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Kano State Government

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Type of lesson plans/ Grade Term/ Learning theme

Numeracy lesson plans Primary 2

Term 3 Asking questions

## Numeracy lesson plans Primary 2 Term 3 Asking questions

Weeks 21—25

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

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### Introduction

The quality of education is a key element to socioeconomic development in any society. Perhaps the most critical element in ensuring quality of education to output. The majority of 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 vou 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 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 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 auide to teachers, while ensuring children become active learners.

The lesson plans, however, 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.

**Barister Faroug Iya Sambo** Honourable Commissioner of Education Kano State

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Wada Zakari **Executive Chairman SUBEB** Kano State

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Numeracy lesson plans Primary 2

Term 3 Asking questions

# Introduction Asking questions

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Weeks 21—25

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### Effective questioning in the classroom

### **Pupil participation**

### Thinking time

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### **Different questions**

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. 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.

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. 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 x 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.

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Numeracy lesson plans Primary 2

Term 3 Asking questions

### Introduction Low-cost teaching aids for the term



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Properties of two- dimensional (2D) shapes	Properties of three- dimensional (3D) shapes	Place value cards	Shopping corner
A <mark>square</mark> has four equal sides and four corners. All	A cube has six flat faces the same size. Each face is	Make the cards pictured below.	Collect examples of things to buy in a shop,
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.	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	Make one set per pair of pupils. You could also make one large class set.	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.
	and no straight edges. It has one curved face.		Fen cards Unit cards

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Numeracy lesson plans Primary 2

Term 3 Asking questions

### Introduction Songs and games for the term

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10 in the bed song	The shape in the bag game	Find my friend game	Guess my number game
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)	<ul> <li>Hide some two-dimensional and/or three-dimensional shapes in a bag.</li> <li>Dip your hand into the bag and choose a shape. Without pulling it out, describe the shape to the class according to its many participant.</li> <li>Without pulling it out, describe the shape to the class according to its many participant.</li> <li>Without pulling it out, describe the shape to the class according to its many participant.</li> <li>Without pulling it out, describe the shape to the class according to its many participant.</li> <li>Without pulling it out, describe the shape to the class according to its many participant.</li> </ul>	<ul> <li>Think of a number and give the pupils clues to guess what it is.</li> <li>Clues could involve:</li> <li>1 The phrases 'more than' and 'less than', eg: if you are thinking of 73 say, 'My number</li> </ul>	
There was 1 in the bed, and the little one said, / 'Goodnight' (sing slowly).	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.	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.	is 2 less than 75'. 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'.

Week 21 Addition and subtraction

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### Words/phrases

### Assessment

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?

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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.  $( \bullet )$ 

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#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 21 Addition and subtraction Day 1

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### Adding numbers from 0—99 using number lines

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By the end of the lesson, most	Group task
<b>pupils will be able to:</b> Say the properties of a square and a rectangle. Use a number line to add two	Hold up the card shapes and ask the pupils to name them. Remind the pupils that these are flat or two-dimensional
two-digit numbers. Teaching aids	(2D) shapes. Give out the shapes and ask the pupils to say how they are different.
Before the lesson: Read 'Properties of two- dimensional (2D) shapes' in the introduction. Make a large square and a rectangle for each group.	Ask, 'How many sides has it got?', 'Are the sides the same length?'. Write the properties of
	<ul> <li>a square and a rectangle on the chalkboard.</li> <li>Ask the groups to look at the shapes they have and check if they are correct.</li> </ul>
Make addition word flash cards, eg: 'add', 'plus', 'sum', increase', 'total', 'altogether'.	

15 minutes

10 minutes		25 minutes	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'. Hold up the flash cards and read them with the pupils. Ask the pupils to explain how to solve 25 + 21.	First, expand the smallest number: 21 = 10 + 10 + 1 Draw a number line starting from the largest number. Add on the expanded number by jumping along the line as shown below. +10 +10 +1 25 35 4546 25 + 21 = 46	Write the following sums on the chalkboard: 23 + 35 = 16 + 13 = 46 + 32 = 50 + 49 = 48 + 31 = Ask the pairs to solve the sums in the same way.	Ask some of the pupils to explain how they worked out their answers.

