basket full of toys and equations flashcards.
- Ask each group to make their own story sums.
- Help where needed.
- Turn to pages 14 and 15 of the workbook and explain the tasks to the children on the board.

### Written work:

Ask the children to do page 15 in the class.

### Homework assignment:

Assign page 14 as homework.

**Lesson 2:** Taking away

**Pages:** 16 and 17

**Suggested time:** 1 hour

### Objectives:

- to introduce the concept of taking away
- to make children learn that a given number becomes smaller when we take away one, two, or more objects

**Resources:**

counters; crayons; pencils; rulers; storybooks; number line strips; Workbook B

**Vocabulary:**

take away, fewer, left

**Motivational activity:**

- Ask the children to sit in a circle.
- Tell story sums to the children by using different classroom items. For example: Shanzay has five storybooks. She takes away two storybooks for her friend. How many storybooks does she have now?
- Using similar story sums ask one child at a time to solve the following equations:
  - $6 - 4 = 2$
  - $4 - 3 = 1$
  - $6 - 3 = 3$
  - $7 - 3 = 4$
  - $8 - 3 = 5$
  - $9 - 3 = 6$
  - $7 - 5 = 2$
  - $3 - 3 = 0$
- Make a number line. Invite a student and ask, 'If you have 8 pencils (count 8 on the number line) and I take away six from you (start counting 6 backwards from the number 8 and putting crosses over the numbers), how many pencils are you left with (count the remaining two)?'
- Invite more students and solve the following equations:
  - $8 - 6 = 2$
  - $5 - 2 = 3$
  - $4 - 2 = 2$
  - $3 - 2 = 1$
  - $2 - 2 = 0$



## Student activity:

Draw how many counters are left.  
Write the number.

Using counters, cover 3 fruits each time.  
Write how many are left.

Teaching Note: A number line shows on the first level can be used to count out the numbers to take away.

- Ask the children to sit in groups of four.
- Provide some stationery to each group and flashcards of the above equations without the answer, for example  $6 - 4 = \underline{\quad}$ .
- Ask them to pick flashcards one by one and make their own story sums.
- Explain the task on pages 16 and 17 of the workbook on the board.

### Written work:

Facilitate the children in completing the task on page 16 in their workbooks. Real counters can be used if required.

### Homework assignment:

Assign page 17 for homework.

# Unit 5

# Patterns

## Introduction

Patterns are all around us, be it in the clothes we wear, on leaves, or even vegetables. If one looks around, many patterns become visible—the way objects are displayed in shops, the rainbow, a tiger has stripes, windswept patterns on desert sand, the feathers on a peacock, etc.

**Lesson 1:** Patterns

**Pages:** 18 and 19

**Suggested time:** 1 hour

## Objectives:

- to recognize patterns
- to explore patterns

## Resources:

cloth pieces with different patterns (polka dots, squares, horizontal/vertical lines, waves, flowers, etc.); A4 paper; Workbook B

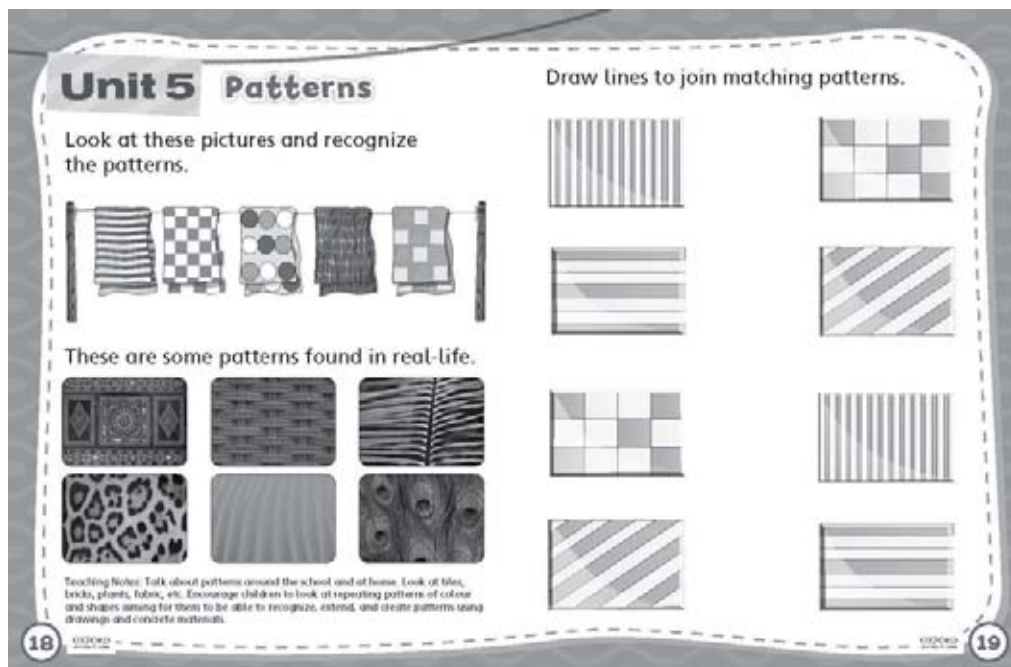
## Vocabulary:

pattern, continue, colour, shape

## Motivational activity:

- Ask the children to sit in a circle.
- Show different patterns on the cloth pieces.
- Discuss the patterns with them, for example:
  - This cloth has a pattern with vertical lines.
  - This cloth has a pattern with horizontal lines.
  - This cloth has a pattern of squares.
  - This cloth has a pattern of circles.
- Pick out a piece and ask a child to look for another piece that matches.
- Encourage more participation in order to cover all the patterns.

