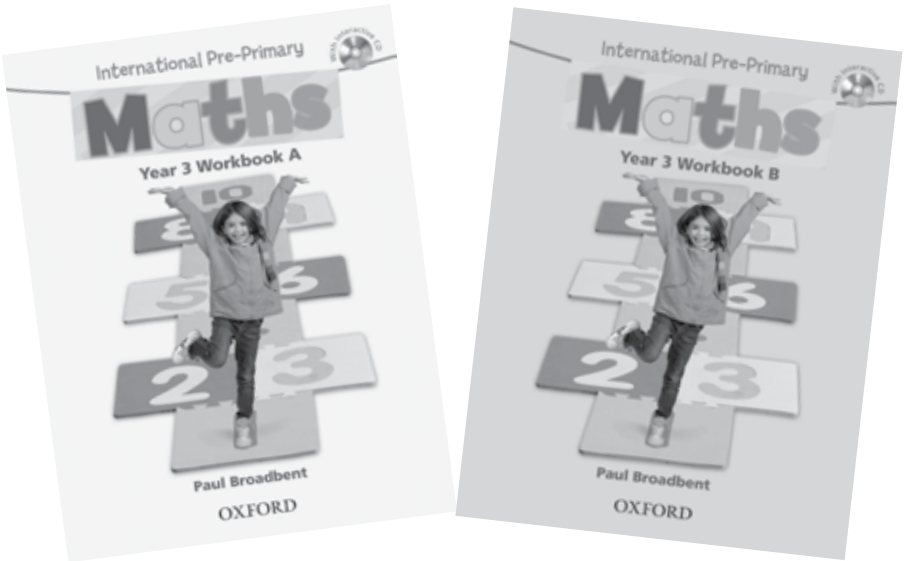
International Pre-Primary

Maths

Teaching Guide

Year 3 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.

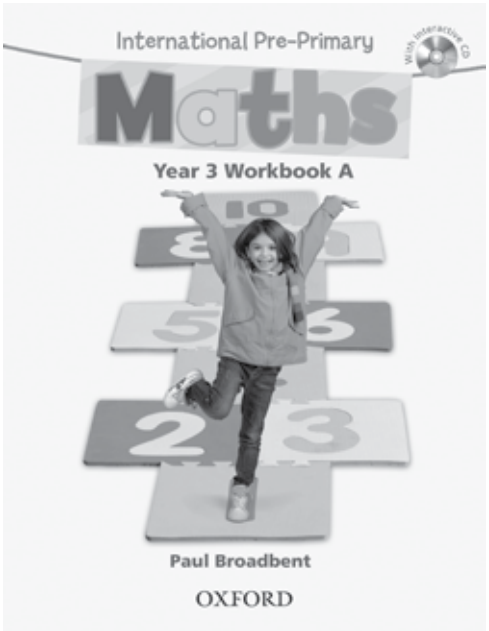
Both class work and home assignments are given so that parents can also gauge the progress made by their child. The Student Learning Objectives page in the workbooks is a check for the progress the child makes.

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 3 Workbook A



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Unit 1 Numbers 1 to 30

Introduction:

This unit reinforces counting, recognizing numbers, and corresponding number names.

Lesson 1: Numbers 1 to 30 **Pages:** 2, 3, 4, and 5 **Suggested time:** 1 hour

Objectives:

- to review numbers written as words from one to thirty
- to recognize numbers written as words
- to match numbers written as figures with corresponding words

Resources:

cards for Bingo; flashcards of number words; pebbles; basic stationery for preparing Bingo; Workbook A

Notes

On a square piece of chart paper, draw five columns and rows. Randomly write numbers 1-30 in words in each space. Make 5 more similar cards but with a different sequence of numbers on each.

Vocabulary:

number, count, order, match, one – thirty

Motivational activity:

- Ask the children to sit in a circle.
- Show flashcards of number words and ask children to read out each number.
- Teach the children to play Bingo.
- Ask them to sit in circles of five.
- Explain that one child will be the caller and call out a number. If you can find that number on your card, place a pebble on that number. The caller then calls out another number and the game continues until one student has completed a row which can be either vertical, horizontal, or diagonal. This person should say, 'Bingo!'
- Select another 5 children and help them to play the same game independently.

Note: More time may be given for this activity as needed.

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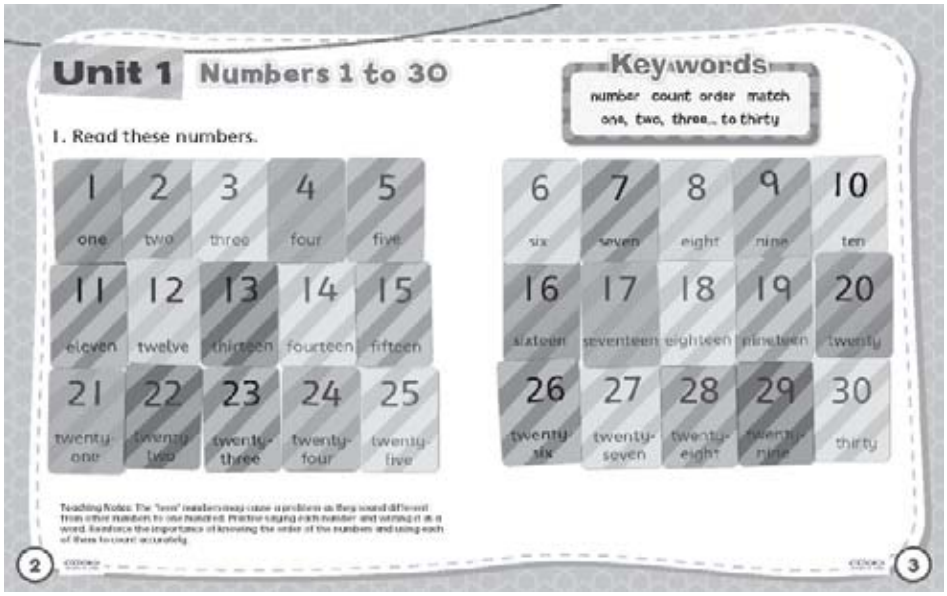
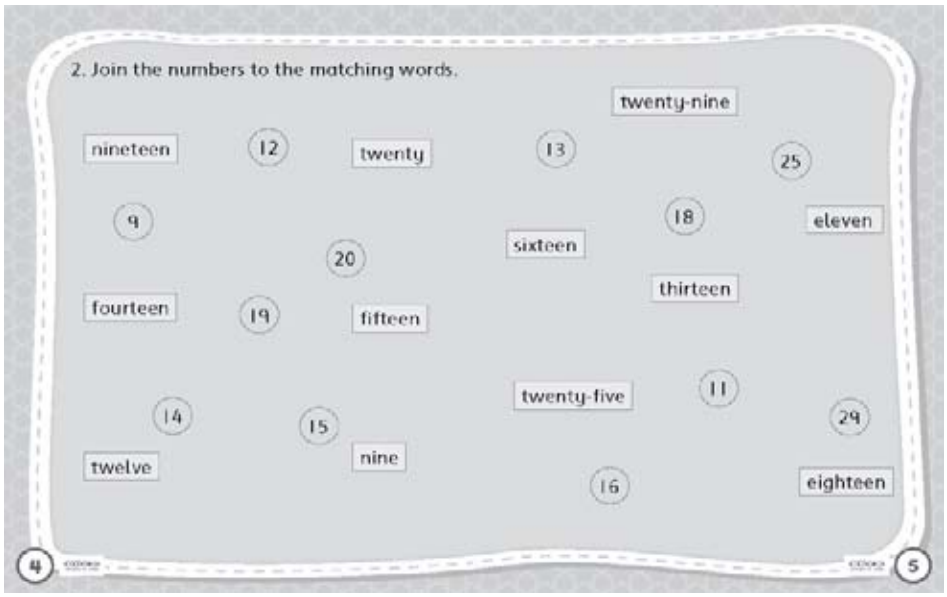
Student activity:





- Ask the children to turn to pages 4 and 5 of Workbook A. Explain the tasks.

Written work:

The children should complete pages 4 and 5.

Lesson 2: Numbers 1 to 30	**Pages:** 6 and 7	**Suggested time:** 30 minutes

Objectives:

- to recognize numbers written as words
- to write numbers as words

Resources:

number flashcards; flashcards of objects to match the numbers; Workbook A

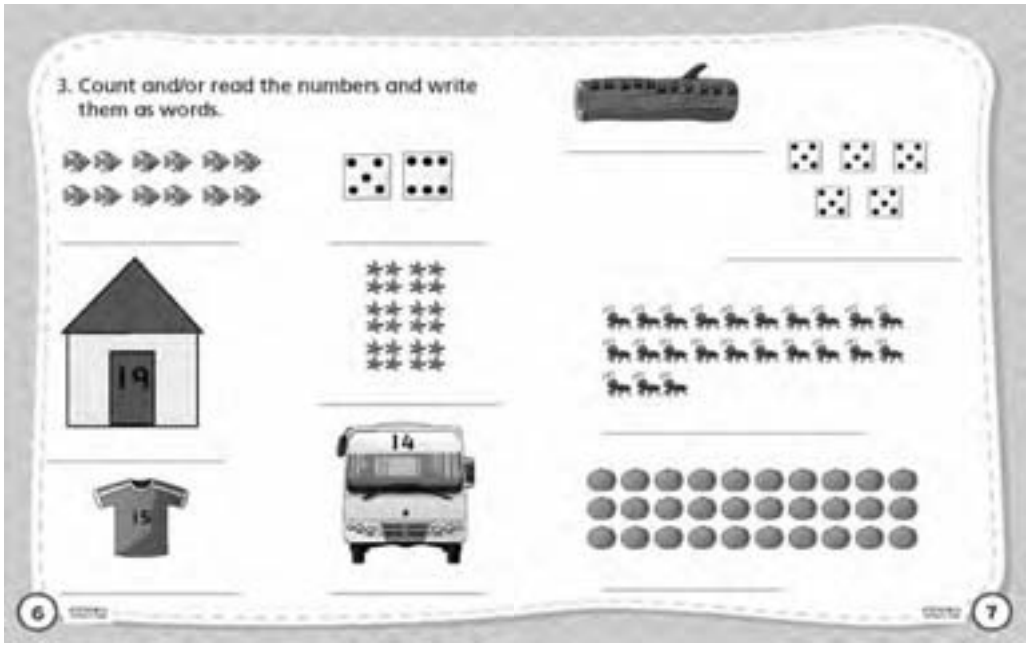
Vocabulary:

number, count, order, match, one, two, three,...thirty

Motivational activity:

- Ask the children to sit in a circle.
- Give them flashcards of number words and different objects.
- Invite a child to select any object flashcard and count the objects on it.
- Another child picks the number card corresponding to the number of objects.
- Display the object card and number flashcard on the board.

Student activity:



- Divide the children into four groups and provide each group with a basket of number flashcards and object cards.
- Ask each group to match the number flashcards with the object cards.
- Help where required.
- Explain the task on pages 6 and 7 of the workbook.

Written work:

The children should complete page 6 in class.

Homework assignment:

Assign page 7 for homework.

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Unit 2 Putting in order

Introduction

Ordering or sequencing is an important concept to learn at this stage. Children will be able to order the days of the week, or numbers in sequence as they appear in real life.

Lesson 1: Putting in order **Page:** 8 **Suggested time:** 1 hour

Objectives:

- to know the names of the days of the week
- to read a calendar
- to say the names of the days of the week in sequence

Resources:

some calendars: Workbook A

Vocabulary:

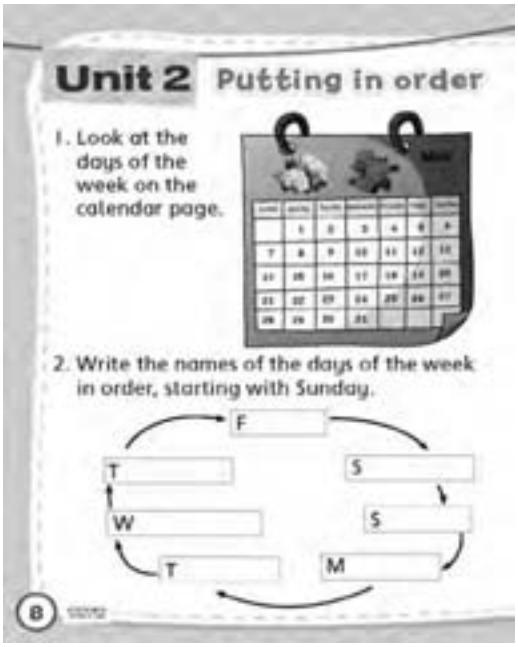
days of the week, order, first, last, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

Motivational activity:

- Ask the children to sit in a circle.
- Show them a calendar month and pointing to the days, elicit or explain that there are seven days in a week. Write the names of the days on the board in sequence.
- Ask questions like:
  - What day is it today?
  - What day was it yesterday?
  - How many days are there in a week?
  - From where can you find out about a day and its date?
- Show the students a calendar month or draw one on the board. Pointing to specific days ask questions like:
  - What is the date on Monday?
  - What is the date on Wednesday?
  - Which is the last day of the week?
  - Which is the first day of the week?

- Invite children to take turns to write the names of the days of the week on the board.

Student activity:



- Ask the children to turn to page 8 of Workbook A. Explain what needs to be done.

Written work:

The children should complete the task on page 8.

Lesson 2: Putting in order	**Pages:** 9,10, and 13	**Suggested time:** 30 minutes

Objectives:

- to identify position
- to order numbers and events

Resources:

pictures of a plant, a tree, and a seed; number cards; Workbook A

Vocabulary:

first, second, third, fourth, order

Motivational activity:

- Ask the children to sit in a circle.
- Show the pictures of the plant, tree, and seed.
- Ask the children to identify the objects in the pictures.

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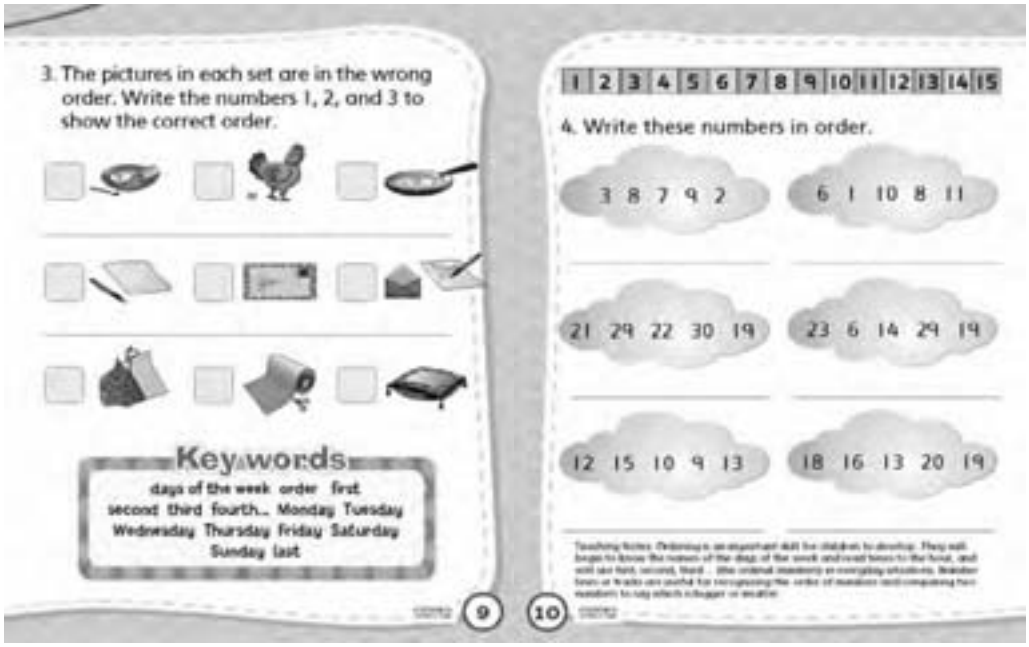
- Invite a child to pick up the picture that shows what stage comes first in the growth of a plant.
- Invite another child to identify which stages take place second and third.
- Next, show the children 5 different number cards and ask them to read the numbers.
- Invite one child to pick the number that comes first.
- Ask another child to pick the number that comes next.
- In the same way, ask 3 more children to pick the cards that come next in turn.
- Repeat this activity with different numbers to teach sequencing numbers.

Student activity:

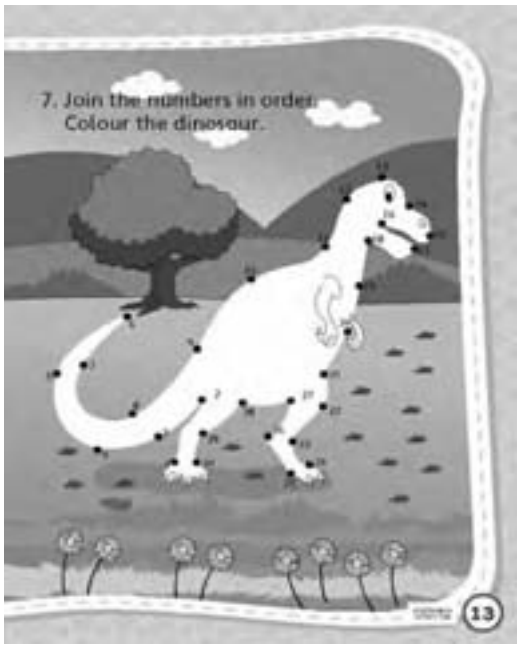


- Divide the children into four groups and provide each group with a basket of pictures showing daily activities and sets of number flashcards.
- Ask each group to arrange the picture cards and number flashcards in order.
- Help where required.
- Turn to pages 9 and 10 of Workbook A. Explain the task.

Written work:

Ask the children to complete pages 9 and 10.

Homework assignment:



Assign page 13 for homework.

Lesson 3: Putting in order	**Pages:** 11 and 12	**Suggested time:** 30 minutes

Objectives:

- to identify position

Resources:

playground area; flashcards with position words first, second, etc.; Workbook A

Vocabulary:

1st, 2nd, 3rd, 4th, 5th, first, second, third, fourth, fifth

Motivational activity:

- Take children into the playground.
- Invite 5 volunteers to stand in a line.
- Instruct them to get ready for a race. Say, 'On your marks. Get set. Go.'
- Note the children's positions as they finish the race.
- Give the card with 1st (or first) to the winning child.
- Do the same for the children who finish second, third, and so on.
- Repeat the race activity so that all the children can participate.

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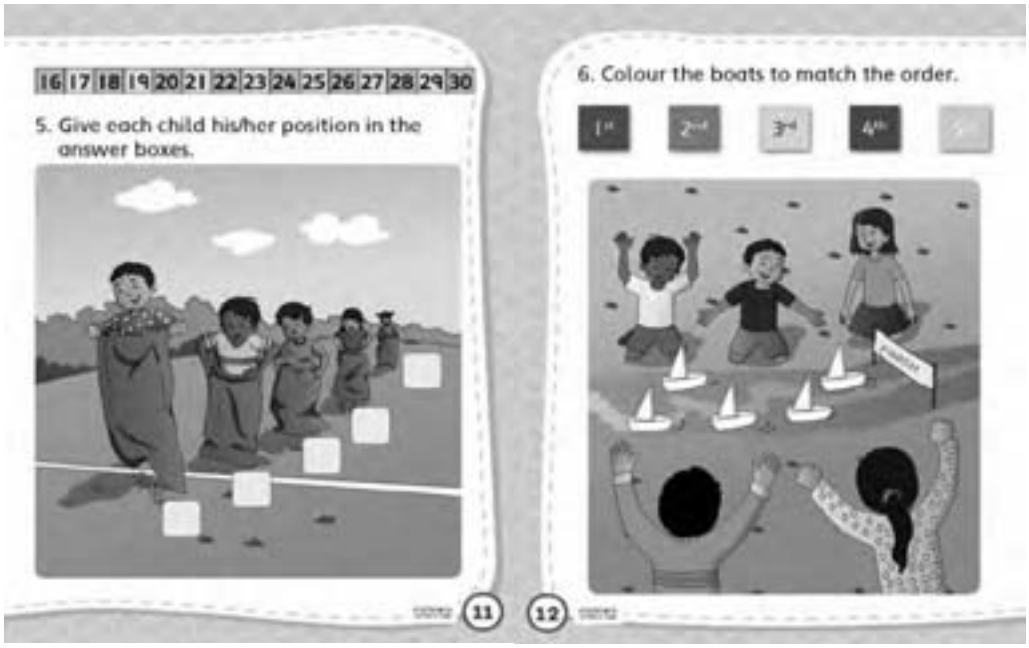
Student activity:



- Bring the children back into the classroom.
- Open to page 11 of Workbook A. Explain the task.

Written work:

The children complete the task on page 11.

Homework assignment:

Assign page 12 for homework.

Unit 3 Addition up to 10

Introduction:

Adding up to 10 is a basic addition skill. If the concept is taught well at this stage, children can easily move on to adding double-digit numbers later.

Lesson 1: Addition up to 10 **Page** 14 **Suggested time:** 1 hour

Objectives:

- to add up to 10 objects
- to solve basic addition equations

Resources:

pictures of flowers; some seeds of any fruit (plum, peach, or apricot); sea shells; number flashcards; flashcards of + sign and = sign; Workbook A

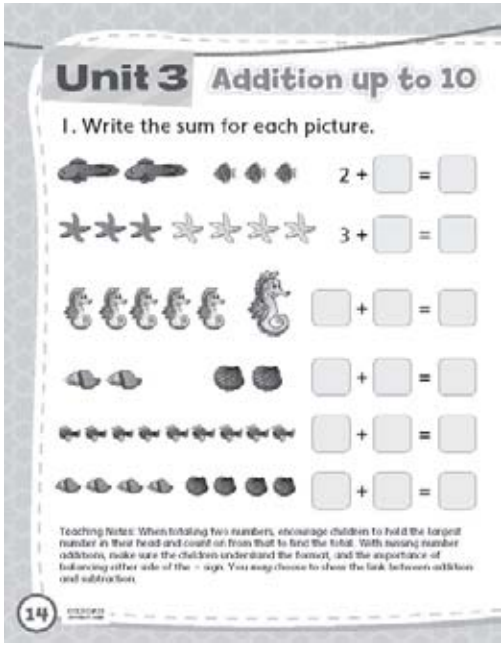
Vocabulary:

add, total, sum, altogether, plus, more, make

Motivational activity:

- Ask the children to sit in a circle.
- Display 3 apricot seeds and ask the children to count them.
- Next, show a set of 5 apricot seeds and ask the children to count these.
- Now ask them to count how many seeds there are altogether.
- Show the flashcards of the + and = signs. Introduce the signs as denoting 'plus' and 'equal to'.
- Demonstrate the use of the signs by putting on the floor any 3 seeds, the plus sign, then the 5 seeds, and lastly the equal to sign. Children can put another 8 seeds after the 'equal to' sign.
- Repeat the activity with sea shells or other objects using another number combination but within 10. Encourage student participation.

