Produced with the
esspin
Education Sector
Support Progra
in Nigeria
from the Department for
international Development

Numeracy
lesson plans
Primary 2
Term 3
Asking questions

## Numeracy lesson plans Primary 2 Term 3 \ Asking questions

This is the fifth
in a series of six numeracy lesson plan publications, designed to be used throughout the three academic school terms.

The quality of education is a key element to socioeconomic development in any society. Perhaps the most critical element in ensuring quality of education is the teacher. Good teaching methodology, with the right textbooks, will quickly provide a good platform for a quality education system in Kano State.

The challenges are sometimes overwhelming when you have 5,335 schools with over 2.3 million children and 46,643 teachers. The Kano State Ministry of Education carried out a series of baseline surveys to assess classroom teachers, the role of the head teacher and the level of pupil learning outcomes.

The findings in most cases were alarmingly poor, with not much difference between qualified and unqualified teachers with respect to output. The majority of teachers were themselves victims of an education system that was in a serious downward slope.

Following this, the Kano State Ministry of Education, the State Universal Basic Education Board (SUBEB) and local government education authorities (LGEAs), supported by the Education Sector Support Programme in Nigeria (ESSPIN), embarked on a series of reforms that will help strengthen schools.

This work has focused on The lesson plans, however, classroom teaching skills in particular how to make teaching child-centred and the organisational structures needed for SUBEB and LGEA staff to provide effective support and advice to primary schools.
With many school leavers unable to read or write, a specific focus has been on improving the teaching of basic literacy and numeracy. To support this, Kano State has developed a benchmark for assessment and carefully designed literacy and numeracy lesson plans for Primary $1-3$ teachers. These plans provide a step-by-step guide to teachers, while ensuring children become active learners.
are not sufficient. Structures and processes have also been put in place so that teachers are continuously supported by both the State School Improvement Team and the LGEA-based school support officers.
We are sure that within a short time of these lesson plans being introduced, children's learning abilities will improve considerably. The materials will also enable teaching and learning to be more exciting - an important element in all classes, but in particular at the primary level. We are confident that these lesson plans will raise standards and improve the quality of children proceeding to higher levels of education.

We commend all those who have produced these lesson plans and trained our teachers to use them. We offer thanks to the UK Department for International Development (DFID) for its ongoing support to education reform in Kano State through its ESSPIN programme. Let's make every Kano school an improving school. In?
Barister Farouq lya Sambo Honourable Commissioner of Education Kano State

## HWtais

## Wada Zakari

Executive Chairman
SUBEB
Kano State

Numeracy lesson plans Primary 2

Term 3
Asking questions

## Introduction

Asking questions

Weeks
21-25

Effective questioning in the classroom

Questioning is a very useful way to find out what pupils already know and whether they understand what they are learning. It is also a strategy to measure how successful your teaching is.
When you use questioning as part of your teaching, you are involving pupils in their learning, and giving them immediate feedback. This is a good way to develop motivation.

## Pupil participation

Ask pupils to discuss questions in pairs or small groups. This is a good way to get the whole class talking. It gives pupils the chance to explain their thinking.

Explain to your class that the question is for them to discuss in a pair or a group. Tell them they have 2-3 minutes to discuss it. Ask the question and walk around the class listening to the pupils talk. You can then ask further questions to extend their thinking or help their understanding.

Thinking time

It is really important that when you ask pupils questions you count to 15 in your head before you choose someone to answer. This gives all pupils the chance to think of something to say, not just the 'quick thinkers'.

When asking questions remember to choose pupils from different areas of the classroom - choose pupils who do not have their hand up and choose pupils whose understanding you want to check.

Different questions

The main types of questions are 'closed' questions and 'open' questions. When you ask closed questions there will only be one answer, eg: 'What is $3 \times 4$ ?', 'What colour is the dog in the story?'. It is easier to ask closed questions. An open question is one that has many answers, eg: 'What do you think Musa likes doing on a Saturday?' Asking open questions makes children think of different ideas.
If pupils give you a different answer to the one you are expecting, think carefully about their reasoning it could be that it is a reasonable answer, just not the one you are expecting.

Numeracy lesson plans Primary 2

Term 3
Asking questions

## Introduction

 Low-cost teaching aids for the term
## Weeks

21-25

Properties of twodimensional (2D) shapes

A square has four equal sides and four corners. Al the sides are straight.

A rectangle has four sides and four corners. It has two short sides and two long sides. All the sides are straight.

A triangle has three corners and three sides. All the sides are straight.

A circle has one curved side and no corners.

Properties of threedimensional (3D) shapes

A cube has six flat faces the same size. Each face is a square. It has 12 straight edges and eight corners.

A cuboid has six flat faces. Four faces are rectangles and the same size. Two faces are the same size and can be rectangles or squares. It has 12 straight edges and eight corners.

A cylinder has one curved face and two faces that are circles.

A sphere has no flat faces and no straight edges. It has one curved face.

Place value cards

Make the cards pictured below.
Make one set per pair of pupils.

You could also make one large class set.

Shopping corner

Collect examples of things to buy in a shop, eg: empty cartons, packets and tins. Display them on a desk, table or in a corner. Use labels to say how much each item costs. Keep the prices simple.


Numeracy lesson plans Primary 2

Term 3
Asking questions

Introduction Songs and games for the term

Weeks
21-25

10 in the bed song

There were 10 in the bed, and the little one said, / 'Roll over, roll over!' / So they all rolled over and 1 fell out. /
(Continue as before, reducing the number each time)

There was 1 in the bed, and the little one said, / 'Goodnight' (sing slowly).

## The shape in the bag game

Hide some two-dimensional and/or three-dimensional shapes in a bag.

Dip your hand into the bag and choose a shape. Without pulling it out, describe the shape to the class according to its properties.

Ask the pupils to guess what shape you are holding.

Repeat this exercise but invite the pupils to choose a shape and describe its properties for the class to guess.

## Find my friend game

Write the numbers $0-10$ on cards. Make two number 5 cards. Make enough cards for each pupil to have one card. If there is an odd number of pupils in the class also make yourself a card.
Give out the cards and tell the pupils to find someone who has a card that will make 10 when added to the number on their own card.

Guess my number game

Think of a number and give the pupils clues to guess what it is.

