Numeracy lesson plans Primary 1

Term 2
Involving pupils in
their learning

## Numeracy lesson plans Primary 1 Term 2 Involving pupils in their learning



## Introduction

Over the years, the citizens of Lagos have benefited from a government orchestrated free basic education programme. This has resulted in mass enrolment of school-age children in public primary institutions across the state, and significant expense on education facilities and continuous teacher improvement programmes.

However, the learning outcomes of these public primary schools have not justified the colossal amount of money that has been spent on education in the state. The school system has inadequately equipped our school leavers for everyday life. A baseline assessment of teachers revealed a general weakness around effective teaching methodologies to improve learning outcomes in our schools.

The State Government, with the support of the Education Sector Support Programme in Nigeria (ESSPIN) and with funding from UK Aid from the Department for International Development, has recently introduced pilot literacy and numeracy lesson plans in public primary schools (starting with Primary 1-3) to improve classroom teachers' capacity. These lesson plans sought to address the challenges by offering step-by-step guidance to teachers on how to deliver good quality literacy and numeracy lessons effectively.

Now, the hard work of all our personnel - the State School Improvement Team, the school support officers and technical partners from ESSPIN - has brought about the production of a complete module of lesson plans.

I am convinced that the use of these complete versions of the literacy and numeracy lesson plans by teachers in all our 1,003 public primary schools will further raise the standards of education to which we are wholly committed.

Mrs Olayinka Oladunjoye Honourable Commissioner for Education Lagos State

Numeracy lesson plans Primary 1

Term 2
Involving pupils in their learning

Weeks
11-15

## Introduction

Involving pupils in their learning

## Learning must be an active process on the part of the learner.

## How children learn

These lesson plans provide you with a variety of techniques to make learning faster, fun and more effective. The plans use activities that reflect the way in which pupils naturally learn, and attempt to bring the joy back into learning for children.

Every individual in your class responds to activities differently and learns their own way, but generally children learn best when they:
Have objects to see and hold.
Take part in the lesson.
Can talk to each other to share ideas and learning.
Practise what they have learned individually, in pairs and in groups.

Are given activities that challenge them and make them think.

Receive encouragement and praise.
Realise that making mistakes is an important part of the learning process.

This third set of lesson plans contains lots of activities to encourage learning through different methods.

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# Introduction <br> Essential low-cost or free teaching aids 

## Counters

Tens and Units

## Money

Ask the pupils to help you
collect together as many bottle tops, small sticks and small stones as they can. Put them into jars to keep in the classroom and use to help with counting.

Collect lots of sticks or straws of the same size.
Cut them so that they are about 10 cms long.

Divide them into groups of 10 and tie each set together to make a bundle of Ten.

These can be used to teach the concept of Tens and Units, along with single straws and sticks of the same size.

Make sets of coins and notes by cutting them out of a cardboard carton and writing the correct amounts on them.

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Primary 1

## Term 2

Involving pupils in their learning

Introduction
Songs and rhymes for the term

1, 2 buckle my shoe /
3, 4 knock at the door /
5, 6 pick up the sticks /
7, 8 lay them straight /
9,10 a big fat hen.

## Weeks

11-15

10 soldiers on parade

10 tall soldiers standing
in a row /
9 stood up and 1 lay low / Along came the sergeant, and what do you think? / Up popped the other one, quick as a wink /

9 tall soldiers...
(Repeat until no soldier is left standing)

Counting songs

1, 2, 3, 4, 5, once I caught a fish alive /
$6,7,8,9,10$, then I let it go again.
1, 2, 3, 4, teachers waiting at the door /
$5,6,7,8$, children waiting at the gate /
$5,6,7,8$, run to school and don't be late.
1 little, 2 little,
3 little fingers /
4 little, 5 little,
6 little fingers /
7 little, 8 little,
9 little fingers / 10 little fingers.
(clap, clap, clap)

10 green bottles

10 green bottles standing on the wall ( x 2 ) /
If 1 green bottle should accidentally fall / There'd be 9 green bottles standing on the wall / 9 green bottles standing on the wall...
(Repeat until no more bottles are left standing.)

10 currant buns

10 currant buns in the baker's shop, round and fat with sugar on the top / Along came (sing the name of a pupil) with a Kobo one day / Bought a currant bun and took it away /
9 currant buns...
(Repeat until no more currant buns are left)

5 long yams

5 long yams in a farmer's field, round and fat, and ready to be picked / Along came (sing the name of a pupil) with a hoe one day / Picked a yam and took it away /
4 long yams...
(Repeat until no more yams are left)



## Numeracy

lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 11
Addition 1-10
Day 1

## Counting the number of objects in a group



By the end of the lesson, most pupils will be able to:
Count forwards and backwards between 0 and 10.

Know the symbols + and $=$.

## Teaching aids

Before the lesson:
Rehearse the dance from
Week 6 and the song ' 10 soldiers on parade'.
Write two large '5's on either side of the chalkboard.
Write + and = on the chalkboard.
Prepare 20 counters, $a+$ card and an $=$ card for each pair.