Student activity:



- Divide the children into four groups.
- Give each group pictures of flowers and the 'plus' and 'equal to' sign cards and ask them to add groups of flowers. They can start with any sets of flowers they like, but the total should remain within 10.
- Help as required.
- Ask the children to look at page 14, and explain the task in exercise 1.

Written work:

Children should complete page 14.

Lesson 2: Addition up to 10 **Pages** 15,16, and 17 **Suggested time:** 1 hour

Objectives:

- to add up to 10 objects
- to solve basic addition equations

Resources:

sea shells; counters; '=' sign cards; '+' sign cards; number flashcards; Workbook A

Vocabulary:

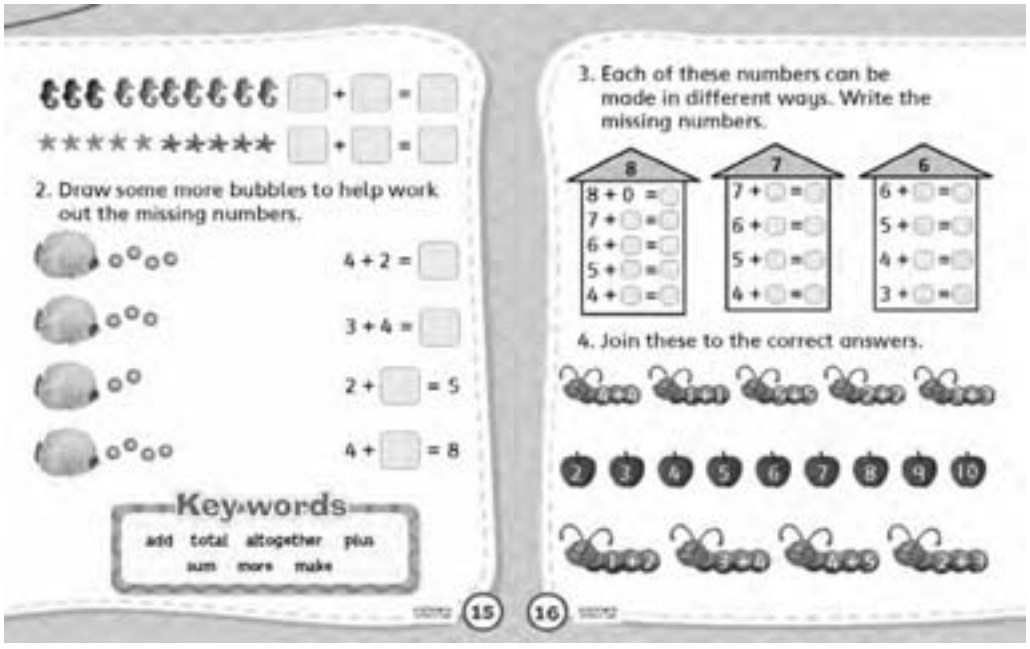
add, total, sum, altogether

Motivational activity:

- Ask the children to sit in a circle.
- Show them the equation cards. Ask them to place the objects accordingly and place the sign cards as in the previous lesson, e.g.
  - 2 + 3 = 5
  - 3 + 4 = 7
- Invite a child to do the same activity.
- Show the children 4 counters and ask them how many more counters need to be added to make 9 counters.
- Start picking up the counters and count from 5 onwards up to 9.
- Place them beside the first four counters. Using the sign cards, form an equation.
- Invite other children to repeat the same activity with different equations.

Note: If required, extend the activities into another session.

Student activity:



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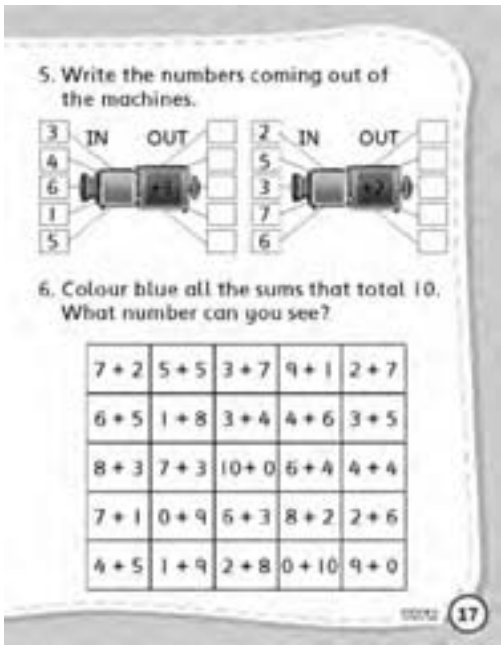

5. Write the numbers coming out of the machines.

IN	OUT
3	
4	
6	
1	
5	

IN	OUT
2	
5	
3	
7	
6	

6. Colour blue all the sums that total 10. What number can you see?

7 + 2	5 + 5	3 + 7	9 + 1	2 + 7
6 + 5	1 + 8	3 + 4	4 + 6	3 + 5
8 + 3	7 + 3	10 + 0	6 + 4	4 + 4
7 + 1	0 + 9	6 + 3	8 + 2	2 + 6
4 + 5	1 + 9	2 + 8	0 + 10	9 + 0

17

- Divide the children into four groups. Give each group a set of number flashcards and counters and ask them to make 8. There are several ways to make 8; so give each group counters to form these equations:
  - 7 + 1 = 8
  - 6 + 2 = 8
  - 4 + 4 = 8
  - 5 + 3 = 8
- Give help where required.
- Turn to pages 15, 16, and 17 of Workbook A. Explain the task.

Written work:

The children should complete the tasks on pages 15 and 16.

Homework assignment:

Assign page 17 for homework.

Unit 4 Subtraction within 10

Introduction:

Like addition (add one more), some basic equations for subtraction are solved best by the concept of taking way. In later classes this will help children to do more complex subtraction involving two-digit numbers.

Lesson 1: Subtraction with in 10 **Pages:** 18 and 19 **Suggested time:** 1 hour

Objectives:

- to subtract numbers up to 10
- to solve basic subtraction equations

Resources:

toys available in class, e.g. cars; counters; flashcards of '–' and '=' signs; equation cards; Workbook A

Vocabulary:

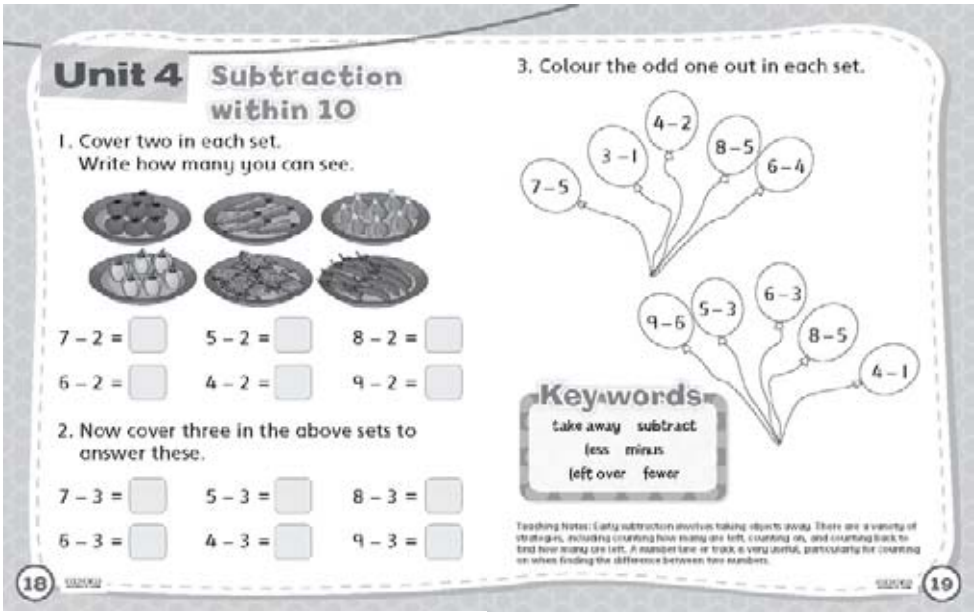
subtract, take away, minus, left over, less, fewer

Motivational activity:

- Ask the children to sit in a circle.
- Show them 3 cars and ask them to count them.
- Elicit that if there are 3 cars and 1 is given to Aliya, there will be two cars left.
- Explain that if an object is taken away from a given set, the operation is called subtraction.
- Repeat the activity using different objects and numbers.
- Show the '–' sign and explain that this sign indicates subtraction or taking away from a given number.
- Repeat this concept 2 or 3 times with different children.

Note: The numbers should be within 9.

Student activity:



Unit 4 Subtraction within 10

1. Cover two in each set.
Write how many you can see.

7 – 2 = ☐ 5 – 2 = ☐ 8 – 2 = ☐
6 – 2 = ☐ 4 – 2 = ☐ 9 – 2 = ☐

2. Now cover three in the above sets to answer these.

7 – 3 = ☐ 5 – 3 = ☐ 8 – 3 = ☐
6 – 3 = ☐ 4 – 3 = ☐ 9 – 3 = ☐

18

3. Colour the odd one out in each set.

4 – 2, 3 – 1, 8 – 5, 7 – 5, 6 – 4
9 – 6, 5 – 3, 6 – 3, 8 – 5, 4 – 1

Keywords
take away subtract
less minus
left over fewer

19

- Ask the children to form pairs.
- Give them subtraction equation flashcards and counters such as shells, large fruit seeds, etc.
- Instruct each pair to pick one equation flashcard and use the counters to solve the subtraction.
- Offer help where needed.
- Turn to page 18 of Workbook A and explain the task.

Written work:

The children should complete the task on page 18.

Homework assignment:

Assign page 19 for homework.

Lesson 2: Subtraction within 10 **Pages:** 20 and 21 **Suggested time:** 30 minutes

Objectives:

- to subtract objects up to 10
- to solve basic subtraction equations
- to introduce subtraction-related vocabulary

Resources:

outdoor cemented area; chalk; laminated number line cut-outs; white board marker; Workbook A

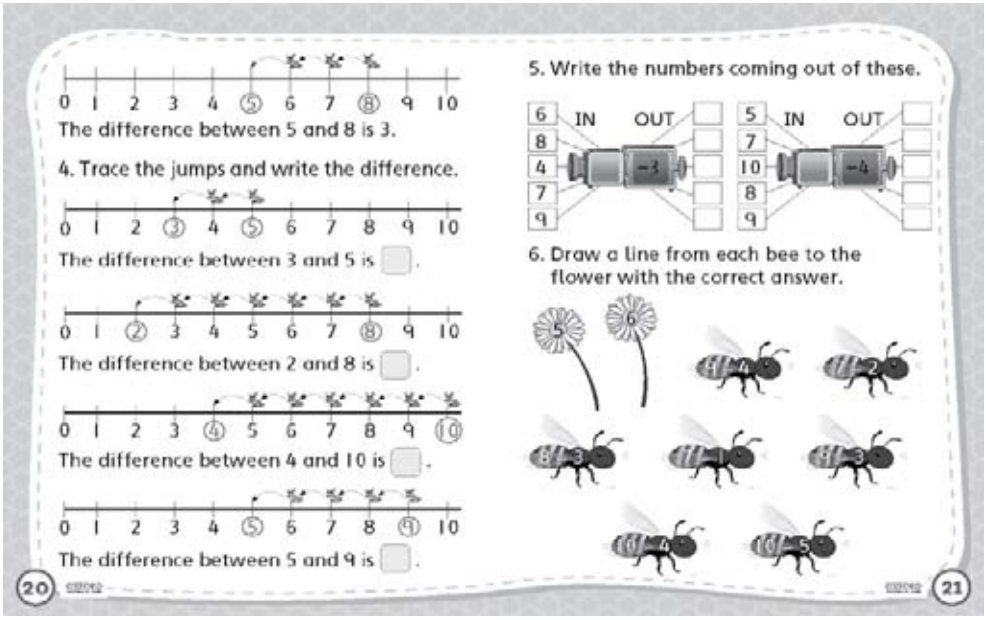
Notes

Cut number lines from thick cardboard and place numbers accurately. Laminate them. These will help in concept delivery and can be used whenever required.

Motivational activity:

- Take the children out of the classroom to an area with a cement floor, if available.
- Draw a large number line for 1 to 10 on the floor with chalk.
- Ask the children to stand near the number line so they can easily see it.
- Stand on number 7 and ask which number it is (7). Jump back to number 5 and ask which number you are now standing on.
- Ask what the difference between 7 and 5 is.
- Ask a child ask to stand on number 9 and then jump to 7.
- Elicit that the difference between 9 and 7 is 2.
- Repeat this activity with four or five children and different numbers.

Student activity



- Ask the children to sit in a circle.
- Select 5 children and give each one a number line cut-out without markings of numbers and a board marker.
  - Give a number between 1 and 10 and ask them to mark it on the number line.
  - Give another number and ask them to mark it as well and give the difference between the two numbers.
- The child who gives the correct answer first wins.
- Repeat this with other children so each child has a chance to play.
- Turn to page 20 of Workbook A. Explain the task.

Written work:

The children should complete the task on page 20.

Homework assignment:

Assign page 21 for homework.

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Unit 5 Counting 1 to 30

Introduction:

Counting will remain a part of pre-primary years' maths lessons. This helps the children learn their numbers well.

Lesson 1: Counting 1 to 30 **Pages:** 22 and 23 **Suggested time:** 1 hour

Objectives:

- to count objects
- to learn different strategies to get a total

Resources:

crayons; pebbles; sea shells; seeds; beads; some empty bowls; small pieces of card; Workbook A

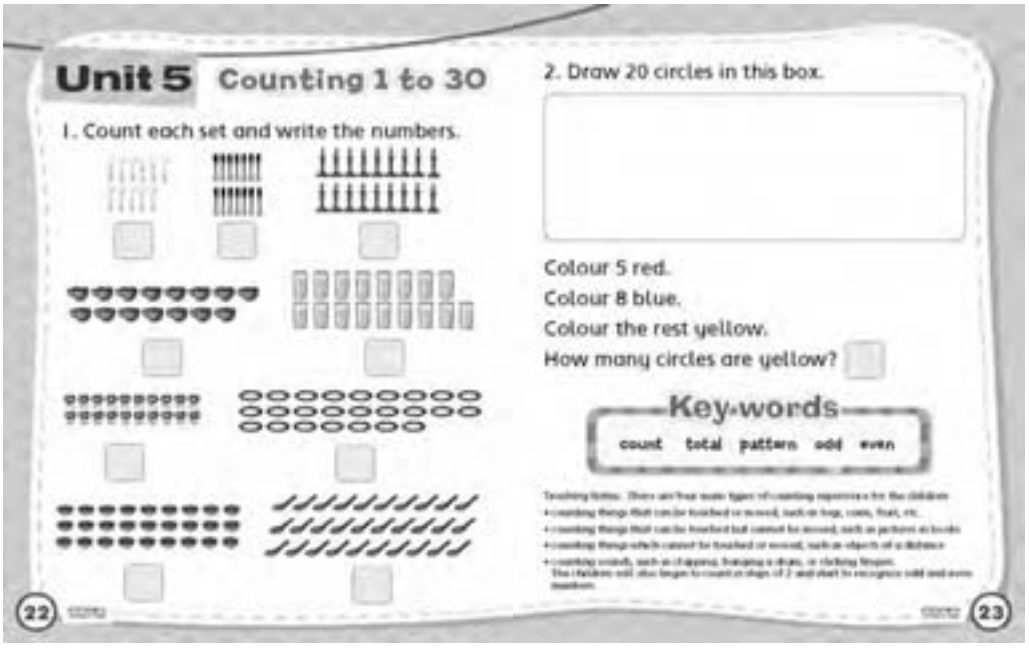
Vocabulary:

count, total

Motivational activity:

- Ask the children to sit in a circle.
- Show them some sea shells and ask them to count.
- Emphasize that the last number shows the total number or quantity.
- Select a child and give him/her a basket of 20 coloured beads, 5 red, 8 green, and the rest, yellow. Ask the child to pick out the 5 red beads and put them in the bowl, then pick out the 8 green beads and put them in the bowl. Now ask him/her to count the yellow beads and share the total.
- Explain that out of 20 beads, 5 were red and 8 were green. Together, this gives a total of 13. If 13 is taken away from 20, the number of yellow beads can be found.
- Repeat this activity 2 to 3 times so the children understand the concept.

Student activity:



- Divide the children into groups of four.
- Give them different materials and ask them to count the objects and write the total number on the cards.
- Turn to pages 22 and 23 of Workbook A. Explain the task.

Written work:

The children should complete pages 22 and 23.

Lesson 2: Counting 1 to 30 **Pages:** 24 and 25 **Suggested time:** 1 hour

Objectives:

- to identify numbers as odd or even
- to manipulate objects to make patterns

Resources:

different counters; a laminated chart of numbers up to 30; a board marker; coloured chalks; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Place 6 counters in front of them and ask them to count them.
- Ask them to make three pairs from the 6 counters.
- Ask if any counters are left.

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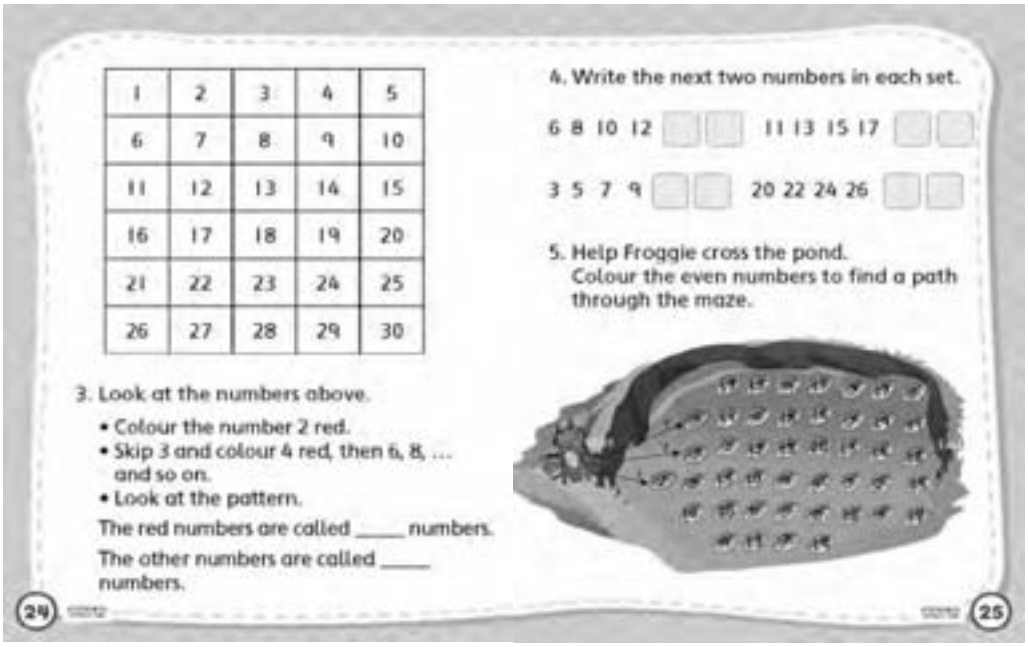
- Explain that when each counter can be paired with another, the original number (6) is even.
- Select a volunteer and repeat this activity with another even number.
- Now put down 7 counters and ask the children to count them.
- Ask them to make pairs from the 7 counters.
- Ask if any counters are left.
- Explain that if there is an unpaired counter, or a counter is left over, then the original number (7) is odd.
- Repeat this activity with another odd number, selecting more volunteers.

Student activity:



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

3. Look at the numbers above.
- Colour the number 2 red.
- Skip 3 and colour 4 red, then 6, 8, ... and so on.
- Look at the pattern.

The red numbers are called _____ numbers.

The other numbers are called _____ numbers.

24

4. Write the next two numbers in each set.

6 8 10 12 ☐ ☐ 11 13 15 17 ☐ ☐

3 5 7 9 ☐ ☐ 20 22 24 26 ☐ ☐

5. Help Froggie cross the pond. Colour the even numbers to find a path through the maze.

25

- Ask the children to make pairs.
- Make a grid on the board as shown on page 24.
- Give each pair a board marker or coloured chalk to colour the squares with the numbers they identify as even.
- When all pairs have marked the grid, elicit that this makes a pattern.
- Odd numbers can be marked in a similar way.
- Turn to pages 24 and 25 of Workbook A and explain each task.

Written work:

The children should complete page 24.

Homework assignment:

Assign page 25 for homework.

Unit 6 Shapes

Introduction:

From the very start, young children see shapes in the form of objects we use in daily life. Feeders which the tiny hands of a baby hold are cylindrical. Pillows are rectangular. A rattle is very often spherical. As babies grow they observe a greater variety of shapes such as a car tyre, a die, the school gong, a football, a shoe box, etc.