Repeat with 34 + 35 =

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### 15 Lesson minutes title **Daily practice** Hundreds, Tens Learning outcomes and Units By the end of the lesson, most **Group task** pupils will be able to: Hold up the square and Say the properties of a circle and ask the pupils to say some of its properties. a triangle. Identify the place value of Repeat with the rectangle. Hundreds, Tens and Units. Give out the circles and triangles and ask the groups **Teaching aids** to say sentences about them. Write the properties of a circle and a triangle on Before the lesson: the chalkboard. Read 'Properties of two-Ask the groups to look at dimensional (2D) shapes' in the shapes and check if they the introduction. 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 2

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10 minutes		25 minutes	10 minutes
Introduction		Main activity	Plenary
Whole class teaching		Whole class teaching	Pair task
Ask the pupils to count in groups of 100 up to 1000.	Say a number between 100 and 999 and ask the pupils to write it down in	Choose some pupils to help you work out 48 + 31 using a number line.	Ask the pupils to show their work to a partner and discuss their answers.
Remind them that numbers between 100 and 999 are three-digit numbers.	their exercise books, with H, T and U in the correct place above each digit.	Remind them how to expand numbers: 31 is 3 Tens and	Choose some pairs to explain their answers on
Write '436' on the chalkboard with H T U above it.	Ask them to show the rest of the class.	1 Unit, ie: 10 + 10 + 10 + 1. Write the following sums on the chalkboard:	the chalkboard.
Ask the pupils to read the number and then tell you how many Hundreds, how many Tens and how many Units it has.	-	56 + 33 = 36 + 42 = 21 + 48 = 43 + 45 = 27 + 41 = 54 + 43 =	
		Ask the pupils to complete the sums in their exercise	

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books using number lines.

#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 21 Addition and subtraction Day 3

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## Subtracting two-digit numbers

### Learning outcomes **Daily practice** By the end of the lesson, most Whole class teaching pupils will be able to: Ask some pupils to draw Identify the properties of common a square, rectangle, triangle and circle on the chalkboard. 2D shapes. Subtract two-digit numbers Ask the class if they are correct. using a number line. Choose some pupils to say the properties of each shape. **Teaching aids** Play 'The shape in the bag'. Before the lesson: Read instructions for 'The shape in the bag' game and have ready a bag containing a square,

15

minutes

Game

Make a set of three-digit place value cards for each pair.

a rectangle, a triangle and a circle.

Write the calculations in today's main activity, shown opposite, on the chalkboard.

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10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Pair task	Whole class teaching	Pair task	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	Look at the following calculations on the chalkboard: From 19 take away 12	Choose some pairs to explain their answers on the chalkboard.
Say some three-digit numbers for them	difference between?'	Take away 15 from 26	
to make using their place value cards.	ds meaning of these words	Subtract 24 from 36 Find the difference between	
Ask the pupils to hold up their cards and see if they	Ask the pupils if they can tell you how to subtract	45 and 13	
are correct.	two-digit numbers using	Tell the pupils to complete the calculations in their	
Ask each pair to make	- a number line, eg: 44 – 22.	exercise books using	
numbers and read them to each other. Each other. First, start with the largest number and expand the smallest: 22 = 10 + 10 + 2	a number line.		
	Count back in jumps along the number line.	_	
	-2 -10 -10 22 24 34 44		

#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 21 Addition and subtraction Day 4

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## Subtraction of two-digit numbers

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

15 minutes

10 minutes	25 minutes	10 minutes
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	Ask the pupils to complete the following in their exercise books:	
smallest number.	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.	

#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 21 Addition and subtraction Day 5

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### Addition and subtraction of two-digit numbers

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

minutes

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10 minutes	25 minutes		10 minutes
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. Ask them to say words that mean 'add' and write them on the chalkboard. Repeat with words that mean 'take away'.	Read the following problems from the chalkboard and explain them to the class: There are 47 oranges. 22 are bad. How many are good? There are 22 girls and 44 boys in class. How many pupils are there altogether? The teacher has 65 books. She gives 24 to the pupils. How many are left? Sabo has 21 carrots. Ali gives him 47 more. How many carrots has Sabo got now? Jamila has 62 eggs. She sells 31. How many has she got now?	Ask the pupils to say whether they need to add or take away to solve each problem. Give each group a problem and ask them to write the sum in their exercise books. Tell them to use a number line to solve the problem. Swap the problems as they finish so the groups get a turn at solving all the problems.	Ask each group to explain their answer to a different problem. Ask the other groups if they agree.

Week 22 Addition

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Words/phrases

Assessment

### square rectangle circle triangle cube cuboid cylinder sphere **Hundreds** Tens Units addition add plus sum increase total altogether find the sum of add together How many?

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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.

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Lesson

title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 1

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## Addition of two-digit numbers

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By the end of the lesson, most pupils will be able to:	Whole class teaching	
dentify 2D shapes on a cube	Hold up the 2D shapes and ask pupils to say the names.	
and a cuboid.	Play 'The shape in the bag' with	
Add two-digit numbers that	the 2D shapes.	
involve crossing the Ten.	Remind the pupils that flat shapes are 2D and solid shapes are 3D.	
Teaching aids		
	Show the pupils the cube and	
Before the lesson:	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	
Have ready the 2D shapes and a cube and cuboid from last week.	_ 3D shape.	

