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Type of lesson plans/ Grade

Learning theme

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Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Weeks 1—5

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Numeracy lesson plans Primary 3 Term 1 Creating an effective learning environment

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



#### Introduction

Quality education is a direct result of the quality of teaching and teachers, more than anything else. Unfortunately, it is in these most critical factors that Kwara State education has suffered the worst setback in recent years.

Reports showing that the majority of children completing the first six years of basic education are unable to read or write have raised serious concerns about the quality of teaching and teachers in our schools. It was concluded that pupils failed because the teachers' basic education had also failed. In other words, they were all victims of an education system that has collapsed at all levels. Therefore, in seeking to address this serious problem, our intervention is holistic and delivered on a sustained basis.

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These lesson plans have been described as a 'cookery book' approach to teacher training. As a teaching manual, they have been designed to provide a step-by-step guide to teachers of literacy and numeracy, while ensuring that children become active learners.

In using these lesson plans, teachers are continuously supported by both the State School Improvement Team and the school support officers who have been trained to provide such support.

I am delighted to note that within a very short time of these lesson plans being introduced into our schools, children's learning abilities have improved considerably. The lesson plans have also made learning and teaching a lot more exciting for both teachers and pupils. I am confident that these lesson plans will raise standards in our schools and improve the quality of children proceeding to higher levels of education in the near future.

I commend all those who have worked very hard to produce these lesson plans and thank the UK Department for International Development (DFID) for its abiding support to Kwara's education reform through its ESSPIN project.

Bolaji Abdullahi

Honourable Commissioner for Education, Science and Technology, Kwara State

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

# Introduction Creating an effective learning environment

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Weeks 1—5

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An effective learning	2	3	4
environment	Build good relationships	Use classroom space	Display
<text><section-header><text></text></section-header></text>	<ul> <li>Learn all your pupils' names and use them frequently.</li> <li>Find out about your pupils' lives and interests by listening to them and asking questions. Greet them individually in the mornings and encourage them to greet and talk to each other.</li> <li>Tell them about yourself and your family. Pupils love finding out that teachers are 'human' too!</li> <li>Notice when pupils are unhappy and make an extra effort to be friendly to them. Smile and make learning fun for the pupils.</li> <li>Praise and encourage pupils for effort and achievement, instead of punishing them for 'laziness' or getting things wrong. Shouting and treating your pupils harshly, or beating them, will affect them emotionally and make them unable to learn.</li> </ul>	<ul> <li>Arrange the seating in different ways. Look at the photo- graphs in some of the lesson plans to help you think of different ways of working.</li> <li>U-shaped formations mean all the pupils can see each other and there is a space in the middle for activities.</li> <li>Pushing tables together means that four or six pupils can sit together.</li> <li>If there is no space in your class- room, take the pupils outside to play circle games or do activities.</li> </ul>	<ul> <li>Displaying pupils' work is motivating and helps them to remember things they have learned. The activities in these lesson plans encourage you to display pupils' work in different ways.</li> <li>At the start of each week display the key words.</li> <li>5 Tacching aids</li> <li>There are lots of suggestions in the lesson plans for making low- and no-cost teaching aids. Making these may take some time, but they can be used more than once and can last a long time it they are made carefully.</li> </ul>

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Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

# Introduction Essential low-cost or free teaching aids

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Weeks 1—5

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This term's teaching aids	Place value cards	How to use the place value cards		Bundles of 10
These are essential teaching aids for this term's work. They will be used almost every day for the first two weeks and again during the year. It is worth spending some time making enough for every pair in your class.	Use card to construct the cards shown below. If possible, make one set per pair of pupils. You could also make one large class set.	For three-digit numbers Place a Unit card on top of a Ten card, and a Ten card on top of a Hundred card, eg: 5 on top of 40 makes 45, 45 on top of 7 makes 745. Explain this as 7 Hundreds, 4 Tens and 5 Units making 745. Repeat several times, constructing new three-digit numbers.	Ask: 'How many Hundreds are there in the number?' 'How many Tens are in the number?' 'How many Units are in the number?' Each time they make a new number ask them: 'What number have you made?' Ask: 'What is the 7 worth in 732?' 'What is the 3 worth in 73?',	Collect lots of sticks or straws of the same size. Cut them so that they are about 10 centimetres (cm) long. Divide the sticks or straws into groups of 10 and tie them together to make bundles of 10. These, along with single straws or sticks of the same size, can be used to teach the concept
		Dictate a number to pupils. Ask them to make that	- etc.	of Tens and Units.

number.

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Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

# Introduction Games for the term

Weeks 1—5

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#### **Target throw**

Provide or have ready objects to throw such as bottle tops or any lids/ covers, matchboxes, etc in required numbers.

Write a whole number up to 10 in or on each of the bottle tops or objects to throw, eg:



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Make charts on the backs of old calendars or posters, like the ones below.

Ask the first player to throw the object/bottle top on the chart.

Then follow the instructions in the lesson plan.

Players play in turn and can stop after two or more attempts by each player. If the bottle top does not land on the required spot or space (eg: on the line or outside appropriate spot/space), it is a foul throw.

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#### Tangram

A 'Tangram' is an ancient Chinese seven-piece puzzle.

Get some old newspaper, plain paper or card and use a ruler to make the shape exactly as it is below.

Make as many copies as you need for each group or pair to have one. Cut along the thick lines so that you have seven shapes. Keep each set together with a clip or in separate envelopes or containers.

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Tangram shape



Animal shapes



Birds

# Week 1 Numbers up to 999

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Words/phrases

Assessment

Hundreds Tens Units bundles of 10 single three-digit numbers 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 plans Primary 3

Term 1 Creating an effective learning environment

Week 1 Numbers up to 999 Day 1

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### Counting up to 999

#### Learning outcomes

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

Add two-digit numbers.

Count numbers up to 999.

Recognise numbers up to 999.

**Teaching aids** 

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

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Have ready a set of number cards from 0—9.

Have ready bundles of 10 straws and 10 single straws for each pair.

Read MAN Primary Mathematics 3, page 2.

### **Daily practice**

#### Whole class teaching

Ask the pupils if they can remember ways of adding two numbers together, eg: number lines, expanding numbers, counting, etc.

Put the number cards face down on the table and ask four pupils to come out and pick one each.

Ask them to stand together to make two numbers between 10 and 99.

Ask the rest of the class to add these two numbers together using any way they can remember.