Clues could involve:
1 The phrases 'more than' and 'less than', eg: if you are thinking of 73 say, 'My number is 2 less than $75^{\prime}$.
2 The terms 'odd' and 'even', eg: if you are thinking of 25 say, My number is odd and it comes between 20 and $30^{\prime}$.

## Week

Addition and
subtraction
( +
Words/phrases
square
rectangle
circle
triangle
cube
cuboid
faces
sides
corners
Hundreds
Tens
Units
add
plus
sum
increase
total
altogether
subtract
take away
minus
What's the difference?
How many less than?
Assessment
During the lesson, walk round the classroom and ask questions to see if the pupils clearly understand what you have taught them. If not, help them to understand by explaining the idea to them again, or asking other pupils to help them. You may need to use some different examples of the idea.

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Lesson

## Adding numbers from 0-99 using number lines

Week 21
Addition and subtraction Day 1

15
minutes


By the end of the lesson, most pupils will be able to:
Say the properties of a square and a rectangle.
Use a number line to add two
two-digit numbers.


## Before the lesson:

Read 'Properties of twodimensional (2D) shapes' in the introduction.

Make a large square and a rectangle for each group.
Make addition word flash cards, eg: 'add', 'plus', 'sum', 'increase', 'total', 'altogether'.

Daily practice

## Group task

Hold up the card shapes and ask the pupils to name them.
Remind the pupils that these are flat or two-dimensional (2D) shapes

Give out the shapes and ask the pupils to say how they are different.

Ask, 'How many sides has
it got?', 'Are the sides the same length?'.
Write the properties of
a square and a rectangle on the chalkboard.

Ask the groups to look at the shapes they have and check if they are correct.

| 10 minutes |  | $\begin{array}{\|l\|} 25 \\ \text { minutes } \end{array}$ | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction |  | Main activity | Plenary |
| Whole class teaching |  | Pair task | Whole class teaching |
| Ask the pupils if they can tell you other words for 'add'. <br> Hold up the flash cards and read them with the pupils. | First, expand the smallest number:$21=10+10+1$ | $\overline{\text { Write the following sums }}$ on the chalkboard: $\begin{aligned} & 23+35= \\ & 16+13= \\ & 46+32= \\ & 50+49= \\ & 48+31= \end{aligned}$ <br> Ask the pairs to solve the sums in the same way. | Ask some of the pupils to explain how they worked out their answers. |
|  |  |  |  |
|  | Draw a number line starting from the largest number. |  |  |
| Ask the pupils to explain how to solve $25+21$. |  |  |  |
|  | Add on the expanded |  |  |
|  | number by jumping along the line as shown below. $+10+10+1$ |  |  |
|  |  |  |  |
|  | $25+21=46$ |  |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

## Week 21

Addition and subtraction Day 2

Lesson

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Group task |
|  | Hold up the square and |
| Say the properties of a circle and a triangle. | ask the pupils to say some of its properties. |
| Identify the place value of Hundreds, Tens and Units. | Repeat with the rectangle. |
|  | Give out the circles and triangles and ask the groups |
| Teaching aids | to say sentences about them. |
| Before the lesson: | Write the properties of a circle and a triangle on the chalkboard. |
| Read 'Properties of twodimensional (2D) shapes' in the introduction. | Ask the groups to look at the shapes and check if they are correct. |
| Have ready one of the squares and one of the rectangles from yesterday. |  |
| Make a large circle and a triangle out of card for each group. |  |



## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

Week 21
Addition and subtraction Day 3

Lesson

## Subtracting two-digit numbers



| 10 minutes | $\left\lvert\, \begin{aligned} & 25 \\ & \text { minutes } \end{aligned}\right.$ |  |
| :---: | :---: | :---: |
| Introduction | Main activity |  |
| Pair task | Whole class teaching | Pair task |
| Give each pair of pupils a set of three-digit number place value cards. | Write on the chalkboard: 'take away', 'minus', 'how many less than?', 'subtract' and 'what's the difference between?' | Look at the following calculations on the chalkboard: |
| Say some three-digit numbers for them |  | From 19 take away 12 <br> Take away 15 from 26 <br> Subtract 24 from 36 <br> Find the difference between 45 and 13 |
| to make using their place value cards. | Read and discuss the meaning of these words. |  |
| Ask the pupils to hold up their cards and see if they are correct. | Ask the pupils if they can tell you how to subtract two-digit numbers using a number line, eg: 44-22. | Tell the pupils to complete the calculations in their exercise books using a number line. |
| Ask each pair to make numbers and read them to each other. |  |  |
|  | First, start with the largest number and expand the smallest: $22=10+10+2$ |  |
|  | Count back in jumps along the number line. |  |
|  |  |  |

10
minutes

## Plenary

## Pair task

Choose some pairs to explain their answers on the chalkboard.

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 21
Addition and subtraction
Day 4

## Subtraction of two-digit numbers

|  | 15 <br> minutes |
| :--- | :--- |
| Learning outcomes | Daily practice |
| By the end of the lesson, most <br> pupils will be able to: | Group task |
| Say some of the properties <br> of a cube. | Ask the pupils to name some <br> of the 2D shapes they have been <br> looking at. |
| Subtract two-digit numbers using <br> a number line. | Give out the cubes and ask if <br> anyone knows what they are called. |
| Teaching aids | Tell the pupils that these are <br> solid shapes and are called |
| three-dimensional (3D) shapes. |  |
| Before the lesson: | Ask the groups to name and <br> count the 2D shapes they can |
| Collect different examples <br> of cubes. | see on the cubes. |
| Read 'The properties of <br> three-dimensional (3D) shapes'. <br> the cubes. |  |
| Write the calculations in today's <br> main activity, shown opposite, <br> on the chalkboard. |  |


| 10 minutes | 25 minutes | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: |
| Introduction | Main activity | Plenary |
| Group task | Pair task | Whole class teaching |
| Ask the groups to discuss how to solve 44-20 using a number line. | Ask if anyone can remember other words for 'take away'. | Choose some pairs to say their answers and ask the class if they agree. |
| Ask them to tell you their ideas. | Write them on the chalkboard. |  |
| Remind them that they should start with the largest number and subtract the smallest number. | Ask the pupils to complete the following in their exercise books: |  |
|  | Find the difference between 47 and 32 |  |
|  | Subtract 11 from 20 |  |
|  | Take away 9 from 35 |  |
|  | From 64 take away 13 |  |
|  | Tell them to use a number line, expand the numbers and use big jumps as often as they can. |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 21
Addition and
subtraction
Day 5