Game

minutes

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10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
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.	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 =	Jump to the nearest Ten by breaking up the 4 (2 + 2) and then add the rest. +10 $+10$ $+2$ $+228 38 48 50 5228 + 24 = 52Ask the pupils to use thesame method to complete$	Whole class teaching Invite some pupils to draw their number lines on the chalkboard.
Tell the pupils they will need to use their knowledge of addition sums to 10.	24 = 10 + 10 + 4	the following in their exercise books: 19 + 8 = 15 + 16 = 18 + 17 = 24 + 19 = 26 + 35 =	

#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 2

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## Addition of two-digit numbers

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By the end of the lesson, most	Group task
pupils will be able to:	Hold up the cube and the cuboi
Say the properties of a cylinder.	and ask the pupils to name ther
Add two-digit numbers that involve crossing the Ten.	Tell the groups to look at New Method Mathematics 2, page 1 <sup>-</sup> and name the shapes.
Teaching aids	Show the groups the cylinder and ask them to say some of its properties.
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.	

New Method

minutes Mathematics 2

10 minutes	25 minutes		10 Song minutes
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:	Ask the groups to discuss and do the following sums using a number line: 36 + 26,	Ask all of the group members to write down all of the numbers.	Sing '10 in the bed'.
103, 340, 708, 660, 280. Ask them to help you put the numbers in the	45 + 56. 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.	
correct order. 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	Ask each pupil in the group to say one number between 0 and 49.	Check that each group is using the number line correctly.	

finally the Units column.)

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### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 3

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## Addition of two-digit numbers

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Learning outcomes	Daily practice	
By the end of the lesson, most pupils will be able to:	Pair task	
Say the properties of some 3D shapes.	Ask the pupils to name some 2D shapes. Ask them to name some	
Add two-digit numbers that involve crossing the Ten.	3D shapes. Show the pairs the cylinder and ask them to say some of its properties. Show them the sphere and ask them to describe it.	
Teaching aids Before the lesson:		
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.		

15 minutes

10 minutes		25 minutes		10 Song minutes
Introduction		Main activity		Plenary
Whole class teaching		Pair task		Whole class teaching
Show the pupils how to put 120 and 152 in order according to size.	Explain that both numbers are the same in the Hundreds and the	Give each pair a set of 0—10 number cards.	Choose some pupils to help as you demonstrate how to use a number line to work	Sing '10 in the bed' with the class.
Tell them that as the Hundreds are the same,	Tens but 9 Units is more than 5 Units, so 339 is the larger number.	Call out a number from 1—10 and ask the pairs to hold up a number card to add to it to make 10.	irs out 26 + 34, which involves card crossing the Ten.	
they need to look at the Tens. Explain that 5 Tens is more than 2 Tens, so 152 is the larger number.	Write pairs of three-digit numbers on the chalkboard and ask the pupils to work	Ask them to write in their exercise books as many pairs of numbers that make	Ask the pupils to complete the following in their exercise books using a number line: 24 + 18 =	
Vrite the following numbers on the chalkboard: 339, 335.	10 as they can.	36 + 15 = 47 + 14 = 73 + 19 = 66 + 25 =		

### Numeracy lesson plans

**Primary 2** 

Term 3 Asking questions

Week 22 Addition Day 4

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## Addition of two-digit numbers

Lesson

title

### Learning outcomes **Daily practice** By the end of the lesson, most Whole class teaching pupils will be able to: Play 'The shape in the bag' Identify common 2D and with all of the 2D and 3D shapes learned in the last two weeks. 3D shapes. Add two-digit numbers that Ask the pupils to explain involve crossing the Ten. 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.

15 Game minutes

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10 minutes	25 minutes		10 minutes	
Introduction	Main activity		Plenary	
Pair task	Whole class teaching	Individual task	Pair task	
number place value cards. Write the following pairs of numbers on the chalkboard and ask the pupils to use their place value cards to tell you which is the largest: 456 or 432 135 or 235 356 or 346 582 or 581	Show the addition flash cards to the pupils and read the words.	problems on the chalkboard. three-or Ask individual pupils to read them out to the class. Ask the pupils to write	Ask the pairs to make three-digit numbers less than 200 using their place	
	Ask, 'What sum would you do if you saw any of these words?'		value cards. Ask them to read out some of their answers.	
	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?

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### Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 5

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### Ordering threedigit numbers

Lesson

title

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Learning outcomes	Daily practice	
<b>By the end of the lesson, most pupils will be able to:</b> Name common 2D and 3D shapes.	Whole class teaching Ask the pupils to name some 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. Ask them to say the names	
Before the lesson:	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.		