Lesson 1: Shapes **Pages:** 26 and 28 **Suggested time:** 1 hour

Objectives:

- to explain the term 2-D
- to identify 2-D shapes

Resources:

different 2-D shapes (oval, circle, square, rectangle, triangle) flashcards; laminated scene drawn using different shapes (6 copies); 6 or 8 sheets of A4 paper; pencils; Workbook A

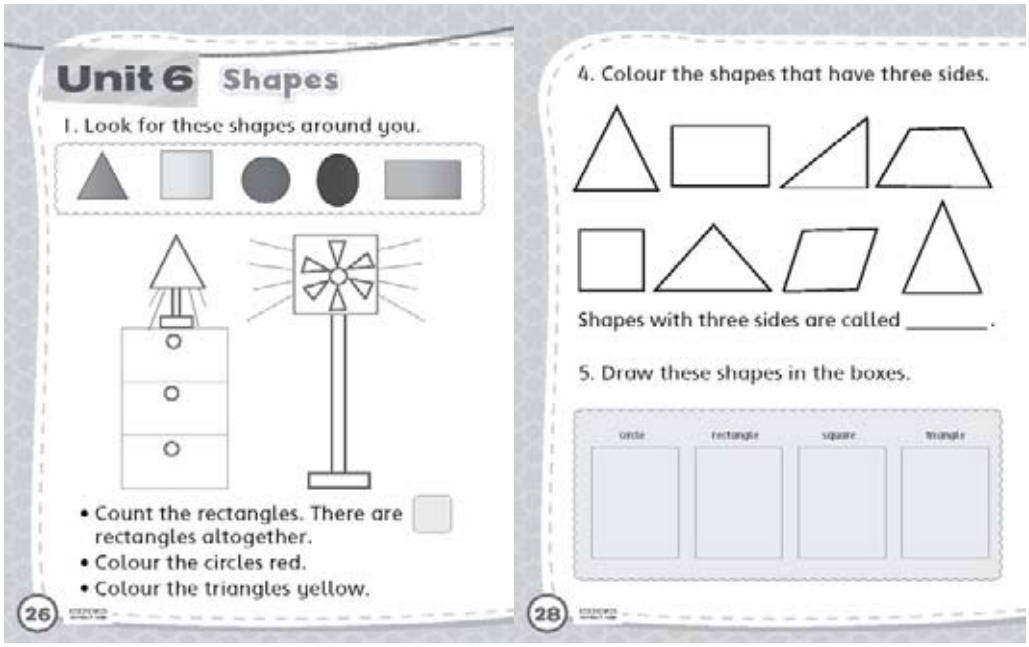
Vocabulary:

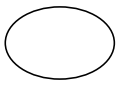
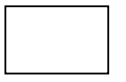
square, triangle, rectangle, circle, oval, side

Motivational activity:

- Ask the children to sit in a circle.
- Show the flashcard of the square and ask which shape it is.
- Point to the sides of the square and elicit that a square has 4 sides.
- Ask the children to count the sides.
- Repeat this activity for the rectangle.
- Show the flashcard of the triangle and ask which shape it is.
- Point to the sides and elicit that a triangle has 3 sides.
- Ask the children to count the sides.
- Show the flashcard of the circle and ask which shape it is.
- Point to the circumference and ask if a circle has any straight sides.
- Repeat the activity with the oval.

Student activity:



- Divide the children into groups of four.
- Give each group a copy of the shapes scene and a sheet of paper and pencil.
- Ask them to count each shape and write the quantity:
  - ❑ = _____
  - ❑ = _____
  - ❑ = _____
  - ❑  = _____
  - ❑  = _____
- The children can make a scene of their own on another A4 sheet.
- Ask the children to share their work with other group members.
- Turn to page 26 of Workbook A and explain the task.

Written work:

The children should complete page 26.

Homework assignment:

Assign page 28 for homework.

Lesson 2: Shapes **Pages:** 27 and 29 **Suggested time:** 30 minutes

Objectives:

- to introduce 3-D shapes
- to identify the characteristics of 3-D shapes

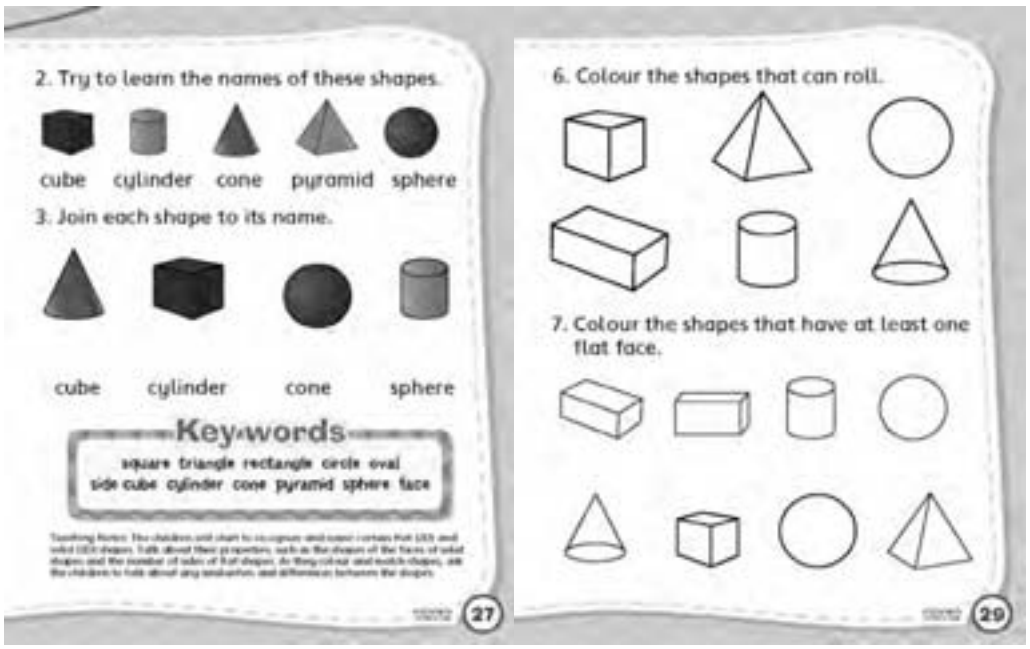
Resources:

some 3-D shapes, e.g. a football, a can of spray, a die, an egg, a prism, a party hat (cone), a shoe box; paper and pencils; flashcards of different 3-D shapes with names; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Show them a sphere (a football) and ask which shape it is.
- Show the flashcard of the sphere.
- Children repeat the name of shape.
- Ask if spheres have any flat surfaces. (No.)
- Ask the children to guess if it will roll.
- Roll the football on the floor to show that it rolls.
- Similarly show them a cylindrical spray can and ask which shape it is.
- Ask if it has any flat surfaces. The teacher should indicate the flat face of the cap.
- Roll the can on the floor to show that it rolls.
- Repeat these questions for the cone, cube, die, shoe box, and the prism.

Student activity:



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- Divide the children into groups.
- Give each pair some 3-D shapes and flashcards and ask them to match each shape with its name and write on a sheet of paper how many flat surfaces it has.
- Ask the children to share their work within their group.
- Observe the activity and help the children if necessary.
- Turn to page 29 of Workbook A and draw the same shapes on the board; invite a child to find at least one flat face on any of the shapes.
- Next, explain the task on this page.

Written work:

The children should complete page 29.

Homework assignment:

Assign page 27 for homework.

Unit 7 Addition and subtraction facts

Introduction:

Addition and subtraction can form some interesting combinations. Children will enjoy adding or subtracting different combinations of numbers.

Lesson 1: Addition and subtraction facts **Page:** 30 **Suggested time:** 1 hour

Objectives:

- to solve basic addition and subtraction operations
- to practise different strategies for adding and subtracting using objects

Resources:

number flashcards; paper; pencil; board; board marker; Workbook A

Vocabulary:

subtract, take away, minus, altogether, difference, sum, total, add

Motivational activity:

- Ask the children to sit in a circle.
- Write an equation on the board and invite a child to solve it, e.g. 4 + 5 =_____.
- Invite another child to solve 5 + 4 = _____.
- Explain that adding 4 + 5 or 5 + 4 gives the same total.
- Next, explain that taking away or subtracting 4 from the total 9 gives 5. Ask what the answer will be if 5 is taken away from 9.
- Explain that these are the addition and subtraction facts of 4, 5, and 9.
- Write another example and invite another child to add, e.g. 3 + 5 = _____.
- Repeat all the steps for some more number facts.

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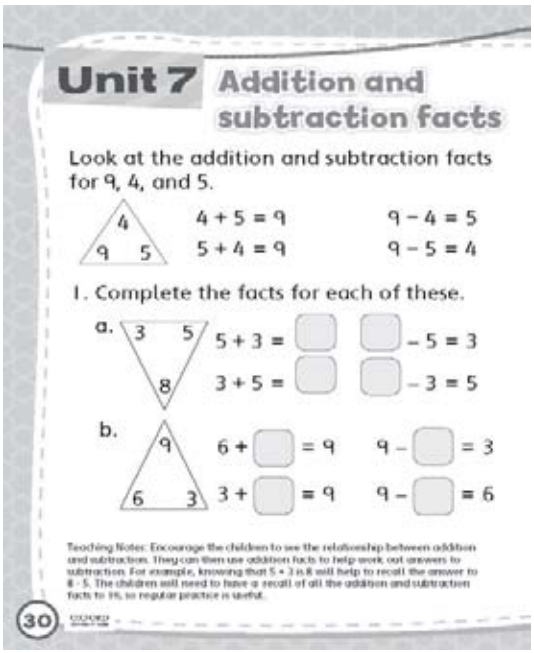
Student activity:

- Ask the children to sit in pairs.
- Give them some paper, pencils and three different number flashcards, and ask them to make a number equation and write it on the sheet of paper.
- Help them do this activity if needed.
- Turn to page 30 of Workbook A and explain the task.

Written work:

The children should complete page 30.



Unit 7 Addition and subtraction facts

Look at the addition and subtraction facts for 9, 4, and 5.

4 + 5 = 9 9 − 4 = 5
5 + 4 = 9 9 − 5 = 4

1. Complete the facts for each of these.

a. 5 + 3 = ☐ ☐ − 5 = 3
3 + 5 = ☐ ☐ − 3 = 5

b. 6 + ☐ = 9 9 − ☐ = 3
3 + ☐ = 9 9 − ☐ = 6

Teaching Notes: Encourage the children to see the relationship between addition and subtraction. They can then use addition facts to help work out answers to subtractions. For example, knowing that 5 + 3 is 8 will help to recall the answer to 8 − 5. The children will need to have a recall of all the addition and subtraction facts to 10, so regular practice is useful.

30

Lesson 2: Addition and subtraction facts **Pages:** 31 and 32 **Suggested time:** 30 minutes

Objectives:

- to solve basic addition and subtraction operations
- to practise different strategies for adding and subtracting using objects

Resources:

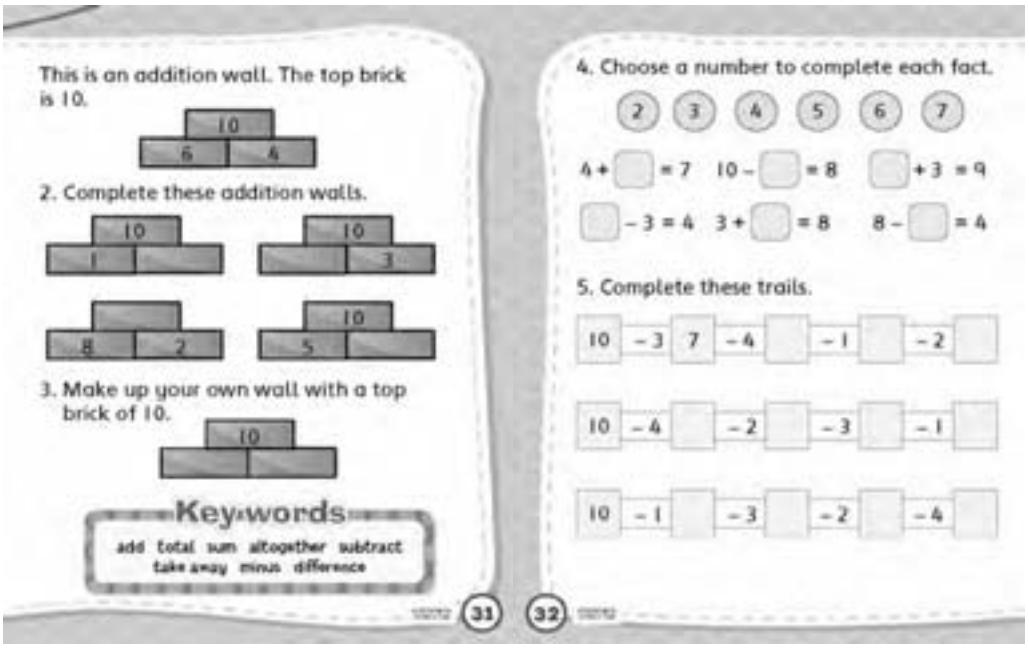
number flashcards; equation cards; small pebbles or counters; paper; pencil; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Show an equation card, e.g. 3 + _____ = 9.
- Explain to the children that if we know one number and the total in an equation, we can find the third number.
- To show this practically, put 3 pebbles on the floor and ask how many more pebbles we need to add to make a total of 9 pebbles.
- Ask one child to start with 3 pebbles and add more as he/she counts on from 4 to 9.
- Count the pebbles added.
- Write that number in the blank.
- Explain that if we add 3 pebbles and 6 pebbles together, the sum will be 9.
- Repeat the same activity for other equations.

- Explain the same activity for subtraction, e.g. 10 − ___ = 8.
- Start with the larger number of pebbles and take away pebbles according to the second given number. The remaining pebbles show the number to be written in the blank.
- Repeat this activity with 4 or 5 children.

Student activity:



- Ask the children to sit in small groups.
- Give them pebbles and equation cards to solve.
- Turn to page 32 of Workbook A and explain the task.

Written work:

The children should complete page 32.

Homework assignment:

Assign page 31 for homework.

Lesson 3: Addition and subtraction facts **Page:** 33 **Suggested time:** 30 minutes

Objectives:

- to solve basic addition and subtraction operations
- to practise different strategies for adding and subtracting using objects

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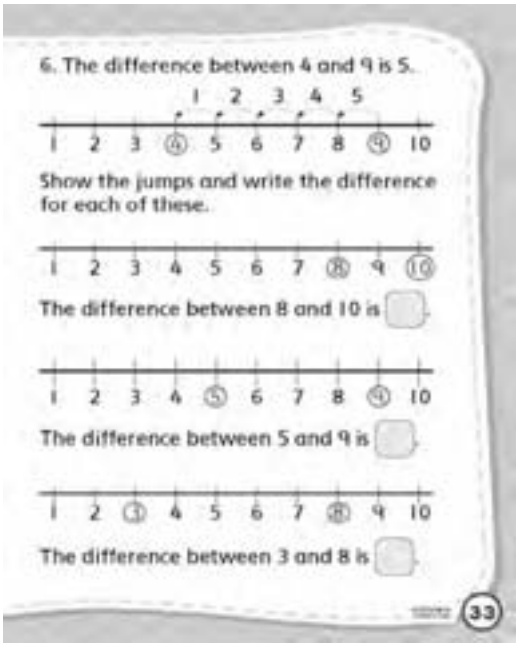
Resources:

1 to 10 number lines on A4 sheets; white board and marker; cut-out of a girl or a boy; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Draw a number line on the board. Mark the numbers 1 to 10.
- Put the cut-out of the number 9 and explain that the girl Sara is on 9. She jumps to number 5. How many steps are there between 5 and 9?
- Make a backward path from 9 to 5. Count the steps and elicit that there are 4. Explain that the difference between 5 and 9 is 4.
- Repeat this activity with 4 to 5 children using different numbers.

Student activity:



- Ask the children to sit in small groups.
- Give number line sheets and pebbles to each group.
- Call out a number and ask the groups to place a pebble on that number.
- Now call out a smaller number. Ask one member of the group to move the pebble to that number.
- Ask them to count how many steps the pebble was moved.
- Turn to page 33 of Workbook A and explain the task.

Written work:

The children should complete page 33.

Unit 8 Numbers 1 to 50

Introduction:

This unit deals with numbers 1 to 50. Many number concepts are covered for these numbers: ascending and descending numbers, odd and even numbers, number sequencing, and matching numbers and their names.

Lesson 1: Numbers 1 to 50 **Pages:** 35 and 38 **Suggested time:** 1 hour

Objectives:

- to review numbers from 1 to 50
- to arrange numbers in ascending and descending order
- to add numbers within 50

Resources:

number flashcards; number chart from 1 to 50; board; board marker; Workbook A

Vocabulary:

digit, place value, tens, ones, odd, even, order

Motivational activity:

- Ask the children to sit in a circle.
- Place the number chart on the board.
- Point to any number and ask which number it is.
- Repeat this for 3 to 5 numbers.
- Next, write 37 on the board and ask what number it is.
- Explain that 3 tens and 7 ones make 37.
- Write 28 and ask the children to say how many tens and ones it represents.
- Repeat for some other numbers.
- Show some flashcards and ask which number comes first, and next (for example, show 24, 30, 15, and 49).
- Explain that when numbers are arranged from smallest to biggest, we call this 'ascending order'.
- Repeat with different sets of numbers.
- Picking a set of numbers, repeat to teach descending order.
- Explain that when numbers are arranged from biggest to smallest, it is called 'descending order'.

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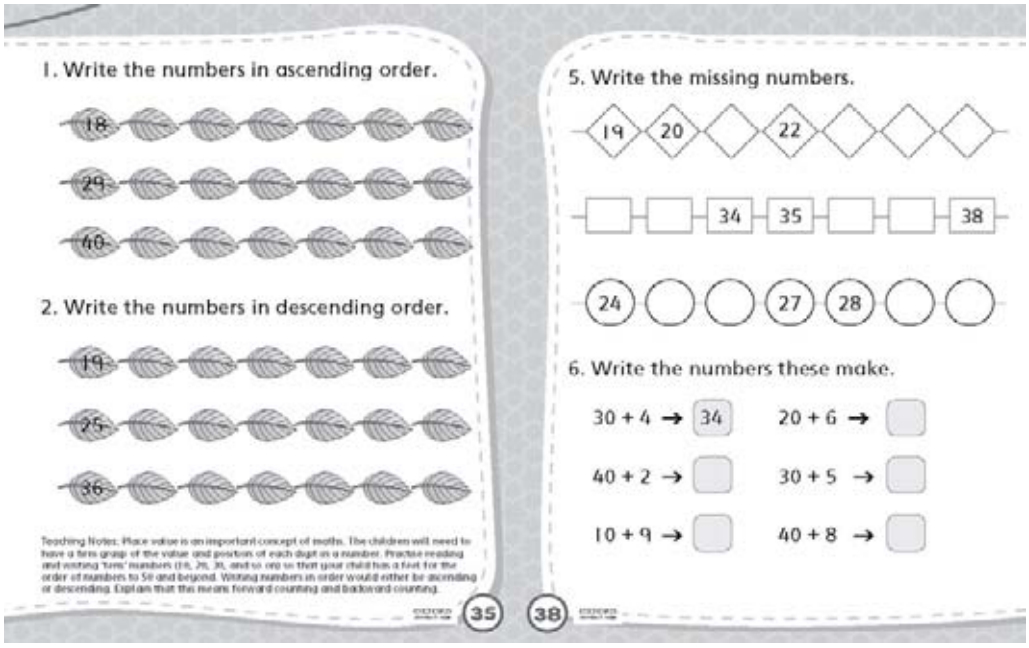
Student activity:



- Take the children outside the classroom.
- Give each child a number card.
- Select 5 children with their numbers.
- Ask them to arrange themselves in ascending order according to their numbers.
- Select another 5 children and repeat the activity.
- Repeat this so that every child gets a chance.
- Provide help where needed.
- Turn to pages 35 and 38 of Workbook A and explain the tasks.

Written work:

The children should complete page 35.

Homework assignment:

Assign page 38 for homework.

Exercise 6 is an addition task for numbers within 50.

Lesson 2: Numbers 1 to 50 **Pages:** 36 and 39 **Suggested time:** 30 minutes

Objectives:

- to teach number names
- to match written numbers with figures

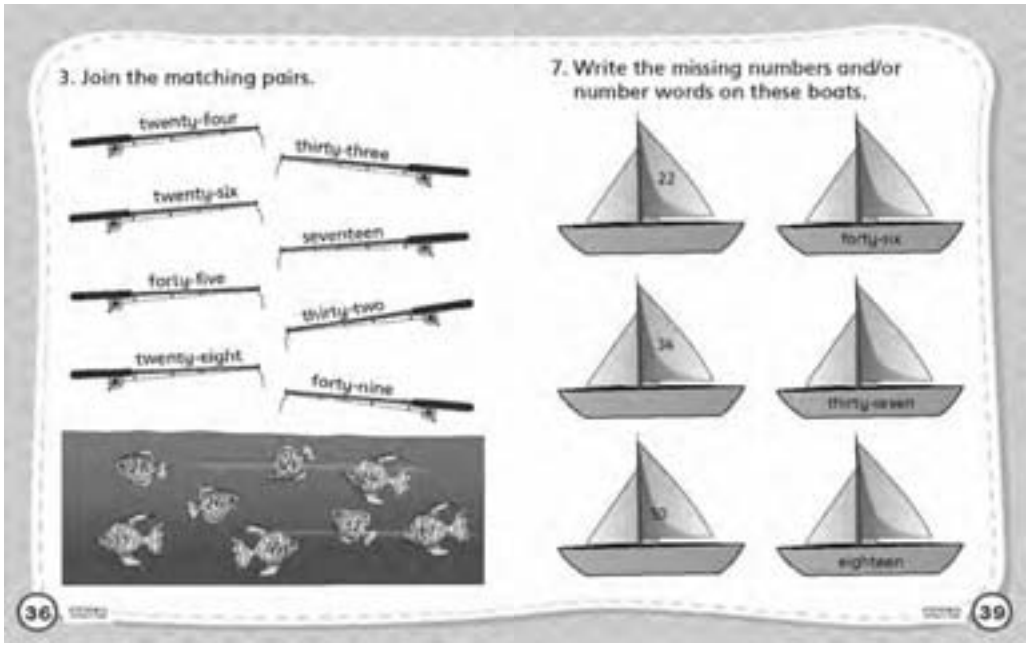
Resources:

number and number names flashcards; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Write random numbers and their number names on the board and ask the children to read them out.
- Place a mix of numbers and numbers names in front of the children.
- Ask the children to pick one card each.
- If a child has the number 15 and another has fifteen, the two should sit side by side in a pair.
- Repeat until all the children and numbers have been paired.

Student activity:



- Turn to pages 36 and 39 of Workbook A. Explain the task.

Written work:

The children should complete page 36.

Homework assignment:

Assign page 39 for homework.