## Student activity:



- Ask the children to sit in groups of four.
- Give each child a sheet of A4 paper.
- Ask each child to draw his/her own pattern. They can copy patterns from the cloth pieces.
- Turn to page 18 of the workbook. Discuss the patterns shown in the real-life pictures.

## Written work:

Ask the children to complete page 19.

**Lesson 2:** Patterns

**Pages:** 20 and 21

**Suggested time:** 1 hour

## Objectives:

- to recognize patterns
- to explore patterns

## Resources:

cut-outs of different shapes; coloured paper or counters; happy and sad face cut-outs; Workbook B

## Vocabulary:

pattern, continue, colour, shape

## Motivational activity:

- Ask the children to sit in a circle.
- Make patterns from different objects, for example:
  - from coloured counters or paper make a pattern of red, blue, green
  - from shape cut-outs make a pattern of square, triangle, etc.

## Student activity:

Colour these trains to make patterns.

Copy these patterns.

Continue these patterns.

**Keywords**  
pattern continue colour shape

Teaching Notes: Help the children choose any two or three colours.

20

21

- Ask the children to arrange themselves in three groups.
- Give each group three baskets—one for shapes, another for coloured counters or paper, and another of happy and sad face cut-outs.
- Ask each group to make patterns from the objects.
- Supervise the group work. The groups show their work to each other.
- Explain the tasks on pages 20 and 21.

## Written work:

The children complete page 20.

## Homework assignment:

Assign page 21 for homework.

# Unit 6

# Numbers 11 to 30

## Introduction

Working with numbers beyond 10 will enforce counting and writing number names. 'Teen' and 'ty' numbers are introduced and they will continue with the 'ty' numbers up to 100.

**Lesson 1:** Numbers 11 to 30

**Pages:** 22 and 23

**Suggested time:** 1 hour

## Objectives:

- to review the numbers 1 to 20
- to count objects up to 20
- to learn and write the spelling of numbers in words

## Resources:

numbers and number words flashcards; charts of 'teen' and 'ty' numbers; rubber bands; Workbook B

## Vocabulary:

number, count, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, thirty

## Motivational activity:

- Ask the children to sit in a circle and show the charts of 'teen' and 'ty' numbers.
- Write the numbers on the board (from 13 'teen' to 20 'ty').
- Ask the children to look for the matching number flashcards.
- In this way, introduce 'ty' numbers from twenty to ninety but focus on the twenties up to thirty.

## Student activity:

**Unit 6 Numbers 11 to 30**

Read these numbers.

11 eleven	16 sixteen
12 twelve	17 seventeen
13 thirteen	18 eighteen
14 fourteen	19 nineteen
15 fifteen	20 twenty

Write these numbers.

Count these.  
Write the numbers.

Key words  
eleven twelve thirteen fourteen fifteen  
sixteen seventeen eighteen nineteen twenty

Teaching Note: The 'teen' numbers often cause difficulties because they do not follow the written or spoken pattern of numbers beyond ten. At this stage, the use of a colour of the number line is important from knowing the order of the numbers, making them accessible and enjoyable to read.

- Ask the children to sit in pairs.
- Place number flashcards, number words flashcards, and ice cream sticks.
- Ask each pair to count 10 ice cream sticks.
- Each student counts ice cream sticks up to 10 and ties them with rubber band to make a set of ten.
- Ask each pair to pick up the number 11 flashcard and its number word card.
- The pair then picks one set of ice cream sticks and places another ice cream stick beside it and says, 'one ten and one makes eleven'.
- The pairs repeat the activity till they reach the number 20.
- Turn to page 22 and 23 and explain the tasks.

## Written work:

The children complete pages 22 and 23.

**Lesson 2:** Numbers 11 to 30    **Pages:** 24 and 25    **Suggested time:** 30 minutes

## Objectives:

- to review the numbers 1 to 30
- to count objects up to 30
- to learn and write the spelling of numbers in words by introducing 'teen' and 'ty' numbers

## Resources:

numbers and numbers words flashcards; charts of 'teen' and 'ty' numbers; pencils; rubber bands; Workbook B

## Vocabulary:

number, count, twenty-one, twenty-two, twenty-three, twenty-four, twenty-five, twenty-six, twenty-seven, twenty-eight, twenty-nine, thirty

## Motivational activity:

- Ask the children to sit in a circle and show the charts of 'ty' numbers. Also, write the numbers on the board (from 21 to 30).
- Ask the children to look for the matching number flashcards.