New Method

minutes Mathematics 2

10 minutes	25 New Method minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Pair task		Whole class teaching
Write '387, 492, 457' on the chalkboard and ask the pupils to say which is the smallest number and how they worked it out. Ask which number is the next smallest and then ask the pupils to say the numbers in order.	Mathematics 2, page 30, questions 40—43 to the class.some three-digit numb less than 200.Ask the pupils to write the answers in their evercise booksAsk the pupils to read of some of their answers.Repeat with numbers	Ask the pupils to make some three-digit numbers less than 200.	Tell the pupils the number of boys in the school and the number of girls.
		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
		Repeat with humpers	
	Go through the answers as a whole class.		the answer.
Toll the pupils they have			

Tell the pupils they have arranged them in increasing order, ie: the numbers are in order of size with the biggest last.

Give out the place value cards.

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### Words/phrases

Assessment

Naira money change total shopping Tens Units addition add sum altogether find the sum of add together How many?

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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. ۲

Lesson title		15   minutes		
Shopping lists	Learning outcomes	Daily practice		
	By the end of the lesson, most	Whole class teaching		
	pupils will be able to:	Demonstrate adding two numbers		
	Add two-digit numbers that involve crossing the Ten.	together that involve crossing the Ten, using a number line,		
Add togethe the cost of	Add together money to work out the cost of two items.	- eg: 27 + 34. Write '33 + 58 =' on the chalkboard.		
	the cost of two items.	Give each pair a set of place		
	Teaching aids	value cards.		
		Ask the pupils to do the sum		
	Before the lesson:	in pairs and show the answer by holding up their place		
	Have ready a set of place value cards for each pair of pupils.	value cards.		
	Set up a 'shopping corner' as explained in the introduction.			
	Read New Method Mathematics 2, page 91.			

# Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 23 Money Day 1

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10 minutes	25 minutes		10New MethodminutesMathematics 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. Write them down on the	Ask, 'If I bought 4 mangoes that cost N10 each, how much money would I need?' Percent with 7 manages	Ask: 'If I bought a mango and a sweet, how much would it cost me?'	Tell the pupils to look at the bank notes in New Method Mathematics 2, page 91. Say some items and ask
chalkboard. Ask the pupils to tell you something that you might buy for each amount and draw it by the side of the	Repeat with 7 mangoes and 5 mangoes. Ask the pupils to say how they worked the answer out, ie: by counting in Tens.	<ul> <li>'If I bought two sweets and a mango, how much would it cost me?'</li> <li>Tell the pairs to choose 2 items they would like</li> </ul>	the pupils to say the notes they would need to buy them, eg: exercise book and a small tin of milk.
Naira. Stop at 50 Naira. Leave this shopping list on the chalkboard for the rest of the week.	Ask how much 2 sweets, 5 sweets and 8 sweets cost if one sweet costs N5. Check that the pupils are	to buy. Tell them to draw the items and write a price underneath each one. Ask them to write the total	-
Choose some pupils to go to the shopping corner and find items that cost N5 and N10.	counting in 5s. Tell them to think of a quick way to add up the cost of 4 toys if one toy costs N20.	cost as an addition sum, eg: 50 + 20 = 70 Naira. Choose some pairs to say the items and ask the class to find the total cost.	_

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#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 23 Money Day 2

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# Making 50 Naira

By the end of the lesson, most pupils will be able to:

Add two-digit numbers.

Learning outcomes

Make 50 Naira using notes of different denominations.

**Teaching aids** 

#### **Before the lesson:**

Make money cards on small pieces of paper. Write N5 on 20 pieces, N10 on 10 pieces, N20 on 5 pieces and N50 on 2 pieces. Make a set for each group.

Have ready the shopping list and shopping corner from yesterday.

# **Daily practice**

15

minutes

# Pair task

Ask the pairs to write 6 numbers from 10—50 in their exercise books.

Ask them to choose two numbers to add together.

Ask them to first of all guess the answer without using pencil and paper.

Tell them to write their sums in their exercise books.

Ask them to choose different numbers to make two more sums and work them out.

10New MethodminutesMathematics 2	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Group task		Group task
Tell the pupils to look at the notes in New Method	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.
Mathematics 2, page 91. Ask them to tell you the	Write down the following amounts on the chalkboard:	Write, 'N10 + N10 + N10 +	Ask the groups to find and
different ways that Naira is written on the notes	N35, N25, N10, N30, N40.	N10 + N10 = N50'.	hold up the money cards needed to pay for them.
and write them on the chalkboard.	Say each price and ask the groups to hold up the money cards they would need to	Ask the groups to use their money cards to find different ways to make N50.	
	pay for it.	Tell them to write their answers as sums in their	
	Explain that there are different ways to make the same amount of money,	exercise books, eg: $N20 + N10 + N10 + N5 + N5 = N50$ .	
	eg: for N35 they could use seven N5 notes or one N20, one N10 and one N5 note.	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

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# **Giving change**

Lesson

title

Learning outcomes

By the end of the lesson, most pupils will be able to:

Add two-digit numbers.