Ask someone to give you the answer and explain how they did the sum.

Repeat the process four or five times.

10 minutes	25 minutes			10MAN PrimaryminutesMathematics 3
Introduction	Main activity			Plenary
Whole class teaching	Pair task			Whole class teaching
Count up to 100 with the class.	Give each pair bundles of Tens and Units.	Tell them they can do this using any method.	Ask pupils if they can guess how many groups – of a 100 there are in	Ask the class to look at MAN Primary Mathematics
Ask different groups of pupils to count in 2s, 4s, 5s and Tens, up to 100.	Write two numbers from 0—9 on the chalk- board and ask each pair to make the lowest number and the highest number possible using both numbers. Repeat this four or five times. Ask the pupils to write	When they have worked out that the answer is 10, write the following on the chalkboard: 10 groups of 1 = 10 10 groups of 10 = 100 groups of 100 = 1,000	<ul> <li>Ask them how they worked it out.</li> <li>Ask them to tell you how many groups of 100 there are in: 500, 200, 400, 300, 900, 400. Tell them to record the answer in their exercise books in</li> </ul>	3, page 2. Ask them to read the top box and count the number of groups of 100 in each number.
	down how many 1s there are in one group of 10.		the following way: 500 = 5 groups of 100.	-
	Ask the pupils to work out how many Tens there are in one group of 100.	_	Ask them to tell you the answers and how they worked it out.	

#### Lesso title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 1 Numbers up to 999 Day 2

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### Writing numbers up to 999

#### Learning outcomes

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

Subtract two-digit numbers.

Write numbers up to 999.

Recognise the value of each number.

**Teaching aids** 

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

Have ready a set of number cards from 0—9.

Have ready bundles of 10 straws and 10 single straws for each pair.

Have ready a set of place value cards for each pair.

Read MAN Primary Mathematics 3, page 4.

#### **Daily practice**

#### Whole class teaching

Put the number cards face down on the table and ask four pupils to come out and pick one each.

Ask them to stand together to make two numbers between 10 and 99.

Ask if someone can tell you the lowest number and the highest.

Remind them that when you subtract, you always start with the highest number and take away the lowest.

Ask them to subtract one number from the other using any method.

Ask someone to give you the answer and explain how they did it.

Repeat four or five times.

10 minutes	25 minutes	MAN Primary Mathematics 3	10 minutes
Introduction	Main activity		Plenary
Group task	Group task	Individual task	Whole class teaching
Give each group a set of number cards 0—9, place value cards and bundles of straws.	Repeat, but this time, ask one member of the group to take four cards and show them to others.	Ask them to complete MAN Primary Mathematics 3, page 4, exercise A, using the place value cards	Ask some of the pupils to come out and explain how they got their answers.
Ask the pupils to pick any three number cards.	Ask the pupils to write down as many three-	to help them.	
Ask the pupils to make as many two-digit numbers as possible from	digit numbers as possible from those numbers, eg: 246, 672, 346, etc.		
those numbers, eg: 34, 23, 32, etc.	Ask the pupils to say how many Hundreds,		
Ask the pupils to write the numbers they have formed in figures and then in words, ie: 23 = twenty three, 32 = thirty two.	Tens and Units there are in each number, using the place value cards to help them.		

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#### Lesso title

Numeracy lesson plans Primary 3

#### Term 1 Creating an

effective learning environment

Week 1 Numbers up to 999 Day 3

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### **Reading numbers** up to 999

### Learning outcomes

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

Add two-digit numbers using a number line.

Read numbers up to 999.

#### **Teaching aids**

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

Have ready a set of number cards from 0—9.

Have ready bundles of 10 straws and 10 single straws for each pair.

Have ready a set of place value cards for each pair.

#### **Daily practice**

#### Whole class teaching

Write the sum 35 + 12 on the chalkboard.

Draw a blank number line on the chalkboard with marks for numbers and ask which number you put at the left hand end (35).

Ask them to tell you what to do next, ie: break 12 up into Tens and Units, start at 35, add 10 and write the number on the number line, then add 2 and write the number on the number line, eg:

	+10			+	-2		
35						45	47

Repeat with different numbers.

Give the pupils two or three simple sums to try on their own.

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Group task		Whole class teaching
Ask the pupils to write down any three-digit	Give each group number cards 0—9.	Tell them they can make their numbers first using the	Ask pupils from each group to come out and explain
	Ask one pupil to pick three cards, make a three-digit	place value cards to help them if they need to.	to the whole class how they got their answers.
number represent Hundreds, Tens and Units from	number and show it to the rest of the group.	Tell the pupils to put the number cards back after	
the given numbers, eg: 4 represents 4 Hundreds,	Ask them to expand their numbers into Hundreds,	use and let someone else pick out three numbers.	
7 represents 7 Tens and 8 represents 8 Units.	Tens and Units, eg: 582 = 5 Hundreds	Make sure that each pupil has a turn at picking	
Repeat two or three times, asking pupils to record their answers each time and hold them up for every- one to see.		the cards.	

#### Lesson title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 1 Numbers up to 999 Day 4

### **Ordering numbers**

### Learning outcomes

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

Subtract two-digit numbers using a number line.

Order numbers up to 999.

Compare pairs of numbers using symbol < or >.

#### **Teaching aids**

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

Have ready bundles of 10 straws and 10 single straws for each pair.

Have ready a set of place value cards for each pair.

Read MAN Primary Mathematics 3, pages 3—4.

### **Daily practice**

#### Whole class teaching

Explain that you are going to subtract 15 from 73 using a number line.

Draw a line on the chalkboard and ask which number you write first, ie: 73.

Ask them to tell you what to do next, ie: take 10 away from 73 then count down until you reach the nearest Ten. (60) How many jumps? (13) How many have you left until you have made 15 jumps? (2) Take 2 away from 60. 73 – 15 = 58:

Repeat with different numbers.