## Student activity:

- Ask the children to sit in pairs.
- Place number flashcards, number words flashcards, and pencils on a table.
- Ask each pair to count 10 pencils and tie them with a rubber band. The pair then picks another 10 pencils and ties them also with a rubber band. Tell them that they now have two tens of pencils or 20 pencils altogether.
- Ask the pairs to now pick up one more pencil and place it beside the 20 pencils, saying, 'twenty-one'.
- The pairs repeat the activity till they reach the number 30.
- Turn to pages 24 and 25 and explain the tasks.

## Written work:

The children complete pages 24 and 25.

## Homework assignment:

Pages 26 and 27 are an extension of the task on page 25. Assign these as homework

**Objectives:**

- to review the numbers 1 to 30

**Resources:**

counters or small pieces of paper; pencil and pencil colours; Workbook B

**Vocabulary:**

grid

**Motivational activity:**

- Draw a grid similar to the one on page 28 on the board.
- Cover one of the numbers with your hand and ask the class what the number might be!
- Similarly, invite a few children and let them repeat the activity.

**Student activity:**

Read these numbers.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30

Cover one number with a piece of paper.  
Can you say which number is covered?

Choose any number from the grid on page 28. Draw that number of fish.  
Colour the fish.

28

29

- Ask the children to now look at page 28 of the workbook and read the numbers.

**Written work:**

- Give the class copies of an empty grid and ask them to write the numbers as on page 28 of the workbook.

**Homework assignment:**

Assign page 29 as homework.



# Unit 7

## Addition and subtraction

### Introduction

Having learned addition up to 10 and taking away, the children can now move on to more addition and subtraction sums.

**Lesson 1:** Addition and subtraction    **Pages:** 30 and 31    **Suggested time:** 1 hour

### Objectives:

- to count and add objects.
- to count and subtract objects

### Resources:

bottle caps; ice-lolly sticks; pebbles, colourful macaroni; blocks; Workbook B

### Vocabulary:

how many, count, altogether, more, take away

### Motivational activity:

- Ask the children to sit in a circle.
- Make up a story sum using available objects. For example, if Usman has three bottle caps and Abdul Rehman has two bottle caps, how many bottle caps do they have altogether?
- Use the following equations to elicit more story sums from the children. Encourage participation from the entire class.
  - $4 + 2 =$
  - $6 + 3 =$
  - $3 + 3 =$
  - $5 + 5 =$
- Make up story sums for subtraction now. For example, if Ayesha has six ice-lolly sticks and she gives away 2 ice-lolly sticks to Fatima, how many ice-lolly sticks is she left with?
- Use the following equations to elicit more story sums from the children. Encourage participation from the entire class.
  - $8 - 3 =$
  - $7 - 4 =$
  - $9 - 3 =$

## Student activity:

**Unit 7 Addition and subtraction**

Add these together.

How many more red bricks are there than blue bricks?

Use these to help you take away.

Cross out the eggs to take them away.

5 take away 2 is  3. 6 take away 1 is

7 take away 3 is  6 take away 4 is

4 take away 3 is

Teaching Notes: Addition and subtraction are often linked, the one being the inverse operation of the other. Activities should encourage children to use objects to help them to solve the problems and to be ready to demonstrate number combinations.

- Divide the children into groups of four.
- Give out flashcards of addition and subtraction equations along with pebbles, colourful macaroni, ice-lolly sticks, and bottle caps.
- Instruct each group to pick one equation flashcard and make up a story sum using the material provided.
- Provide help where needed.
- Turn to pages 30 and 31 of Workbook B and explain what needs to be done.

## Written work:

The children complete the tasks on pages 30 and 31.

**Lesson 2:** Addition and subtraction

**Pages:** 32 and 33

**Suggested time:**  
30 minutes

## Objectives:

- to make patterns
- to count and subtract objects

## Resources:

blue and red counters; handmade card coins; a purse; Workbook B

## Vocabulary:

pattern, altogether

## Motivational activity:

- Ask the children to sit in a circle.
- Make a pattern using the counters. (Refer to Workbook B page 32.)
- Using the purse:
  - State that: 'There are nine coins altogether. If I have 6 coins in my hand, how many coins are there in the purse?'
  - Repeat the same activity for the following equations. Encourage class participation.
  - $9 - 7 =$
  - $9 - 6 =$
  - $9 - 5 =$
  - $9 - 4 =$
  - $9 - 3 =$
  - $9 - 2 =$

## Student activity:

Complete the pattern. Write the numbers.

There are 9 coins altogether.  
How many coins are there in the purse?

- Turn to pages 32 and 33 of the workbook. The children should be able to follow the activities as they have practised them above.

## Written work:

The children complete page 32.