15 minutes

## Whole class teaching

Lead the pupils in the dance from Week 6 to count from 0-10.
Reverse the steps of the dance to count from 10-0.
Sing '10 soldiers on parade' with the pupils.

Bring out 10 pupils to the front to be soldiers and give them numbers.
As each verse finishes take one pupil away and count how many there are until there are no soldiers left.

## Introduction

minutes
$\mid$

## Main activity

Whole class teaching

Show the class the + and = symbols on the chalkboard and ask pupils to tell you their meaning.
$\overline{\text { Give them } 2 \text { minutes }}$
to discuss and then ask what they decided. Agree that + means add and $=$ means equals.
Ask them to show you 3 fingers on one hand.

Ask how many fingers they have altogether and agree that it is 5 .
Explain that they have 'added' 2 and 3 , which equals 5 .

Write the sum on the chalkboard.

Ask the pupils to suggest three simple sums. Write the sums on the chalkboard.
Ask them to show 2 fingers on their other hand.

## Pair task

Give each pair 10 counters.
Show them the sums on the chalkboard and remind them that each sum is asking them to add the two numbers together.

Ask pairs to use their counters to find the answers to each question and to write the answers in one of their exercise books.

Ask pairs who finish the sums quickly to make up their own adding sums and write them down in an exercise book.

## Whole class teaching

ook at the first number in the first sum and call that number of pupils to the front.
Look at the second number in that sum and call that number of pupils to the front.

Keep the groups separate. Remind the class that the sum is asking them to add the two groups together. Move the groups of pupils together into one group.

Ask:
'How many pupils are in this new group?
Count them together,
agree on the answer to the sum and write it on the chalkboard.

Repeat for each sum.

## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

Week 11
Addition 1-10
Day 2

## Counting the number of objects in two groups

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Group task |
| Confidently identify numbers from 1-10. | 10 number cards and ask them to arrange the cards in order. |
| Use counters to add numbers from 1-10. | Ask one member of the group to close their eyes. |
| Teaching aids | Ask the rest of the group to remove a number from the line. |
| Before the lesson: | Tell the pupil to guess which card has been removed. |
| Have ready a set of number cards from 1-10 for each group. | Ask them to do this a few times so that everyone in the group has a turn to guess. |
| Have 40 counters, $a+$ and an $=$ card for each group. |  |
| Write a large + and = on the chalkboard. |  |


| $\begin{array}{\|l\|l} 10 \\ \text { minutes } \end{array}$ | 25 <br> minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Whole class teaching |
| Show the class the two symbols on the chalkboard. | Give 10 counters to each group with a set of number cards from 1-5 and a + and = card. | Ask a pupil to put the + card between the two sets of counters. | Ask some groups to share their sums with the whole class. As they tell you their sums, write them up on the chalkboard and congratulate them. |
| Ask them to make the symbols in the air with you. |  |  |  |
| Ask if anyone can remember what they mean. | Tell pupils to shuffle the number cards and put them face down. | Tell the group to count and say how many counters altogether in the two piles. |  |
| Remind them that + means add and $=$ means equals. | Ask one pupil to turn over the top card and read the number on it. | Ask the group to place that number of counters after the = card next to the second pile. |  |
| Ask pairs to take in turns to draw the symbol on each other's back and guess what it is. |  |  |  |
|  | Tell another pupil in the group to count that number of counters and put them next to the number. | Ask one pupil to write that number on a new card and put it next to the final pile of counters. |  |
|  | Ask another pupil to turn over the next card and read the number. | Ask all pupils in the group to write their sum down in their exercise books. |  |
|  | Tell another pupil to count that number of counters and put them next to the number card. | Repeat the game with new pairs of cards. |  |

Numeracy
lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 11
Addition 1-10
Day 3

Lesson

15
minutes

Learning outcomes

By the end of the lesson, most pupils will be able to:
Count and order numbers 0—10.
Add numbers from 1—10

## Teaching aids

## Before the lesson:

Read Macmillan New Primary Mathematics 1, page 57.
Prepare 20 counters for each pair in your class.

Have a set of 0-10 number cards ready for each group.

## Daily practice

## Group task

Sing '10 green bottles' with the class.
Ask them to use their fingers to show you the number of bottles as they sing.

Give each group a set of number cards from 0-10.
Ask them to lay the cards face down on the table and remove two without anyone seeing which cards they are.

Ask them to put the cards in a number line and say which the missing numbers are.

Tell pupils to turn over the number cards and check they are correct.
Ask them to repeat the game four or five times.

| $\|$10 <br> minutes | 25 <br> minutes | Macmillan <br> New Primary <br> Mathematics 1 | main <br> minutes |
| :--- | :--- | :--- | :--- |
| Introduction | Mactivity | Plenary |  |
| Whole class teaching | Pair task | Whole class teaching |  |

## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

Week 11
Addition 1-10
Day 4

Lesson
title

## Writing addition sums

15
minutes


By the end of the lesson, most pupils will be able to:
Count between 1 and 10.
Use number lines to help answer basic sums.