Lesson

## Addition and subtraction of two-digit numbers

|  | 15 <br> minutes |
| :--- | :--- |
| Learning outcomes <br> By the end of the lesson, most <br> pupils will be able to: | Caily practice <br> Say some of the properties <br> of a cuboid. <br> Solve simple word problems <br> using addition and subtraction. <br> properties of a cube. <br> Teaching aids |
| Give out the cuboids and ask if <br> anyone knows what they are called. <br> Ask the pupils to say some |  |
| Before the lesson: | Ask them to share their ideas with <br> the class and check they have said <br> all the properties. |
| Collect different examples <br> of cubes and cuboids. |  |
| Read 'The properties of <br> three-dimensional (3D) shapes'. |  |
| Have ready a large piece of card <br> for each group. |  |
| Write the word problems in the <br> main activity on the chalkboard. |  |


| 10 minutes | 25 minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Whole class teaching |
| Ask the pupils to think how they use subtraction and addition of numbers every day, eg: buying and selling. | Read the following problems from the chalkboard and explain them to the class: <br> There are 47 oranges. 22 are <br> Ask the pupils to say whether they need to add or take away to solve each problem. |  | Ask each group to explain their answer to a different problem. |
| Ask them to say words that mean 'add' and write them on the chalkboard. | bad. How many are good? <br> There are 22 girls and 44 boys in class. How many pupils are there altogether? | Give each group a problem and ask them to write the sum in their exercise books. | they agree. |
| Repeat with words that mean 'take away'. | pupils are there altogether? <br> The teacher has 65 books. She gives 24 to the pupils. How many are left? | their exercise books. <br> Tell them to use a number line to solve the problem. |  |
|  | Sabo has 21 carrots. Ali gives him 47 more. How many carrots has Sabo got now? | Swap the problems as they finish so the groups get a turn at solving all the problems. |  |
|  | Jamila has 62 eggs. She sells 31 . How many has she got now? |  |  |




## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

## Week 22

Addition
Day 1

## Addition of two-digit numbers

|  | $\begin{array}{l\|l} 15 & \text { Game } \\ \text { minutes } \end{array}$ |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Identify 2D shapes on a cube and a cuboid. | Hold up the 2D shapes and ask pupils to say the names. |
| Add two-digit numbers that | Play 'The shape in the bag' with the 2D shapes. |
| involve crossing the Teaching aids | Remind the pupils that flat shapes are 2D and solid shapes are 3D. |
| Before the lesson: | Show the pupils the cube and the cuboid and ask what they are called. |
| Read the instructions for 'The shape in the bag' game. | Ask them to name the flat faces they can see on each 3D shape. |
| Have ready the 2D shapes and a cube and cuboid from last week. |  |

## Introduction

## Main activity

Whole class teaching
Write '10' on the chalkboard and ask the pupils to tell you as many different addition sums using two numbers they can think of to make the number 10 , eg: $6+4$.

Write their list of sums on the chalkboard as they say them.

Tell the pupils they will
need to use their knowledge
of addition sums to 10.

Pair task
Remind the pupils how to add two numbers together that involve crossing the Ten.
Demonstrate how to work out $24+28$.

Start with the largest number and expand the smallest number:
$28+24=$
$24=10+10+4$

Jump to the nearest Ten by breaking up the $4(2+2)$ and then add the rest.


Ask the pupils to use the same method to complete the following in their exercise books:
$19+8=$
$15+16=$
$18+17=$
$24+19=$
$26+35=$

## Plenary

## Whole class teaching

Invite some pupils to draw their number lines on the chalkboard.

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 22
Addition
Day 2

## Addition of two-digit numbers



By the end of the lesson, most pupils will be able to:
Say the properties of a cylinder.
Add two-digit numbers that involve crossing the Ten.

## Teaching aids

## Before the lesson:

Find an everyday object that is a cylinder, eg: a can or a tin and have ready the cube and cuboid from yesterday.

Have ready a set of three-digit number place value cards for each pair.
Read New Method Mathematics 2, page 111.

## Daily practice

## Group task

Hold up the cube and the cuboid and ask the pupils to name them.
Tell the groups to look at New Method Mathematics 2, page 111 and name the shapes.
Show the groups the cylinder and ask them to say some of its properties.

| 10 minutes | 25 minutes |  | 10 minutes | Song |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |  |
| Pair task | Group task |  | Whole class teaching |  |
| Ask the pupils to use their place value cards to make the following numbers: $\text { 103, 340, 708, 660, } 280 .$ | Ask the groups to discuss and do the following sums using a number line: $36+26$, $45+56$. | Ask all of the group members to write down all of the numbers. <br> Tell them to put the numbers | Sing '10 in the bed'. |  |
| Ask them to help you put the numbers in the correct order. | Remind the pupils how to add two numbers together that involve crossing the Ten, using their knowledge of addition to 10 and a number line. | Tell them to put the numbers in pairs to make their own addition sums. |  |  |
| Ask, 'Which is the largest number?' |  | Ask them to work out the answers using a number line. |  |  |
| Ask, 'How do you know?' (Tell them to look for the largest number in the Hundreds column first, then check the Tens column and finally the Units column.) | Ask each pupil in the group to say one number between 0 and 49. | Check that each group is using the number line correctly. |  |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 22
Addition
Day 3

Lesson
title

## Addition of two-digit numbers

|  | $\begin{aligned} & 15 \\ & \text { minutes } \end{aligned}$ |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most | Pair task |
| pupils will be able to: | Ask the pupils to name some |
| Say the properties of some | 2D shapes. |
| 3D shapes. | Ask them to name some |
| Add two-digit numbers that | 3D shapes. |
| involve crossing the Ten. Teaching aids | Show the pairs the cylinder and ask them to say some of its properties. |
| Before the lesson: | Show them the sphere and ask them to describe it. |
| Have ready a cylinder and a sphere. |  |
| Have ready a set of 0-10 number cards and a set of three-digit number place value cards for each pair. |  |
| Write the calculations in today's main activity, shown opposite, on the chalkboard. |  |



Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 22
Addition
Day 4

Lesson

## Addition of two-digit numbers

|  | 15 minutes | Game |
| :---: | :---: | :---: |
| Learning outcomes | Daily practice |  |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |  |
| Identify common 2D and 3D shapes. | Play 'The shape in the bag' with all of the 2D and 3D shapes learned in the last two weeks. |  |
| Add two-digit numbers that involve crossing the Ten. | Ask the pupils to explain to each other how they knew which shapes they were. |  |
| Teaching aids |  |  |
| Before the lesson: |  |  |
| Have ready a set of three-digit number place value cards for each pair. |  |  |
| Make addition word flash cards using the last 10 items in the weekly words/phrases list. |  |  |
| Write the word problems, shown opposite, on the chalkboard. |  |  |


| 10 minutes | 25 minutes |  | 10 <br> minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Pair task | Whole class teaching | Individual task | Pair task |
| Give out the three-digit number place value cards. | Show the addition flash cards to the pupils and read the words. | Look together at the word problems on the chalkboard. | Ask the pairs to make three-digit numbers less than 200 using their place value cards. |
| Write the following pairs of numbers on the chalkboard |  | Ask individual pupils to read them out to the class. |  |
| and ask the pupils to use their place value cards to tell you which is the largest: | 'What sum would you do if you saw any of these words?' | Ask the pupils to write the answers in their exercise books. | Ask them to read out some of their answers. |
| $\begin{aligned} & 456 \text { or } 432 \\ & 135 \text { or } 235 \\ & 356 \text { or } 346 \\ & 582 \text { or } 581 \end{aligned}$ | Display the words along the edge of the chalkboard so all the pupils can see them easily. |  |  |

## Word problems

Isa had 43 chickens and his brother had 38.
How many chickens did they have altogether?
Hadiza is 17 and her sister is 25.
What is the sum of their age?
Garba baked 48 loaves of bread and Musa baked 37.
How many loaves did they bake altogether?
There are 32 boys and 28 girls in class 2.
How many pupils are there altogether?

Numeracy
lesson plans
Primary 2
Term 3
Asking questions

Week 22
Addition
Day 5

15
15
minutes
New Method Mathematics 2

| Learning outcomes | Daily practice |
| :---: | :---: |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
|  | Ask the pupils to name some 3D shapes. |
| Name common 2D and 3D shapes. |  |
| Arrange three-digit numbers in increasing order. | Ask them to name some 2D shapes. |
| Teaching aids | Ask them to look at New Method Mathematics 2, page 109. |
| Before the lesson: | Ask them to say the names of the 3D objects they can see, eg: cube, cuboid, cylinder. |
| Have ready a set of three-digit number place value cards for each pair. |  |
| Read New Method Mathematics 2, pages 109 and 30. |  |


| 10 minutes | 25 minutes | New Method <br> Mathematics 2 |  | 10 minutes |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  |  | Plenary |
| Whole class teaching | Pair task |  | Ask the pupils to make some three-digit numbers less than 200. | Whole class teaching |
| Write '387, 492, 457' on the chalkboard and ask the pupils to say which is the smallest number and how | Explain New Method Mathematics 2, page 30, questions 40-43 to the class. |  |  | Tell the pupils the number of boys in the school and the number of girls. |
| worked it out. | Ask the pupils to write the answers in their exercise books. |  | Ask the pupils to read out some of their answers. | Ask them if there are more boys than girls. Ask them how they can use their place value cards to check the answer. |
| Ask which number is the next smallest and then |  |  | Repeat with numbers more than 750 , less than 150 and more than 890. |  |
| ask the pupils to say the numbers in order. | Go through the answers as a whole class. |  |  |  |
| Tell the pupils they have arranged them in increasing order, ie: the numbers are in order of size with the biggest last. | Give o value | ut the place ards. |  |  |

Week
23
Money


## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

## Week 23

Money
Day 1

Lesson

## Shopping lists

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Add two-digit numbers that involve crossing the Ten. | Demonstrate adding two numbers together that involve crossing the Ten, using a number line, eg: $27+34$. |
| Add together money to work out the cost of two items. |  |
| Teaching aids | Give each pair a set of place value cards. |
| Before the lesson: | Ask the pupils to do the sum in pairs and show the answer by holding up their place value cards. |
| Have ready a set of place value cards for each pair of pupils. |  |
| Set up a 'shopping corner' as explained in the introduction. |  |
| Read New Method Mathematics 2, page 91. |  |


| 10 <br> minutes | 25 <br> minutes |  | 10 minutes | New Method Mathematics 2 |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |  |
| Whole class teaching | Pair task |  | Whole class teaching |  |
| Ask the pupils to tell you any Nigerian coins or notes they know. | Ask, <br> 'If I bought 4 mangoes that cost N10 each, how much money would I need?' Repeat with 7 mangoes and 5 mangoes. | Ask: <br> 'If I bought a mango and a sweet, how much would it cost me?' <br> 'If I bought two sweets and a mango, how much would it cost me?' | Tell the pupils to look at the bank notes in New Method Mathematics 2, page 91. |  |
| Write them down on the chalkboard. |  |  | Say s the pup | me items and ask ils to say the notes |
| Ask the pupils to tell you something that you might buy for each amount and draw it by the side of the | Ask the pupils to say how they worked the answer out, ie: by counting in Tens. |  |  | eg: exercise book small tin of milk. |
| Naira. Stop at 50 Naira. | Ask how much 2 sweets, 5 sweets and 8 sweets cost if one sweet costs N5. Check that the pupils are counting in 5 s . | Tell the pairs to choose 2 items they would like to buy. Tell them to draw the items and write a price underneath each one. |  |  |
| Leave this shopping list on the chalkboard for the rest of the week. |  |  |  |  |
| Choose some pupils to go to the shopping corner and find items that cost N5 and N10. | Tell them to think of a quick way to add up the cost of 4 toys if one toy costs N20. | Choose some pairs to say the items and ask the class to find the total cost. |  |  |

## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

## Week 23

Money
Day 2

Lesson
title

## Making 50 Naira

|  | 15 <br> minutes |
| :--- | :--- |
| Learning outcomes | Daily practice |
| By the end of the lesson, most <br> pupils will be able to: | Pair task |
| Add two-digit numbers. | Ask the pairs to write 6 <br> numbers from 10-50 in their <br> exercise books. |
| Make 50 Naira using notes <br> of different denominations. | Ask them to choose two <br> numbers to add together. |
| Teaching aids | Ask them to first of all guess <br> the answer without using pencil <br> and paper. |
| Before the lesson: | Tell them to write their sums <br> in their exercise books. <br> of paper. Write N5 on 20 pieces, |
| N10 on 10 pieces, N20 on 5 pieces <br> and N50 on 2 pieces. Make a set <br> for each group. | Ask them to choose different <br> numbers to make two more <br> sums and work them out. |
| Have ready the shopping <br> list and shopping corner from <br> yesterday. |  |


| $\begin{array}{l\|l} 10 & \text { New Method } \\ \text { minutes } & \text { Mathematics 2 } \end{array}$ | 25 minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Group task |
| Tell the pupils to look at the notes in New Method Mathematics 2, page 91. <br> Ask them to tell you the different ways that Naira is written on the notes and write them on the chalkboard. | Give out the money cards to each group. | Hold up five N10 cards and ask the pupils to say how much money you have got. | Choose some pupils to go to the shopping corner and choose two items. |
|  | Write down the following amounts on the chalkboard: N35, N25, N10, N30, N40. | Write, 'N10 + N10 + N10 + $\mathrm{N} 10+\mathrm{N} 10=$ N50'. <br> Ask the groups to use their money cards to find different ways to make N50. | Ask the groups to find and hold up the money cards needed to pay for them. |
|  | Say each price and ask the groups to hold up the money cards they would need to pay for it. |  |  |
|  | Explain that there are different ways to make the same amount of money, eg: for N35 they could use seven N5 notes or one N20, one N10 and one N5 note. | Tell them to write their answers as sums in their exercise books, eg: N20 + $\mathrm{N} 10+\mathrm{N} 10+\mathrm{N} 5+\mathrm{N} 5=\mathrm{N} 50$. <br> Ask each group to write a different way to make N50 on the chalkboard. |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 23
Money
Day 3

Lesson
title

## Civing change

|  | 15 <br> minutes |
| :--- | :--- |
| Learning outcomes | Daily practice |
|  |  |
| By the end of the lesson, most <br> pupils will be able to: | Whole class teaching |
| Add two-digit numbers. | Remind the pupils that they |
| have been using a number line |  |



## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

## Week 23

Money
Day 4

Lesson

## Civing change

|  | 15 <br> minutes |
| :--- | :--- |
| Learning outcomes | Daily practice |
| By the end of the lesson, most <br> pupils will be able to: | Whole class teaching |
| Solve problems by adding <br> two-digit numbers. <br> chalkboard to the class: |  |
| Work out the change needed <br> and identify the correct notes. | 1 If Musa had 10 mangoes <br> and he bought 25 more from <br> the shop, how many would <br> he have altogether? |
| Teaching aids | Rakiya has 12 chickens and <br> her brother has 15. How <br> many chickens do they have <br> altogether? |
| Before the lesson: | Ask the pupils what they need <br> to do to work out the problems. |
| Write the problems in the daily <br> practice on the chalkboard. | Tell them to complete the <br> problems in their exercise books <br> using a number line. |
| Have ready the money cards <br> and the shopping corner from <br> yesterday. | Choose some pupils to explain <br> their answers on the chalkboard. |

Introduction 25 minutes

| Introduction |
| :--- |
| Group task |
| Give out the money cards |

to each group.
Ask them to make the following amounts using as few cards as possible: N25, N30, N40, N10.
Call out each amount and ask the groups to hold up the cards.
Check which group has the fewest cards.

## Main activity

## Whole class teaching

Tell the pupils you are going to buy a packet of sweets for N20.

Explain that you only have an N50 note and you need to work out how much change you would get.
Ask the pupils to solve the problem using a number line. Explain that they should only make jumps that are the size of the notes that are available.

## Group task

Give a pupil from each group an N50 money card and ask them to find an item in the shopping corner that costs N25.

Ask groups to find and hold up the money cards they would use as the change.

Choose a group to use their cards to draw the jumps and write the Naira on a number line.
Choose a pupil to count back the change using money cards.
Repeat with different items.

## Plenary

## Group task

Tell the pupils they have bought a toy that cost N15. They only have an N50 note.

Ask them to work out the change in their exercise books using a number line and the money cards.
Choose one group to draw and explain their number line on the chalkboard.

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

## Week 23

Money
Day 5

Lesson

## In the shop

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
|  | Tell the pupils that adding money is exactly the same as adding numbers. |
| Solve money word problems by adding two-digit numbers. |  |
| Work out the change needed from different amounts of money. | Show them how to do this on a number line, eg: N25 + N15 = N40. |
|  | +10 +5 |
| Teaching aids | $25 \quad 3540$ |
| Before the lesson: | Tell each group to choose two items from the shopping corner. |
| Have items ready in the |  |
| shopping corner. | Tell them to draw number lines in their exercise books to find the total cost. |
| Have ready the money cards for each group. |  |
| Write the problems in the plenary on the chalkboard. |  |


| 10 minutes | 25 minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Group task | Group task |  | Whole class teaching |
| Give each group a set of money cards. | Remind the pupils that giving the correct change is very important. | Ask the rest of the group to say if the customer needs change. | Read the following problems to the class: |
| Ask them to hold up money cards to make amounts as you say them, eg: N30, N45. | Put a few items from the shopping corner in front of each group. | change. <br> Tell them to work out the change needed. | 1 I spend N5. How much change will I have from N50? What notes will I get? |
| Ask the pupils to use as few cards as possible. | Tell the pupils to take it in turns to be the shopkeeper and the customer. | The shopkeeper can then count the change into the customer's hand. | 2 I spend N15. How much change will I have from N50? What notes will I get? |
|  | Tell the customer to choose an item and give the shopkeeper the money cards to pay for it. | Swap roles until everyone has had a turn. | Ask the pupils to draw number lines in their exercise books to work out the change. |