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Lesson 3: Numbers 1 to 50 **Pages:** 37 **Suggested time:** 40 minutes

Objectives:

- to identify odd and even numbers

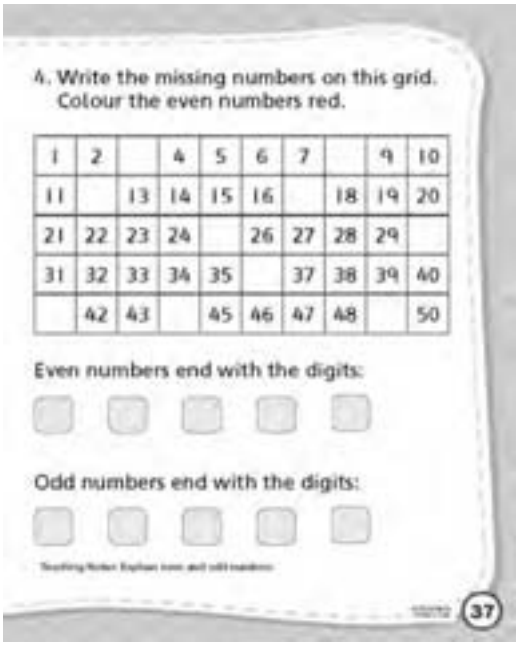
Resources:

flashcards for numbers; red and blue board markers; Workbook A

Motivational activity:

- Draw a chart on the board similar to the one on page 37. Ask the children to call out the missing numbers.
- Now mark the even numbers with a red board marker.
- Mark the odd numbers with a blue marker.
- Explain that numbers ending with 2, 4, 6, 8, and 0 are called even numbers and numbers ending with 1, 3, 5, 7, and 9 are called odd numbers.

Student activity:



4. Write the missing numbers on this grid. Colour the even numbers red.

1	2		4	5	6	7		9	10
11		13	14	15	16		18	19	20
21	22	23	24		26	27	28	29	
31	32	33	34	35		37	38	39	40
	42	43		45	46	47	48		50

Even numbers end with the digits:

Odd numbers end with the digits:

37

- Turn to page 37 of Workbook A. Explain the task.

Written work:

The children should complete page 37.

Homework assignment:

Assign Worksheet 4 for homework.

Unit 9 Time: half–past

Introduction

Having learned time as hour, the children should now know the term, 'half-past'

Lesson 1: Time: half-past **Pages:** 41, 42, and 45 **Suggested time:** 1 hour

Objectives:

- to introduce the hands of the clock
- to tell time for the hour and half-past the hour

Resources:

a clock; a watch; a clock made out of a circular disc with marked numbers and moveable hands; flashcards of clocks with hands and some without hands but with hour and half past times written on them; paper; pencils

Vocabulary:

clock, watch, time, hour, minute, o'clock, half-past

Motivational activity:

- Ask the children to sit in a circle.
- Show them a clock and ask what it is used for.
- Similarly, show a wristwatch.
- Elicit or explain the difference between a clock and a wristwatch.
- Introduce the hands of the clock. Explain that the long hand shows the minutes and the short hand shows the hour.
- Explaing that the long hand is the minute hand, and that when it points to 12 and the short hand is at 6, the time is 6 o'clock.
- Setup the clock to show 9 o'clock.
- Repeat this activity for more hour times.
- Now, set the minute hand at 6 and the short hand exactly between 5 and 6. Explain that this shows half-past 5.
- Repeat this activity for more half-past times.

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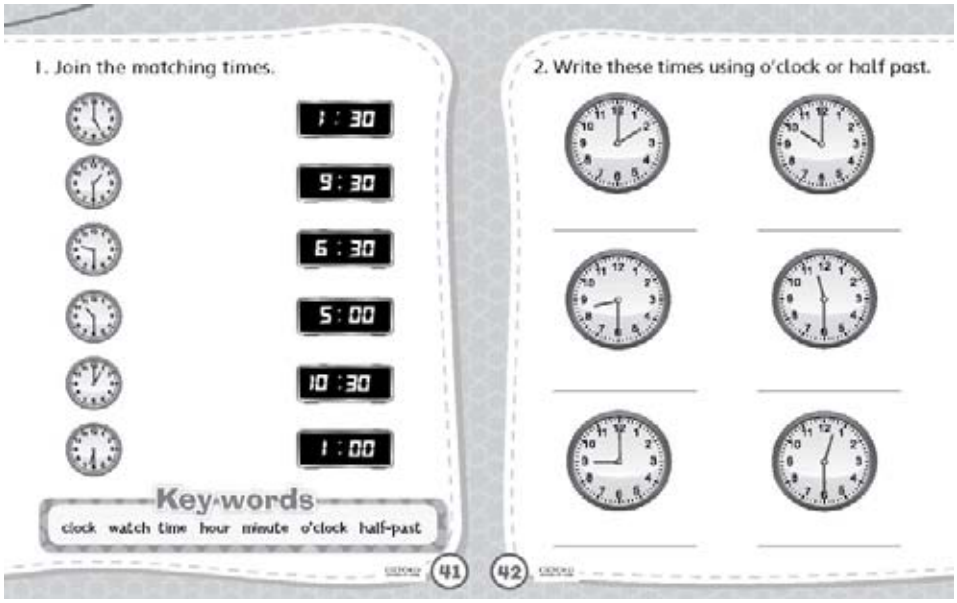
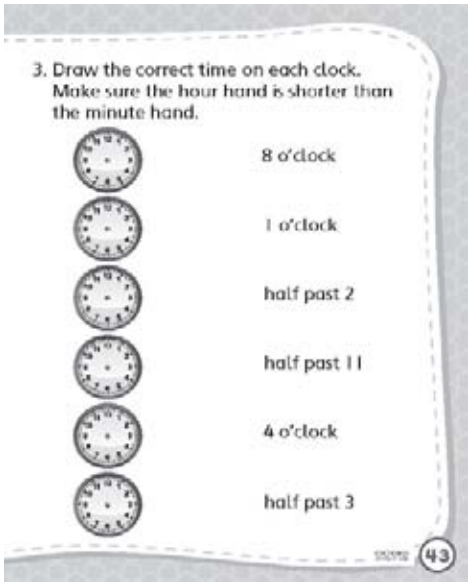
Student activity:





- Divide the children into groups of four.
- Give each group flashcards of a clock and ask the children to look at the card and tell the time. On the clocks without hands, they should draw the hands to show the time written under the clock.
- Provide help where needed.
- Turn to pages 41 and 42 of Workbook A. Explain the task.

Written work:

The children should complete pages 41 and 42.

Homework assignment:

Assign page 43 for homework.

Lesson 2: Time: half-past **Pages:** 44 and 45 **Suggested time:** 30 minutes

Objectives:

- to review time for the hour and half-past an hour
- to relate daily activities to clock times

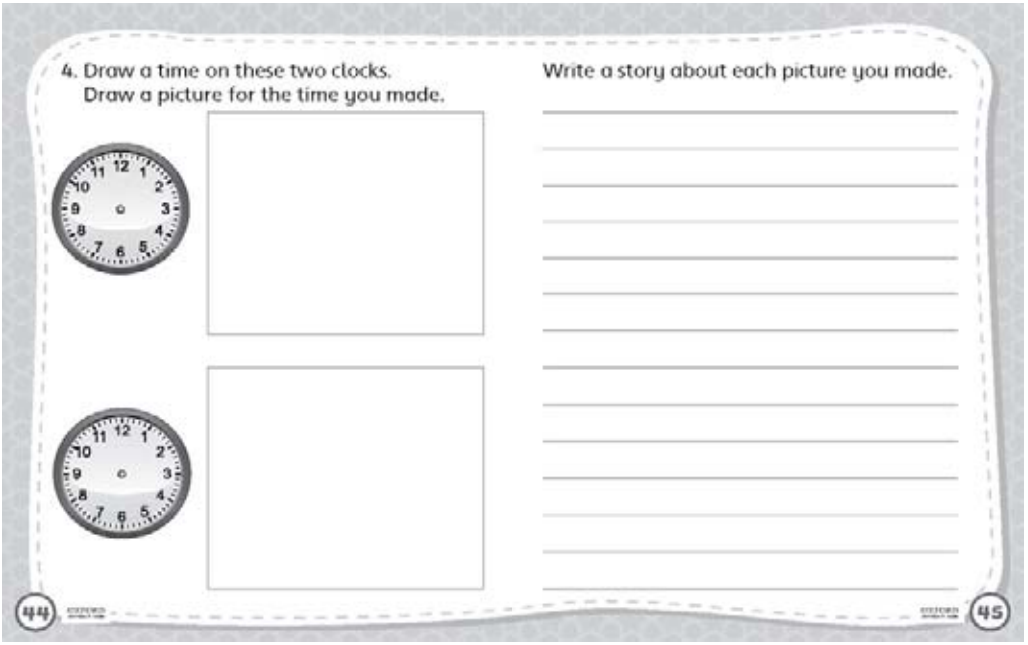
Resources:

a clock made out of a circular disc with marked numbers and moveable hands; board marker; Workbook A

Motivational activity:

- Ask the children to sit in a circle.
- Move the clock hands to 6 o'clock and say that you wake up 6 o'clock.
- Move the hands to show 7.30 and say that you go to school at 7.30.
- Ask a child to move the hands to a time at which he/she does a particular activity, for example, have dinner.
- Repeat this with 3 to 5 children.

Student activity:



- Turn to page 44 of Workbook A. Explain the task.

Written work:

The children complete page 44. Help the children draw the pictures.

Homework assignment:

Assign page 45 for homework. Explain that they have to share the activity for the picture they have made on page 44. Show them what they can write.

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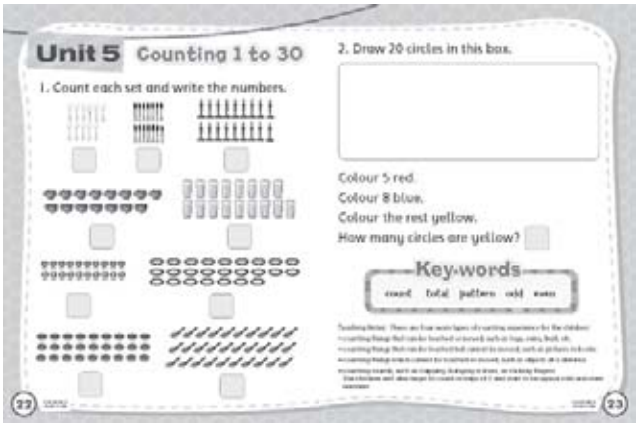
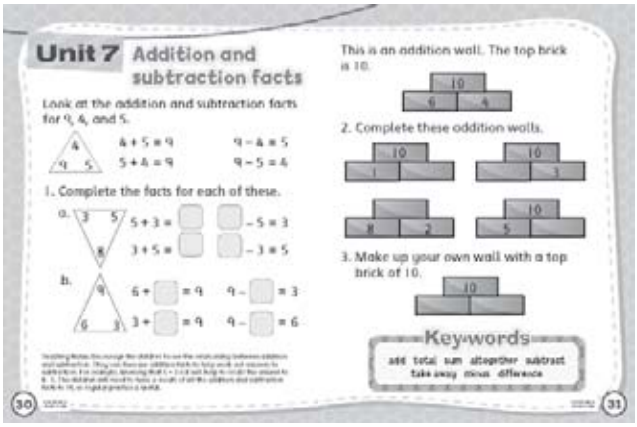
Unit 10 A look back at...

- 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 22 the topic is 'Counting 1 to 30 '. Draw some objects on the board, e.g. stars, trees, flowers, etc. each in different quantities from 1 to 30. Ask the children to count the objects as they are drawn.
- Explain each page and encourage the children to complete the tasks independently.
- The revision pages can also be used for end-of-term assessments.





Worksheet 1

Days of the week

Look at this month's calendar.

Write the dates for the days in the third week.

Sunday: _____

Monday: _____

Tuesday: _____

Wednesday: _____

Thursday: _____

Friday: _____

Saturday: _____

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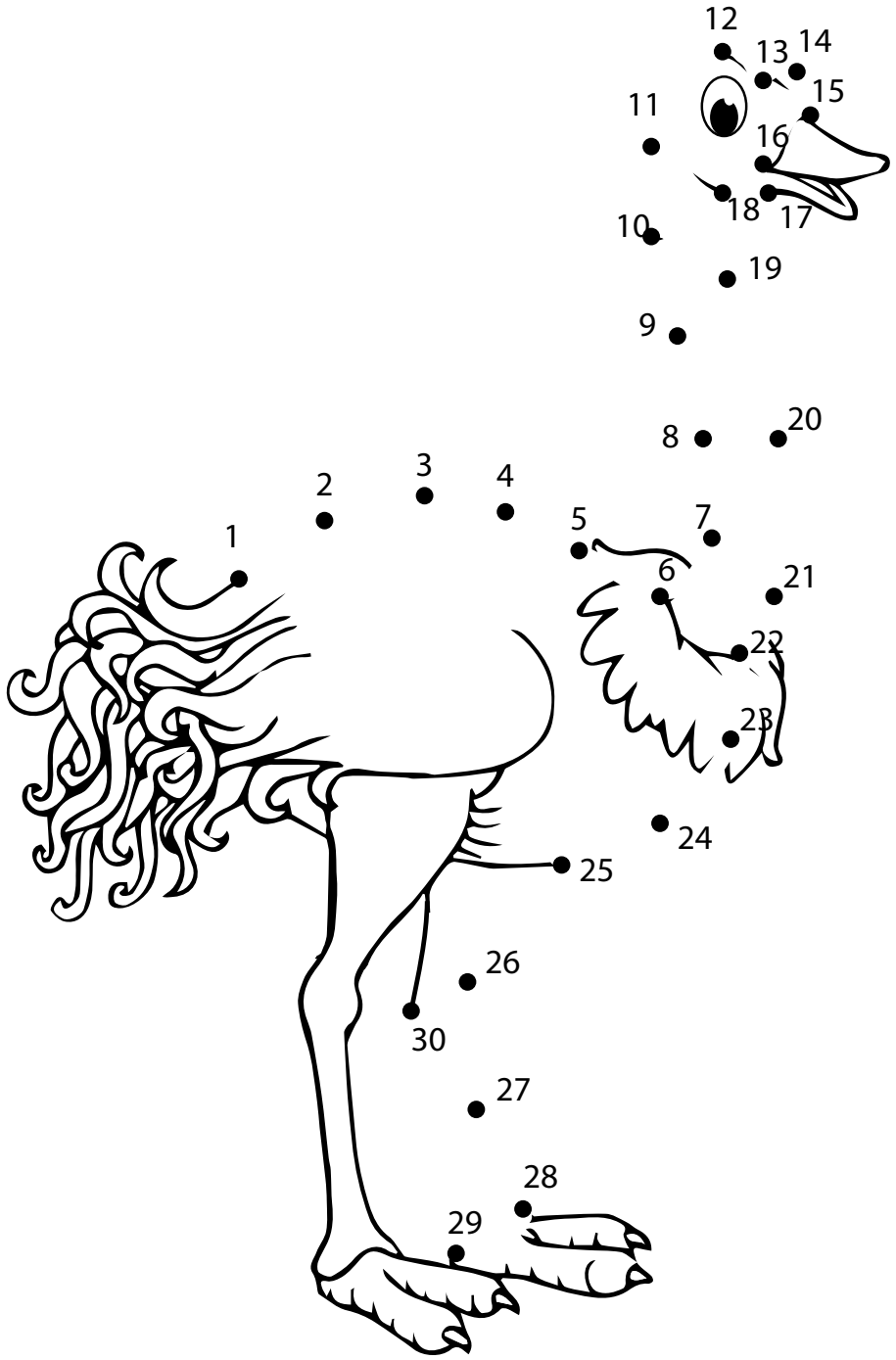
Worksheet 2

Join in order

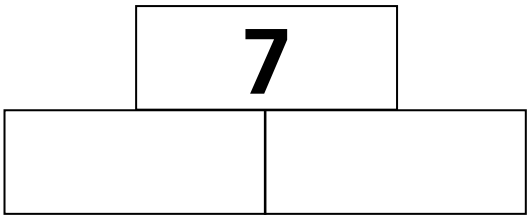
Join the numbers in order to reveal this big bird. Colour it.

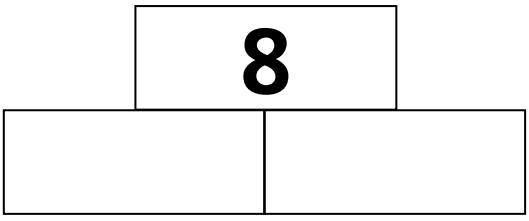


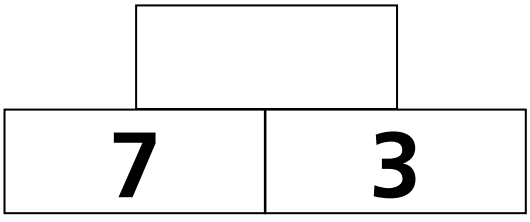
Worksheet 3

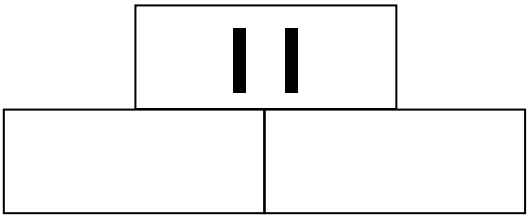
Addition wall

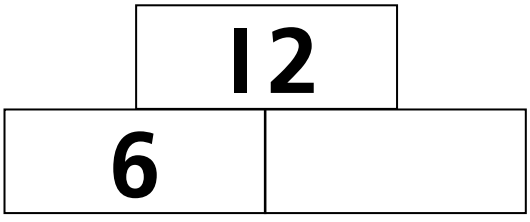
Complete these addition walls. Use any combination of numbers.

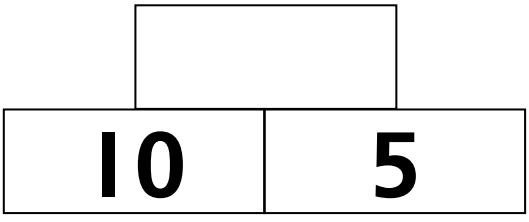


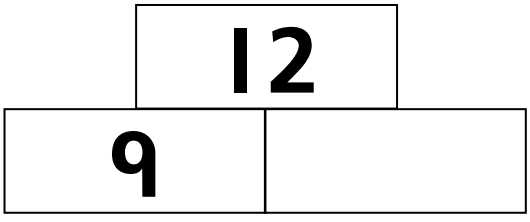


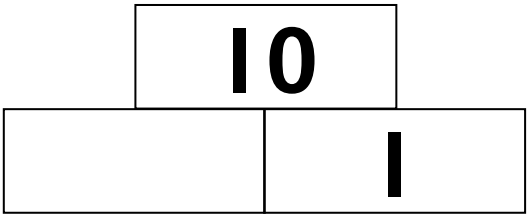












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Worksheet 4

Odd numbers

Write the missing numbers on the grid. Colour the odd numbers blue.

1	2	3	4	5		7		9	
		13		15	16		18	19	20
21	22		24		26	27		29	
31	32		34				38	39	40
41	42	43		45	46	47			50

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Worksheet 5

Numbers

Write the number names for the following:

30 _____

29 _____

28 _____

27 _____

26 _____

25 _____

24 _____

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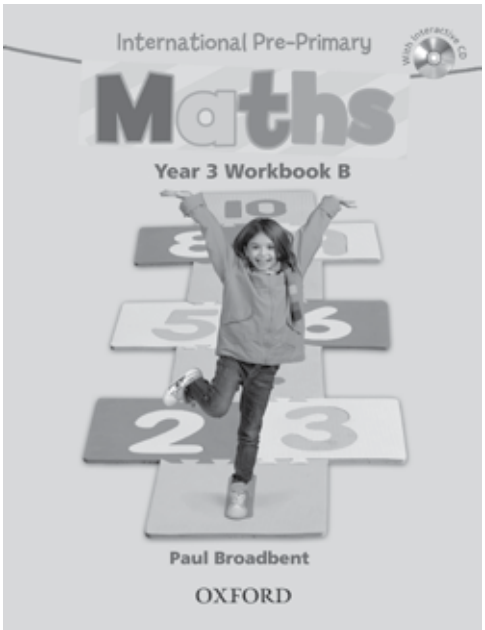
Teaching Guide
Year 3 Workbook B



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Unit 1 Numbers and number sequences

Introduction:

Children can learn a lot about numbers by playing with them. They can sequence them, arrange them in ascending or descending order, or mark a number that comes after, before, or between any given numbers. Interesting patterns emerge from number sequences. This also develops observation skills.