## Teaching aids

Before the lesson:
Draw a number line from 1-10 on the chalkboard.

Make a number of pairs of flash cards. One card in each pair should have a simple sum using numbers $1-10$ and the other card should have the answer. Answers should be no larger than 10 .

Look at the first number line
in Macmillan New Primary
Mathematics 1, page 69.

## Daily practice

## Whole class teaching

Take the class outside, or to a space large enough for pupils to move around comfortably.
Tell them that when you call out a number between 1 and 10, they have to get themselves into groups of that number and stand in a circle. Ask them to write the number on the ground in the middle of their group.
If they cannot get into a group of that number, they should join you, make another group and write that number on the ground.
Call out different numbers between 1 and 10.

| 10 minutes | 25 minutes | Game |  | 10 minutes |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  |  | Plenary |
| Whole class teaching | Whole class teaching |  |  | Whole class teaching |
| Show pupils the number line on the chalkboard. | Ask pupils to look at a number and use it in the following game. |  | Any pupils who can find a card with the answer to the sum should bring it to the front and say 'l am your friend'. There may be more than one matching card. | Ask pupils to write down one of the sums they can remember from the 'Finding friends' game, making sure that they use the + and $=$ signs correctly. |
| Ask a pupil to show you the |  |  |  |  |
| number 3. Tell them that they will add 2 and 3. | Give the sum and answer flash cards out to groups. Try not to give matching pairs to the same group. |  |  |  |
| Ask the pupil to count two spaces on from number 3. |  |  | Ask the class if they agree. If they do, ask the pupils to shake hands and ask them why they are friends. Make sure they explain the sum using the words 'add' and 'equals'. |  |
| Ask the class what number has been arrived at and | Play the 'Finding friends' game with the cards. |  |  |  |
| agree that it is 5 . | Ask a pupil to come to the front with a sum and tell them to ask the rest of the class, 'Where is my friend?' |  |  |  |
| Write the sum on the chalkboard: ' $3+2=5$ '. |  |  |  |  |
| Explain to the class that number lines can be used to make sums easier. |  |  | Repeat with different sums. |  |

## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

Week 11
Addition 1-10
Day 5

Lesson

Using real objects to solve addition sums


By the end of the lesson, most pupils will be able to:
Answer questions about numbers from 0-10.

Know different ways of adding numbers from 1-10.

## Teaching aids

## Before the lesson:

Prepare 20 counters for each pair of pupils.

Write 10 simple sums on the chalkboard, using the numbers 1-10.

15
minutes Macmillan
New Primary
Mathematics 1

## Daily practice

## Whole class teaching

Ask the pupils to use their fingers to count with you from 0-10 and 10 - 0 .

Tell them to look at the first number line in Macmillan New Primary Mathematics 1, page 69 and use their fingers to count forwards and backwards between 1 and 10 .

Ask individuals questions which they will answer using the number line, eg:
'Which number is more than 7 ?' 'Which number is more than 2?' 'Which number comes before 6?' 'Which number comes after 5? 'How many jumps from 6 to 8 ?'

| 10 minutes | Macmillan New Primary Mathematics 1 | 25 minutes | Macmillan <br> New Primary <br> Mathematics 1 |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Introd | ction | Main | activity |  | Plenary |
| Pair task |  | Whole class teaching |  |  | Individual task |
| Give each pair 20 counters. <br> Ask pupils to show their sums from yesterday to their partner and to check their partner's sum using the first number line in Macmillan New Primary Mathematics 1, page 69 and the counters. |  | Ask pupils to choose five sums from the chalkboard and write them down in their exercise books. |  | When a pupil has ticked off all of the sums on their list, they should shout 'Bingo!' <br> Continue until five or six pupils have completed their lists of sums. <br> If there is time, play the game again with the pupils and five new sums. | Ask the pupils to write + and $=$ in their exercise books and 'add' and 'equals' next to them. <br> Tell them to write down two of the sums they have done today using the + and $=$ signs correctly. |
|  |  | Remind them that they can use the counters or the first number line in Macmillan New Primary Mathematics 1 to help them. |  |  |  |
|  |  | Select at ran out to | numbers from 1-10 om and read them the class. |  |  |
|  |  | Give p work one of | upils enough time to ut if the number is their answers. |  |  |
|  |  | If the $n$ answe tell the off the | umber you say is the to one of their sums, pupil to tick that sum list. |  |  |




## Numeracy

lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 12
Addition 0-10

## Day 1

Lesson
title

## Number lines

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

Use number lines to find numbers.
Use counters to do simple addition sums.

## Teaching aids

## Before the lesson:

Have ready a set of number cards from $1-10$ for each group of 11 or more pupils.
Have a set of 10 counters for each pair in your class.

Draw the + and = symbols clearly on the chalkboard.

Write five simple sums on the chalkboard, making the numbers 1-10.