## Homework assignment:

Assign page 33 for homework.

# Unit 8

# Comparison: length and height

## Introduction

Children see people of varying heights, or animals with a short or long tail. This concept is again helpful in developing observation skills.

**Lesson 1:** Comparison: length and height    **Pages:** 34, 35 and 36    **Suggested time:** 1 hour

## Objectives:

- to differentiate between size, length, and height
- to compare objects according to their physical features

## Resources:

bottles of different sizes; rulers of different sizes; Workbook B

## Vocabulary:

long, short, tall, compare, shorter, taller, the tallest, the shortest, the longest

## Motivational activity:

- Ask the children to sit in a circle.
- Show them three bottles and ask:
  - Which bottle is the tallest?
  - Which bottle is the shortest?
- Invite three children to stand in front of the class. Ask the class to point out the tallest and the shortest child.
- Show rulers of different sizes and ask:
  - Which ruler is the longest?
  - Which ruler is the shortest?

**Student activity:**

**Unit 8 Comparison: Length and height**

**Circle the tallest in each group.**

**Colour the shorter tree in each pair.**

34

35

This is a long stick. This is a short stick.

**Circle the long one in each pair. Tick (✓) the shorter one.**

**Draw something longer than this pencil.** **Draw something shorter than this pencil.**

**Keywords**  
long short tall the longest  
the shortest shorter the tallest

**Tick (✓) the longest in each group.**

**Teaching Note:** When comparing the lengths of objects use appropriate vocabulary so that the children become familiar with the language of length. Comparative language and opposite terms (for example, long, tall, and short) are useful as preparations for ordering and then measuring length and height. Explain that tall is used for things standing upright vertically placed. Long is used for things that are horizontally placed.

36

37

Show pages 34 to 37 and ask questions about the objects displayed. You could draw a few items on the board to make it clearer and allow participation by the children. Refer to teaching notes given on page 37.

**Written work:**

The children complete pages 34, 35, and 37 of the Workbook.

**Homework assignment:**

Assign page 36 as homework.

**Lesson 2:** Comparison: length and height **Pages:** 38 and 39

**Suggested time:**  
30 minutes

**Objectives:**

- to measure lengths
- to compare lengths from the shortest to the largest

**Resources:**

gem clips; counters; blocks; Workbook B

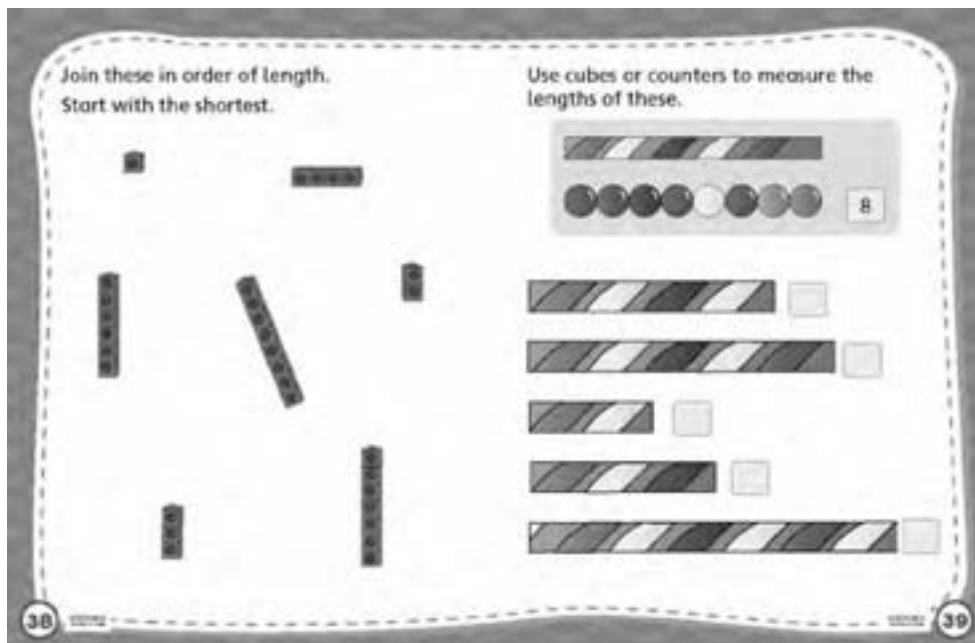
**Vocabulary:**

compare, the shortest, longer, the longest,

**Motivational activity:**

- Ask the children to sit in a circle.
- Place a basket of building blocks in front of them.
- Invite a child to make a tower of three blocks; another child makes a tower of four blocks, and so on.
- Ask which tower is the tallest and which is the shortest.
- Use gem clips or counters to measure the length of a note book or Workbook B.
- When done, count the gem clips or counters and say that the Workbook B is, for example, 12 counters long.

## Student activity:



- Divide the children into groups of four.
- Give each group a box of gem clips or counters and different objects to measure, for example, a pencil, a pencil box, or a ruler, etc.
- Let each group decide whether to use counters or gem clips.
- Ask them to note on a piece of paper the measurement they have made.
- All the groups share their work.
- Explain the tasks on pages 38 and 39.