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10MAN PrimaryminutesMathematics 3	25 minutes		MAN Primary Mathematics 3	10 minutes
Introduction	Main activity			Plenary
Whole class teaching	Pair task		Individual task	Whole class teaching
Ask the pupils to look at the number square in MAN Primary Mathematics	Write five, three-digit numbers on the chalkboard and ask each pair to work	Tell each pair to put up their hands when they have done this.	Ask pupils to look at MAN Primary Mathematics 3, page 4, exercise D and	Ask one or two pupils to share their answers with the rest of the class.
3, page 3, exercise B. Ask them to count, with a partner, using the	<ul> <li>together to put them in</li> <li>the correct order, from the highest to the lowest.</li> </ul>	When most of the class have their hands raised, ask the pair who raised	write the numbers in each column in order from the lowest to the highest.	
number square and say the missing numbers.	Remind them to look at the Hundreds first, then the	their hands last to give you the answer.	Tell them they can make the numbers first using	-
Ask the pupils to explain the following symbols,	<ul> <li>Tens and finally the Units to see which is the biggest.</li> </ul>	Ask the rest of the class if they agree with the order.	place value cards to help them if they need to.	
giving examples, eg: < less than > greater than		Repeat four or five times, each time writing different sets of five numbers on	-	
Write pairs of numbers on the chalkboard and ask the pupils to put the symbol between them so it reads correctly, ie: 247 <b>&gt;</b> 155.	-	the chalkboard.		

#### Lessor title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 1 Numbers up to 999 Day 5

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# Number lines for large numbers

Learning outcomes	Daily practice
By the end of the lesson, most pupils will be able to: Add and subtract two-digit numbers. Order numbers up to 999 on a number line. Teaching aids	Individual task Ask the class to complete the following sums using a number line 23 + 45 65 - 42 35 + 15 79 - 56 54 - 36 67 + 87
Before the lesson: Prepare number cards from 0—9. Have ready a set of place value cards for each pair to use.	Remind pupils to look closely at the sign so they know whether the sum is addition or subtraction. Ask individual pupils to tell the class their answers and explain how they did it.

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10MAN PrimaryminutesMathematics 3	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Whole class teaching		Whole class teaching
Read out the numbers from MAN Primary Mathematics 3, page 3, exercise C one at a time, and ask the pupils to write them in their exercise books. When they have written one, ask one pupil to come out and write it on the chalkboard for everyone to see. When you have a full list of numbers, ask the pupils to work with a partner and work out the correct order from the highest to the lowest, using the place	Ask the pupils to draw a number line and write the numbers on a number line from the lowest number to the highest. Ask them to choose two numbers and tell you how they would work out the difference between them using the number line, ie: subtracting the lowest number from the highest.	<ul> <li>Ask them to work out the answer.</li> <li>Ask the pupils to explain which numbers they chose and how they worked out the answer.</li> <li>Tell them to do the same activity with different pairs of numbers on their number line.</li> </ul>	Sit the pupils in a circle. Throw a ball across the circle and ask the pupil who you threw it to, to tell you one thing they have learned about numbers during this week. When that pupil has spoken, ask them to throw the ball to someone else and they should also say something they have learned about numbers this week. Continue, until three or four pupils have had a turn.

# Week 2 Multiplication

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#### Words/phrases

Assessment

repeated addition order groups of sets of product times target

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 3

Term 1 Creating an effective learning environment

Week 2 Multiplication Day 1

### **Repeated addition**

### Learning outcomes

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

Order a group of numbers up to 999.

Count groups of objects and numbers.

Explain the method being used.

**Teaching aids** 

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

Collect a large selection of counters for each pair.

Have ready sets of 0—9 number cards for each group.

Make a 'Target throw' Chart 1 for each group (as in the introduction), containing different singledigit numbers.

#### **Daily practice**

Whole class teaching

Write a list of three-digit numbers on the chalkboard.

Ask the pupils to tell you the value of each digit, ie: 345 = 3 Hundreds, 4 Tens and 5 Units, or 300, 40 and 5.

Ask the pupils to draw a number line and order the numbers in the number line, from the lowest to the highest.

10 minutes		25 Game minutes		10 minutes
Introduction		Main activity		Plenary
Pair task		Group task		Whole class teaching
Give each pair a selection of counters and number cards from 0—9. Ask one person to pick a number card. Ask them to look at the number and make that number of piles of counters on their table, eg: 5 piles.	Ask each pair: 'How many counters do you have altogether?' Ask them to write what they have just done as a sum using repeated addition or multiplication, eg: 5 + 5 + 5 + 5 = 20 or $5 \times 4 = 20$	Ask the groups to plat the 'Target throw' gar as described in the introduction section. Give each group a different target to thro their object at. Ask the pupils to reco the sums they made, eg: a first throw that	<ul> <li>numbers around so they make 4 groups of 7, and then write the sum and its answer.</li> <li>Ask them to play this six or seven times, each time making two sums with</li> </ul>	Ask some pupils to come out and explain how they worked out their multiplication sums. Ask them if they can tell you anything interesting when they used the same numbers to make the sum, ie: the answers are the same whichever order
Ask the other pupil to pick another card and put that number of counters in each pile, eg: 5 piles of 4.	(both ways of writing this are correct). Ask them to repeat the process until they have they have written 10 different sums.	lands on 7 and a second throw that lands on 4 be written as: 7 x 4 = or 4 + 4 + 4 + 4 + 4 + 4 + 4	can	you put the numbers in.

# Lesson title

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#### Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 2 Multiplication Day 2

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### Multiplication using a number line

#### **Daily practice** Learning outcomes By the end of the lesson, most **Group task** pupils will be able to: Give each group a set of number cards 0—9. Make up a variety of threedigit numbers. Ask pupils from each group Identify the place value of threeto pick any three numbers from digit numbers. the pack. Multiply numbers using Ask the pupils to make as many repeated addition. three-digit numbers as possible with the number cards and record them in their exercise **Teaching aids** books, eg: 346, 463, etc. Ask them to use their place Before the lesson: value cards to help write the numbers as expanded numbers, Have ready sets of number eq: 375 = 300 + 70 + 5. cards 0—9. Have ready a set of place value cards for each group. Collect a large selection of counters for each pair.