15
minutes

Introduction

## Main activity

Whole class teaching
Show the class the + and = symbols on the chalkboard.

Ask pairs to try and remember what they mean, and to think of a sum using them.
Give them 1-2 minutes to discuss and then ask what they decided.
$\overline{\text { Agree that + means add and }}$ $=$ means equals.

Ask pupils to suggest three or four different simple sums using the symbols.

Write two of the sums on the chalkboard.

If they find this difficult ask them to all show you 3 fingers on one hand. Then ask them to show 2 fingers on their other hand. Ask how many fingers they have altogether and agree that it is 5 .

Explain that they have added 2 and 3 , which equals 5 . Write the sum on the chalkboard.

## Pair task

Give each pair 10 counters.
Show them the sums on the chalkboard and remind them that each sum asks them to add the two numbers together.

Ask pairs to use their counters to find the answers to each question and to write the answers in one of their exercise books.

Tell pairs who finish quickly to try to make up their own adding sums and write them down.

## Whole class teaching

Look at the first number in the first sum and call that number of pupils to the front of the class.

Look at the second number and call that number of pupils to the front.

Keep the groups separate.
Remind the class that the sum is asking them to add the two groups together. Move the groups of pupils together into one group.

Ask the class how many pupils are in this new group and count them together. Agree on the answer to the sum and write it on the chalkboard.

Repeat for each sum.

## Numeracy

lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 12
Addition 0-10 Day 2

Lesson

## Using a

number line


By the end of the lesson, most pupils will be able to:
Use a number line to count.
Use a number line to do simple addition sums.

## Teaching aids

Before the lesson:
Draw a number line from 1-10 on the chalkboard.

Look at Macmillan New Primary Mathematics 1, page 69.

15
minutes Macmillan
New Primary
Mathematics 1

## Daily practice

## Whole class teaching

Show the pupils the number line on the chalkboard and ask them to look at the first number line in Macmillan New Primary Mathematics 1, page 69.

Ask them to count along their number lines with their fingers as you count along yours.

Tell them to find and point to 5 on their number lines.
Ask them to find the number that is 3 more than 5.

Explain that they should put their finger on the number 5 and make 3 jumps.
The number they land on is 3 more than 5 .

Repeat with a few more numbers, letting the pupils do it themselves.

| 10 | $\begin{array}{l}\text { Macmillan } \\ \text { minutes }\end{array}$ |
| :--- | :--- |
| $\begin{array}{l}\text { New Primary } \\ \text { Mathematics 1 }\end{array}$ |  |

## Introduction

Whole class teaching
Ask the class to look at
Macmillan New Primary
Mathematics 1, page 69,
exercise A.
Ask the pupils to follow the number lines for each sum with their fingers.
Use your number line on the chalkboard to do the sum along with them, eg:
$5+3=$
Tell them to put their finger on 5 and then move
3 spaces forwards.

Ask:
'What number have landed you on?' (8).

Say that this shows that 5 add 3 equals 8.

Ask pupils to complete sum a in their exercise books using the number line.

Walk around the class and check that pupils are doing it correctly.

Ask the pupils to put up their hands if they can tell you their answer.

Repeat with sum b.

## 25 <br> minutes <br> Macmillan New Primary

 Mathematics 1
## Main activity

## Pair task

Ask pairs to look at Macmillan New Primary Mathematics 1, page 69, sums c-f.
Ask them to use the number lines in the same way to answer the sums, then write them in their exercise books.

## Plenary

## Whole class teaching

Ask the class to tell you what they worked out for each question.

For each question, ask a pair to come and write the sum on the chalkboard and agree on the answer with their partner.

If there is confusion, lead the class in working the answers out on your number line.

Numeracy lesson plans Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 12
Addition 0-10
Day 3

## Adding two numbers

15
minutes Macmillan
New Primary
Mathematics 1


## Numeracy

lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 12
Addition 0-10
Day 4

## Using an

addition table


Introduction
25
minutes

## Main activity

Whole class teaching
Show the pupils your
addition table on the chalkboard.

Explain that it can be used
to make adding two small
numbers easy.
Write the sum ' $1+2$ = on the chalkboard.
Explain that this is the answer: $1+2=3$

Ask one pupil to come and point to the 1 on the top row of the table.

Ask another pupil to come and point to the 2 on the first column of the table.

Ask the first pupil to bring their finger down the column of numbers and the second to bring their finger along the row of numbers until their fingers meet on 3 .
Draw lines where the pupils' fingers moved on the addition table, as shown below.

Table

| + | 1 | 2 |
| :--- | :--- | :--- |
| 1 | 2 | 3 |
| 2 | 3 | 4 |

## Pair task

Ask pupils to look at the addition table on the chalkboard.

Tell them that you will call out sums and they must find the answers using the addition table.
One pupil must start from the top row and the other

## from the first column.

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## Numeracy

lesson plans
Primary 1

## Term 2 <br> Involving pupils in <br> their learning

Week 12
Addition 0-10
Day 5

Lesson

## Answering

 addition questions

By the end of the lesson, most pupils will be able to:
Count using a number line.
Choose a method to do addition.

