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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

Good teaching can help learners achieve positive outcomes, even in difficult circumstances. But learners have little chance of making progress where the teaching is poor.

Throughout 2010 in Kaduna State, the Ministry of Education carried out baseline surveys to assess classroom teachers, headteachers and pupil learning outcomes. Sadly, the findings were alarmingly poor. It was clear that despite substantial inputs into education, the majority of teachers were themselves victims of an education system that was in a serious downward spiral.

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

To improve the teaching of basic literacy and numeracy in primary schools, Kaduna is introducing a carefully designed series of literacy and numeracy lesson plans for primary 1–3 teachers. These provide a step-bystep guide to teachers, while ensuring that teaching and learning become more exciting and children become active learners.

Alongside the lesson plans, structures and processes have been put in place so that teachers are continuously supported by the State School Improvement Team and specially-trained school support officers.

I am confident that these lesson plans will raise standards in our schools. I commend all those who have worked hard to produce these plans and train our teachers to use them, and I offer thanks to the UK Department for International Development (DFID) for its ongoing support for education reform in Kaduna State through its ESSPIN programme.

Professor Andrew Jonathan Nok

DSc, PhD, OON, FAS, NNOM

Honourable Commissioner of Education, Science and Technology Kaduna 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 Hassan 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 square has four equal sides and four corners. All	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 cuboid has six flat faces. Four faces are rectangles and 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.	Make the cards pictured below.	Collect empty cartons, packets, and so on. Display
A rectangle has four sides		Make one set per pair of pupils.	 them on a desk, table or in a corner. Use labels to say how much each item costs.
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.		You could also make one large class set.	Keep the prices simple.
	A sphere has no flat faces and no straight edges. It has one curved face.		

Hundred 1 set 100	cards —900		Ten card 1 set 10-	s —90	Unit car 1 set 0-	ds –9
6	0	0	2	0	3	

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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, /	Hide some two-dimensional and/or three-dimensional	Write the numbers 0—10 on cards.	Think of a number and give the pupils clues to
'Roll over, roll over!' /	shapes in a bag.	Make two number 5 cards.	guess what it is.
and 1 fell out. /	Dip your hand into the	Make enough cards for	Clues could involve:
(Continue as before, reducing the number each time)	bag and choose a shape. Without pulling it out, describe the shape to the class according to its properties.	of pupils in the class also make yourself a card.	1 The phrases 'more than' and 'less than', eg: if you are thinking of 73 say, 'My number
and the little one said, / 'Goodnight' (sing slowly).	Ask the pupils to guess what shape you are holding.	Give out the cards and tell the pupils to find someone who has a card	2 The terms 'odd' and 'even', eg: if you are
Repeat this exercise but invite the pupils to choose a shape and describe its properties for the class	that will make 10 when added to the number on their own card.	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. ()

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

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 45 46 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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Lesson title		15 minutes
Hundreds, Tens	Learning outcomes	Daily practice
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 a triangle.	ask the pupils to say some of its properties.
	Identify the place value of	Repeat with the rectangle.
	Hundreds, Tens and Units.	Give out the circles and triangles and ask the groups to say sentences about them.
	Teaching aids	
		Write the properties of
	Before the lesson:	a circle and a triangle on the chalkboard.
	Read 'Properties of two- dimensional (2D) shapes' in the introduction.	Ask the groups to look at the shapes and check if the 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 1,000.	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	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.	Write the following sums on the chalkboard:	the chaikboara.
Ask the pupils to read the number and then tell you how many Hundreds, how many Tens and how many Units.	-	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.

Read MAN Primary Mathematics 2, page 85, Exercise N.

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10 minutes	25 MAN Primary minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Pair task	Whole class teaching		Pair task
Give each pair of pupils a set of three-digit number place value cards. Say some three-digit numbers for them to make using their place value cards. Ask the pupils to hold up their cards and see if they are correct.	Write on the chalkboard: 'take away', 'minus', 'how many less than?', 'subtract' and 'what's the difference between?' Read and discuss the meaning of these words. Ask the pupils if they can tell you how to subtract two-digit numbers using	First, start with the largest number and expand the smallest: 22 = 10 + 10 + 2 Count back in jumps along the number line. -2 -10 -10 22 24 34 44	Choose some pairs to explain their answers on the chalkboard.
Ask each pair to make numbers and read them to each other	a number line, eg: 44 – 22.	Ask pupils in pairs to turn to MAN Primary Mathematics 2 and complete the word problems in page 85, Exercise N, questions 1—4 in their exercise books using a number line.	