### Written work:

The children complete pages 38 and 39.

# Unit 9

# Position

## Introduction:

At this age, children learn new words quickly and knowledge of positions such as above, below, first, last, next to, between, after, and before enhances their ability to follow and give directions. The teacher should be aware that a variety of positions may apply to a situation, such as describing the location of a book on a shelf: a book may be, for example, above another toy, on the top shelf, to the left of another object, or on top of another book.

Using words in connection with concrete objects and situations help children develop vocabulary, a process that should extend over the entire year. Modelling situations with emphasis on positions also helps children to learn the meanings of the words.

**Lesson 1:** Position

**Pages:** 40 and 41

**Suggested time:** 1 hour

## Objectives:

- to develop understanding of language used to denote position

## Resources:

different toy animals like a zebra, tiger, camel, sheep, etc.; Workbook B

## Vocabulary:

above, below, first, last, next to, between, after, before, in front of, order

## Motivational activity:

- Ask the children to sit in circle.
- Introduce the toy animals and keep on changing their places, explaining their positions and making statements like:
  - The camel is standing between the tiger and the sheep.
  - The zebra is next to the sheep.
  - The tiger is in front of the camel.
- You can ask questions like:
  - Which animal is first in the line?
  - Which animal is last in the line?
  - Which animal is between the tiger and the zebra?
- Place these animals on a shelf, one above the other, ask:



- Which animal is above the camel?
- Which animal is below the tiger?

### Student activity:

**Unit 9 Position**

Which toy is above the green car?

Which toy is below the green ball?

Which toy is next to the yellow duck?

Count the toys.

Boats	<input type="checkbox"/>	Cars	<input type="checkbox"/>
Drums	<input type="checkbox"/>	Ducks	<input type="checkbox"/>
Trains	<input type="checkbox"/>	Bears	<input type="checkbox"/>
Balls	<input type="checkbox"/>		

Which toy is between the red drum and the blue boat?

**Keywords**  
above below first last  
next to between after  
before order

Teaching Notes: These activities will help to reinforce and develop children's understanding of language used for position. It needs to be supported by practical experiences including manipulating objects and children's own comments.

40 OXFORD UNIVERSITY PRESS 41

- Divide the children into four groups.
- Give the four animals to each group
- Instruct them to change the positions of the animals and ask each other different questions.
- Repeat the activity till all the positions have been taught.
- Open pages 40 and 41 of the Workbook and reinforce the positions while explaining.

### Written work:

The children complete pages 40 and 41.

**Lesson 2:** Position

**Pages:** 42 and 43

**Suggested time:**  
30 minutes

### Objectives:

- to further develop an understanding of positions

### Resources:

number flashcards; different shape cut-outs; Workbook B

### Vocabulary:

above, below, first, last, next to, between, after, before, order

### Motivational activity:

- Ask the children to sit in a circle.
- Place a number flashcard on the floor.
- Invite one child to pick a number that comes before the number.
- Invite another child to pick a number that comes after the number.
- Put different shape cut-outs in a line and ask:
  - ❑ Which shape is between the circle and the square?
  - ❑ Which shape is first?
  - ❑ Which shape is last?
  - ❑ Which shape is next to the rectangle?

### Student activity:

- Ask the children to sit in pairs
- Instruct each pair to repeat the above activity with shapes, asking their partner different questions related to positions.
- Some pairs could do the 'before' and 'after' number flashcard activity.
- Now turn to pages 42 and 43 of the Workbook. Explain the tasks.

### Written work:

The children complete page 42.

### Homework assignment:

Assign page 43 for homework.

# Unit 10 A look back at...

- Unit 10 reviews all the concepts that have been covered in Workbook B.
- To reinforce the concepts, explain each page and help the children to complete the tasks.

## For example:

- On page 44, the topic is time. Draw some clocks on the board and ask a volunteer to draw needles to show different times.
- Explain each page and encourage the children to complete them independently where possible.
- The revision pages can also be used for end-of-term assessments.

**Unit 10 A look back at...**

**Time**  
Write these times.

o'clock  
 o'clock  
 o'clock  
 o'clock  
 o'clock

Write numbers to put these in order.

**Adding up to 10**  
Count these.  
Write the totals.

Rs  and Rs  makes Rs

Rs  and Rs  makes Rs

Rs  and Rs  makes Rs

Rs  and Rs  makes Rs

Rs  and Rs  makes Rs

**Draw spots on each wing of the butterflies.**  
The spots on each butterfly should add up to 9.

Teacher Note: Show the children how to place odd different numbers to make 9.

**Solid shapes**  
Colour to match the shapes.

What do you know about each shape?

Teacher Note: Check the different characteristics of the shapes the children use to colour them.