## Teaching aids

## Before the lesson:

Have the 'Finding friends' sum cards from Day 4.
Write the 'Finding friends' answers on the chalkboard.

Read Macmillan New Primary Mathematics 1, page 69.
Have five counters for each pupil.

25
minutes
Macmillan
New Primary Mathematics 1

## Main activity

## Individual task

Give each pupil five counters.
Remind pupils that they have learned three ways of adding numbers. Ask
if anyone can remember the different ways and agree that they have used counters, number lines and addition tables.

Ask them to look at Macmillan New Primary
Mathematics 1, page 69, exercise A , questions $\mathrm{g}-\mathrm{k}$.
Ask pupils to use their favourite method to work out the answers to the questions and write them in their exercise books.

## Plenary

## Whole class teaching

Ask pupils what their favourite counting song is and sing it with them.


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Primary 1

## Term 2

Involving pupils in
their learning

Week 13
Numbers 0-20
Day 1

Lesson

## Counting

|  | 15 minutes | Game |
| :---: | :---: | :---: |
| Learning outcomes | Daily practice |  |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |  |
|  | Play the 'Finding friends' game with the sum and answer cards. |  |
| Do simple addition sums. |  |  |
| Count objects from 1-20. |  |  |

Teaching aids

## Before the lesson:

Collect lots of objects for pupils to use as counters (each pair will need 20).
Have ready a set of number cards from 1-20.


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Week 13
Numbers 0-20
Day 2

## Writing numbers

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Count, order and write numbers up to 20 . <br> Do addition up to 10. | to make as many sums as they can which equal 10 and write them in their exercise books. |
| Teaching aids |  |
| Before the lesson: |  |
| Find the second number line in Macmillan New Primary Mathematics 1, page 69. |  |
| Collect enough counters for each pupil to have 10. |  |
| Prepare a sand tray for each group. |  |
| Have ready one set of number cards 1—20. |  |


| $\begin{array}{l\|l} 10 & \text { Macmillan } \\ \text { minutes } & \text { New Primary } \\ & \text { Mathematics 1 } \end{array}$ | 25 minutes |  | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task | Individual task | Whole class teaching |
| Ask the pupils to find the second number line in Macmillan New Primary Mathematics 1, page 69. | Give each group a sand tray. <br> Ask each pupil to choose their favourite number and write it in the sand. | Ask each pupil to write the following numbers in their exercise books and draw the correct number of objects | Ask some pupils to show the numbers they have written in their books to the class. |
| Put the number cards face down on your table. | Ask them to tell the rest of the group why it is their | next to them. A number between: <br> 1 and 5 |  |
| Ask a pupil to come out and pick a card and look at it without showing it to the rest of the class. | favourite number. <br> Tell pupils to write some numbers in the sand together, eg: $1,3,6,8,12$, | 5 and 10 <br> 10 and 15 <br> 15 and 20 <br> While they are doing that, |  |
| Ask them to read it out. <br> Ask the rest of the pupils to put a counter on top of that | 15, 20. | they can take it in turns to practise writing numbers in the sand. |  |

Numeracy
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Primary 1

## Term 2

Involving pupils in
their learning

Week 13
Numbers 0-20
Day 3

Lesson
title

## Ordering numbers

15
15
minutes Song


By the end of the lesson, most pupils will be able to:
Do simple addition up to 10 .
Read and order numbers 1-20.

## Teaching aids

## Before the lesson:

Read Macmillan New Primary Mathematics 1, page 28 and make sure you understand the task.

Collect number cards from 1-20 for each group.
Have ready a set of 20 counters for each group.

## Daily practice

## Whole class teaching

Sing '10 soldiers on parade' and do the actions.
Count forwards and backwards between 1 and 20.

Ask the pupils 10 simple addition questions which they should try and answer without writing it down, eg: $2+4$ $7+2$
$3+5$, etc.
Ask pupils to tell you how they worked out the answer.

| 10 minutes | 25 minutes | Macmillan <br> New Primary <br> Mathematics 1 |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  |  | Plenary |
| Group task | Individual task |  | Group task | Whole class teaching |
| Give number cards from 1 -20 to each group. | Ask the pupils to do the activity in Macmillan New Primary Mathematics 1, page 28. |  | Give each group a set of 20 counters. | Put one set of number cards face down on the floor |
| Ask the pupils to read the numbers on their cards. |  |  | Ask them to count their counters and check that they have 20. | at the front of the class. <br> Ask the pupils to come |
| Tell the pupils to arrange the number cards on their tables in the correct order from | Tell the pupils to use a pencil to match the numbers to the dots. |  | they have 20. <br> Tell the groups that you will give them a number. When | out, choose a card and say which number they have chosen. |
| 1-20. | Ask them to try and write the numbers 10-20 in their exercise books. |  | they have made that number |  |
| Ask the pupils to count from 1 - 20 in their groups. |  |  | with their counters, they should all stand up to show you they have finished. |  |
|  |  |  | Say a number between 10 and 20, eg: 14. |  |
|  |  |  | Repeat with other numbers, finishing with 20. |  |