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10 minutes		25 minutes		10 minutes
Introduction		Main activity		Plenary
Whole class teaching		Pair task		Whole class teaching
Write the following on the chalkboard and ask the oupils to explain to you what t means: 4 x 4 =	Remind them that they can write it out in full to help them, ie: $4 + 4 + 4 + 4 =$ Read out the following	Show the pupils how to use a number line to do the sum 9 x 4 by starting at 0 and adding 4 each	If it is easier for the pupils to understand, you can write all the numbers from 0—40 on the number line,	Ask some pupils to explain how they worked out their answers.
Ask if anyone can tell you what the 'x' means.	sums one at a time, using the different terms	time, as shown below.	and then they can count four jumps each time.	
Ask them if they know any other words which mean the same things, ie: multiply times product groups of lots of sets of Ask the pupils to tell you	'times', 'multiply' and 'groups of' each time. Ask the pupils to work out the sums in their exercise books, using counters to help them: 7 times $3 =$ 7 groups of $3 =$ 7 multiplied by $3 =$ $4 \times 5 =$ $6 \times 3 =$		Ask them to complete the sums they did earlier, but this time use the number lines instead of counters to work out the answers.	
how they would answer this question: 4 x 4 =	8 x 4 =	Number line 9 x 4 = +4 +4 +4 +4 +4 +4 0 4 8 12 16	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_

### Learning outcomes **Daily practice Multiplication** By the end of the lesson, most pupils will be able to: Write numbers in figures and in words. Multiply numbers using a number line. the pack. **Teaching aids**

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

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Have ready sets of number cards 0—9.

Have ready a set of place value cards for each group.

Group task Give each group a set of number cards from 0-9. Ask pupils from each group

to pick any three numbers from

Ask the pupils to make as many three-digit numbers as possible with the number cards and record them in their exercise books.

Ask the pupils to write the numbers in words, eg: 125 = one hundred and twenty five. ۲

Numeracy lesson plans Primary 3

Term 1 **Creating an** effective learning environment

Week 2 **Multiplication** Day 3

10 minutes	25 minutes	10 minutes
Introduction	Main activity	Plenary
Whole class teaching	Pair task	Whole class teaching
Do the following as examples with the whole class, using the number line: 5 x 4 = 2 x 3 =	Ask the pupils to work in pairs to do the following sums in their exercise books, drawing a number line for each one: $3 \times 2 =$ $2 \times 3 =$ $4 \times 3 =$ $3 \times 4 =$ $4 \times 2 =$ $2 \times 4 =$	Ask individual pupils to come out and share with the rest of the class what they have learned.
	Ask the pupils to check their partners' work to make sure they have the	-

same answers.

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#### Lessor title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 2 Multiplication Day 4

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## Multiplication using number lines

#### **Daily practice** Learning outcomes By the end of the lesson, most Individual task pupils will be able to: Ask the pupils to complete MAN Primary Mathematics 3, Write numbers in expanded form, using Hundreds, Tens page 5, exercise H. and Units. Ask them to compare their Use a number line to solve answers with the person sitting next to them. word problems. **Teaching aids Before the lesson:** Prepare 'Target throw' Chart 2 and counters, as explained in

15 | MAN Primary minutes | Mathematics 3

Read MAN Primary Mathematics 3, page 105.

the introduction.

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10 minutes		25 Game minutes	MAN Primary Mathematics 3	10 Game minutes
Introduction		Main activity		Plenary
Whole class teaching		Group task	Individual task	Whole class teaching
Ask pupils the following multiplication questions and ask them to write the answer in their exercise books before putting up their hands:	Ask them to explain how they worked out the answers.	Give each group a 'Target throw' chart and counters.	Ask the pupils to complete MAN Primary Mathematics 3, page 105, exercise A using number lines to answer the questions.	Play a game with the pupils.
		Ask each pupil in the group to take turns to throw their counters on the chart and record where they land. Ask every group member to write the sum that they have made, eg: if they throw the number 3 counter and it lands on '6 drinks in 1 crate', they would record it as: 4 x 6 =		Ask them to walk around the classroom and then stand in groups of four.
'If there are 2 biscuits in a packet, how many			Ask the pupils to exchange their books and check each other's answers.	Ask someone to tell you how many groups there are, and how many people are in those groups altogether.
biscuits would you have in 3 packets?'				
'If there are 4 bottles of soft drink in a crate and you have 2 crates, how many bottles of soft drinks would you have?'				
'If a cow has 4 legs and there are 3 cows, how many legs are there altogether?'		Ask pupils to draw a number line to answer the questions they have made.		
		Repeat until every pupil in the group has had a turn.		

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#### Lessor title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 2 Multiplication Day 5

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### Word problems

### Learning outcomes

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

Write numbers as Hundreds, Tens and Units.

Multiply numbers using a number line

**Teaching aids** 

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

Have ready a set of number cards 0—9 for each group.

Read MAN Primary Mathematics 3, page 105, exercise B.

Write the names of all the pupils on small pieces of paper and put them in a pot.

#### **Daily practice**

#### **Group task**

Give each group a set of number cards.

Ask each group member to take a number.

Tell them to use their numbers to make as many two- and three-digit numbers as they can in 5 minutes and write them on a sheet of paper.

Ask them to put those numbers in order, from the lowest to the highest.

Ask the pupils to share their numbers. Ask them: 'Who made the most numbers?' 'Who got the highest number?' 'Who wrote the lowest number?' 'Has anyone made a number that no one else has made?'

10 minutes		25 MAN Primary minutes Mathematics 3	10 minutes
Introduction		Main activity	Plenary
Whole class teaching		Individual task	Whole class teaching
Write the following sums on the chalkboard and ask pupils to tell you how to answer the first one: $2 \times 6 =$ $6 \times 2 =$ $5 \times 4 =$ $4 \times 5 =$ $3 \times 6 =$ $6 \times 3 =$	Ask all pupils to try the rest of the sums in their exercise books.	Ask the pupils to complete MAN Primary Mathematics page 105, exercise B.	Pick out the names of individual pupils from the pot and ask them
	Ask individual pupils to tell you their answers. Ask the pupils how they did it and answer the sum on the chalkboard, by following their instructions.	Go round and help the pupils work out how to answer the questions. Encourage them to use a number line to help them.	- to tell you one thing they have learned this week about multiplication.
	Ask if the pupils noticed anything about the answers (6 x 2 is the same as 2 x 6).		

Week 3 Multiplying 1 x 1 to 9 x 9

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#### Words/phrases

Assessment

addition subtraction product multiply times multiplication chart Find the sum of Find the difference between 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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Term 1 Creating an effective learning environment

Week 3 Multiplying 1 x 1 to 9 x 9 Day 1

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### Multiplying

### Learning outcomes

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

Add and subtract two-digit numbers.

Investigate multiplication patterns.

**Teaching aids** 

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### **Before the lesson:**

Have ready number cards from 0-9 for each group.

Collect enough counters for each group to have 100.

### **Daily practice**

### Group task

Give each groups a set of number cards 0—9

Ask pupils to pick any four numbers.

Read the following instructions to them one at a time, recording the sums and the answers in their exercise books:

'Make two, two-digit numbers and put them on a number line.' 'Find the sum of the two numbers.' (addition).