## Numeracy

 lesson plansPrimary 2

## Term 3

Asking questions

Week 24
Weight
Day 1

Lesson
title

## Heavy and light

|  | $\begin{aligned} & 15 \\ & \text { minutes } \end{aligned}$ |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching <br> Gather the pupils in a circle. |
| Count numbers above 300. | Tell them they are going to |
| Use the terms 'heavy' and 'light' to describe weight. | count in Tens. |
|  | Choose a pupil to say 310, tell the next pupil to say 320. |
| Teaching aids | Continue round the circle until everyone has had three turns. |
| Before the lesson: | Repeat, starting at 438 and |
| Have ready two pieces of paper or card for each group. | counting in 2 s . <br> Help the pupils as they cross over the Hundreds boundary, eg: 498, 500, 502 |
|  | Ask them to write '688, 670' in their exercise books. |
|  | Tell them to count on in 2 s and write the numbers down. |
|  | After 3 minutes, ask them to tell you which number they have reached. |


| 10 minutes | 25 minutes | 10 minutes |
| :---: | :---: | :---: |
| Introduction | Main activi | Plenary |
| Whole class teaching | Group task | Whole class teaching |
| Explain the meaning of weight in the pupils' local language. | Tell each group to gather a selection of objects found inside and outside the classroom. | Ask each group to say which objects they put by each label. |
| Write the words 'heavy' and 'light' on the chalkboard. |  | Ask the other groups if they agree or disagree. If they disagree, ask them to say why. |
| Explain to the pupils that these words describe the weight of an object. | Ask them to discuss whether the objects they have collected are heavy or light. |  |
| Give them an example of something heavy and something light, eg: a goat is heavy, a leaf is light. | Give out two pieces of paper or card to each group and ask them to write heavy on one and light on the other. | Put the objects in a 'weight' display at the back of the room and sort them into two piles with the labels 'light' and 'heavy'. Keep for the next day. |
| Ask the pupils to tell you other things that are light and heavy and write their ideas on the chalkboard. | Ask the groups to sort their objects and put the heavy objects by the 'heavy' label and the light objects by the 'light' label. |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

## Week 24

Weight
Day 2

Lesson
title

## Heavier and lighter

15
minutes


By the end of the lesson, most pupils will be able to:
Order three-digit numbers.
Use the words 'heavier',
'heaviest' and 'lighter', 'lightest' to compare weights.

## Teaching aids

## Before the lesson:

Have ready a set of three-digit number place value cards for each group.
Have ready the weight display from yesterday and add some heavier objects.
Have ready small pieces of paper, containers and small objects, eg: buckets, bowls, balls and stones.

## Daily practice

## Group task

Give each group a set of three-digit number place value cards.
Write a selection of three-digit numbers, randomly spread across the chalkboard.

Ask each group to use their place value cards to help them put the numbers in the correct order, from the smallest to the highest.
Tell the pupils to write the numbers in order in their exercise books.

Remind them to compare the Hundreds first, then the Tens and finally the Units.

Ask the groups to swap exercise books and discuss the correct order of the numbers.

## Introduction <br> Whole class teaching

$\overline{\text { Ask the pupils to discuss the }}$ meaning of heavy and light.

Tell them that when you have two objects you can say that one is heavier and one is lighter.
Write 'goat' and 'chicken' on the chalkboard. Ask,
'Which is heavier?',
'Which is lighter?'
Ask a pupil to hold up two objects of different weight. Ask,
'Which is heavier?',
'Which is lighter?'
Repeat with other objects and different pupils.

## Main activity

Pair task
Give each pair a piece of paper and a stone.
Ask them to drop both together and see which one lands first.

Ask,
'Why do you think the stone landed first?' (The stone is heavier.)
Give each pair two
containers. Ask them to put five large stones in one container and five small stones in the other.

## Plenary

## Whole class teaching

Tell the class that when we compare different weights we say 'lightest’ and 'heaviest'.
Ask which they think is the lightest and heaviest container.
Choose some pupils to arrange the containers in order of weight.

Ask other pupils to come and lift them and see if they agree.

## Numeracy

lesson plans
Primary 2
Term 3
Asking questions

## Week 24

Weight
Day 3

Lesson
title

## Heaviest and Iightest

|  | 15 <br> minutes |
| :--- | :--- | :--- |
| Learning outcomes | Daily practice |
| By the end of the lesson, most <br> pupils will be able to: | Pair task <br> Give each pair a set of place <br> value cards. |
| Identify the value of each <br> digit in a three-digit number. | Say any three-digit number and <br> ask the pairs to make that number <br> using their cards and hold them <br> up for you to see. |
| Use hand balancing to <br> compare weights. | Ask the pupils to tell you how <br> many Hundreds, Tens and Units <br> there are in that number. |
| Teaching aids | Repeat five times with <br> different numbers. |
| Before the lesson: |  |
| Have ready the three-digit <br> number place value cards. |  |
| Have ready the weight display |  |
| from yesterday. |  |


| 10 minutes | 25 minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Pair task | Group task | Pair task | Whole class teaching |
| Ask the pupils to look at the range of objects on display. | Demonstrate 'hand balancing' to the pupils. | Write 'heavier' and 'lighter' on the chalkboard. | Let the pupils use hand balancing to check |
| Ask them to compare the weight of the objects. | Give each group some of the objects. | Write sentences about objects in the classroom | their answers. <br> Ask if anyone can |
| Ask, 'Which is the heaviest?' 'Which is the lightest?' | Ask them to put the objects in weight order, using hand balancing. | on the chalkboard, eg: <br> The maths book is $\qquad$ than the exercise book. The key is $\qquad$ than the tin of milk. | think of a more accurate way of finding out how heavy objects are. |
| Tell the pupils to use 'heavier' and 'lighter' to describe two objects. | Ask each group, 'How did you decide the order?' | Read the sentences and ask the pupils to say if they think the missing words are 'heavier' or 'lighter'. |  |
|  |  | Ask them to complete the sentences in their exercise books. |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 24
Weight
Day 4

## Comparing weights using improvised scales



By the end of the lesson, most pupils will be able to:
Continue three-digit number sequences.

Estimate weights.

## Teaching aids

Before the lesson:
Make a pair of scales.
Make an 'Estimate, measure and compare' grid as shown left for each group.
Have ready the objects listed in the grid, including stones or sticks.

15
minutes

Daily practice

Whole class teaching
Say, '228, 230, 232'. Ask the pupils what the next number will be.
Tell them to join in as you count to 250 .