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

Learning outcomes	Daily practice
By the end of the lesson, pupils will be able to: Say some of the properties of a cube.	mostGroup taskAsk the pupils to name some of the 2D shapes they have been looking at.
Subtract two-digit numbers.	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
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) shap	es'. Ask what else they notice about the cubes.
Read MAN Primary Mathem page 85, Exercise N.	atics 2,

15 minutes

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10 minutes	25 MAN Primary minutes Mathematics 2	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 smallest number.	Ask the pupils to complete the word problems in MAN Primary Mathematics 2, page 85, Exercise N, questions 5—8 using a number line.	
	Tell them to 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

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Learning outcomes	Daily practice
By the end of the lesson, most pupils will be able to:	Group task Ask the pupils to say some of the
Say some of the properties of a cuboid.	properties of a cube.
	Give out the cuboids and ask if
Solve simple word problems using addition and subtraction.	anyone knows what they are called.
	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.	

15 minutes

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	Read the following problems from the chalkboard and explain them to the class:	Ask the pupils to say whether they need to add or take away	Ask each group to explain their answer to a different problem.
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'.	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? Samui has 21 carrots. Ali gives him 47 more. How many carrots has Samui got now? Simbi has 62 eggs. She sells 31. How many has she got now?	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 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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Numeracy

Lesson

title

lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 1

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Addition of two-digit numbers

By the end of the lesson, most	Whole class teaching
Identify 2D shapes on a cube and a cuboid. Add two-digit numbers that involve crossing the Ten.	Hold up the 2D shapes and ask pupils to say the names. Play 'The shape in the bag' with the 2D shapes. Remind the pupils that flat shapes are 2D and solid shapes are 3D.
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.
Read MAN Primary Mathematics 2, page 68, Exercise C, questions 1—5.	

Game

minutes

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10 minutes	25 MAN Primary minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Pair task		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.	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 +2 28 38 48 50 52 28 + 24 = 52 Ask the pupils to use the same method to complete	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	MAN Primary Mathematics 2, page 68, Exercise C, questions 1—5 in their exercise books.	

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

By the end of the lesson, most	Group task
pupils will be able to: Say the properties of a cylinder.	Hold up the cube and the cuboic and ask the pupils to name them
Add two-digit numbers that involve crossing the Ten.	Tell the groups to look at MAN Primary Mathematics 2, page 15 Exercise B.
Teaching aids	Ask the pupils to point to and name the cubes.
Before the lesson:	Repeat with the cuboids.
Find an everyday object that is a cylinder, eg: a can or a tin and have ready the cube and cuboid from yesterday.	 Show the groups the cylinder and ask them to say some of its properties.
Have ready a set of three-digit number place value cards for	

15MAN PrimaryminutesMathematics 2

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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 pupils to discuss and do the following sums using a number line:	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 youput the numbers in the	36 + 26, 45 + 56.Remind the pupils how toadd two numbers together	Tell them to put the numbers in pairs to make their own addition sums.	
correct order. Ask, 'Which is the largest number?'	that involve crossing the Ten, using their knowledge of addition to 10 and a number line.	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.	

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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

Learning outcomes	Daily practice
By the end of the lesson, most	Pair task
Bay the properties of some D shapes.	Ask the pupils to name some 2D shapes. Ask them to name some
dd two-digit numbers that holds a construction of the two-digit numbers that holds a construction of the two-digits and two-digits	3D shapes.
Feaching aids	and ask them to say some of its properties.
Before the lesson: Have ready a cylinder and I sphere.	Show them the sphere and ask them to describe it.
lave ready a set of 0—10 number ards and a set of three-digit umber place value cards for each pair.	
Read MAN Primary Mathematics 2, page 69, Exercise D, questions 6—12.	