Lesson 1: Numbers and number sequences **Pages:** 2, 3, 4, and 5 **Suggested time:** 1 hour

Objectives:

- to count backwards and forwards to and from 100
- to recognize number patterns in varying sequences

Resources:

playground area where a number line up to 50 can be drawn on the ground; cardboard circles (usually come with cakes); paper; pencils; Workbook B

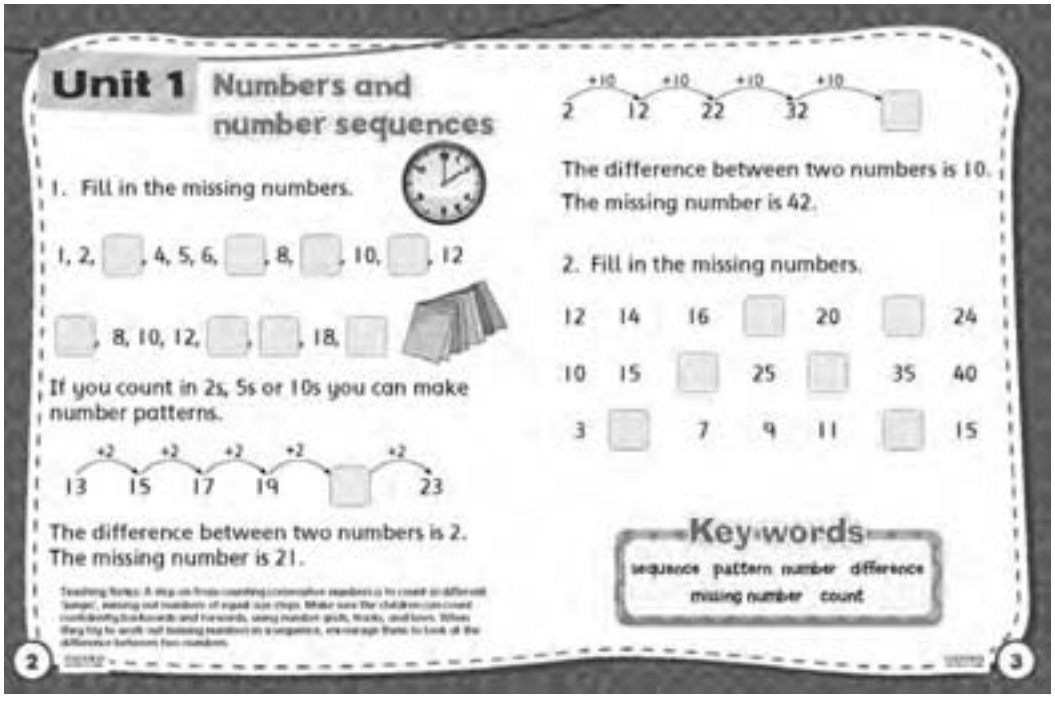
Vocabulary:

sequence, pattern, number, difference, missing, count

Motivational activity:

- Take the children to the playground.
- Draw two number lines on the ground one from 1 to 25 and the other from 26 to 50.
- Cover random numbers with the card circles.
- Ask the children to guess the hidden numbers.
- Select two children and ask them to stand on the number lines. Give them each a sheet of paper and a pencil. Ask them to write the number on which they are standing and then jump forward two numbers and write the new number next to the previous entry. Continue the activity until they reach the end of the number line. For example, if a child begins on 1, he/she writes 1 and jumps two numbers, stands on 3, and writes 3 next to 1.
- Two more children can simultaneously do the activity on the second number line.
- Invite another two children to do the same task, but now they jump five numbers and record their numbers. See if some children can jump 10 numbers.

Student activity:



Unit 1 Numbers and number sequences

1. Fill in the missing numbers.

1, 2, ☐, 4, 5, 6, ☐, 8, ☐, 10, ☐, 12

☐, 8, 10, 12, ☐, ☐, 18, ☐

If you count in 2s, 5s or 10s you can make number patterns.

+2 +2 +2 +2 +2

13 15 17 19 ☐ 23

The difference between two numbers is 2.
The missing number is 21.

+10 +10 +10 +10

2 12 22 32 ☐

The difference between two numbers is 10.
The missing number is 42.

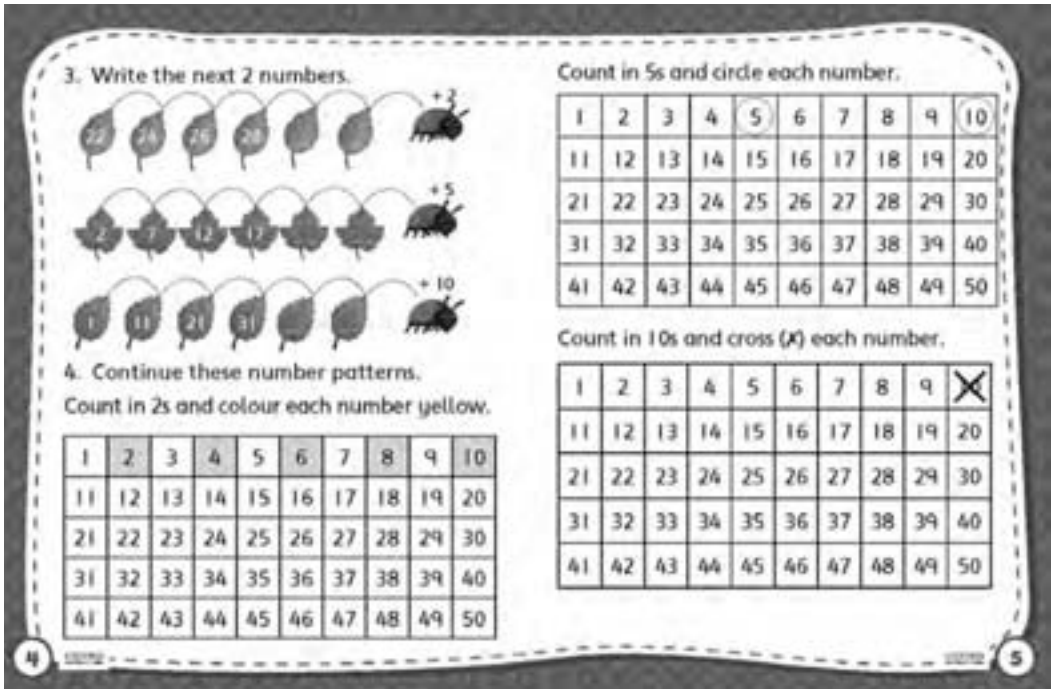
2. Fill in the missing numbers.

12	14	16	☐	20	☐	24
10	15	☐	25	☐	35	40
3	☐	7	9	11	☐	15

Key words

sequence pattern number difference
missing number count

2 3



3. Write the next 2 numbers.

+2

22 24 26 28 ☐ ☐

+5

2 7 12 17 ☐ ☐

+10

1 11 21 31 ☐ ☐

4. Continue these number patterns.

Count in 2s and colour each number yellow.

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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Count in 5s and circle each number.

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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Count in 10s and cross (✗) each number.

1	2	3	4	5	6	7	8	9	✗
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

4 5

- Bring the children back to the classroom.
- Open to pages 2, 3, 4, and 5 of Workbook B. Explain the tasks.

Note: The teacher may need more time as outdoor activity is involved in this lesson.

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Written work:

The children should complete pages 2 and 3.

Homework assignment:

Assign pages 4 and 5 for homework.

Lesson 2: Numbers and number sequences **Pages:** 6 and 7 **Suggested time:** 30 minutes

Objectives:

- to count backwards and forwards up to and from 100
- to identify various number patterns
- to use the terms before and after, between, greater than, and less than correctly

Resources:

number flashcards; Workbook B

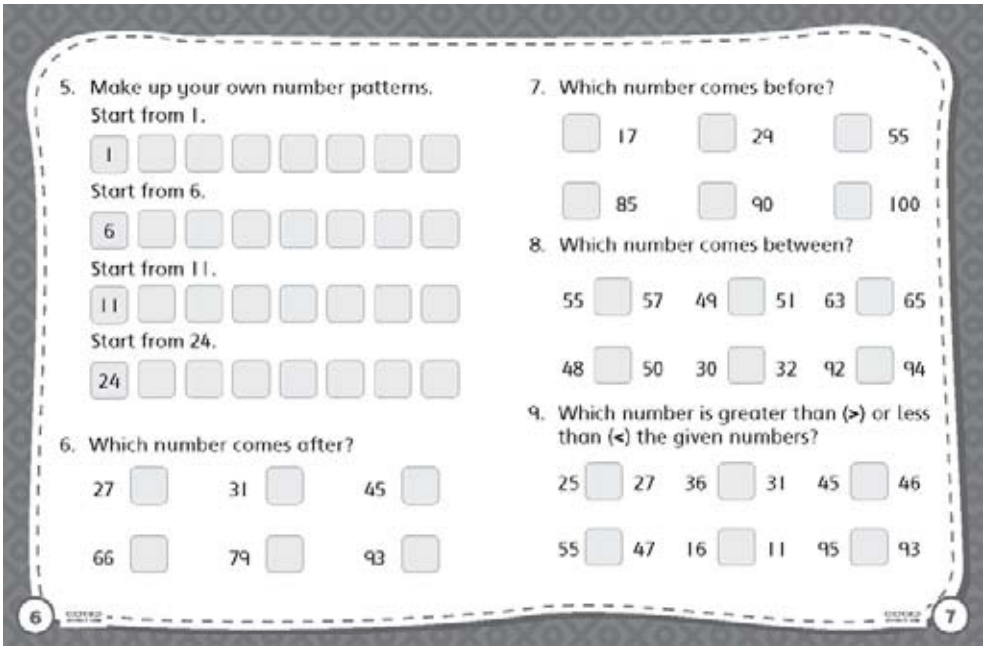
Vocabulary:

sequence, pattern, number, difference, missing, count

Motivational activity:

- Ask the children to sit in a circle.
- Use number cards to show them different number patterns. Invite a child to select a number card.
- Invite another child to select the number that comes before the number selected by the first child.
- Invite a third child to select the number that comes after the chosen number.

Student activity:



5. Make up your own number patterns.
Start from 1.
1 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Start from 6.
6 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Start from 11.
11 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Start from 24.
24 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

6. Which number comes after?
27 ☐ 31 ☐ 45 ☐
66 ☐ 79 ☐ 93 ☐

7. Which number comes before?
☐ 17 ☐ 29 ☐ 55
☐ 85 ☐ 90 ☐ 100

8. Which number comes between?
55 ☐ 57 49 ☐ 51 63 ☐ 65
48 ☐ 50 30 ☐ 32 92 ☐ 94

9. Which number is greater than (>) or less than (<) the given numbers?
25 ☐ 27 36 ☐ 31 45 ☐ 46
55 ☐ 47 16 ☐ 11 95 ☐ 93

6 7

- Divide the children into four groups and give each group some number flashcards.
- Ask each group to make different number patterns.
- Then ask each group to play a 'what comes before and after' game using the number cards.
- Explain that a number can be greater than or less than a given number. Draw the symbols (<) and (>) on the board and demonstrate.
- Provide help where required.
- Open pages 6 and 7 of Workbook B. Explain the task.

Written work:

The children should complete page 6.

Homework assignment:

Assign page 7 for homework.

Unit 2 Measuring lengths

Introduction:

The children observe different-sized objects all around them. They may only know that sizes are different by measuring. Help them to complete this unit employing the activities given. Encourage them to come up with their own methods of measuring things.

Lesson 1: Measuring lengths **Pages:** 8, 9, and 10 **Suggested time:** 1 hour

Objectives:

- to measure lengths
- to compare objects according to their physical features

Resources:

flashcards showing the longest, longer, long, the shortest, shorter, short; 6 pencils of different lengths, other items with varying length like socks, ribbons, strings, etc.; Workbook B

Vocabulary:

length, long, longer, the longest, short, shorter, and the shortest, compare, estimate, measure

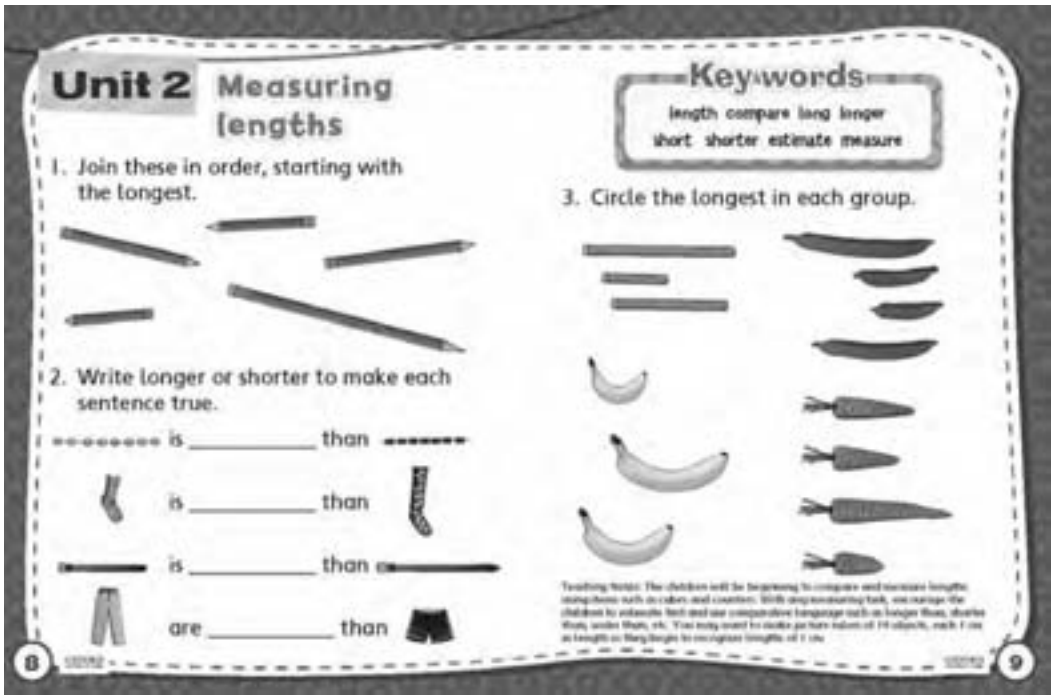
Motivational activity:

- Ask the children to sit in a circle.
- Place the flashcards in the following order:

the shortest	shorter	short	long	longer	the longest

- Select a child and give him/her 6 pencils of different lengths and ask him/her to place them on the cards in order from longest to shortest.
- Repeat the same activity to encourage more class participation, and change the objects each time.

Student activity:



Unit 2 Measuring lengths

Keywords
length compare long longer short shorter estimate measure

1. Join these in order, starting with the longest.

2. Write longer or shorter to make each sentence true.

_____ is _____ than _____

_____ is _____ than _____

_____ is _____ than _____

_____ are _____ than _____

3. Circle the longest in each group.

8

9

- Draw two different-sized socks on the board. Point to the shorter sock and ask if it is the shorter or the longer of the two.
- Repeat the activity with different objects.
- Look at pages 8 to 10 and ask questions about the objects displayed. You can draw a few items on the board to make it clearer and encourage participation from the class. Refer to the teaching notes given on page 9. Explain the exercise on page 10.

Written work:

The children complete pages 8 and 9. Provide help where needed.

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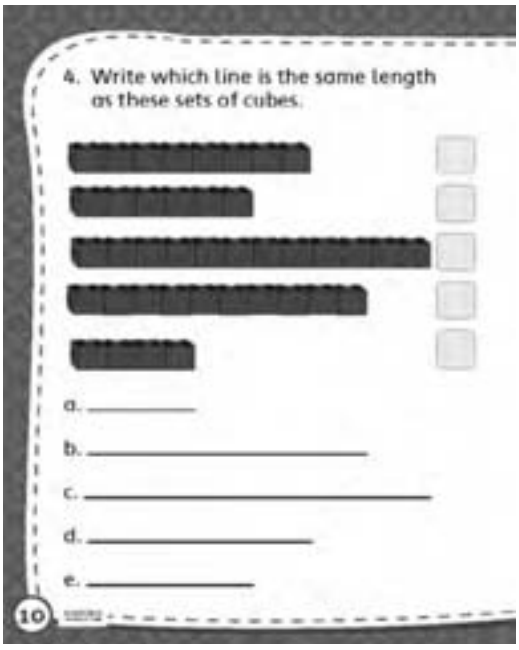
Homework assignment:



Assign page 10 as homework.

Lesson 2: Measuring lengths **Pages:** 11, 12, and 13 **Suggested time:** 1 hour

Objectives:

- to measure lengths
- to compare lengths

Resources:

blocks; a picture ruler (showing objects at 1 cm lengths); a few objects like a white board marker, a duster etc.; Workbook B

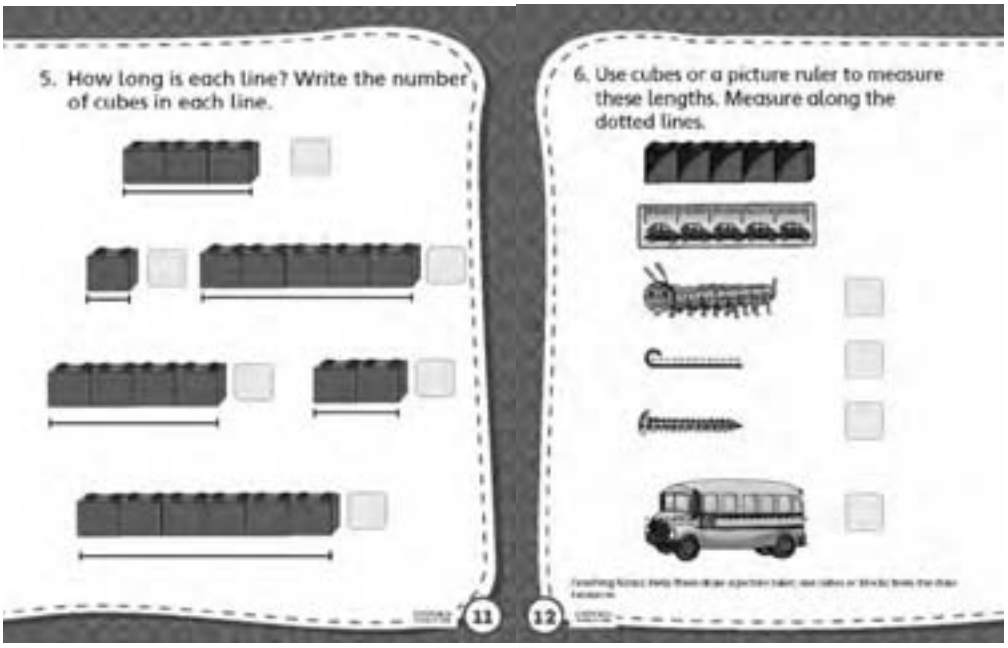
Vocabulary:

length, long, longer, the longest, short, shorter, the shortest, compare, estimate, measure

Motivational activity:

- Ask the children to sit in a circle.
- Place different items on the floor for measuring, for example, a white board marker, a duster, a small table, etc.
- Select a child and ask him/her to measure one of the objects using the blocks. For example, the child measures the whiteboard marker by placing blocks against it in a row. He/she will say that the whiteboard marker is, e.g. 4 blocks long.
- Encourage more class participation by changing the objects.

Student activity:



- Look at pages 11, 12, and 13. Page 11 has already been explained above.
- Give each child 5 to 7 blocks and ask them to measure the objects shown on page 12.
- A picture ruler can also be used for this purpose.

Written work:

Ask the children to complete pages 11 and 12.

Homework assignment:

Assign page 13 for homework.

Unit 3 Addition up to 20

Introduction:

Children need to be able to add numbers to 10 and 20 in simple addition equations in order to move on to more complex addition in later classes.

Lesson 1: Addition up to 20 **Pages:** 14 and 15 **Suggested time:** 1 hour

Objectives:

- to add up to 20 objects
- to solve basic addition equations

Resources:

bottle caps or small pebbles; a small toy like a plastic rabbit or a dog, etc.; four 1 to 10 number line charts; equation flashcards; number flashcards; '+' and '=' sign cards

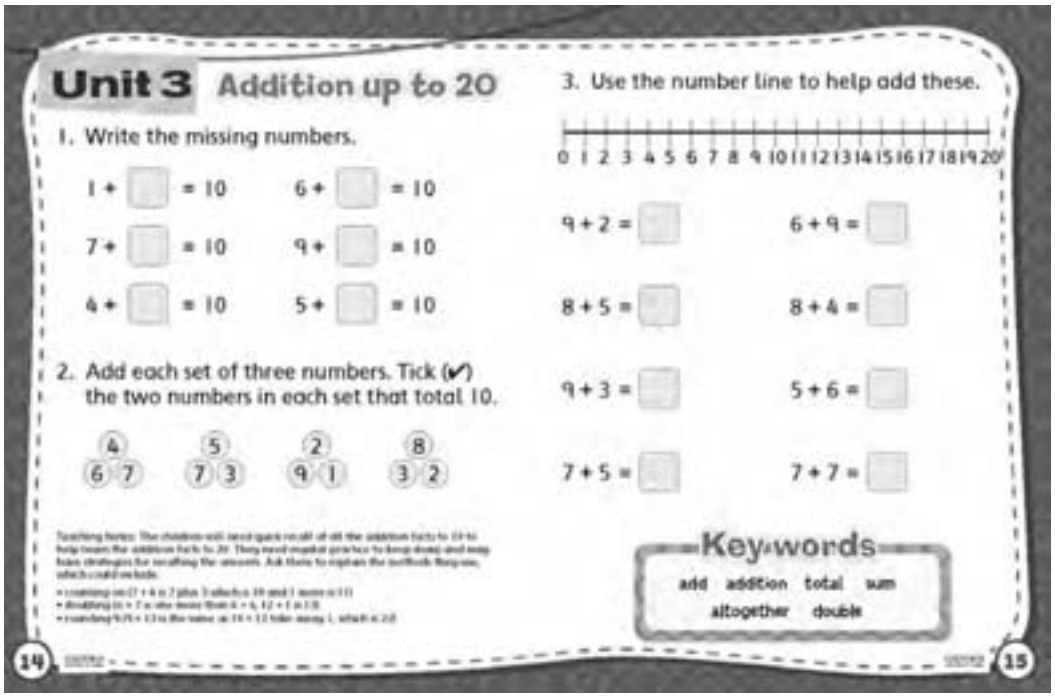
Vocabulary:

add, addition, total, sum, altogether, double

Motivational activity:

- Ask the children to sit in a circle.
- Prepare the following equation flashcards and laminate them:
  a. 1 + — = 10
  b. 6 + — = 10
  c. 7 + — = 10
  d. 9 + — = 10
  e. 4 + — = 10
  f. 5 + — = 10
- Select a child and ask him/her to place the flashcard of equation 'a' on the floor.
- Against the equation, ask the child to put 1 pebble, the '+' sign card, and leave the blank area. Then place the '=' sign card and the number 10 flashcard.
- Ask the children how many pebbles must be added to 1 to make 10. Ask the selected child to start picking up the pebbles and count from 2 to 10.
- Place the counted pebbles in the blank space.
- Now ask the child to complete equation 'a' using a whiteboard marker to write 9 on the blank space on the laminated equation card.
- Repeat the same activity for other equations.
- Encourage class participation.