Ask them to say what you are counting in (2s).
Repeat with '455, 460, 465'.
Write the following number sequences on the chalkboard:
678, 680, 682,
703, 706, 709,
560, 570, 580,
655, 660, 665,
$\qquad$
 655, 660, 665, $\square, \square, \square$ Ask them to complete the number sequences in their exercise books.

| 10 minutes | 25 minutes |  | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task | Whole class teaching | Group task |
| Ask the pupils to look at the scales you have made. | Give each group an 'Estimate, measure and | Choose some pupils to use the improvised scales. | Ask the groups if the answers were bigger or |
| Put some objects of different sizes or quantities | compare' chart and some stones or sticks. | Put an object on one side of the scales and | smaller than their estimate |
| on each side of the scales. | Explain the word 'estimate' | fill up the other side with |  |
| Ask the pupils to comment on the weights on the | and tell the groups to estimate how many sticks | stones or sticks until both sides balance. |  |
| scales, using the words 'heavier' and 'lighter'. | or stones will weigh the same as each object. | Count the stones or sticks and tell the pupils to write |  |
|  | Tell them to write their estimates on the chart. | it in on their chart. |  |
|  | Ask each group to read out their estimates and discuss. | Repeat until all the objects have been weighed. |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 24
Weight
Day 5

Lesson
title

## The kilogram

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Group task |
|  | Give each group a sum card and ask them to complete it in their exercise books. |
| Add two-digit numbers. |  |
| Estimate weights in kilograms. |  |
| Teaching aids | Swap the cards round so that each group does two or three sums. |
| Before the lesson: | Choose some groups to say the answers and ask the class |
| Write the following sums on flash cards: '48 + $26=$ =', '32 + 59 =', <br> '37 + 47 =', '48 + 48 =', '37 + $18=$ =' | if they are correct. |
| Read New Method Mathematics 2, page 79 and try to make a simple seesaw using a drum and a piece of wood. |  |
| Find some scales and a kilogram weight or an object that weighs exactly a kilogram, eg: a yam or a stone. |  |


| $\begin{array}{l\|l} 10 & \text { New Method } \\ \text { minutes } & \text { Mathematics 2 } \end{array}$ | 25 minutes |  | $\left\|\begin{array}{l\|l}10 \\ \text { minutes }\end{array}\right\| \begin{aligned} & \text { Song }\end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Whole class teaching |  | Whole class teaching |
| Ask the pupils to look at the picture of a seesaw in New Method Mathematics 2, page 79. | Tell the pupils that we use kilograms to weigh accurately. | Choose some pupils to fetch objects that they estimate are heavier than a kilogram. | Sing '10 in the bed' with the class. |
| Discuss and explain the seesaw. Ask if anyone has ever been on one. | Pass the kilogram weight around and let them all hold it. | Write 'heavier than a kilogram' on the chalkboard and list the objects underneath. |  |
| Take two objects from the weight display. <br> Use your seesaw to check which is heavier and which | Choose some pupils to fetch objects from the weight display that they estimate are lighter than a kilogram. | objects underneath. <br> Show the pupils the scales and explain how they work. <br> Use the scales to weigh |  |
| is lighter. | Write 'lighter than a kilogram' on the chalkboard and list the objects underneath. | the objects. <br> Read the weights to the nearest kilogram and ask the pupils if their estimates were correct. |  |



Words/phrases
Assessment
capacity containers less least more most spoonful bottleful litre

During the lesson, walk round the classroom and ask questions to see if the pupils clearly understand what you have taught them. If not, help them to understand by explaining the idea to them again, or asking other pupils to help them. You may need to use some different examples of the idea.

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 25
Capacity
Day 1

Lesson

## Taller and smaller

## Learning outcomes <br> By the end of the lesson, most pupils will be able to:

Order numbers from 0-100.
Compare different capacities.

## Teaching aids

## Before the lesson:

Read the instructions for the 'Guess my number' game in the introduction.

Read New Method Mathematics 2, page 76.
Have ready a variety of small containers, enough for each group to have two containers with different capacities, and pieces of paper to label them.

15
minutes

Daily practice

## Whole class teaching

Gather the pupils in a circle.
Start at 45 and tell them to count forwards around the circle.
Stop at 93 and ask them to count backwards around the circle.
Play 'Guess my number' with the class.


Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 25
Capacity
Day 2

Lesson
Longer and shorter

15
minutes


Daily practice

By the end of the lesson, most pupils will be able to:
Say the number bonds to 10.
Order containers according
to capacity.

## Teaching aids

Before the lesson:
Read the instructions for the 'Find my friend' game in the introduction and have ready number cards for the game.
Have ready the containers from yesterday, a bucket of water and a large spoon for each group.

## Pair task

Play 'Find my friend' and ask 'friends' to sit down together.
Choose some pairs to say their numbers and write them on the chalkboard.
Remind the pupils that these are the number bonds to 10 .
Write the following sums on the chalkboard:
$20+\square=100$
$30+\square=100$
$40+\square=100$
$50+\square=100$
Ask the pupils to complete the sums in their exercise books.

Explain that these sums are number bonds to 100 and ask if anyone can see how they are similar to number bonds to 10 .

| 10 minutes |  | 25 minutes |  | 10 minutes |
| :---: | :---: | :---: | :---: | :---: |
| Introduction |  | Main activity |  | Plenary |
| Group task |  | Whole class teaching |  | Whole class teaching |
| Give each group the containers and labels from yesterday. | Ask them to write the number of spoonfuls used on the labels. | Ask each group to bring their containers to the front and arrange them in a line. | Place this container at the beginning of the line. <br> Ask them which holds | Ask the pupils to draw two different containers in their exercise books |
| Tell them they are going to check if the labels are correct. | Ask each group to say what they have found out. Tell them to use the words | Tell the pupils when we compare the amount two containers can hold we say, | the least and place this at the end of the line. | under each one. <br> Ask them to draw three |
| Give each group a bucket and spoon. | 'less than' and 'more than'. | 'less' or 'more' but when we compare more than two containers we say, "least’ | help you place the rest of the containers in order | containers and write 'most' and 'least' under two of them. |
| Tell them to spoon water into the containers and count how many they use until it is full. |  | and 'most'. <br> Ask the pupils to look at the containers and labels and say which holds the most. |  |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 25
Capacity
Day 3