15 minutes

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10 minutes		25 MAN Primary minutes Mathematics 2		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. Tell them that as the Hundreds are the same, they need to look at the	Explain that both numbers are the same in the Hundreds and the Tens but 9 Units is more than 5 Units, so 339 is the larger number.	Give each pair a set of 0—10 number cards. Call out a number from 1—10 and ask the pairs to hold up a number card to add to it to make 10.	Choose some pupils to help as you demonstrate how to use a number line to work out 26 + 34, which involves crossing the Ten. Ask the pupils to complete	Sing '10 in the bed' with the class.
Tens. Explain that 5 Tens is more than 2 Tens, so 152 is the larger number. Write the following numbers on the chalkboard: 339, 335.	Write pairs of three-digit numbers on the chalkboard and ask the pupils to work out which is the larger in each pair.	Ask them to write in their exercise books as many pairs of numbers that make 10 as they can.	MAN Primary Mathematics 2, page 69, Exercise D, numbers 6—12.	

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. Read MAN Primary Mathematics 2, page 71, Exercise F.

15

minutes

Game

10 minutes	25 MAN Primary minutes Mathematics 2		10 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 fla cards to the pupils a the words.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:Show the addition fla cards to the pupils a the words.456 or 432 	Show the addition flash cards to the pupils and read the words.	Tell the pupils to look at MAN Primary Mathematics 2, page 71, Exercise F.	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?'	Ask them to write the sums and work out problems 2, 3, 8, 9 and 12 in Exercise F.	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.			

Numeracy

lesson plans Primary 2

Term 3 Asking questions

Week 22 Addition Day 5

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Ordering threedigit numbers

Lesson title (\bullet)

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By the end of the lesson, most	Whole class teaching	
pupils will be able to:	Ask the pupils to name some	
Name common 2D and 3D shapes.	3D shapes.	
Arrange three-digit numbers in	Ask them to name some	
increasing order.	2D shapes.	
	Ask them to look at MAN Primary	
Teaching aids	Mathematics 2, page 146.	
	Ask them to say the names of the	
Before the lesson:	objects where they can see a circle a square, a cylinder, and so on.	
Have ready a set of three-digit		
number place value cards for		
eacn pair.		
Read MAN Primary		
Nathematics 2, page 146		

15 | MAN Primary minutes | Mathematics 2

10 minutes	25 MAN Primary 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.	Explain MAN Primary Mathematics 2, page 25, Exercise F, questions 1—6	MAN Primary matics 2, page 25, se F, questions 1—6 class.Ask the pupils to make some three-digit numbers less than 200.Ask the pupils to read out some of their answers.	Tell the pupils the numberof boys in the school and the number of girls.Ask them if there are more boys than girls. Ask them how they can use their place value cards to check
	to the class. Ask the pupils to write		
Ask which number is the next smallest and then ask the pupils to say the numbers in order.	the answers in their exercise books.	Repeat with numbers more than 750, less than 150 and more than 890. how they can use place value cards the answer.	
	Go through the answers as a whole class.		the answer.

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. A
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Lesson title		15 minutes
Shopping lists	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.	together that involve crossing the Ten, using a number line,
	Add together money to work out the cost of two items.	Write '33 + 58' on the chalkboard.
	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
	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 MAN Primary Mathematics 2, page 111.	