Student activity:



Unit 3 Addition up to 20

1. Write the missing numbers.

1 + ☐ = 10 6 + ☐ = 10

7 + ☐ = 10 9 + ☐ = 10

4 + ☐ = 10 5 + ☐ = 10

2. Add each set of three numbers. Tick (✔) the two numbers in each set that total 10.

(4) (5) (2) (8)

6 7 7 3 9 1 3 2

3. Use the number line to help add these.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

9 + 2 = ☐ 6 + 9 = ☐

8 + 5 = ☐ 8 + 4 = ☐

9 + 3 = ☐ 5 + 6 = ☐

7 + 5 = ☐ 7 + 7 = ☐

Key words

add addition total sum

altogether double

14 15

- Divide the children into four groups.
- Give each group a number line and a toy.
- Give each group two of the following equations cards:
  a. 9 + 2 =
  b. 6 + 9 =
  c. 8 + 5 =
  d. 8 + 4 =
  e. 9 + 3 =
  f. 5 + 6 =
  g. 7 + 5 =
  h. 7 + 7 =
- Ask each group to solve their equations. For example, taking equation 'a', ask the group to put their toy on number 9 on the number line.
- Now ask them to make the toy jump two places along the number line.
- Ask them to say which number the toy is now on.
- Ask them to fill in the equation card accordingly.
- Each group completes their equation cards.
- Show the children pages 14 and 15 of the Workbook B and explain the tasks on the board.

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Written work:

The children should complete pages 14 and 15.

Lesson 2: Addition up to 20 **Pages:** 16 and 17 **Suggested time:** 30 minutes

Objectives:

- to add up to 20 objects
- to solve addition equations up to 20

Resources:

shells; counters; number cards; '+' and '=' sign cards

Vocabulary:

add, addition, total, sum, altogether, double

Motivational activity:

- Ask the children to sit in a circle.
- Prepare the following equation flashcards and laminate them:

  a. _____ + 3 = 11

  b. 9 + _____ = 14

  c. _____ + 6 = 12

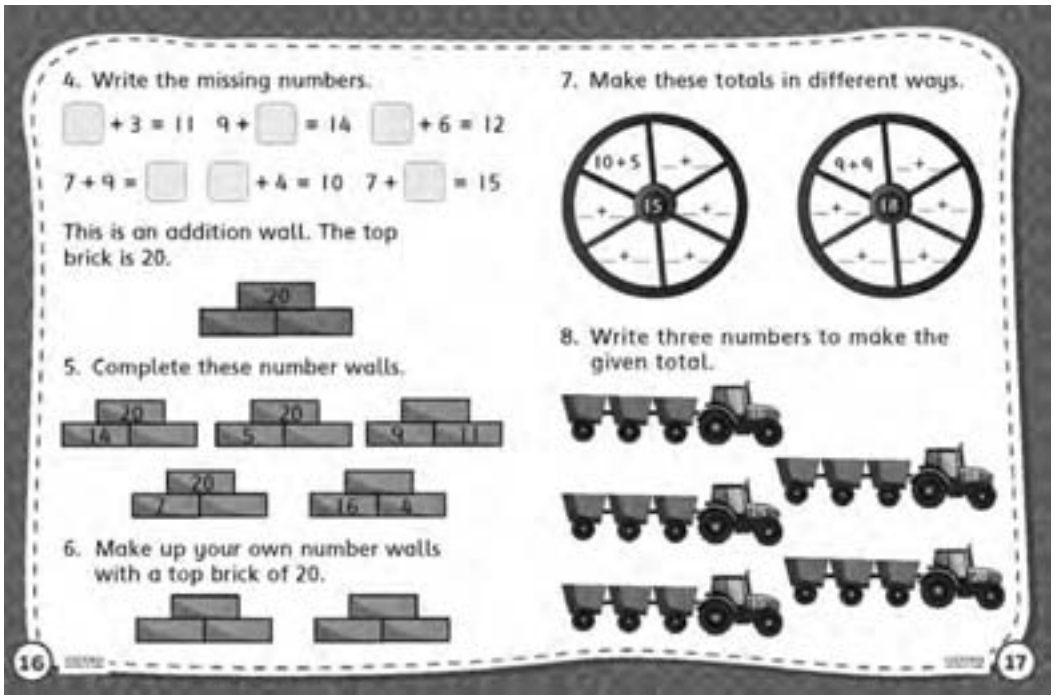
  d. 7 + 9 =____

  e. _____ + 4 = 10

  f. 7 +_____= 15

- Select a child and ask him/her to place the flashcard of equation 'a' on the floor.
- Put down the '+' sign card and three shells and also the '=' sign card and the number 11 card.
- Elicit how many more shells need to be added to the three shells to make 11.
- Ask the child to start picking up the shells and count from 4 to 11.
- Place the counted shells in the blank space.
- Now ask the child to complete equation 'a' using the white board marker.
- Repeat the same activity for other equations.
- Encourage class participation.

Student activity:



- Divide the children into four groups.
- Give the first group the number 15 card, the second group the number 16 card, the third group the number 18 card, and the fourth group the number 20 card.
- Give each group counters.
- Ask each group to make different story sums using the materials provided. Their sums should be equal to the given number card. For example, group 1 could make the following story sums:

  a. 10 + 5 =
  b. 7 + 8 =
  c. 9 + 6 =
  d. 11 + 4 =
  e. 3 + 12 =
  f. 13 + 2 =

- Observe the activity and help the children if they face any difficulty.
- Turn to pages 16 and 17 of Workbook B and explain the task.

Written work:

The children should complete page 16.

Homework assignment:

Assign page 17 for homework.

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Unit 4 Numbers 1 to 100

Introduction:

Place value is an important concept in maths. The children will need to have a firm grasp of the value and position of each digit in numbers up to one hundred before moving on to bigger numbers.

Lesson 1: Numbers 1 to 100 **Pages:** 18 and 19 **Suggested time:** 1 hour

Objectives:

- to review numbers 1 to 100
- to count up to 100 objects
- to read and write numbers in words

Resources:

units, tens, and hundreds flashcards; numbers and number names flashcards;

flashcards and charts of 'teen' and 'ty' numbers; baskets Workbook B.

Notes

Take three large printouts of the chart given on page 18. Paste it on cardboard. Leave one number chart as it is. Cut the second number chart into ten strips, each strip showing one ten. For example, numbers 1 to 10 on strip one, numbers 11 to 20 on strip two, and so on. Now cut the third chart into a hundred pieces so there is one number on one piece.

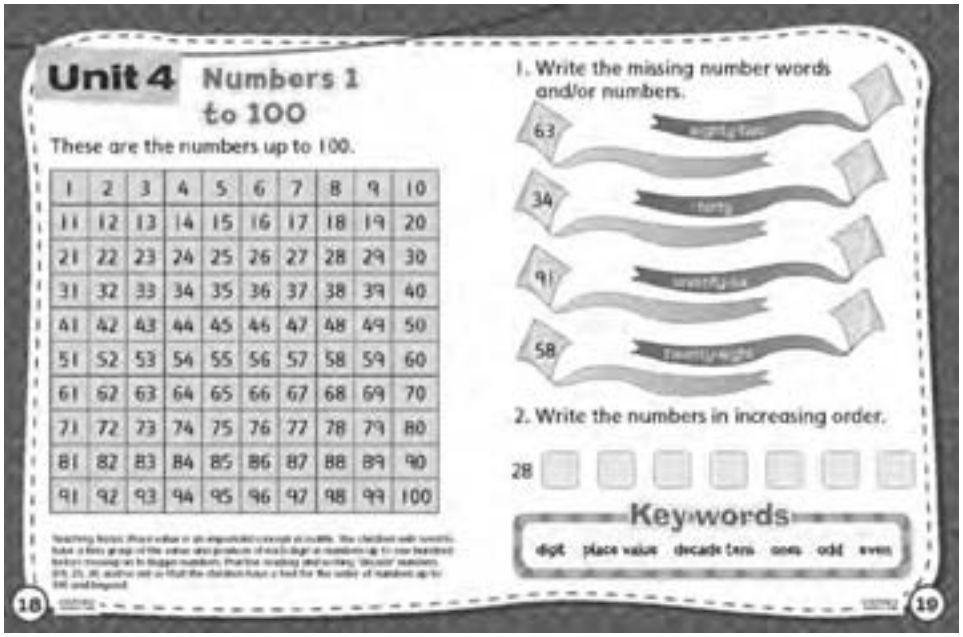
Vocabulary:

digit, place value, decade, tens, ones, even

Motivational activity:

- Ask the children to sit in a circle.
- Show the children pieces of 1 unit, 2 units, 3 units, and so on, and reinforce the fact that ten units make one ten.
- Now show a strip of one ten.
- Show the strip from 11 to 20. Elicit that two tens makes twenty.
- In this way add all the strips with the same explanation.
- Elicit that ten tens make one hundred. Now put all tens strips on one card.
- Show the chart of 'ty' numbers from (twenty to ninety). Explain the 'ty' numbers by writing on the board and reinforce using flashcards as well.

Student activity:



- Divide the children into four groups. Give each group two baskets, one of number flashcards, and another of number names flashcards.
- Explain that each member of the group should pick up one number flashcard and pair it with its number name from the other basket.
- The group matching the most pairs correctly will win.
- Provide help where required.
- Explain the task on page 19 of Workbook B.

Written work:

The children should complete page 19.

Lesson 2: Numbers 1 to 100 **Pages:** 20 and 21 **Suggested time:** 1 hour

Objectives:

- to review numbers 1 to 100
- to count up to 100 objects
- to explain place value of units and tens

Resources:

units, tens flashcards; greater than and less than flashcards; numbers flashcards (20 to 99); lollipop sticks (some bundled as tens and some loose sticks); Workbook B

Vocabulary:

digit, place value, decade, tens, ones, odd, even

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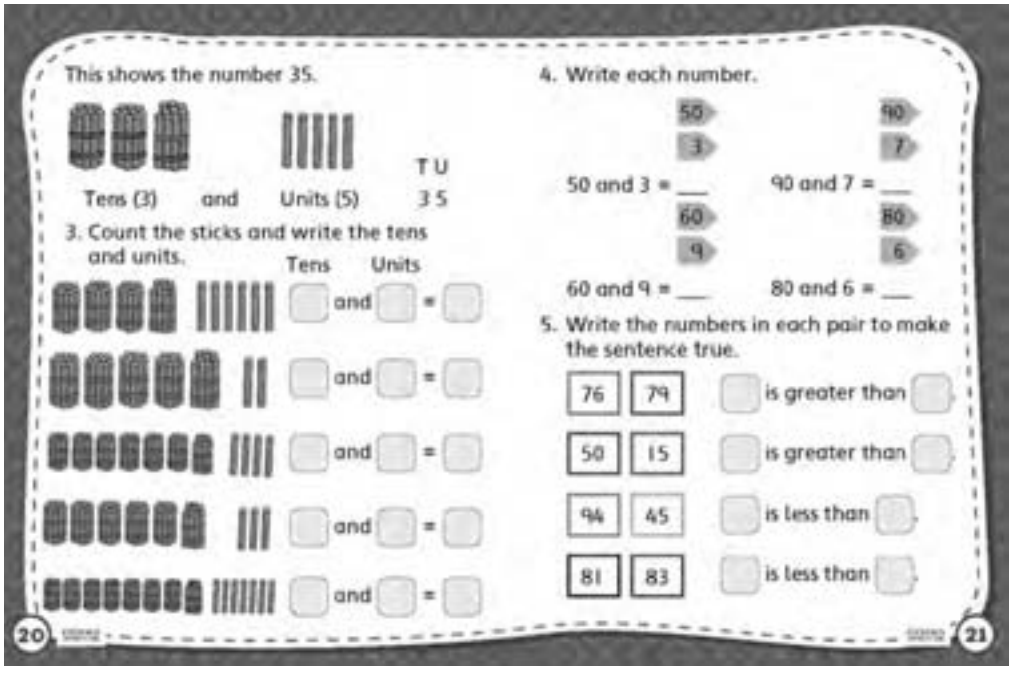
Motivational activity:

- Ask the children to sit in a circle.
- Place the units and tens flashcards on the floor.
- Ask a child to pick a number from the numbers flashcard basket, for example, the number 69 is selected.
- Ask another child to pick 69 lollipop sticks; he/she picks up 6 sets of tens and nine sticks.
- Now place the 6 sets of tens under the flashcard of 'tens' and 9 sticks under the flashcard of units. Put the 69 number card beside it.
- Repeat the same activity for another number.
- For example, if the other number is 72, then display 72 beneath 69.
- Ask the children if 69 is greater than or less than 72.
- If necessary, explain what less than or greater than is.
- Help children count. Then place the 'less than' flashcard after 69.

Student activity:



- Divide the children into four groups.
- Ask each group to repeat the above activity.
- Turn to pages 20 and 21 and explain the tasks.

Written work:

The children should complete page 20.

Home assignment:

Assign page 21 for homework.

Unit 5 Subtraction within 20

Introduction

Like addition, children need to learn subtraction within 10 and then within 20, in simple subtraction equations.

Lesson 1: Subtraction within 20 **Pages:** 22 and 23 **Suggested time:** 1 hour

Objectives:

- to count and subtract numbers
- to use different strategies for subtraction

Resources:

crayons; number line chart; equation flashcards; pebbles; coloured macaroni; lollipop sticks; bottle caps; Workbook B

Vocabulary:

subtract, take away, count on, difference

Motivational activity:

- Ask the children to sit in a circle.
- Make up story sums for the following equations using crayons, and encourage class participation. For example, 'If Ashr has 14 crayons and gives 3 crayons to Saad, how many crayons does he have left?'
  - 14 – 3 =
  - 18 – 5 =
  - 7 – 4 =
- Display the number line (0 to 20). Invite students to solve the following equations using the number line. Show them how to cross out the numbers to help take away:
  - 15 – 6 =
  - 11 – 1 =
  - 13 – 3 =
- Do some mental maths sums. Elicit that if both the numbers are large, they should start counting from the smaller number to the larger number, counting on the fingers. For example:
  - 19 – 15 =
- Count on from 15: 16, 17, 18, 19, and stop. This indicates a difference of 4.

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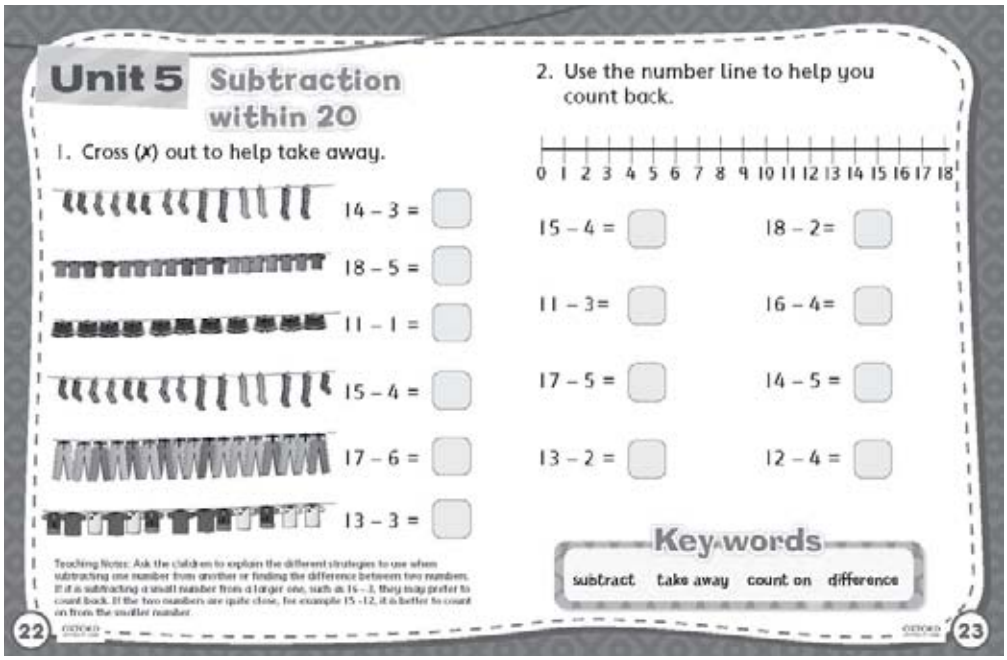
- Repeat the same for the following:
  - 18 − 16 =
  - 20 − 17 =
  - 17 − 14 =

Student activity:



- Divide the children into groups of four.
- Give each group a basket containing equation flashcards for subtraction as well as the basket of pebbles, colourful macaroni, lollipop sticks, and bottle caps.
- Ask each group to pick one equation flashcard and make a story sum using the materials provided.
- Give help where needed.
- Turn to pages 22 and 23 of Workbook B and explain the task.

Written work:

Ask the children to complete pages 22 and 23.

Lesson 2: Subtraction within 20 **Pages:** 24 and 25 **Suggested time:** 30 minutes

Objectives:

- to count and subtract numbers
- to use different strategies for subtraction

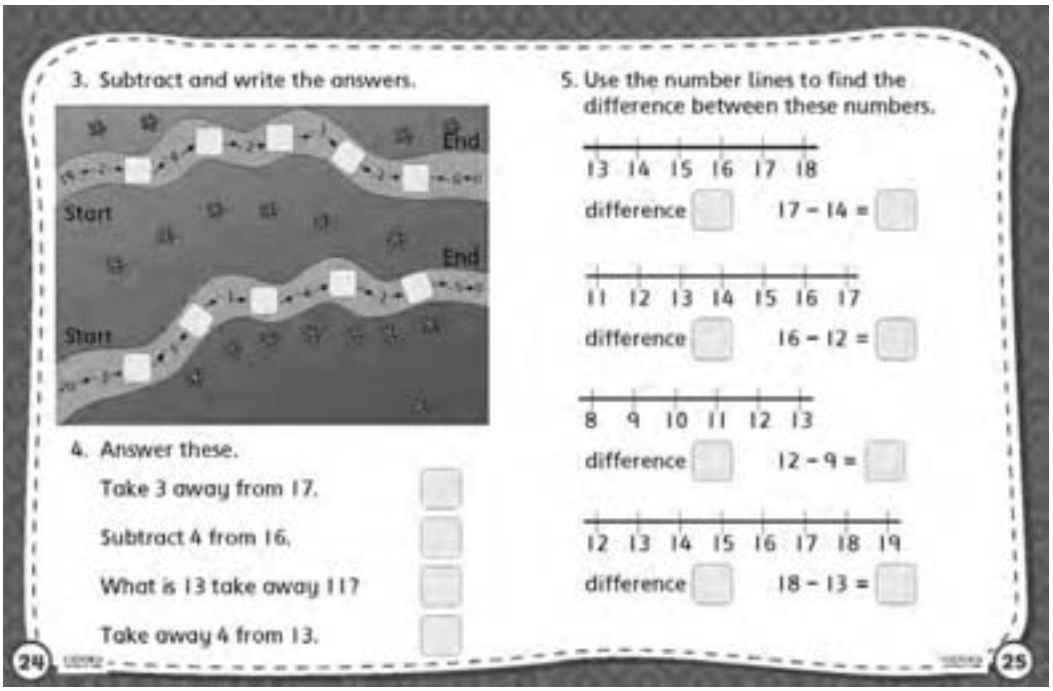
Resources:

any cartoon or an animal toy; number line chart; start and finish game printouts; Workbook B

Motivational activity:

- Ask the children to sit in a circle.
- Place the toy on the number line. Explain that the toy is on number 17. If it were to jump six numbers backwards, ask at what number will it land on.
- Repeat this for the following equations:
  - 12 – 4 =
  - 17 – 3 =
  - 16 – 4 =
  - 13 – 11 =
  - 13 – 4 =

Student activity:



- Ask the children to form pairs.
- Give each pair a start and finish game. Refer to page 24, exercise 3.
- The children can use the number line charts or materials provided for help.
- Observe the activity and provide help if they face any difficulty.
- Turn to pages 24 and 25 of Workbook B and explain the task.

Written work:

The children should complete page 25.

Homework assignment:

Assign page 24 for homework.

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Unit 6 Money

Introduction:

Handling money is an everyday task. At this age, children do not have to use money very often, but they do need to know the currency in use in Pakistan and begin to understand the values associated with rupee notes and coins.

Lesson 1: Money **Pages:** 26 and 27 **Suggested time:** 1 hour

Objectives:

- to identify rupee notes and coins
- to explain value of rupees for purchasing objects

Resources:

real Rs 1, 2, 5, 10, and 20 coins and notes; some price tags (Re 1 to Rs 20); some toys; biscuit or sweets boxes; Workbook B

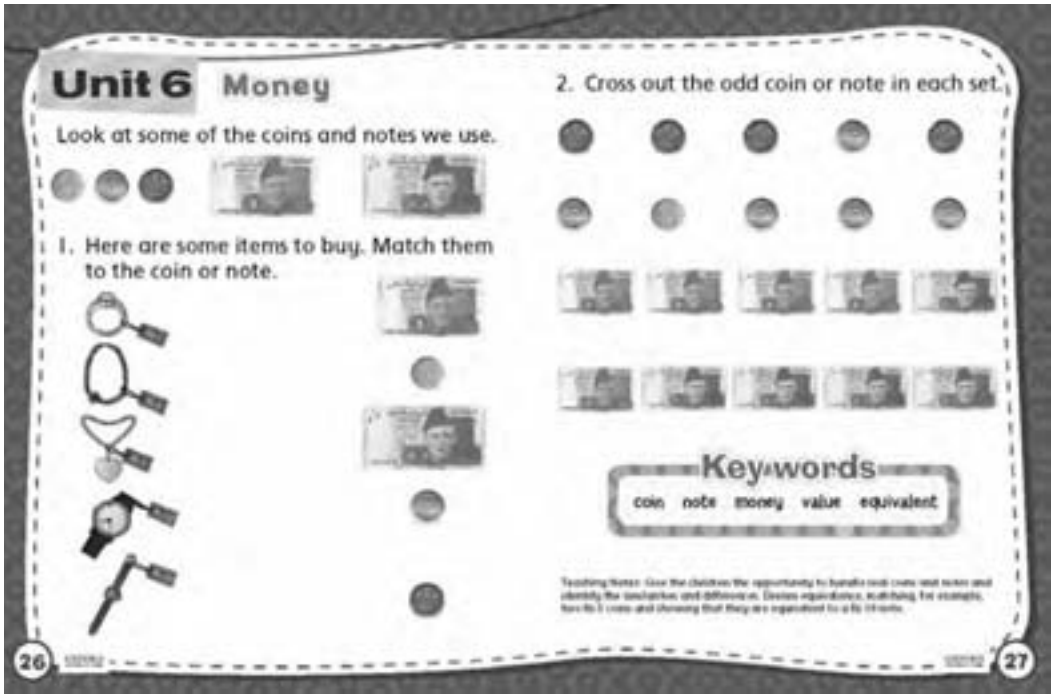
Vocabulary:

coin, note, money, value, equivalent

Motivational activity:

- Show the children some real coins and notes and let them see and feel them.
- Plan a shop with the children.
- Encourage them to collect items from the classroom resources and put price tags on them.
- Divide the children into two groups. One group can play shopkeepers and the other group can be customers. Give the customers real money and tell them to purchase items from the shop. Ensure that every group member has a turn.
- Repeat the same activity with reversed roles for the two groups.