'Subtract the smaller number from the larger number.'

'The larger number is how many more than the smaller number?' (counting on).

Ask each group to repeat this once or twice.

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Group task		Whole class teaching
Ask pupils to remind you how to multiply two numbers together.	Give each group 100 counters and a set of number cards from 0—9.	Ask if they can write each row as a sum, thinking about what they learned	Ask each group to say one thing they noticed about the numbers and write their
Explain that this week they are going to look at another way of multiplying numbers together.	Ask them to lay the numbers out in a line and put the counters in groups of two next to	<ul> <li>from last week, ie:</li> <li>1 x 2 = 2</li> <li>or</li> <li>1 + 1 = 2</li> </ul>	ideas on the chalkboard.
	each number, ie: $1 \oplus 2 \oplus 4 \oplus 4$	Ask them to look at the sums and their answers carefully, and be prepared to say one thing to the rest of the class	_

about them.

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### $( \bullet )$ Learning outcomes **Daily practice Multiplication** By the end of the lesson, most Whole class teaching pupils will be able to: Read the following sums one Add and subtract twoat a time: digit numbers. 20 + 10 =15 + 23 =Investigate multiplication patterns. 30 - 12 =25 + 25 =**Teaching aids** 62 - 15 = Ask the pupils to work them out as quickly as they can without Before the lesson: using pencil and paper and put Find the number charts up their hands when they have

at the back of MAN Primary

Mathematics 3.

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the answer.

worked it out.

Ask them to tell you the answer and explain how they

Week 3 Multiplying 1 x 1 to 9 x 9 Day 2

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Numeracy

Term 1

lesson plans Primary 3

**Creating an** 

environment

effective learning

10 MAN Primary minutes Mathematics 3	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Pair task	Individual task	Whole class teaching
Ask the pupils to look at the multiplication chart in the back of MAN Primary Mathematics 3.	Give each pair a number from 0—16. Ask them to count how	Ask the pupils to divide a page of their exercise books into six parts.	Ask one or two pupils to explain their work to the class.
Ask individual pupils to tell you something they find interesting about it.	many times their number appears in the answers on the multiplication chart. Ask them to say why they	Ask them to choose six numbers between 1 and 192 and write one in each box. Ask them to write all	
Write their ideas on the chalkboard. Try to get as many ideas as possible.	think their number appears so many times.	the sums they can find which give that answer in the correct box.	
Ask the pupils some questions from the chart to help them become familiar with it, eg: $4 \times 3 =$ $7 \times 5 =$ $13 \times 5 =$		Ask them to choose one of the sums and answers and use counters or a number line to show how to do that sum.	

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### title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 3 Multiplying 1 x 1 to 9 x 9 Day 3

# Investigating multiplication

# By the end of the lesson, most<br/>pupils will be able to:Whe<br/>Writh<br/>Writh<br/>the Writh<br/>Writh<br/>the Writh<br/>the Wri

Learning outcomes

Read MAN Primary Mathematics 3, page 94, exercise F and look at the multiplication chart at the back of the book. **Daily practice** 

Whole class teaching

Write the numbers 0-20 on the chalkboard.

Ask the pupils to use addition or subtraction to make one of the numbers, eg: 19 = 27 - 8

Write the sum next to the number and then ask if anyone can make one of the other numbers.

Tell the pupils that they have 10 minutes in pairs to complete all the numbers from 0—20.

When 10 minutes is finished, ask:

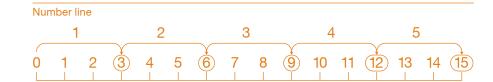
'How many numbers did you make sums for?'

'How many of you have used both addition and subtraction?'

"Were there any numbers you couldn't make a sum for?"

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10 MAN Primary minutes Mathematics 3	25 MAN Primary minutes Mathematics 3	10 Game minutes	
Introduction	Main activity	Plenary	
Whole class teaching	Individual task	Whole class teaching	
Ask the pupils to look at their 3 times table on the multiplication chart at the back of MAN Primary Mathematics 3.	Ask pupils to use the multiplication chart to answer MAN Primary Mathematics 3, page 94, exercise F.	Play the game 'Fizz'. Stand the pupils in a circle and explain that they are going to count around the circle up to 50.	When you have finished the game ask them: 'How many are you counting on each time?'
Ask them to write it out on a number line, circling every number they land on, and comparing it to the numbers on their	_	Explain that every third number they have to say 'fizz' instead of the number, ie: '1, 2, fizz', '4, 5, fizz', '7, 8, fizz'.	-
chart, as shown below. Ask pupils to number the jumps they make, from 1—5.	_	Tell the pupils that they have to concentrate really hard so they don't miss the number.	-



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### title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 3 Multiplying 1 x 1 to 9 x 9 Day 4

# Investigating multiplication

# Learning outcomes

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

Add and subtract two-digit numbers.

Multiply numbers together.

**Teaching aids** 

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

Prepare 20 mixed addition and subtraction sums using twodigit numbers. Make some easy sums for pupils who find it difficult to think quickly, and some difficult ones for pupils who are quick thinkers.

Read MAN Primary Mathematics 3, pages 89—91 (not the multiplication table), making sure you understand it.

### **Daily practice**

### Whole class teaching

Read out the questions you have prepared, one at a time, and ask the pupils to answer them without using pencil and paper.

Try to make sure that you don't always ask the first pupil to put up their hand, but wait for 2 or 3 minutes to give everyone a chance.

When they have answered, ask: 'Has anyone else got a different answer?'

'How did you work it out?'

'Did anyone else work it out in a different way?'