Work out change from 50 Naira.

# **Teaching aids**

# **Before the lesson:**

Write the calculations in today's daily practice, shown right, on the chalkboard.

Have ready the money cards and the shopping corner.

Daily	practice

15

minutes

# Whole class teaching

Remind the pupils that they have been using a number line to work out addition sums.

Ask the pupils to complete the following in their exercise books: 19 + 27 = 38 + 13 =

24 + 47 =

#### 45 + 48 = 66 + 25 =

Tell them to write the sums horizontally before using a number line to answer the questions.

Ask the pairs to check each other's work.

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Group task	Whole class teaching		Pair task
Ask the groups to say the Naira notes they have seen. Give out the money	Tell the pupils that you are going to buy a toy for N10 but you only have	Ask: 'How many Naira change will you get?'	Ask the pupils to draw a number line to work out the change from an
cards and ask the groups to find different ways to make N100, writing their answers as sums in their	an N20 note	Tell the pupils that you	N50 note if they were buying a banana for N25. Choose a pair to draw their number line on the
exercise books.	amount you have given them, to make sure they	want to buy a ball that costs N40.	chalkboard.
Ask each group to write a different way to make N100 on the chalkboard.	give the correct change, as shown below.	Tell them that you only have an N50 note.	
		Show them how to work out the correct change, by counting on along a number line.	

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Number line

+N1 N10 N11 N12 N13 N14 N15 N16 N17 N18 N19 N20

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#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 23 Money Day 4

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# **Giving change**

# By the end of the lesson, most pupils will be able to:

Solve problems by adding two-digit numbers.

Learning outcomes

Work out the change needed and identify the correct notes.

**Teaching aids** 

#### **Before the lesson:**

Write the problems in the daily practice on the chalkboard.

Have ready the money cards and the shopping corner from yesterday.

# **Daily practice**

15

minutes

# Whole class teaching

Read these word problems on the chalkboard to the class:

- 1 If Musa had 10 mangoes and he bought 25 more from the shop, how many would he have altogether?
- 2 Rakiya has 12 chickens and her brother has 15. How many chickens do they have altogether?

Ask the pupils what they need to do to work out the problems.

Tell them to complete the problems in their exercise books using a number line.

Choose some pupils to explain their answers on the chalkboard.

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Group task	Whole class teaching	Group task	Group task
Give out the money cards to each group.	Tell the pupils you are going to buy a packet of sweets	Give a pupil from each group an N50 money card	Tell the pupils they have bought a toy that cost N15.
Ask them to make the following amounts using as few cards as possible:	<ul> <li>for N20.</li> <li>Explain that you only have an N50 note and you need to work out how much</li> <li>change you would get.</li> <li>Ask the pupils to solve the problem using a number</li> <li>line. Explain that they should only make jumps that are the size of the</li> </ul>	and ask them to find an item in the shopping corner that costs N25.	They only have an N50 note. Ask them to work out the change in their exercise
N25, N30, N40, N10.		Ask groups to find and hold up the money cards they	books using a number line and the money cards.
ask the groups to hold up the cards.		would use as the change. Choose a group to use their cards to draw the	Choose one group to draw and explain their number line on the chalkboard.
Check which group has the fewest cards.		jumps and write the Naira on a number line.	on the chaikboara.
	notes that are available.	Choose a pupil to count back the change using money cards.	

Repeat with different items.

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		15   minutes	
the shop	Learning outcomes	Daily practice	
	By the end of the lesson, most pupils will be able to:	Whole class teaching	
	Solve money word problems by adding two-digit numbers.	Tell the pupils that adding money is exactly the same as adding 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		
	Before the lesson:	Tell each group to choose two	
	Have items ready in the shopping corner.	<ul> <li>items from the shopping corner.</li> <li>Tell them to draw number lines</li> </ul>	
	Have ready the money cards for each group.	<ul> <li>in their exercise books to find the total cost.</li> </ul>	
	Write the problems in the plenary on the chalkboard.		

Numeracy lesson plans Primary 2

Term 3 Asking questions Lesson title

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Week 23 Money Day 5

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



### Words/phrases

Assessment

count three-digit numbers sequence heavy heavier heaviest light lighter lightest balance weigh hand balance seesaw kilogram scales 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. ۲

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#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 24 Weight Day 1

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# **Heavy and light**

Learning outcomes

# By the end of the lesson, most pupils will be able to:

Count numbers above 300.