Lesson
title

## Estimating capacity

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Add 9 to numbers quickly. | to add 10. Repeat with other |
| Estimate the capacity of containers. | numbers. |
| Teaching aids | Remind the pupils that it is easy to add 10 as they only have to change the Ten digit. |
| Before the lesson: | Write ' 28 +9' on the chalkboard and ask if anyone knows a quick |
| Have ready a large bucket or container of the same size for each group. | way to add this up. <br> Explain that they can add 10, ie: $28+10=38$. |
| Have ready a variety of smaller containers for each group, including a cup. | Explain that 10 is one more than 9, so they must now take away 1 , ie: $38-1=37$ so $28+9=37$. |
| Have ready several large containers of water. | Repeat with other numbers, adding 9 each time. |


| 10 minutes | 25 minutes |  | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Whole class teaching |
| Tell the pupils to look at the containers in the 'capacity' display. | Give each group a bucket and a smaller container. <br> Ask them to estimate | Tell them to count the number of times they pour the water in. | Collect all the containers and ask the pupils to help you arrange them in order |
| Fill one cup with water and pour it into a bucket. | how many of the smaller containers will fill the bucket. | Ask each group to say how many containers it took to fill | Use the words 'least' and |
| Ask the pupils to look at the level of the water. | Ask them if each group will have the same answer. | the bucket. <br> Discuss how close they | 'most' and 'less than' and 'more than' as you do this. |
| Choose some pupils to show you where they think the level will be when you add another cup of water. | (No, because some containers are smaller). <br> Ask them to share their estimates and discuss. | were to their estimates. |  |
| Repeat twice with the same container and then with different containers. | Ask each group to use the smaller container to fill the bucket. |  |  |

Numeracy
lesson plans
Primary 2

## Term 3

Asking questions

Week 25
Capacity
Day 4

Lesson
title

## A litre

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
|  | Write '23+9', '67+9' and |
| Add and subtract 9 quickly. | ' $78+9$ ' on the chalkboard. |
| Identify containers that hold more or less than a litre. | Choose a pupil to demonstrate the quick way to add 9. |
| Teaching aids | Write '76-9' on the chalkboard and ask if anyone can suggest a quick way to work it out. |
| Before the lesson: | Tell the pupils they can take away 10, ie: 76-10 = 66 . |
| Write the following sums on the chalkboard: $\begin{aligned} & 56-9= \\ & 73-9= \end{aligned}$ | Tell them that 10 is 1 more than 9 so they must add 1, ie: $66+1=67$ so $76-9=67$. |
| $88-9=$ | Repeat with the sums written |
| $\begin{aligned} & 67-9= \\ & 81-9= \end{aligned}$ | on the chalkboard. |
| Have ready a litre bottle, a bucket of water and an empty bucket. |  |


| 10 minutes |  | 25 minutes |  |
| :---: | :---: | :---: | :---: |
| Introduction |  | Main activity |  |
| Whole class teaching |  | Group task |  |
| Show the pupils the containers they used to measure the capacity of the buckets yesterday. | Choose some pupils to help you fill the bottle and pour it into the bucket. <br> Ask them all to keep | Choose some pupils to fetch containers from the capacity display that they estimate hold less than a litre. | Check the estimates by filling the containers with water from the litre bottle. <br> Tell the groups to discuss |
| Ask them why the results were different. | a count of how many bottlefuls you use. | Write 'less than a litre' on the chalkboard and list the objects underneath. | Tell the groups to discuss the results and compare them with their estimates on the chalkboard. |
| Tell them that we use litres to weigh accurately. |  |  |  |
| Show them the litre bottle. <br> Ask how many litres they think the bucket will hold. |  | Choose some pupils to fetch containers that they estimate hold more than a litre. |  |
|  |  | Write 'more than a litre' on the chalkboard and list the objects underneath. |  |

## Plenary

## Whole class teaching

Ask the pupils to help you arrange the containers in order. Put the container with the least capacity at the front of the line.

## Numeracy

lesson plans
Primary 2

## Term 3

Asking questions

Week 25
Capacity
Day 5

Lesson

## Estimating a litre



By the end of the lesson, most pupils will be able to:
Use a variety of strategies to work out simple sums.

Identify containers that hold more or less than a litre.

## Teaching aids

## Before the lesson:

Write the following sums on the chalkboard:
$30+60=$
$28+16=$
$67+9=$
$56-9=$
$65+28=$
Have ready some drinks bottles, cans and cartons that contain 1 litre or more and a bucket of water.
Have ready a litre bottle of sand for each group.

15
minutes

| 10 minutes | 25 minutes | 10 minutes |
| :---: | :---: | :---: |
| Introduction | Main activity | Plenary |
| Whole class teaching | Group task | Whole class teaching |
| Show the pupils the drinks bottles, cans and cartons. | Give each group a litre bottle full of sand. | Collect the containers that held more than a litre |
| Ask them what is used to measure the amount of drink they contain, ie: a litre. | Ask them to select some containers from the capacity display that they think hold | of sand. <br> Ask the pupils if they think they will hold more than |
| Choose some pupils to help you put the containers in order of capacity. | more than a litre of sand. <br> Tell them to check by pouring the bottleful | a litre of water. <br> Check by pouring a bottleful of water in each one. |
| Use the terms 'least', 'most', 'less than' and 'more than'. | of sand into the container. <br> Ask each group to say which containers held more than a litre of sand. | Tell the class that a litre is the same amount, whether it is liquid like water or solid like sand. |

## Credits

Special thanks go to:

In 2008, Kwara State carried out a Teachers' Development Needs Assessment for all primary school teachers. This showed that most teachers in Kwara State did not have strong literacy and numeracy skills. The Kwara State Government responded by developing a strategy to support existing teachers and improve new teachers' pre-service training.
These literacy and numeracy lesson plans, developed by the Kwara State School Improvement Team, were part of that strategy. Two years after introducing these plans alongside the training and support programme, Kwara State began to see strong improvements in teachers' teaching skills and pupils' learning outcomes.

The Honourable Commissioner and staff of the Kwara State Ministry of Education and Human Capital Development, as well as the Kwara State Universal Basic Education Board for their support and valuable input and for agreeing to share these plans with other states.

The UK's Department for International Development (DFID) and the DFID-funded ESSPIN programme for their input, focus, guidance and constructive criticism throughout the development of the plans.

Thanks also go to the teachers of Kwara State who have used these plans to bring about change in their classrooms.