**Taking away**  
Draw spots and write the numbers.

$\rightarrow$    $\rightarrow$

$\rightarrow$    $\rightarrow$

$\rightarrow$    $\rightarrow$

$\rightarrow$    $\rightarrow$

**Patterns**  
Copy these patterns.

Continue these patterns. Draw 3 more.

**Cross (x) out the coins to help take away.**  
Write how many are left.

6 take away 3 is  7 take away 4 is

8 take away 5 is  9 take away 6 is

**Numbers 11 to 30**  
Write these numbers.

**Count and write the numbers.**

**Draw 16 roindrops.**

**Addition and subtraction**  
Draw spots to make 7.

Use these to help you take away.

6 take away 2 is  6 take away 4 is

8 take away 3 is  8 take away 5 is

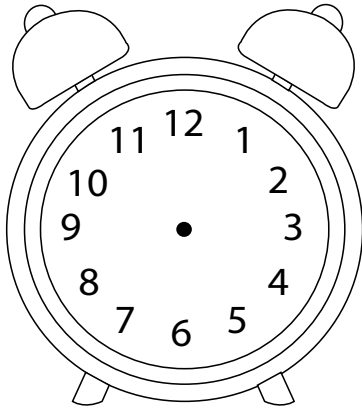
Teacher Note: Show the children how to cross out the spots on the ten frames to help them.

# Worksheet 1

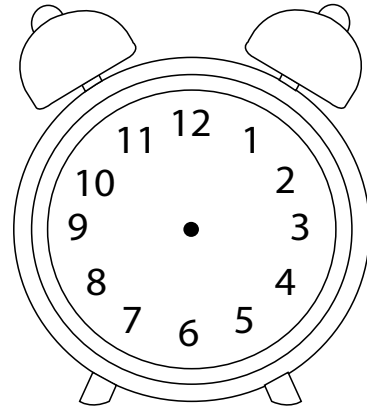
## Time

Draw hands on the clocks to match the times.