Use the terms 'heavy' and 'light' to describe weight.

**Teaching aids** 

### **Before the lesson:**

Have ready two pieces of paper or card for each group.

**Daily practice** 

15

minutes

Whole class teaching

Gather the pupils in a circle.

Tell them they are going to count in Tens.

Choose a pupil to say 310, tell the next pupil to say 320.

Continue round the circle until everyone has had three turns.

Repeat, starting at 438 and counting in 2s.

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 2s 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 activity	Plenary	
Whole class teaching	Group task	Whole class teaching	
Explain the meaning of <mark>weight</mark> in the pupils' local language.	Tell each group to gather a selection of objects found inside and outside	Ask each group to say which objects they put by each label.	
Write the words 'heavy' and 'light' on the chalkboard.	the classroom. Ask them to discuss whether the objects they have collected are heavy or light.	Ask the other groups if they agree or disagree.	
Explain to the pupils that these words describe the weight of an object.		If they disagree, ask them to say why. Put the objects in a 'weight'	
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.	display at the back of the room and sort them into two piles with the labels 'light' and 'heavy'. Keep for the	
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.	next day.	

# Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 24 Weight Day 2

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# Lesson title

# Heavier and lighter

#### **Daily practice** Learning outcomes By the end of the lesson, most **Group task** pupils will be able to: Give each group a set of three-digit Order three-digit numbers. number place value cards. Use the words 'heavier'. Write a selection of three-digit 'heaviest' and 'lighter', 'lightest' numbers, randomly spread across to compare weights. the chalkboard. Ask each group to use their place **Teaching aids** value cards to help them put the numbers in the correct order. from the smallest to the highest. Before the lesson: Tell the pupils to write the numbers in order in their exercise books. Have ready a set of three-digit number place value cards for Remind them to compare the each group. Hundreds first, then the Tens Have ready the weight display and finally the Units. from yesterday and add some Ask the groups to swap exercise heavier objects. books and discuss the correct Have ready small pieces order of the numbers. of paper, containers and small objects, eg: buckets, bowls, balls and stones.

15 minutes

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Pair task		Whole class teaching
Ask the pupils to discuss the meaning of heavy and light.	Give each pair a piece of paper and a stone.	Ask them to decide which is heavier and suggest why.	Tell the class that when we compare different
Tell them that when you have two objects you can	Ask them to drop both together and see which one	Ask them to put one large stone in one container. Ask	weights we say 'lightest' and 'heaviest'.
say that one is heavier and one is <mark>lighter</mark> .	lands first.	them to find objects to put in the other container to make	Ask which they think is the lightest and heaviest
Write 'goat' and 'chicken'	Ask, 'Why do you think the	it heavier than the first.	container.
on the chalkboard. Ask, 'Which is heavier?',	stone landed first?' (The stone is heavier.)		Choose some pupils to arrange the containers in order of weight.
'Which is lighter?'	Give each pair two containers. Ask them to		Ask other pupils to come
Ask a pupil to hold up two objects of different weight. Ask, 'Which is heavier?', 'Which is lighter?'	put five large stones in one container and five small stones in the other.		and lift them and see if they agree.

Repeat with other objects and different pupils.

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	Lesson title		15   minutes	
Numeracy lesson plans	Heaviest and	Learning outcomes	Daily practice	
Primary 2 Term 3	lightest	By the end of the lesson, most pupils will be able to:	<b>Pair task</b> Give each pair a set of place	
Asking questions		Identify the value of each digit in a three-digit number.	value cards. Say any three-digit number and	
		Use hand balancing to compare weights.	ask the pairs to make that number using their cards and hold them up for you to see.	
Week 24 Weight		Teaching aids	Ask the pupils to tell you how many Hundreds, Tens and Units there are in that number.	
Day 3		Before the lesson:	Repeat five times with	
		Have ready the three-digit number place value cards.	different numbers.	
		Have ready the weight display from yesterday.		

10 minutes	25 minutes		10 minutes	
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. 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: The maths book is <u>than</u> the exercise book. The key is <u>than</u> 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		

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exercise books.