10 MAN Primary minutes Mathematics 3	25 MAN Primary minutes Mathematics 3		10 Game minutes
Introduction	Main activity		Plenary
Pair task	Pair task		Whole class teaching
Ask each pair to look at MAN Primary Mathematics 3, pages 89—91 (not the multiplication table) for 5 minutes.	Ask each pair to look at the multiplication chart at the back of MAN Primary Mathematics 3 and choose two times tables, eg:	Ask them to look at the two number lines they have drawn and tell you any difference between them.	Play 'Fizz' again.
Ask each pair to tell the class anything they have learned from looking at it.	<ul> <li>6 and 11.</li> <li>Ask them to make         <ul> <li>a number line for each,</li> <li>circling where they land</li> <li>each time, and counting</li> <li>the number of jumps,</li> <li>as shown below.</li> </ul> </li> </ul>		
	6x 0 6 (12)		

#### Lesso title

Numeracy lesson plans Primary 3

### Term 1 Creating an effective learning environment

Week 3 Multiplying 1 x 1 to 9 x 9 Day 5

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### Multiplication word problems

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Learning outcomes	Daily practice
By the end of the lesson, most pupils will be able to: Add and subtract two-digit numbers. Solve multiplication problems.	Give each group a sheet of paper with a number in the middle. Ask them to write down as many sums as they can in 5 minutes which make that number.
Before the lesson: Prepare a sheet of paper for each group, with a number from 10—100 written in the middle. Read MAN Primary Mathematics 3, page 92, questions 1—10 and 41—44.	<ul> <li>Tell them they can write addition, subtraction or multiplication sums.</li> <li>After 5 minutes swap the papers between the groups, so each group has a different number to work on.</li> <li>Swap papers for the final time so each group works on a third number.</li> <li>Share the sums with the rest of the class and check they are correct.</li> </ul>

15 minutes

10 minutes	25 MAN Primary minutes Mathematics 3	10 Game minutes
Introduction	Main activity	Plenary
Whole class teaching	Individual task	Whole class teaching
Read out the following questions, one at a time, and ask pupils to work them out in their exercise books: 'A chair has 4 legs. How many legs have 7 chairs?' 'A room has 4 windows. How many windows do 6 rooms have?'	Ask the pupils to complete MAN Primary Mathematics 3, page 92, questions 1—10 and 41—44, using counters, the multiplication chart or drawing number lines to help them. Ask the pupils to explain to the whole class how they got their answers	Play 'Buzz'. This is played the same way as 'Fizz' except that the pupils say 'buzz' instead of every fifth number, ie: '1, 2, 3, 4, buzz', '6, 7, 8, 9, buzz', etc.

Ask the pupils to tell you how they worked out the answers.

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### Words/phrases

#### Assessment

symmetry symmetrical fold tear half

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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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Term 1 Creating an effective learning environment

Week 4 Symmetry Day 1

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# Symmetrical patterns

### Learning outcomes

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

Multiply numbers.

Explain the meaning of symmetry.

Discover the line of symmetry by folding a shape.

### **Teaching aids**

### **Before the lesson:**

Collect something simple to throw and catch.

Cut newspaper into different regular shapes, eg: circles, rectangles, squares. You will need at least two shapes for each pupil.

Find some string and pegs to make a washing line display.

### **Daily practice**

Game

### Whole class teaching

Sit the pupils in a circle and throw the ball or object at one pupil.

As you throw, ask a multiplication question, eg: 3 x 4 =

Ask the pupil who catches the object to answer the question as quickly as possible and then throw the ball to someone else and make up a different multiplication sum.

If the person is struggling to answer the question, ask one of the other pupils to help.

Try to make the game run at a fast pace or the rest of the pupils will lose interest.

10 minutes		25 minutes	10 minutes	
Introduction		Main activity	Plenary	
Whole class teaching		Pair task	Whole class teaching	
Give each pupil a piece of newspaper cut into a square.	Explain that this is called a symmetrical pattern, because both sides	Give each pair three or four different shapes cut out of newspaper and ask them	Give the class a number and ask the pupils to shout out as many ways	
Ask them to fold it in half and tear out a small piece of paper from along the fold.	<ul> <li>of the paper look exactly the same.</li> </ul>	to make shapes like the one they have just made, by folding their paper in half and tearing bits of paper out of them.	as they can think of to make that number.	
Ask them to open up the paper and they should find that both sides of the paper have the		Ask them to show their shapes to the rest of the class.		
same shaped hole in the same place.		Display them by hanging a washing line across the classroom.		

#### Lesson title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 4 Symmetry Day 2

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### Line of symmetry

### Learning outcomes

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

Multiply numbers.

Work as a group to solve a 'Tangram' puzzle.

Identify shapes with lines of symmetry.

**Teaching aids** 

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### **Before the lesson:**

Prepare a 'Tangram' for each group (see introduction).

Cut out a selection of squares, rectangles, circles, etc.

Have ready 0—9 number cards and a 'X' card for each group.

### Group task

**Daily practice** 

Give each group a set of 0-9 number cards.

Ask each group to pick two numbers at random and arrange them either side of a multiplication sign.

Ask the pupils to make as many sums as possible from those two numbers and find their product, eq: 5 x 3 =

Ask the pupils to write down the sums and their answers in their exercise books.

Ask the pupils to tell you the highest and the lowest answer they found.

10 Puzzle minutes	25 minutes		10 minutes		
Introduction	Main activity		Plenary		
Group task	Pair task		Whole c	lass teaching	
Ask the pupils to do the 'Tangram' puzzle.	Give the pupils a selection of shapes cut out of	Explain that the place where paper is folded in	share the	group to Fir shapes and	
Divide the pupils into four groups and give each group a set of 'Tangram' pieces (not the animal shapes). Ask each group to use all the shapes to make a rectangle, a triangle and a square.	Ask the pupils to fold the square, so that the edges match together exactly.	half is called a line of symmetry and that a square has three lines of symmetry.	their table with the rest of the class.		
	This may be across the middle or diagonally. If the edges overlap the shapes are not	Ask each pair to fold their shapes in matching halves _ in as many different ways as possible.			
	symmetrical. If they	Ask each pair to record	Shape table		
	match exactly the shape is symmetrical.	on the table opposite how many lines of	Shape	Number of lines of symmetry (folds)	
		symmetry they have	rectangle		
		found on each shape.	square		

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circle

Term 1 Creating an effective learning environment

Week 4 Symmetry Day 3

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# Symmetrical patterns

### Learning outcomes

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

Multiply numbers.

Identify lines of symmetry in everyday life.

### **Teaching aids**

### **Before the lesson:**

Prepare Chart 1 for each group for the 'Target throw' game.

### Find a mirror.

Have ready a photo or picture from a magazine, newspaper or calendar for each pupil. Cut each picture in half.

### **Daily practice**

Game

### Group task

Ask the pupils to play the 'Target throw' game in groups, recording the sums they make and the answers in their exercise books.