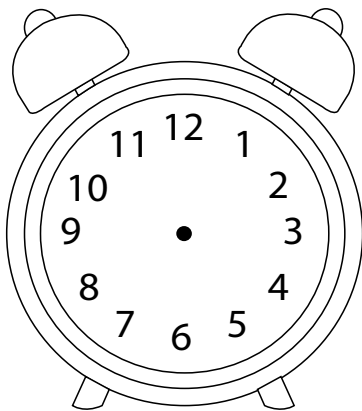
7 o'clock



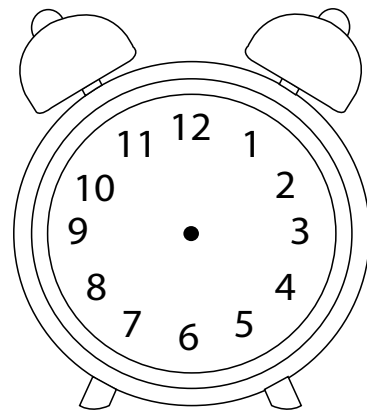
9 o'clock



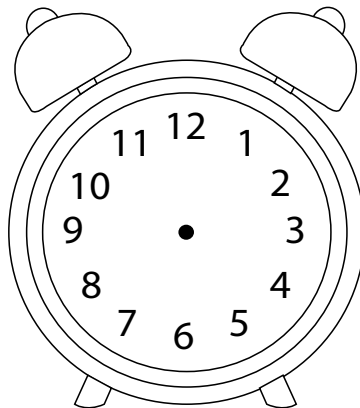
11 o'clock



3 o'clock



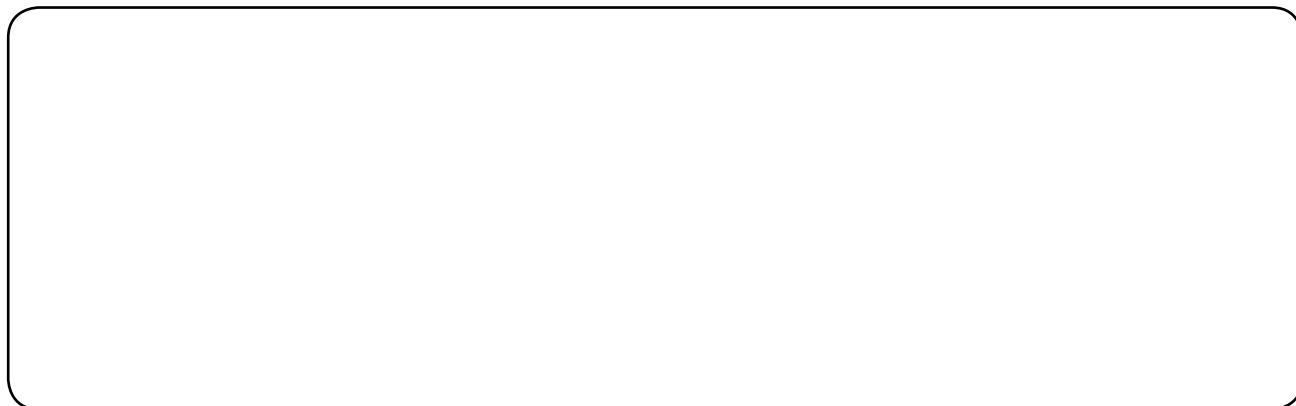
1 o'clock



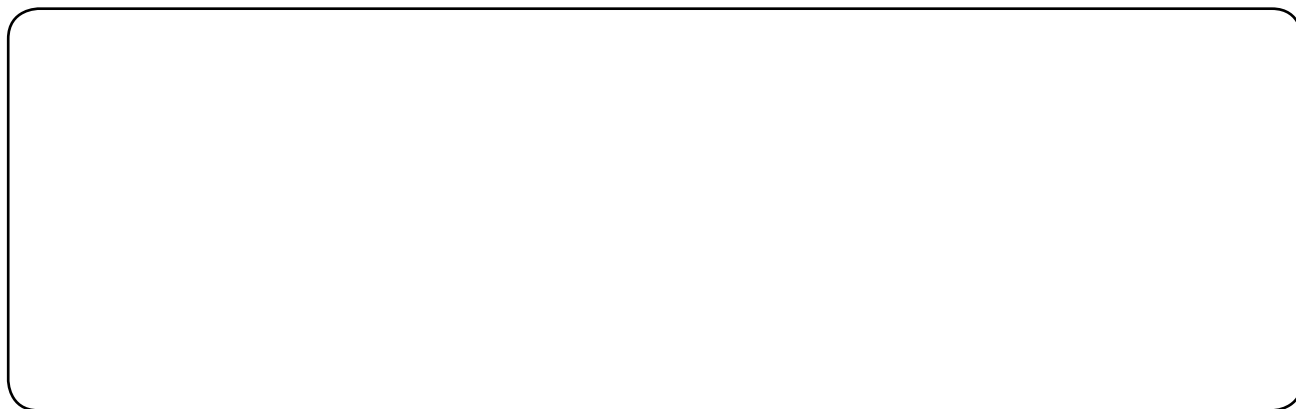
# Worksheet 2

## Shapes

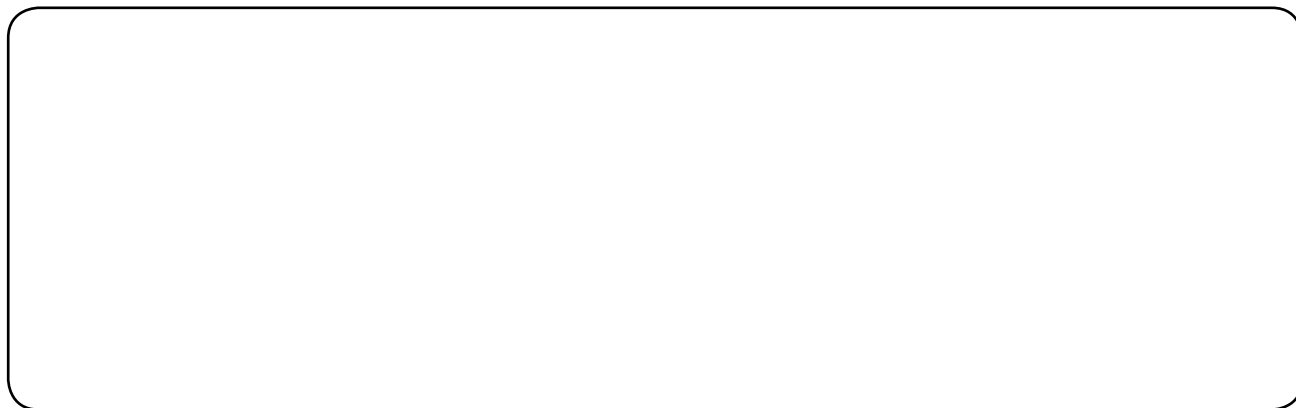
Draw 5 triangles. Colour them red.



Draw 6 squares. Colour them yellow.



Draw 7 circles. Colour them blue.



# Worksheet 3

## Patterns

Make the following patterns.

blue square

red square

blue square

yellow circle

red circle

yellow circle

pink flower

green leaf

pink flower

green leaf

red ball

yellow ball

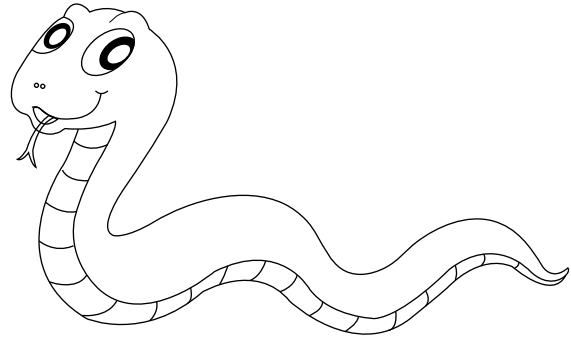
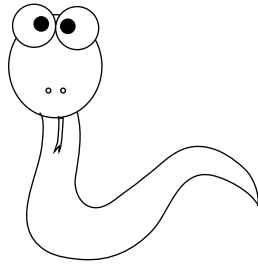
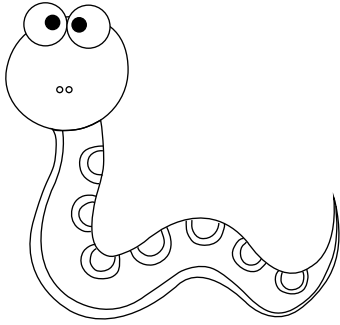
yellow ball