Student activity:



- Turn to pages 26 and 27 of Workbook B and explain the task.

Written work:

The children complete the task on pages 26 and 27.

Lesson 2: Money **Pages:** 28 and 29 **Suggested time:** 30 minutes

Objectives:

- to recognize rupee notes and coins
- to explain the value of rupees for purchasing objects

Resources:

real 2, 5, 10 and 20 coins and notes; Workbook B

Vocabulary:

coin, note, money, value, equivalent

Motivational activity:

- Gather all the children around the shop.
- Select three children to be customers and two children to be shopkeepers.
- The customers will only have Re 1 coins to shop. They buy as many items as they can for Re 1 or Rs 3.

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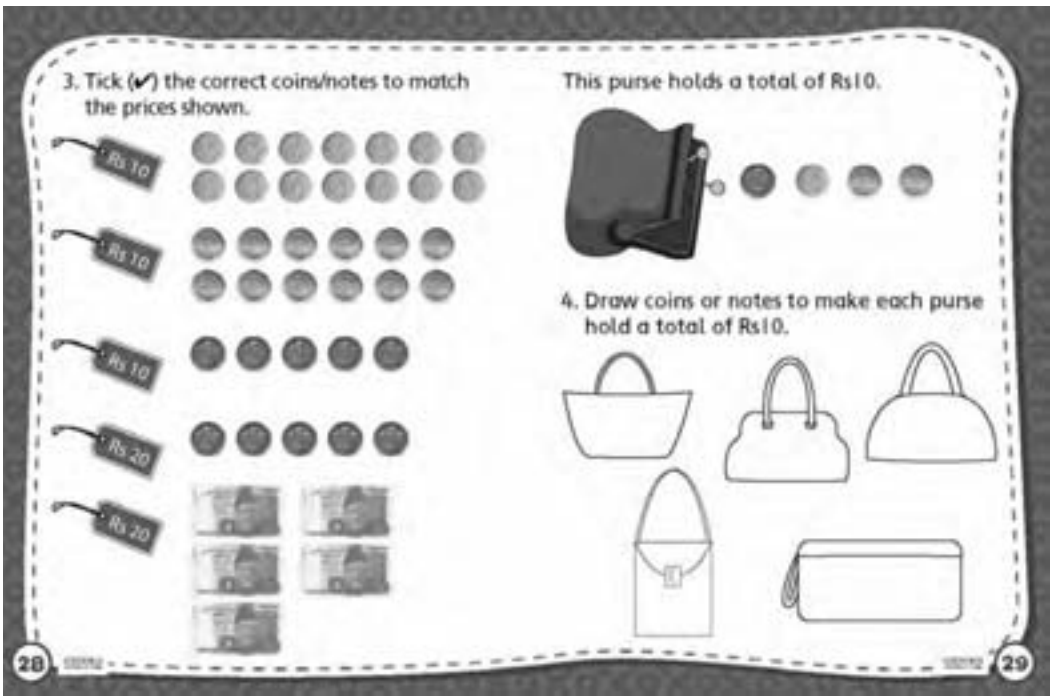
- Provide another group of five children with Rs 2 coins to do the shopping.
- Repeat the same activity with Rs 5, Rs 10, and Rs 20.
- Help the children to give change, etc.

Student activity:



- Turn to pages 28 and 29 of Workbook B. Explain the task.

Written work:

The children should complete page 28.

Homework assignment:

Assign page 29 for homework.

Unit 7 Addition and subtraction up to 20

Introduction:

Adding and subtracting numbers is a process that the children will need to learn well. As they say, practice makes perfect, so it is important that children learn to add and subtract using objects and word problems.

Lesson 1: Addition and subtraction up to 20	**Pages:** 30 and 31	**Suggested time:** 30 minutes

Objectives:

- to count and add up to 20
- to count and subtract up to 20

Resources:

bottle caps; lollipop sticks; blocks; number flashcards; Workbook B

Vocabulary:

add, subtract, total, difference, how many, count, altogether, more, take away

Motivational activity:

- Ask the children to sit in a circle.
- Make equations using classroom resources, and encourage class participation.
- For example, 'If Neha has 13 bottle caps and Ayesha has 2 bottle caps, how many bottle caps do they have altogether?'
  - 13 + 2 =
  - 8 + 5 =
  - 4 + 7 =
- Similarly, make other subtraction equations.
- For example, 'If the class has a total of twelve toys and four toys are with the girls, how many toys are with the boys?' (Explain this as a story sum displaying objects and flashcards on the floor.):
  - _____ + 4 = 12
    boys girls total
- Make more story sums using the following equations and classroom resources. Encourage class participation.
  - 16 − 2 =
  - 8 − 3 =

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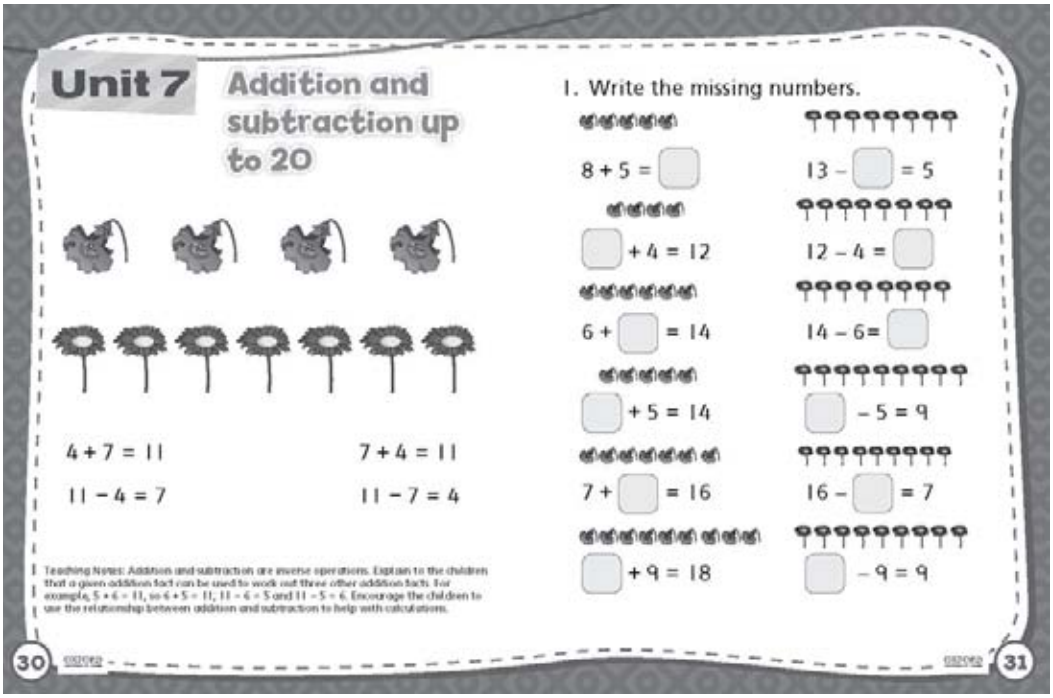
- 7 − 4 =
- 9 − 3 =

Student activity:



- Divide the children into groups of four.
- Give each group a basket containing flashcards of addition and subtraction equations, and a basket of pebbles, colourful macaroni, lollipop sticks, and bottle caps.
- Instruct each group to pick one equation flashcard and make a story sum using the materials provided.
- Provide help where needed.
- Turn to pages 30 and 31 of Workbook B and explain the task.

Written work:

The children complete pages 30 and 31.

Lesson 2: Addition and subtraction up to 20	**Pages:** 32 and 33	**Suggested time:** 40 minutes

Objectives:

- to make story sums
- to count, add, and subtract numbers

Resources:

red and blue blocks; green and yellow counters; shells and beads, etc; Workbook B

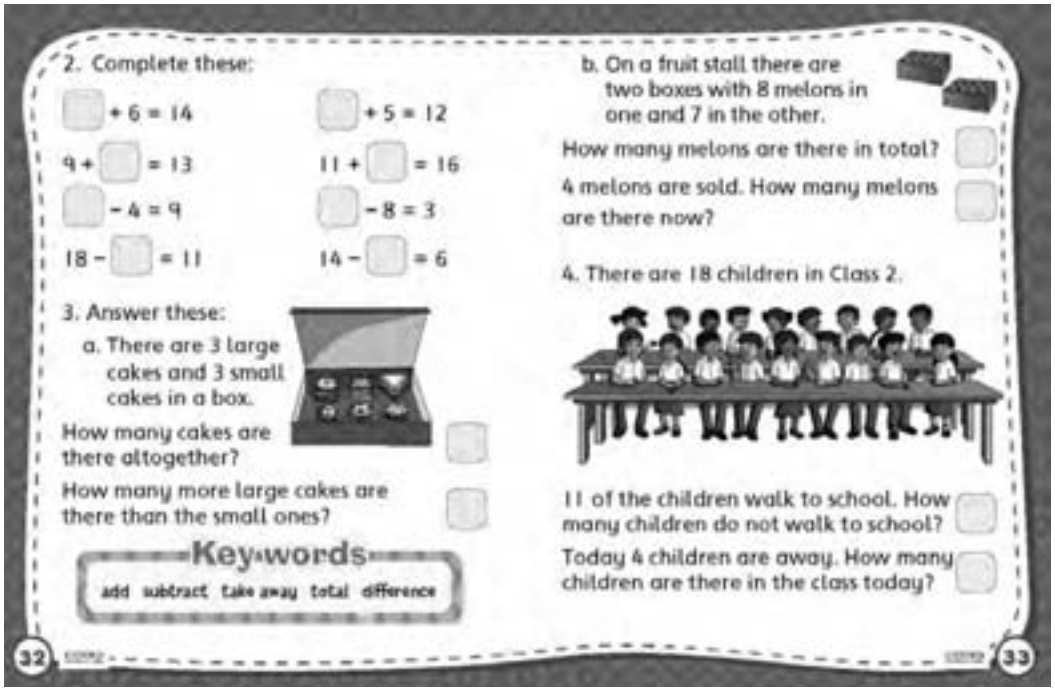
Vocabulary:

pattern, altogether

Motivational activity:

- Ask the children to sit in a circle.
- Make up a few story sums using different objects. For example, using blocks of two different colours, ask, 'If Mohsin has 6 red blocks and Rayyan has 4 blue blocks, how many blocks do they have altogether? How many more blocks does Mohsin have than Rayyan?'

Student activity:



- Divide the children into groups of four.
- Tell each group different story sums, displaying different objects and number flashcards. Encourage them to solve the equations.
- Provide help where needed.
- Turn to pages 32 and 33 of Workbook B and explain the task.

Written work:

The children should complete page 32.

Homework assignment:

Assign page 33 for homework.

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Unit 8 Multiplication: counting groups

Introduction:

Early multiplication involves grouping objects and counting the groups. Therefore, the language used is, e.g. '3 lots of 5 or 4 groups of 2'. This will lead on to the use of the multiplication or 'times' sign × which can replace 'lots of' or 'groups of'.

Lesson 1: Multiplication: counting groups	**Pages:** 34 and 35	**Suggested time:** 1 hour

Objectives:

- to group objects and count the groups
- to introduce and practise terms such as '3 lots of 5' or '4 groups of 2'

Resources:

number flashcards; basket of pebbles, colourful macroni, lollipop sticks, and bottle caps; Workbook B

Vocabulary:

group of, multiply, times, lots of, multiply by

Motivational activity:

- Ask the children to sit in a circle.
- Bring a basket of bottle caps and flashcards of numbers and the addition, multiplication, and it equal to signs. Group the materials and explain that there are, for example, 2 groups of 2:

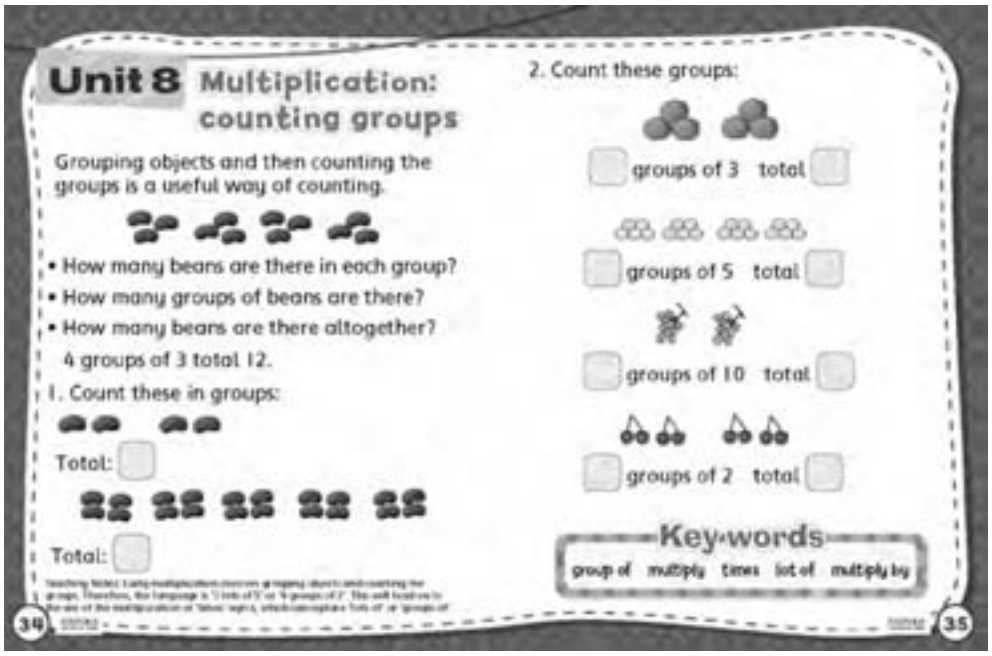
  2 groups of 2

  2 × 2 = 4

  2 groups of 3

  2 × 3 = 6
- Repeat same activity, encouraging more class participation and change the objects and equation every time.

Student activity:



- Divide the children into groups of four.
- Give each group a basket of pebbles, colourful macaroni, lollipop , and bottle caps, and flashcards of numbers and the '+', and '=' signs.
- Instruct each group to make groups of different objects and display the corresponding equation.
- Provide help where needed.
- Turn to pages 34 and 35 of Workbook B, and explain the tasks.

Written work:

The children complete pages 34 and 35. Provide help where needed.

Lesson 2: Multiplication: counting groups	**Pages:** 36 and 37	**Suggested time:** 30 minutes

Objectives:

- to group objects and count the groups
- to practise the terms, e.g. '3 lots of 5' or '4 groups of 2'

Resources:

number flashcards; basket of pebbles, colourful macaroni, lollipop sticks, and bottle caps; Workbook B

Vocabulary:

group of, multiply, times, lots of, multiply by

Motivational activity:

- Ask the children to sit in a circle.

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- Bring a basket of bottle caps and flashcards of numbers and the '+', '×', and '=' signs. Group the materials, and explain that there are, for example, 2 groups of 2:

☆ ☆ + ☆ ☆ = 4

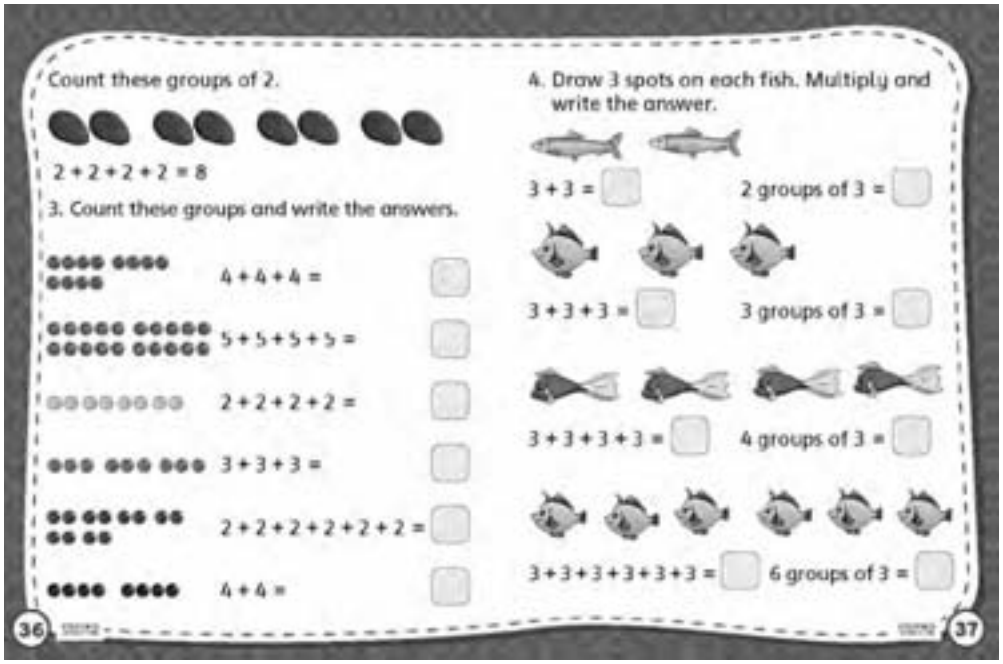
2 groups of 2 2 x 2 = 4

☺☺☺ + ☺☺☺ = 6

2 groups of 3 2 x 3 = 6

- Repeat same activity, encouraging more class participation, and change the objects and equation every time.

Student activity:



- Divide the children into groups of four.
- Give each group a basket of pebbles, colourful macaroni, lollipop sticks, and bottle caps, and the flashcards of numbers and the '+', and '=' to signs.
- Instruct each group to make groups of different objects and display the corresponding equations.
- Provide help where needed.
- Turn to pages 36 and 37 of Workbook B and explain the tasks.

Written work:

The children complete page 36. Provide help where needed.

Homework assignment:

Assign page 37 for homework.

Unit 9 Fractions: halves and quarters

Introduction:

Fractions are equal parts of a whole. It is important for children to understand the terms, 'halves' and 'quarters'.

Lesson 1: Fractions **Pages:** 38 and 39 **Suggested time:** 1 hour

Objectives:

- to provide hands-on activities for fractions
- to explain that when an object is divided into two equal parts, each part is called a half
- to explain that when an object is divided into four equal parts, each part is called a quarter

Resources:

cut-outs of different shapes, for example, square, rectangle and circle; Workbook B

Vocabulary:

half, quarter, equal,

Motivational activity:

- Ask the children to sit in a circle.
- Give each child a circle cut-out and show them how to fold it into half. (See pages 38 and 39.)
- Now give each student cut-outs of different shapes and show them how to fold them in half.
- Emphasize each time that when you divide an object into two equal parts, each part is called a half.
- Give each student another circle cut-out and ask them to fold it into half, and then half again in order to get four equal parts. Explain that each of the four equal parts is called a quarter.
- Now give them cut-outs of different shapes and ask them to fold them into 4 parts.
- Reinforce the concept at lunch time while cutting food items like an apple, orange, sandwich, or pizza.

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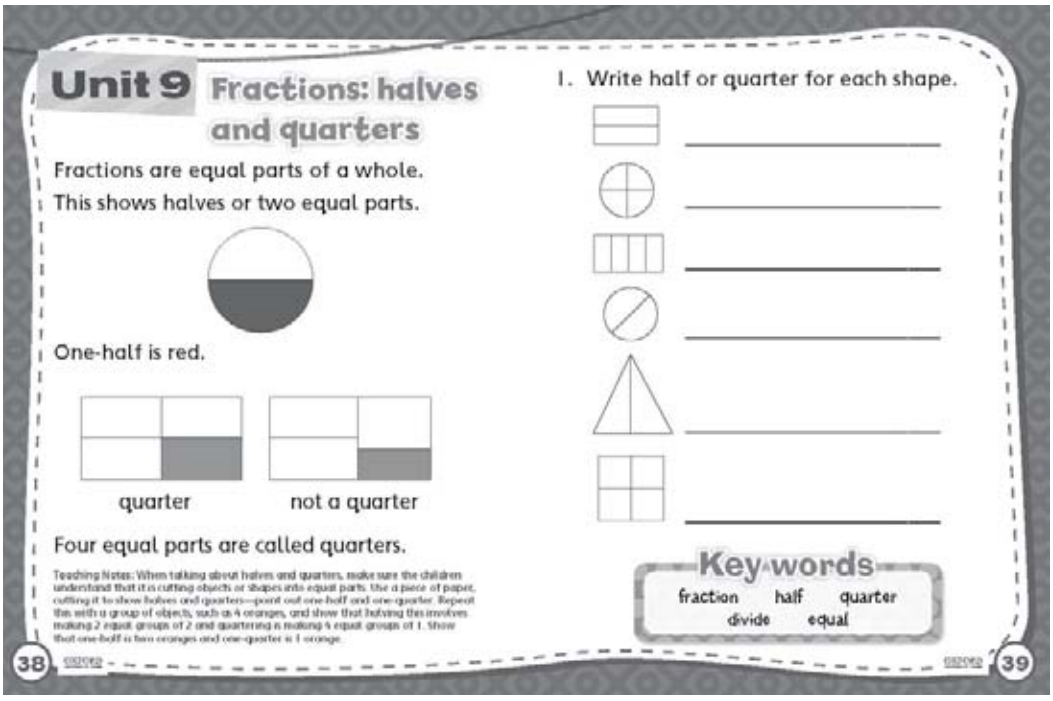
Student activity:



- Turn to page 39 of Workbook B and explain the task.

Written work:

The children should complete page 39.