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Numeracy

Term 3

lesson plans Primary 2

Asking questions

25 minutes		10MAN PrimaryminutesMathematics 2
Main activity		Plenary
Pair task		Whole class teaching
Ask, 'If I bought 4 mangoes that cost N10 each, how much	Ask: 'If I bought a mango and a sweet, how much would	Tell the pupils to look at the bank notes in MAN Primary Mathematics 2, page 111.
money would I need?' Repeat with 7 mangoes and 5 mangoes.	it cost me?' 'If I bought two sweets	Say some items from the shopping corner and ask the
Ask the pupils to say how they worked the answer out, ie: by counting in Tens. Ask how much 2 sweets,	and a mango how much would it cost me?' Tell the pairs to choose 2 items they would like to buy. Tell them to draw	pupils to point to the notes they would need to buy - them.
5 sweets and 8 sweets cost if one sweet costs N5. Check that the pupils are counting in 5s	the items and write a price underneath each one. Ask them to write the total	_
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	_
	 ²⁵ minutes Main activity Pair task Ask, ^{(1f]} I bought 4 mangoes that cost N10 each, how much money would I need?' Repeat with 7 mangoes and 5 mangoes. Ask the pupils to say how they worked the answer out, ie: by counting in Tens. Ask how much 2 sweets, 5 sweets and 8 sweets cost if one sweet costs N5. Check that the pupils are counting in 5s. Tell them to think of a quick way to add up the cost of 4 toys if one toy costs N20. 	25 minutes Main activity Pair task Ask, If I bought 4 mangoes that cost N10 each, how much money would I need?' Repeat with 7 mangoes and 5 mangoes. Ask the pupils to say how they worked the answer out, ie: by counting in Tens. Ask how much 2 sweets, 5 sweets and 8 sweets cost if one sweet costs N5. Check that the pupils are counting in 5s. Tell them to think of a quick way to add up the cost of 4 toys if one toy costs N20.

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.

Read MAN Primary Mathematics 2, page 111.

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.

10 MAN Primary minutes Mathematics 2	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Whole class teaching		Group task
Tell the pupils to look at the notes in MAN Primary Mathematics 2, page 111. 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. Write down the following amounts on the chalkboard: N35, N25, N10, N30, N40. 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.	Hold up five N10 cards and ask the pupils to say how much money you have got. Write N10 + N10 + N10 + N10 + N10 = N50. Ask the groups to use their money cards to find different ways to make N50. Tell them to write their answers as sums in their exercise books, eg: N20 + N10 + N10 + N5 + N5 = N50. Ask each group to write a different way to make N50 on the chalkboard.	Choose some pupils to go to the shopping corner and choose two items. Ask groups to find and hold up the money cards needed to pay for them.

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 23 Money Day 3

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Giving change

Lesson

title

By the end of the lesson, most

pupils will be able to: Add two-digit numbers.

Learning outcomes

Work out change from 50 Naira.

Teaching aids

Before the lesson:

Read MAN Primary Mathematics 2, page 70, Exercise E, questions 1—6.

Have ready the money cards and the shopping corner.

Daily practice

minutes | Mathematics 2

15

Whole class teaching

MAN Primary

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

Ask them to complete MAN Primary Mathematics 2, page 70, Exercise E, questions 1—6.

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.

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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.	Tell the pupils that you are going to buy a toy	Ask: 'How many Naira change will	Ask the pupils to draw a number line to work
Give out the money cards and ask the groups to find different ways to make N100, writing their answers as sums in their exercise books. Ask each group to write a different way to make N100 on the chalkboard	for N10 but you only have an N20 note. Explain that in shops people count on from the cost of the item to the amount you have given them, to make sure they give the correct change, as shown below.	you get?' 'What notes or coins will the shopkeeper give you?'	out the change from an N50 note if they were buying a banana for N25.
		Tell the pupils that you want to buy a ball that costs N40.	Choose a pair to draw their number line on the chalkboard.
		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.	

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 the word problems on the chalkboard to the class:

- 1 If Ola had 10 mangoes and he bought 25 more from the shop, how many would he have altogether?
- 2 Grace 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 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: N25, N30, N40, N10.	 for N20. Explain that you only have an N50 note and you need to work out how much 	and ask them to find an - item in the shopping corner that costs N25. Ask groups to find and hold	Ask them to work out the change in their exercise books using a number line
Call out each amount and ask the groups to hold up the cards.	- change you would get. Ask the pupils to solve the problem using a number	up the money cards they - would use as the change. Choose a group to use	and the money cards. Choose one group to draw and explain their number lin
Check which group has the fewest cards.	 line. Explain that they should only make jumps that are the size of the notes that are available. 	their cards to draw the jumps and write the Naira on a number line.	on the chalkboard.
		Choose a pupil to count back the change using money cards.	