red ball

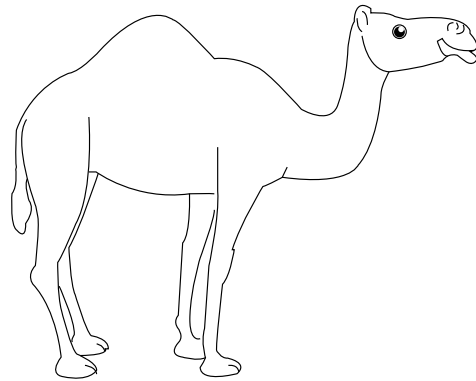
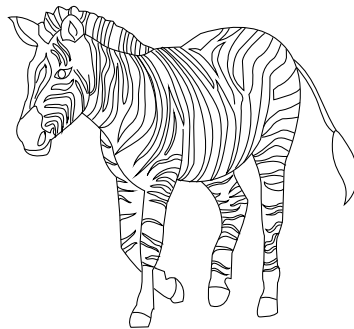
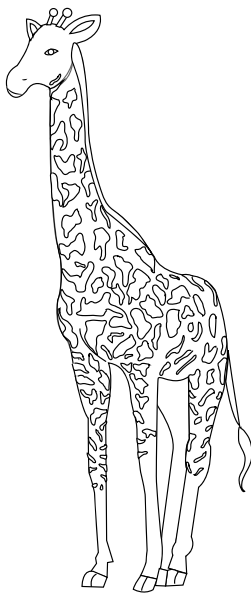
# Worksheet 4

## Comparison: length and height

Colour the longest snake.

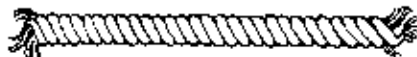
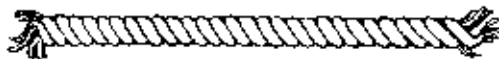


Colour the tallest animal.



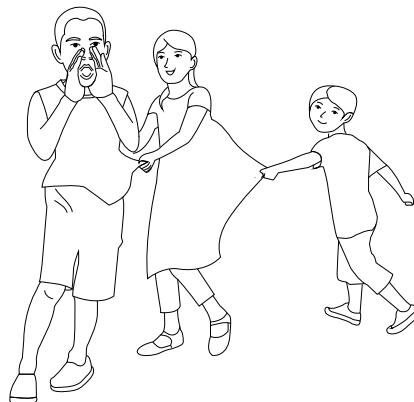
Tick (✓) the longer rope.

Cross (X) the shorter rope.



# Worksheet 5

## Position

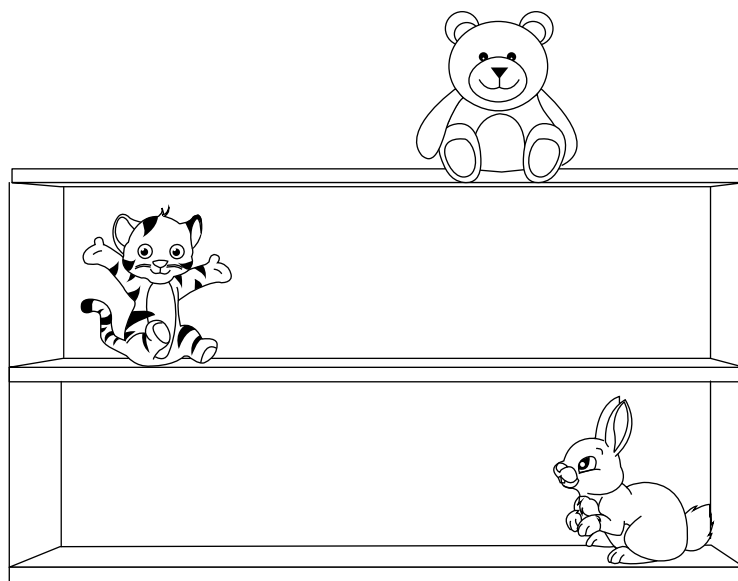


Tick (✓) the right option.

The boy playing the engine is the first/last.

The girl is \_\_\_\_\_ the two boys.

between  next



Which toy is on the top rack? \_\_\_\_\_

Which toy is on the middle rack? \_\_\_\_\_

Which toy is on the bottom rack? \_\_\_\_\_