10 minutes		25 minutes	10 minutes
Introduction		Main activity	Plenary
Whole class teaching		Individual task	Whole class teaching
Explain to pupils that there are lines of symmetry in nature, eg: Human beings have one line of symmetry, ie: down the middle of a human from top to bottom. Butterflies have one line of symmetry, ie: their wings are exactly the same on both sides. Dogs have one line of symmetry, ie: along their middle.	<ul> <li>Explain to pupils that many people consider that symmetry is what makes nature so beautiful.</li> <li>Try putting a mirror along the length of and across a pupil's face and see if it is symmetrical and draw the other half so that it is symmetrical.</li> <li>Ask the pupils to come outside with you.</li> <li>Put a mirror in the middle of several objects outside to show the pupils what happens.</li> <li>Explain that if the reflection is exactly the same as the other half of the object,</li> </ul>	Ask each pupil to find a leaf and fold it in half to see if it is symmetrical. Give each pupil half of a photograph or picture and ask them to put it on a page in their exercise books and draw the other half. Ask them to use a ruler to draw along the line of symmetry.	Ask each pupil to show their pictures to the class.

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Term 1 Creating an effective learning environment

Week 4 Symmetry Day 4

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# Symmetrical patterns

### Learning outcomes

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

Multiply numbers.

Find lines of symmetry in letters.

Make symmetrical patterns.

**Teaching aids** 

### **Before the lesson:**

Draw one of the 'Tangram' animal shapes from the introduction on the chalkboard.

Write the alphabet in capital letters on the chalkboard.

Find as many mirrors as you can, so that each pair can have one.

### **Daily practice**

Game

Whole class teaching

Play 'Buzz'.

Ask the pupils to choose any number between 0 and 193, and write it in their exercise books.

MAN Primary Mathematics 3

Ask them to look at the multiplication chart at the back of MAN Primary Mathematics 3.

Ask them to write down all the multiplication sums which make that number.

Ask them to look at the sums and see if they can tell you anything they think is interesting about them.

10 Puzzle minutes	25 MAN Primary minutes Mathematics 3		10 minutes
Introduction	Main activity		Plenary
Group task	Pair task		Whole class teaching
Ask pupils to solve the 'Tangram' puzzle.	Ask the pupils to copy the alphabet letters into their exercise books.	When they have completed the task, ask them these questions:	Sit the pupils in a circle and give them a ball or a simple object to throw.
Give each group a set of seven 'Tangram' pieces. Ask them to work together to make the animal shape you have drawn on the chalkboard. The first group to make the correct shape using the seven pieces is the winner. Repeat with a different animal shape.	Ask them to work together, using a mirror if possible, to find out which letters have lines of symmetry. Ask them to draw the line of symmetry on the letter. Remind them that some letters may have more than one line of symmetry, see below.	<ul> <li>'Are there any letters which have no lines of symmetry?'</li> <li>'Are there any letters which have more than one line of symmetry?'</li> <li>'What happened when you tried to find a line of symmetry in the letter O?'</li> <li>Ask them to write the numbers 1—50 and see if they have any lines of symmetry, see below.</li> </ul>	Ask the pupils to throw the ball to someone and give them a sum to answer. When the pupil has answered it, ask them to think of a sum to pass on to someone else. Continue for four or five throws.

Line of symmetry

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Line of symmetry

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Term 1 Creating an effective learning environment

Week 4 Symmetry Day 5

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# Symmetrical patterns

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#### **Daily practice** Learning outcomes By the end of the lesson, most Group task pupils will be able to: Give each group a set of 0-9 Multiply numbers. number cards. Make symmetrical patterns. Ask each group to pick two numbers at random. Identify lines of symmetry. Ask the pupils to make as many sums as possible and find **Teaching aids** their product, eg: 8 x 3 2 x 4 **Before the lesson:** Ask the pupils to write down Have ready sets of 0-9 the sums and their answers in number cards.

their exercise books.

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10 minutes	25 minutes		10 minutes	
Introduction	Main activity		Plenary	
Whole class teaching	Pair task	Pair task		
Ask pupils to tell you anything that they have	Ask one pair to stand up opposite each other.	Repeat with three or four different pairs.	Ask each pair to share their work with the rest of	
learned about symmetry during the week.	Ask one member of the pair to make a shape	Ask each pupil to draw half of a picture in their	- the class.	
Write their ideas on the chalkboard.	and the other to copy that shape exactly, so that they are making one symmetrical shape.	partner's exercise book. Ask the other person to complete the picture so it is symmetrical, and draw	_	
	Have a look at the shape with the rest of the class and ask them to say where the line of symmetry is in the shape.	the line of symmetry. Ask each pair to write a symmetrical line of numbers, see below.	-	
	If the shape is not symmetrical, ask someone to move one of them so that they are making a symmetrical shape.	- Line of symmetry		
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Week 5 Properties of shapes ۲

Words/phrases	N	0	rd	s/	p	h	rc	IS	e	3
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Assessment

properties edges curves curved straight lines surfaces faces corners

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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

## Numeracy

lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 5 Properties of shapes Day 1

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# Curved and straight lines

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Learning outcomes	Daily practice
By the end of the lesson, most	Whole class teaching
pupils will be able to:	Write a selection of random
Count numbers in Hundreds,	numbers on the chalkboard and
Tens and Units.	ask a pupil to come out and
Distinguish between curves	circle five numbers.
and straight lines. Teaching aids	Give the pupils 5 minutes to make as many three-digit numbers as they can with those numbers.
<b>Before the lesson:</b>	Ask them to write the numbers
Have ready sets of number	in order, from the highest to
cards 0—9.	the lowest.

15 minutes

10 minutes	25 minutes		10 minutes
Introduction	Main activity		Plenary
Whole class teaching	Pair task	Individual task	Whole class teaching
Take the pupils outside and ask them to say which objects have <mark>curved</mark> lines and which have	Give each pair a stick and ask them to draw patterns of straight lines in the ground.	Take the pupils inside and ask them to think of an object to draw that has both straight and	Ask the pupils to show their pictures to the rest of the class, identifying curved and straight lines.
straight lines.	Ask each pair to make patterns of curves in the ground.	<ul> <li>curved lines.</li> <li>Ask them to draw the object in their exercise books</li> <li>and label the straight lines 'straight' and the curved lines 'curved'.</li> </ul>	Discuss the difference between a curve and a straight line.
	Ask the pupils if they can explain the difference between a <mark>curve</mark> and a <mark>straight</mark> line.		