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		15 minutes
the shop	Learning outcomes	Daily practice
	By the end of the lesson, most	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.
	Teaching aids	
	Before the lesson:	Tell each group to choose two
	Have items ready in the	 Items from the shopping corner.
	snopping corner.	 in their exercise books to find the
	for each group.	total cost.
	Write the problems in the plenary on the chalkboard.	

Numeracy lesson plans Primary 2

Term 3 Asking questions Lesson title

In

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

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Words/phrases

Assessment

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

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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 24 Weight Day 1

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Heavy and light

By the end of the lesson, most

Learning outcomes

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

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 24 Weight Day 2

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title

Lesson

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	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 lighter.	lands first.	them to find objects to put in the other container to make	Ask which they think is the lightest and heaviest
Write 'cow' and 'cat'	Vrite 'cow' and 'cat' Vrite 'cow' and 'cat'	it heavier than the first.	container.
Write 'cow' and 'cat'Write 'by do you think theon the chalkboard. Ask,stone landed first?'Which is heavier?',(The stone 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		
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	lightest	By the end of the lesson, most	Pair task
Term 3		pupils will be able to:	Give each pair a set of place
Asking questions		Identify the value of each	value cards.
		digit in a three-digit number.	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.
		Read MAN Primary Mathematics 2, page 137, Unit 2 and collect as many as possible of each object featured on that page.	
		Have ready the weight display from yesterday.	

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10 MAN Primary minutes Mathematics 2	25 MAN Primary minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Pair task	Group task	Pair task	Whole class teaching
Ask the pupils to look at MAN Primary Mathematics	Demonstrate 'hand balancing' to the pupils.	Write 'heavier' and 'lighter' on the chalkboard.	Let the pupils use hand balancing to check their answers
Ask them to compare the weight of the objects in each row.	Give each group some of the objects shown in MAN Primary Mathematics 2, page 137 and objects from the weight display. Ask them to put the objects in weight order, using hand	Write sentences about objects in the classroom on the chalkboard, eg: The maths book is than	Ask if anyone can think of a more accurate way of finding out how
Ask, 'Which is the heaviest?' 'Which is the lightest?'		the exercise book. The key is than the tin of milk. Read the sentences and	heavy objects are.
Tell the pupils to use 'heavier' and 'lighter' to describe two objects	- balancing. Ask each group, 'How did vou decide the order?'	ask the pupils to say if they think the missing words are 'heavier' or 'lighter'.	
in each row.	,	Ask them to complete the sentences in their exercise books.	

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	Lesson title				15 Game minutes
Numeracy lesson plans	Comp	aring		Learning outcomes	Daily practice
Primary 2 Term 3 Asking questions weights usi improvised	weigh impro	weights using improvised scales		By the end of the lesson, most pupils will be able to:	Whole class teaching
			Continue three-digit	what the next number will be.	
		Estimate weights.	Estimate weights.	Tell them to join in as you count to 250.	
				Teaching aids	Ask them to say what you are counting in (2s).
Week 24					Repeat with '455, 460, 465'.
Day 4				Before the lesson: Make scales as shown in MAN Primary Mathematics 2, page 136, Unit 1.	Write the following number – sequences on the chalkboard: 678, 680, 682,,, 703, 706, 709,,,
	object	Estimated number of stones	Actual number of stones	Make an 'Estimate, measure and compare' grid as shown	560, 570, 580,,, 655, 660, 665,,,
	pen exercise book				
	textbook			in the grid, including stones or sticks.	Ask them to complete the number sequences in their exercise books.