Lesson 2: Fractions	**Pages:** 40 and 41	**Suggested time:** 30 minutes

Objectives:

- to provide hands-on activities for fractions
- to explain that when an object is divided into two equal parts, each part is called a half
- to explain that when an object is divided into four equal parts, each part is called a quarter

Resources:

different materials like counters, bottle caps, pebbles, etc. Workbook B

Vocabulary:

fraction, half, quarter, equal, divide

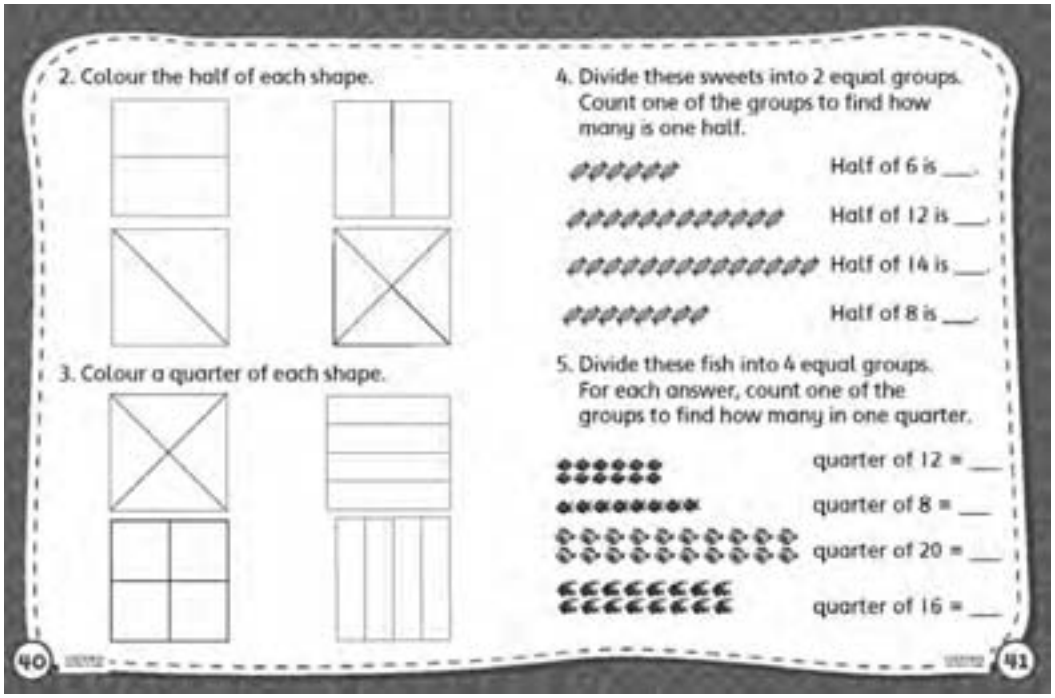
Motivational activity:

- Ask the children to sit in a circle.

- Give each student different materials and ask them to divide them into two equal halves.
- Ensure that the children have divided the material into equal quantities.

  Now ask the students to divide their materials into four equal parts. Count to ensure that there are equal quantities. Emphasize that each part is one quarter of the whole.

Student activity



- Turn to pages 40 and 41 of Workbook B and explain the tasks.

Written work:

The children should complete pages 40 and 41.

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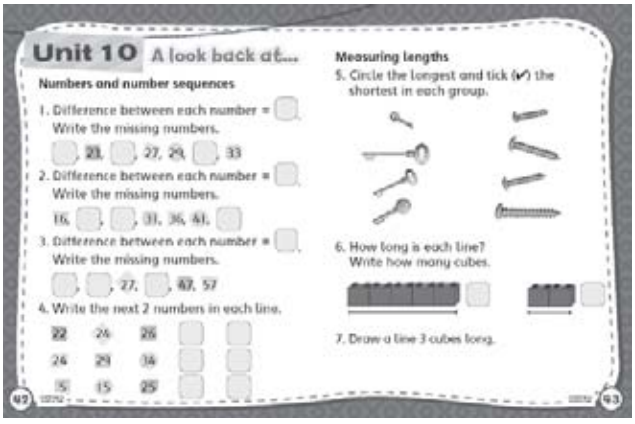
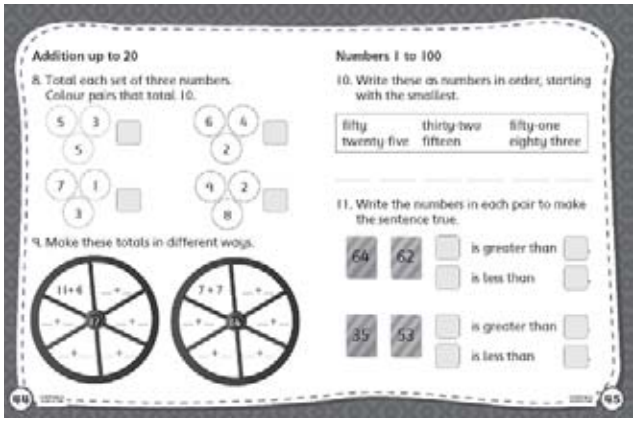
Unit 10 A look back at...

- 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 43, the topic is 'Measuring lengths'. Draw a few objects of varying lengths and ask the children to circle the longest and tick (✓) the shortest.
- Explain each page and encourage the children to complete the tasks independently.
- The revision pages can also be used for end-of-term assessments.

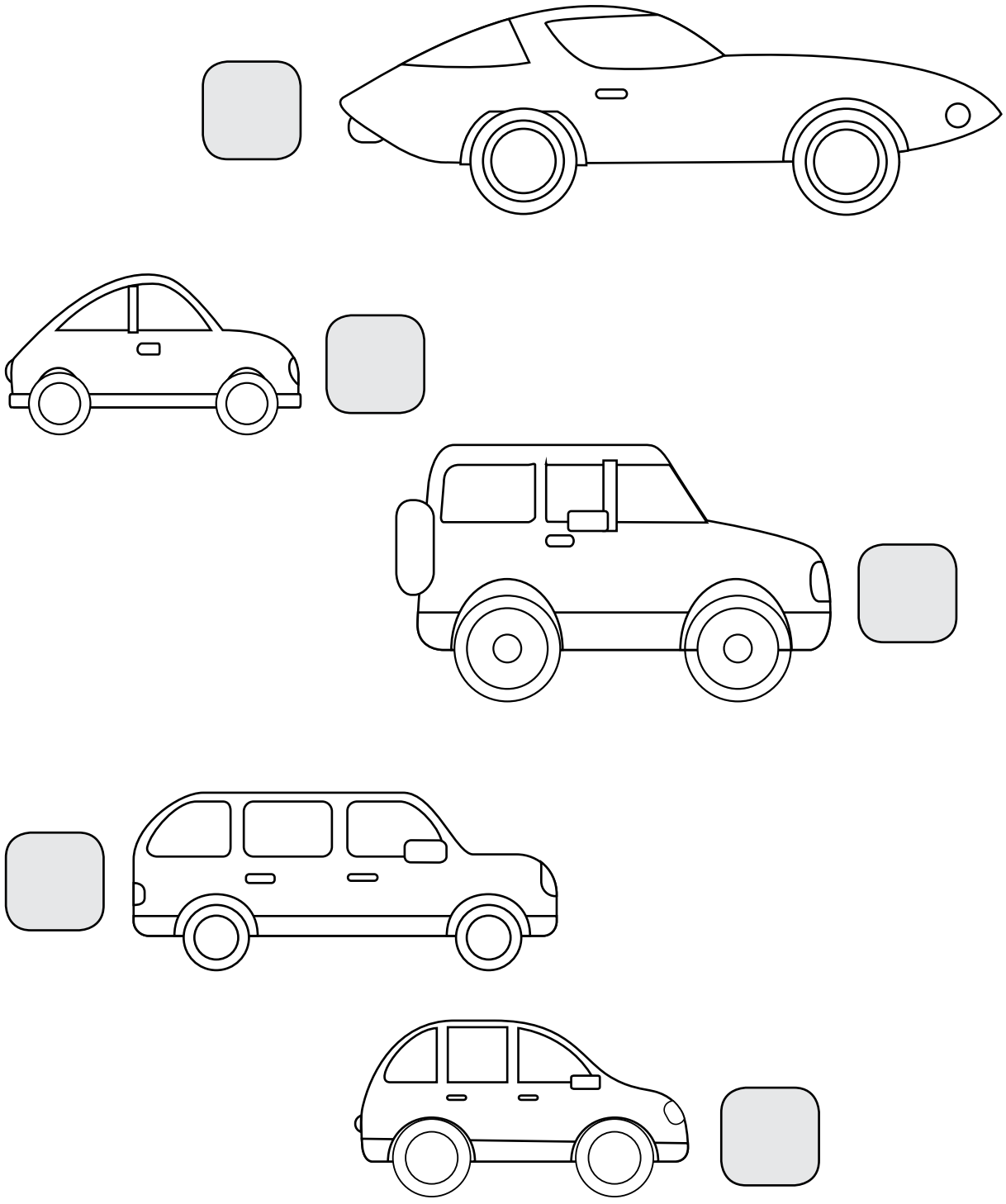




Worksheet 1

Measuring lengths

Number these cars according to their length from the shortest to the longest.



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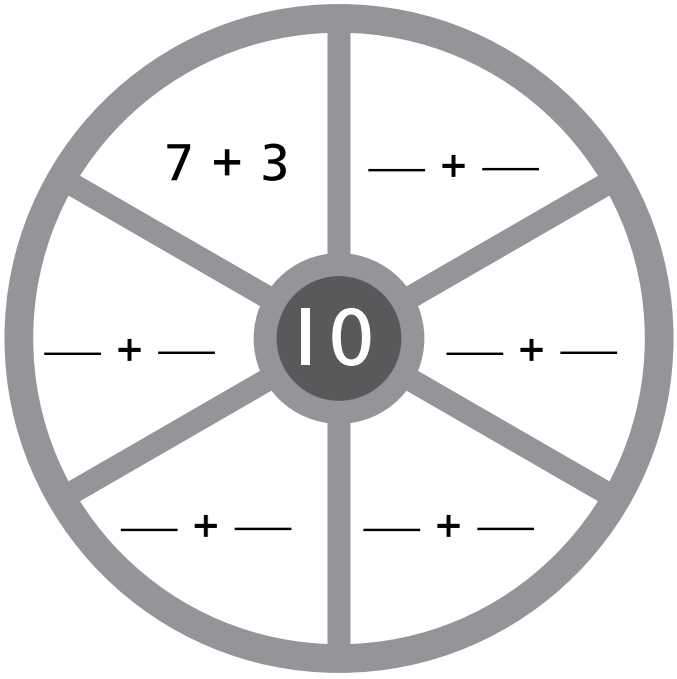
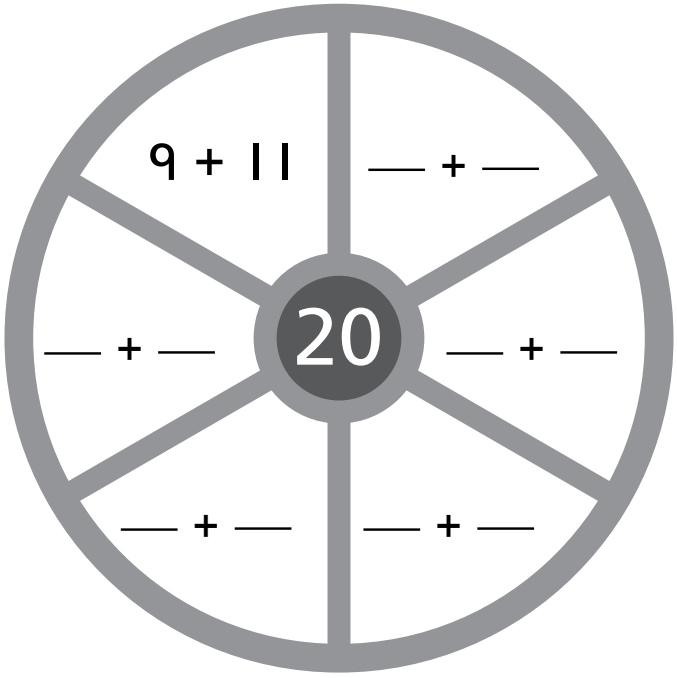
Worksheet 2

Addition up to 20

Make these totals in different ways.





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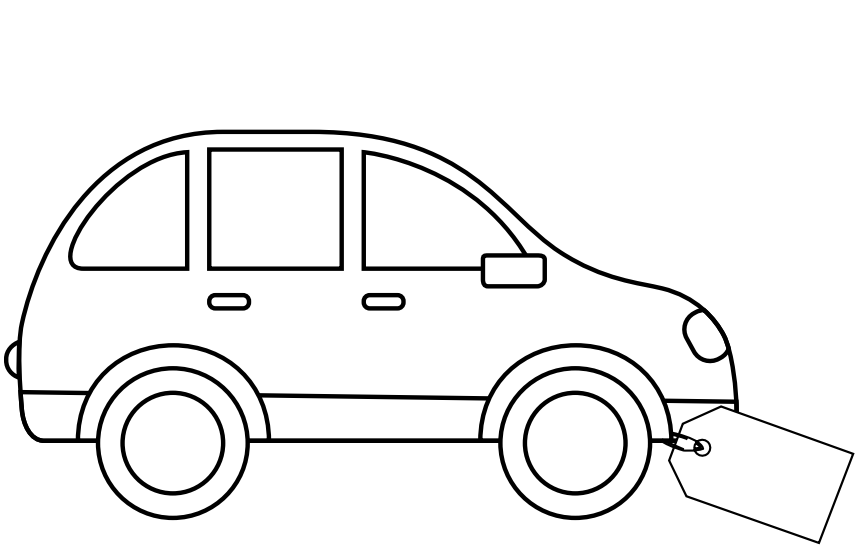
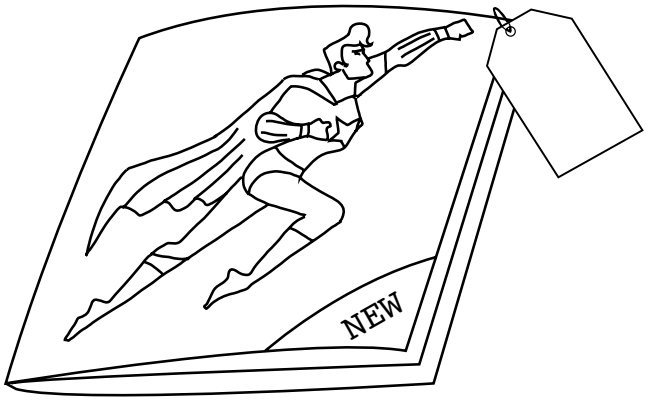
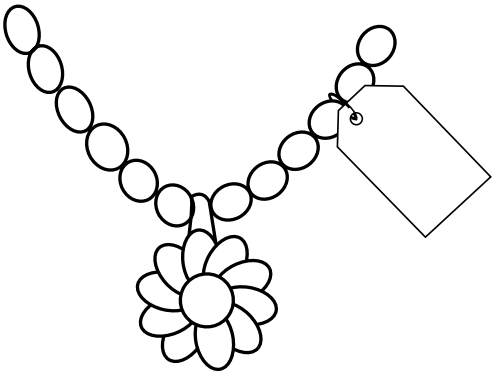
Worksheet 3

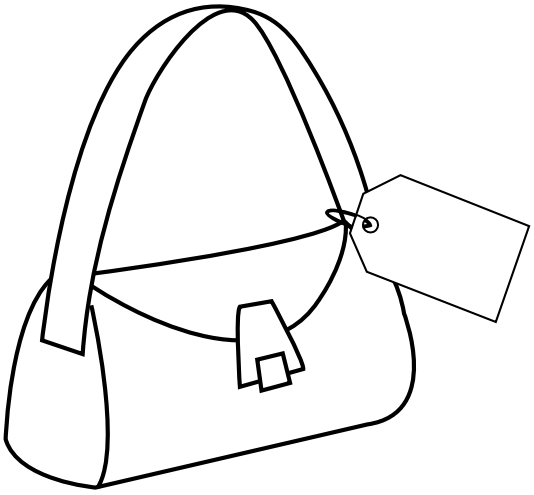
Money

Put any value on the price tags for these items.









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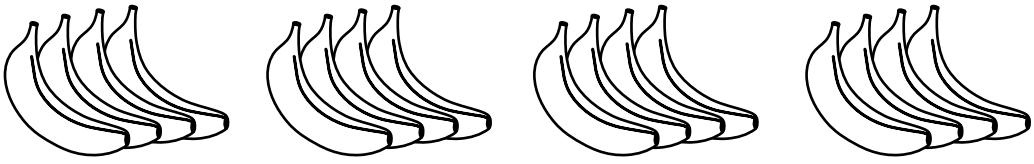
Worksheet 4

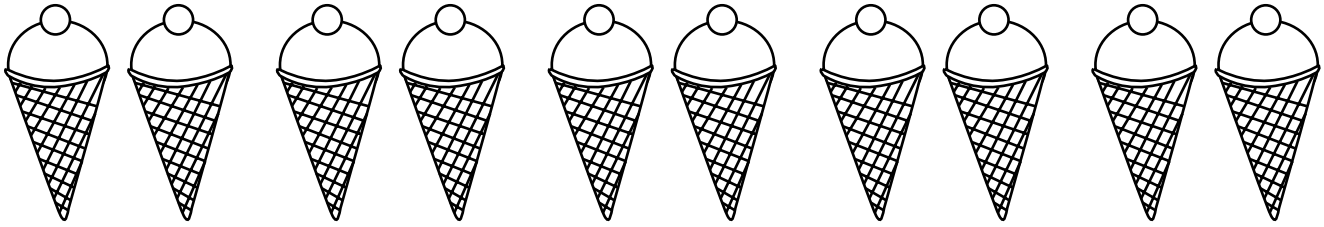
Multiplication: counting groups

Count these groups:

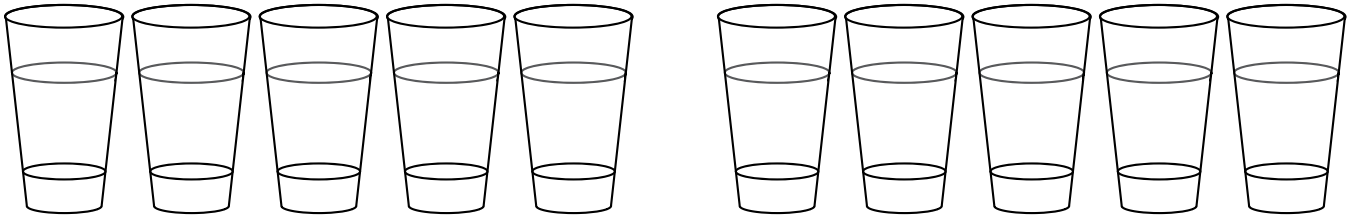
☐ groups of 3 total ☐



☐ groups of 4 total ☐



☐ groups of 2 total ☐

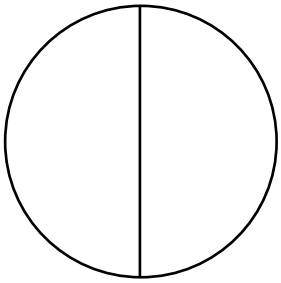
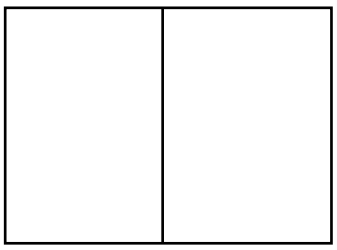
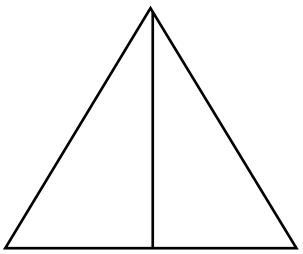
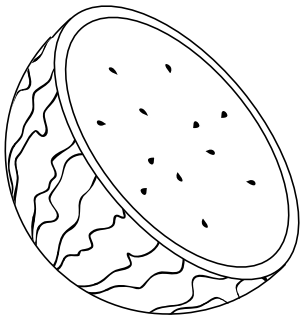
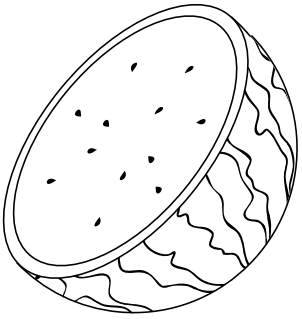
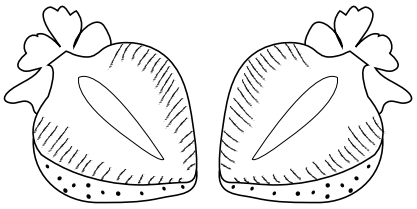


☐ groups of 5 total ☐

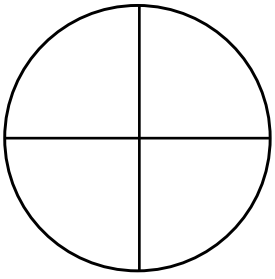
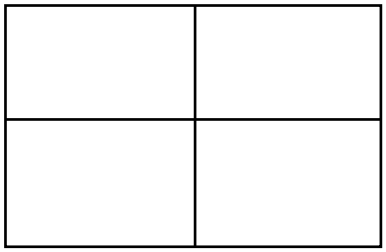
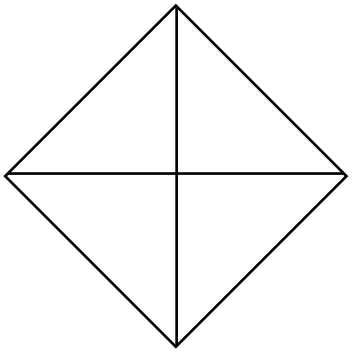
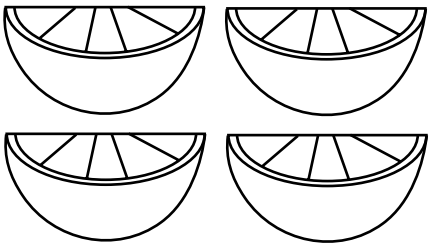
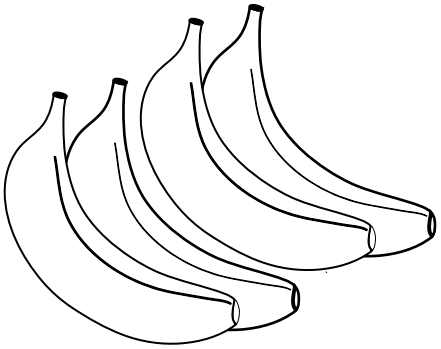
Worksheet 5

Fractions

Colour the one-halves red.

Colour the one-quarters yellow.

Notes

Notes

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