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	Lesson title				15   Game   minutes
Numeracy lesson plans	Comp			Learning outcomes	Daily practice
Primary 2 Term 3		weights using improvised scales		By the end of the lesson, most pupils will be able to: Continue three-digit number sequences.	Whole class teaching Say, '228, 230, 232'. Ask the pupils
Asking questions	•				what the next number will be. Tell them to join in as you count
				Estimate weights.	to 250. Ask them to say what you are
Week 24				Teaching aids	counting in (2s). Repeat with '455, 460, 465'.
Weight Day 4				Before the lesson:	Write the following number - sequences on the chalkboard:
				Make a pair of scales.	_ 678, 680, 682,,,
	object	Estimated number of stones	Actual number of stones	Make an 'Estimate, measure and compare' grid as shown	703, 706, 709,,,
	pen			left for each group.	560, 570, 580,,,
	exercise book textbook			Have ready the objects listed in the grid, including stones	655, 660, 665,,,
	bowl			or sticks.	Ask them to complete the number sequences in their exercise books.

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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 on each side of the scales. Ask the pupils to comment on the weights on the	compare' chart and some stones or sticks.	stones or sticks until	- smaller than their estimates.
	Explain the word 'estimate' and tell the groups to estimate how many sticks		
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. Repeat until all the objects	-
	Ask each group to read out their estimates and discuss.	have been weighed.	

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Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 24 Weight Day 5

# The kilogram

Lesson

title

Learning outcomes

By the end of the lesson, most pupils will be able to:

Add two-digit numbers.

Estimate weights in kilograms.

### **Teaching aids**

# **Before the lesson:**

Write the following sums on flash cards: '48 + 26 =', '32 + 59 =', '37 + 47 =', '48 + 48 =', '37 + 18 ='.

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.

# **Daily practice**

15

minutes

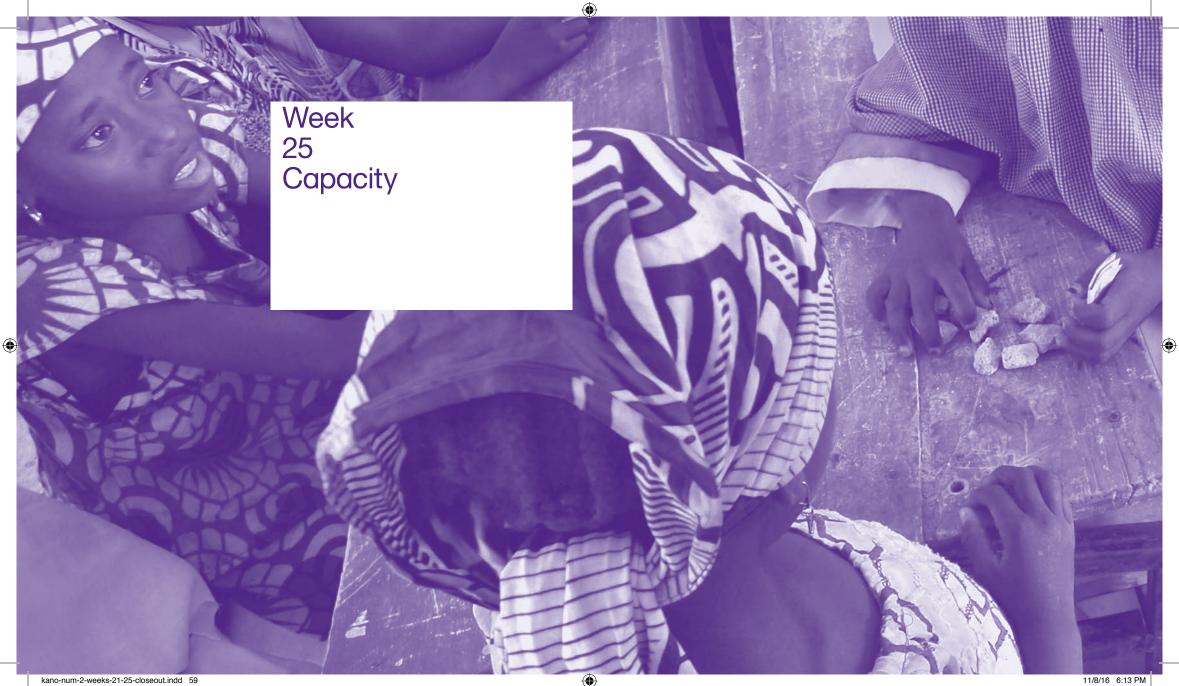
### Group task

Give each group a sum card and ask them to complete it in their exercise books.

Swap the cards round so that each group does two or three sums.

Choose some groups to say the answers and ask the class if they are correct.

10 New Method minutes Mathematics 2	25 minutes		10 Song minutes
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. Pass the kilogram	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.	weight around and let them all hold it.	Write 'heavier than a kilogram' on the — chalkboard and list the	
Take two objects from the weight display. 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. Show the pupils the scales and explain how they work. Use the scales to weigh	
is lighter.	Write 'lighter than	the objects.	
	a kilogram' on the chalkboard and list the objects underneath.	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

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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. ( )

# Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 25 Capacity Day 1

# **Taller and smaller**

Learning outcomes

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.