Numeracy
lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

Week 13
Numbers 0-20
Day 4

Lesson

|  | $\left.\right\|_{15} ^{15} \begin{aligned} & \text { minutes } \end{aligned} \text { Song }$ |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Use a number line to count forwards between 1 and 20. | Sing two counting songs with the whole class, with actions to illustrate the songs. |
| Use the number line to answer the question 'Which number is one more than...?' | Write five simple addition sums on the chalkboard, ask the pupils to copy them into their exercise books and do the sums. |
| Teaching aids | Ask them how they worked out the answers to the sums. |
| Before the lesson: |  |
| Draw a number line from 0-20 on the chalkboard. |  |
| Find the second number line in Macmillan New Primary Mathematics 1, page 69. |  |
| Read Macmillan New Primary Mathematics 1, page 69. |  |


| 10 | Macmillan <br> minutes |
| :--- | :--- |
| New Primary <br> Mathematics 1 |  |

## Introduction

## Group task

Ask each group to look at the second number line in Macmillan New Primary Mathematics 1, page 69.
Circle a number between 10 and 20 on the number line on the chalkboard, eg: 14.
Ask the pupils how they would answer the question: 'Which number is one more than 14?'

Remind them that they put their finger on the number 14 and make one jump.

The number they land on is
one more than 14.
Ask one pupil to show the rest of the class how they worked out the answer.

25
minutes
Macmillan New Primary Mathematics 1

## Main activity

## Pair task

Ask the pupils to use the number line to count from $1-20$ and from 20-1.

Ask one pupil in each pair to place their pencils on any number on the number line.

Ask the other pupil in each pair to place their pencil on the next number, eg: 11 and 12 , or 14 and 15 , etc.
Ask them to say what
they have found out, eg: ' 12 is one more than 11 '. Repeat this activity with different numbers.

Ask each pair to complete Macmillan New Primary Mathematics 1, page 69, exercise B, questions a-f pointing to the answers on the number line in the textbook.

## Plenary

## Whole class teaching

Ask some pupils to come out and show how to use a number line to find a number that is one more than another number.

## Numeracy

lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

## Week 13

Numbers 0-20
Day 5

Lesson
title

## One less than

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Individual task |
|  | Stand the pupils in a circle and you |
| Use the number line to say a number that is 'one less than' any given number from 0-20. | stand in the middle. |
|  | Ask the pupils to walk around in a circle and put up their hand |
| Use a number line to count forwards and backwards between 1 and 20 from any given starting point. | when they know the answer to the question you are asking them, but to keep walking. |
|  | Ask them a simple addition sum. |
| Teaching aids | When someone puts up their hand, ask them to give you the answer. |
| Before the lesson: | If the answer is right, ask them to |
| Write 'more than' and 'less than' on different sides of the chalkboard. | come into the middle and ask the next question. |
| Find the second number line in Macmillan New Primary Mathematics 1, page 69. | If the answer is wrong, ask someone else to give you the answer. |
|  | Continue until five pupils have had a turn in the middle. |

By the end of the lesson, most pupils will be able to:
number that is 'one less than' any given number from 0-20.
Use a number line to count forwards and backwards between 1 and 20 from any given starting point.

Before the lesson:
Write 'more than' and 'less than' on different sides of the chalkboard.

Find the second number line in Macmillan New Primary Mathematics 1, page 69.

Stand the pupils in a circle and you the middie. in a circle and put up their hand when they know the answer to the question you are asking them, but to keep walking.

Ask them a simple addition sum.
When someone puts up their hand, ask them to give you the answer.
er is right, ask them to next question.

If the answer is wrong, ask someone

Continue until five pupils have had a turn in the middle.

| 10 minutes | 25 minutes | Macmillan New Primary Mathematics 1 |  | 10 minutes | Song |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  |  | Plen |  |
| Whole class teaching | Group task |  | Whole class teaching | Who | class teaching |
| Call two pupils to the front of the class, give one of them 10 counters and the other 19 counters. | Ask each group to look at the second number line in Macmillan New Primary Mathematics 1, page 69. |  | Explain that to find 'one less than' you put your finger on the number line and make one jump backwards. | Sing with | me counting songs pupils. |
| Write the number 12 in the middle of the chalkboard. | Ask pupils to use the number line to count from $1-20$ and from 20-1. |  | The number you land on is one less than the number you started with. |  |  |
| than' 12 to go and stand under the words 'more than' on the chalkboard. | Ask one pupil in each group to place their pencils on any number on the number line. |  | Ask each pupil to place their pencil on the number line to do this and say, eg: |  |  |
| Explain that the second pupil has 'less than' 12 and should go and stand under the word 'less than'. | Ask the rest of the group to say a number that is less than that number. |  | Repeat for the numbers $9,10,7,14,20,17,4,2,6,11$. |  |  |
| Repeat with different pupils and different numbers between 0 and 20. | Repeat so that each member of the group has a turn. |  |  |  |  |

Week
14
Numbers 0-20


Numeracy
lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

Week 14
Numbers 0-20
Day 1

Lesson
title

## Counting to 20



By the end of the lesson, most pupils will be able to:
Do simple addition up to 10 .
Make sets of Ten.