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10 MAN Primary minutes Mathematics 2	25 minutes		10 minutes	
Introduction	Main activity		Plenary	
Whole class teaching	Group task	Whole class teaching	Group task	
Ask the pupils to look at MAN Primary Mathematics	Give each group an 'Estimate, measure and	Choose some pupils to use the improvised scales.	Ask the groups if the answers were bigger or	
2, page 136, Unit 1 and discuss the pictures.	compare' chart and some stones or sticks.	Put an object in one bucket and fill up the other bucket	- smaller than their estimates.	
Ask pupils in turn to place the scales you prepared	Explain the word 'estimate' and tell the groups to estimate how many sticks or stones will weigh the same as each object. Tell them to write their estimates on the chart.	with stones or sticks until both buckets balance.		
Put some objects of		or stones will weigh the	Count the stones or sticks and tell them to write it in	
different sizes or quantities		on their chart.		
Ask the pupils to comment		Repeat until all the objects have been weighed.		
on the weights in the buckets, using the words 'heavier' and 'lighter'.	Ask each group to read out their estimates and discuss.			

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 MAN Primary Mathematics 2, page 138 and try to make a simple seesaw using a can 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.

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10MAN PrimaryminutesMathematics 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 in MAN Primary Mathematics 2, page 138, Unit 3.	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.	 russ the kilogram weight around and let them all hold it. Choose some pupils to fetch objects from the weight display that they estimate are lighter than a kilogram. 	Write 'heavier than a kilogram' on the — chalkboard and list the	
Take two objects from the weight display. Use your seesaw to check		objects underneath. Show the pupils the scales and explain how they work.	
which is heavier and which is lighter.	Write 'lighter than a kilogram' on the chalkboard and list the objects underneath.	the objects.	
		Read the weights to the nearest kilogram and ask the pupils if their estimates were correct.	



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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. (\bullet)

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Lesson title

Numeracy lesson plans **Primary 2**

Term 3 **Asking questions**

Week 25 Capacity Day 1

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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 MAN Primary Mathematics 2, pages 133—134.

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.

10 MAN Primary minutes Mathematics 2	25 MAN Primary minutes Mathematics 2		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Group task		Whole class teaching
Ask the pupils to look in MAN Primary Mathematics 2, page 133.	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 amount they can hold is called the 'capacity'.	Ask the pupils to look in MAN Primary Mathematics 2, page 134 and discuss the answers in their groups	Tell the groups to walk around and look at all the containers	Write some of their ideas on the chalkboard.
	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.	-
	Give each group two containers and pieces of paper.	Put the containers with their labels in a corner of the classroom.	-
	Ask them to decide which container will hold less and which will hold more.	Write 'capacity' on a piece of paper and display it with the containers.	-

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s that these onds to 10.
g sums d: complete the rcise books.
e sums are 100 and ask how they are r bonds to 10.

Numeracy lesson plans Primary 2

Term 3 Asking questions 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 from vesterday.	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.	Ask the pupils to draw two different containers in their exercise books
Tell them they are going to check if the labels	Ask each group to say what they have found out.	Tell the pupils when we compare the amount two	Ask them which holds the least and place this at the end of the line.	and write 'less' or 'more' under each one.
are correct. Give each group a bucket and spoon.	Tell them to use the words - 'less than' and 'more than'.	containers can hold we say, 'less' or 'more' but when we compare more than two containers we say 'least '	Choose some pupils to help you place the rest of the containers in order	 Ask them to draw three containers and write '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.		

timating	Learning outcomes	Daily practice
ραςιτγ	By the end of the lesson, most	Whole class teaching
	pupils will be able to:	Say '28' and ask the pupils
	Add 9 to numbers quickly.	to add 10. Repeat with other numbers.
	Estimate the capacity of containers.	
	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.	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.
	pacity	By the end of the lesson, most pupils will be able to:Add 9 to numbers quickly.Estimate the capacity of containers.Teaching aidsBefore the lesson:Have ready a large bucket or container of the same size for each group.Have ready a variety of smaller containers for each group, including a cup.Have ready several large containers of water.

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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.	Give each group a bucket and a smaller container. Ask them to estimate	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.	
Fill one cup with water and pour it into a bucket.	how many of the smaller containers will fill the bucket. Ask them if each group will have the same answer. (No, because some containers are smaller).			
Ask the pupils to look at the level of the water.				
Choose some pupils to show you where they think 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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_esson :itle		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.	'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.		

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

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Lesson title

Numeracy lesson plans Primary 2

Term 3 Asking questions

Week 25 Capacity Day 5

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	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'.	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.

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.

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