# **Daily practice**

Game

15

minutes

# 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.

10New MethodminutesMathematics 2	25 New Method minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Group task		Whole class teaching
Ask the pupils to look in New Method Mathematics 2, page 76.	Write 'less' and 'more' on the chalkboard and remind the pupils what they mean.	Tell the pupils to write 'less' and 'more' on the paper labels and place them next	Ask the pupils to discuss how they can check if their labels are correct.
Discuss the use of each item. Tell the pupils they are all containers and the	Ask the pupils to look in New Method Mathematics 2, page 76 and discuss which container will hold	to the containers. Tell the groups to walk around and look at all the containers.	Write some of their ideas on the chalkboard.
amount they can hold is called the 'capacity'.	more liquid. Ask each group to say an answer and ask the other groups if they agree.	Ask them if they agree with the labels. If they do not, ask them to explain. Put the containers with	
	Give each group two containers and pieces of paper.	their labels in a corner of the classroom. Write 'capacity' on a	
	Ask them to decide which container will hold less and which will hold more.	piece of paper and display it with the containers.	

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.esson itle		15   Game   minutes
Longer and shorter	Learning outcomes	Daily practice
	By the end of the lesson, most pupils will be able to: Say the number bonds to 10.	Pair task Play 'Find my friend' and ask 'friends' to sit down together.
	Order containers according to capacity.	Choose some pairs to say their numbers and write them on the chalkboard.
	Teaching aids	Remind the pupils that these are the number bonds to 10.
	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.	Write the following sums on the chalkboard: $20 + = 100$ $30 + = 100$ $30 + = 100$ $40 + = 100$ $50 + = 100$ 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.

Numeracy lesson plans Primary 2

Term 3 Asking questions Le tit

Week 25 Capacity Day 2

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

	Lesson title		15   minutes
Numeracy lesson plans	Estimating	Learning outcomes	Daily practice
Primary 2	capacity	By the end of the lesson, most	Whole class teaching
Term 3		pupils will be able to:	Say '28' and ask the pupils
Asking questions		Add 9 to numbers quickly.	to add 10. Repeat with other
		Estimate the capacity of containers.	numbers.
		· /	Remind the pupils that it is
		Teaching aids	easy to add 10 as they only have to change the Ten digit.
Week 25 Capacity		Before the lesson:	Write '28 + 9' on the chalkboard and ask if anyone knows a quick
Day 3		Have ready a large bucket	way to add this up.
		or container of the same size for each group.	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.

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

with different containers.

fill the bucket.

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Numeracy lesson plans Primary 2

Term 3 Asking questions

**Week 25** Capacity Day 4

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Lesson liitle		15   minutes	
A litre	Learning outcomes	Daily practice	
	By the end of the lesson, most	Whole class teaching	
	pupils will be able to:	Write '23 + 9', '67 + 9' and	
	Add and subtract 9 quickly.	<sup>-</sup> '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: 56 – 9 = 73 – 9 =	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	
	67 – 9 = 81 – 9 =	on the chalkboard.	
	Have ready a litre bottle, a bucket of water and an empty bucket.		

10 minutes		25 minutes		10 minutes
Introduction		Main activity		Plenary
Whole class teaching		Group task		Whole class teaching
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.	Choose some pupils to fetch containers from the capacity display that – they estimate hold less	Check the estimates by filling the containers with water from the litre bottle.	Ask the pupils to help you arrange the containers in order. Put the container with the least capacity at
Ask them why the results were different.	Ask them all to keep a count of how many bottlefuls you use.	than a litre. Write 'less than a litre' on the chalkboard and list the objects underneath. Choose some pupils to fetch containers that they estimate hold more than a litre.	Tell the groups to discuss the results and compare them with their estimates on the chalkboard.	the front of the line.
Tell them that we use litres to weigh accurately.				
Show them the litre bottle.				
Ask how many litres they think the bucket will hold.	_			
		Write 'more than a litre' on the chalkboard and list the objects underneath.	-	

#### Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 25 Capacity Day 5

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# **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.

Learning outcomes

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.

# **Daily practice**

# Pair task

15

minutes

Choose some pupils to explain quick ways they have learned to calculate, ie: adding Tens (20 + 30 = 50) and adding and taking away 9.

Ask them to look at the sums on the chalkboard and say which ones they can do quickly.

Ask the pupils to complete the sums on the chalkboard, choosing a quick method or a number line as needed.

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. Ask the pupils if they think they will hold more than
Choose some pupils to help you put the containers in order of capacity.	Tell them to check by pouring the bottleful	a litre of water. 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. 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

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#### 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.

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