## Teaching aids

## Before the lesson:

Prepare sets of number cards from $1-20$, enough for one set between for each pair.

15
minutes


## Term 2

Involving pupils in
their learning

Week 14
Numbers 0-20
Day 2

Lesson
title

Introduction to Tens and Units

15
minutes

## Learning outcomes

By the end of the lesson, most pupils will be able to:
Recognise sets of numbers that fall into Tens and Units.

Group two-digit numbers into Tens and Units using sticks.
Do simple addition sums up to 10 .

## Teaching aids

## Before the lesson:

Collect straws or sticks, enough for each pair to have 20, and pieces of thread to tie around them to make bundles of Ten.
Collect together sets of number cards from $0-9$, enough for one between two pupils.
Have ready the 'Finding friends' addition sum cards from Week 13.

## Daily practice

## Group task

Tell the pupils you are going to see how many sums each group can answer in 10 minutes.

Put the addilition sum cards face down on the floor in the front of the classroom.
Ask one pupil from each group to come out, choose a card and take it back to their group.
Ask each group to match the correct answer to the sum.
Ask each person to write the sum in their exercise books.
When they have all done this the next pupil from the group should come out and collect a new card from the front.
See which group has answered the most sums correctly in 10 minutes.


10
minutes

Plenary

## Whole class teaching

Ask some pupils to tell you the numbers they have made, eg: a group of Ten and three more make 13

Numeracy
lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

Week 14
Numbers 0-20
Day 3

Lesson
title

## Tens and Units

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Whole class teaching |
| Add together two numbers between 1 and 10. | they know about the number 10. |
| Group two-digit numbers into sets of Tens and Units. | Ask the pupils the following simple sums. Ask them to put up their hands when they can answer the |
| Teaching aids | question: $\begin{aligned} & 1+1 \\ & 2+1 \end{aligned}$ |
| Before the lesson: | $3+1$ |
| Collect a bundle of Ten and 10 separate sticks or straws for each pair of pupils. | $\begin{aligned} & 4+1 \\ & 5+1 \\ & 6+1 \\ & 7+1 \end{aligned}$ |
| Find the second number | $8+1$ |
| line in Macmillan New Primary Mathematics 1, page 69. | $9+1$ |
| Have ready a set of number cards from 0-20 for each pair. |  |


| 10 minutes | Song | 25 minutes | Macmillan New Primary Mathematics 1 | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes }\end{aligned}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Introd | ction | Main activity |  | Plenary |  |
| Whole class teaching |  | Whole class teaching | Pair task | Whole class teaching |  |
| Sing th with th | e song ‘5 long yams' e pupils. | Give out the straws, sticks and number cards and ask the pupils to remind you what they did on Day 2. | Give each pair a pile of number cards from 0-20 to put face down on their table. | Sing another counting song with the pupils. |  |
| Choos to pick | e one pupil to pretend the yam and take |  |  |  |  |
| it aw |  | Say a number between 1 and 20 and ask the pupils to make that number using their bundles of Ten and the single sticks or straws. | Ask one of the pupils in each pair to choose a card, turn it over and read the number to their partner without showing them the card. |  |  |
| Ask th to cou are lef | rest of the pupils nt how many yams in the farmer's field. |  |  |  |  |
| Sing th startin | e next verse, this time with four long yams. | Repeat two or three times. | Ask the other pupil to point to that number on the second number line in Macmillan New Primary Mathematics 1, page 69 and then make it using their bundles of Tens and Units. |  |  |
| Continue until all the yams have been taken away. |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  | Go round the class and help those pupils who find it difficult to understand. |  |  |

Numeracy
lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

Week 14
Numbers 0-20
Day 4

Lesson
title

## Tens and Units



By the end of the lesson, most pupils will be able to:
$\overline{\text { Do simple addition up to } 10 .}$
Expand numbers between 11 and 20 into Tens and Units.

## Teaching aids

## Before the lesson:

Read Macmillan New Primary Mathematics 1, page 37.

Have ready sets of number cards containing the numbers $0-10$, and the word 'and'. Have enough for one set for each pair.
Collect a bundle of Ten and 10 separate sticks or straws for each pair.

15
minutes Song

## Daily practice

## Whole class teaching

Sing two counting songs with the whole class, with actions to illustrate the songs.

Hand out cards with numbers from $0-10$, so that every pupil has one card.

Ask the whole class a selection of simple addition sums to 10.
Tell the pupils to hold up their card if it is the correct answer.
Check that everyone holding a card up has the correct answer.