Term 1 Creating an effective learning environment

Week 5 Properties of shapes Day 2

# Curves and straight lines

Learning outcomes	Daily practice
<b>By the end of the lesson, most pupils will be able to:</b> State the place value of a digit in three-digit numbers.	Whole class teaching Ask the pupils to help you expand 536 into Hundreds, Tens and Units, ie: 536 = 500 + 30 + 6.
Classify shapes according to their properties.	Ask the pupils to state the place value of each digit in the following numbers, and then expand the number into Hundreds
Teaching aids	Tens and Units: 324
Before the lesson: Collect real objects that have a mix of curved and straight lines, eg: box of sugar, matches,	425 672 123 691 801
toothpaste, milk tin. Make a set of flash cards for each group, ie: 'curved lines' and 'straight lines'.	Discuss their answers.
Read MAN Primary Mathematics 3, pages 191—193, up to activity 1.	

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10 minutes		25 minutes	MAN Primary Mathematics 3	10 Game minutes
Introduction		Main activity		Plenary
Whole class teaching		Group task		Whole class teaching
Draw two columns on the chalkboard. Label one column 'straight lines' and label the other curved lines'.	Ask the pupils to think about each thing you have written and say why they are straight or curved.	Place the objects on the table. Ask pupils to sort them into groups of straight or curved lines and put them into labelled columns.	Read MAN Primary Mathematics 3, pages 191—192 to the class and ask them to follow it while you read.	Play 'Buzz' with the pupils.
Ask pupils to mention some examples of straight lines and curves in every- day life and ask them which column you should write		Ask pupils to say how many curved objects they have, and how many straight ones they have.	Ask each group to look at the examples they have sorted and match them to the shapes on page 192.	_
them in, eg: a rainbow the line between the wall and the floor of a house a tight rope pulling a cow a tin of milk.			Read MAN Primary Mathematics 3, page 193, activity 2 one point at a time and ask pupils to rearrange the objects accordingly.	_

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Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 5 Properties of shapes Day 3

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### **Drawing objects**

### Learning outcomes

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

State the place value of a digit in three-digit numbers.

Identify the properties of solid shapes.

**Teaching aids** 

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

Have ready the selection of objects that you collected for Day 2. Daily practiceWhole class teachingAsk the pupils to stand in a circle.Tell the pupils the following:'A clap of the hands representsHundreds.'

'A click of the fingers represents Tens.'

'A stamp of the feet represents Units.'

Say a three-digit number and ask a pupil to represent that number using claps, clicks and stamps, eg: 246 would be 2 claps, 4 clicks and 6 stamps.

Ask that pupil to say another number for someone else.

Continue until everyone has had a turn.

10 minutes		25 MAN Primary minutes Mathematics 3	10 minutes
Introduction		Main activity	Plenary
Whole class teaching		Group task	Whole class teaching
Show the pupils an object with a <mark>flat surface</mark> , then another with a <mark>curved surface</mark> .	Ask them to help you find one example of a surface, an edge and a corner.	Ask each group to put each object on their table into one of three sets, ie: all flat surfaces,	Ask the pupils to show their drawings to the class.
Ask the pupils to pick out other objects with flat	_	all curved surfaces, flat and curved surfaces.	
surfaces or curved surfaces from the objects on their table.		Ask the pupils to look at the diagrams in MAN Primary Mathematics 3,	-
Show the pupils an object and explain that	_	page 192 to help them see how to draw the object.	
it has surfaces, edges and vertices (corners). A sphere has no edges		Ask the pupils to pick some shapes and draw them in their exercise books.	-
or corners.		Ask them to label edges, surfaces and vertices (corners).	-

### title

Numeracy lesson plans Primary 3

Term 1 Creating an effective learning environment

Week 5 Properties of shapes Day 4

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### Counting edges and corners

### Learning outcomes

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

Compare pairs of numbers using the symbols < and >.

Count faces, edges and corners of shapes.

**Teaching aids** 

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

Have ready circular objects for the pupils to draw around and a straight-edged object to help them draw straight lines.

### **Daily practice**

### Whole class teaching

Give the pupils pairs of numbers, one at a time and ask them to write them down, using the ≥ and ≤ symbols to order them, eg: 354 > 215

Ask them to tell you how they decided which one was the smallest number.

Remind them that they should first of all compare the Hundreds, then the Tens and then the Units to see which number is greater.

Give pupils the following pairs of numbers and ask them to say which is greater than the other, eg: 231 and 272 567 and 548 333 and 337 498 and 492

10 minutes	25 MAN Primary minutes Mathematics 3		10 minutes
Introduction	Main activity	Main activity	
Whole class teaching	Pair task	Individual task	Whole class teaching
Ask pupils to identify any circular and triangular shapes in the classroom.	Ask pupils to complete MAN Primary Mathematics 3, page 196, exercise D.	Ask pupils to use circular tins and coins to draw circles in their exercise books.	Ask the pupils to show their pattern to the class.
		Ask them to use a ruler or other straight object to draw triangles of different sizes in their exercise books.	
		Ask the pupils to design a pattern using circles and triangles.	

Term 1 Creating an effective learning environment

Week 5 Properties of shapes Day 5

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### Counting shapes, edges and surfaces

Learning outcomes	Daily practice
By the end of the lesson, most pupils will be able to: Identify the properties of	Whole class teaching Give the pupils the following list of numbers. Ask them to write
solid shapes. Complete a table to sort information.	them in order using the system they – learned during Day 4: 333 765 334
Teaching aids	569 785 669
Before the lesson:	529
Read MAN Primary Mathematics 3, page 195, exercise A.	- 444
Have ready the selection of objects that you collected for	

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Day 2.

10 minutes	MAN Primary Mathematics 3	25 MAN Primary minutes Mathematics 3	10 minutes	
Introd	luction	Main activity	Plenary	
Whole	e class teaching	Group activity	Whole class teaching	
and as	the pupils a shape sk them to identify:	Give each group a selectior of objects.	chalkboard and ask pupils	
faces, edges, corners and curved surfaces.		Tell them to do their own work but help each other.	to help you complete it using their answers.	
	ipils to tell you any of each their has.	Ask them to copy the table in MAN Primary Mathematics 3, page 195,		
the tab Mathe	n how to complete ble in MAN Primary matics 3, page 195 r exercise books.	exercise A, putting the name of their objects in the column 'solid name' instead of the ones written in the book.		
		Ask pupils to complete the table for their objects.	_	

Credits	Special thanks go to:	
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Thanks also go to the teachers of Kwara who have used these

plans and started to bring about change in their classrooms.

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