Ask one or two pupils how they worked out the answer.
Continue for about 10 sums.

$$
\begin{array}{|l|l}
10 & \text { Macmillan } \\
\text { minutes } & \text { New Primary } \\
\text { Mathematics 1 }
\end{array}
$$

## Introduction

## Whole class teaching

Ask each pupil to find the second number line in Macmillan New Primary Mathematics 1, page 69.

Write the number 12 on the chalkboard.

Draw a bundle of Ten on the chalkboard and 2 separate sticks next to the number.

Ask the pupils to tell you how many bundles of Ten are in that number, and how many Units.

Write the number
underneath your drawing as 10 and $2=12$.

Repeat three or four times with different numbers between 10 and 20 .

## Macmillan

 New Primary Mathematics 1
## Main activity

## Pair task

Give out a bundle of Ten, 10 separate straws, a set of number cards $0-10$ and an 'and' card to each pair.
$\overline{\text { Ask them to open Macmillan }}$ New Primary Mathematics 1, page 37 and use their bundles to make each number.
Ask them to use their number cards to show the number in the way you did on the chalkboard, eg: 10 and $5=15$.

## Plenary

## Whole class teaching

Play 'I went to market', asking pupils to decrease the number of items they buy each time, eg: I went to market and I bought 20 cars, I went to market and I bought 19 fish.

## Numeracy

lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

Week 14
Numbers 0-20
Day 5

Lesson
title

## Expanding numbers

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most pupils will be able to: | Group task |
|  | Hand out a number card between 5 and 10 to each group. |
| Do simple addition up to 10. |  |
| Expand numbers between 10 and 20 into Tens and Units. | Tell pupils to put the number in the middle of the table and find one exercise book and pencil. |
| Teaching aids | Ask them to write down as many addition sums as they can which make that number. |
| Before the lesson: | Go around the groups and encourage them. |
| Have ready the bundles of Ten and single sticks from the previous day. |  |
| Have ready a set of number cards $0-10$ and an 'and' flash card for each pair. |  |
| Write some two-digit numbers, lower than 50, on the chalkboard. |  |
| Read Macmillan New Primary Mathematics 1, page 39, Exercise 3. |  |


| 10 minutes | 25 minutes | Macmillan New Primary Mathematics 1 | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Group task | Group task |  | Whole class teaching |
| Count together to 50. | Tell the class that you will point to different numbers on the chalkboard. Tell them to use their bundles of Ten to make the numbers. | Each time, ask how many sets of Ten they have, and how many Units they needed to make the number. | Write the number 15 on the chalkboard. |
| Give pupils a bundle of Ten and 10 Units. |  |  | Ask pupils how many sets of Ten it has. |
| Ask each group to count |  | Ask them to complete Macmillan New Primary Mathematics 1, page 39, Exercise 3 using their bundles to help them expand the numbers into Tens and Units, and using their number cards to show the expanded numbers. |  |
| the total number of sets of 10 that they have in each group. | Point randomly to the numbers on the chalkboard. Each time, give groups a little time to make the number using their Tens and Units sticks. |  | Ask if anyone can circle the Tens in the number. |
| Ask them to hold up a number card which tells you how many sets of Ten they have in their group. |  |  | Ask if a pupil can come and circle the Units in the number on the chalkboard. |
|  |  |  | Repeat this process for three or four numbers. |
|  |  |  | Finish with the number 10, encouraging pupils to identify that it has one Ten and zero Units. |

Week
15
Money


## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

Week 15
Money
Day 1

Lesson
title
Money number
lines

|  | 15 minutes |
| :---: | :---: |
| Learning outcomes | Daily practice |
| By the end of the lesson, most | Whole class teaching |
| pupils will be able to: | Give out the bundles of Ten |
| Expand numbers between 10 and 20. | Units to the class. |
| Order coins and notes according to value. | Point to a number on the number line between 10 and 20 and ask pupils to make that number using their sticks or straws. |
| Teaching aids | Ask them: <br> 'How many Tens?' |
| Before the lesson: | 'How many Units?' <br> 'What number have you made?' |
| Collect bundles of Tens and Units, to go around the class. | Repeat with different numbers. |
| Draw a number line from 0-20 on the chalkboard. |  |
| Have ready real or model money of Kobo and Naira. Have one mixed set for each group in your class. |  |
| Have ready a strip of card or paper for each group. |  |


| $\begin{array}{\|l\|} 10 \\ \text { minutes } \end{array}$ | 25 minutes |  | 10 minutes |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Whole class teaching |
| Ask the pupils the following questions: <br> 'What is money?' <br> 'What do we use money for?' <br> Record their answers on the chalkboard and leave them there for the week. | Give each group a set of real or model money. | Ask the following questions which they have to answer using their money line: <br> 'Which coin is worth the | Ask groups to find somewhere in the classroom to display their money line so that they can easily find it during this week and the next. |
|  | Ask pupils to identify the colours and sizes of the different coins. | 'Which coin is worth the least money?' |  |
|  | Tell them to arrange the coins in order of value, from the smallest to the largest. | 'Name a coin which is worth less than a note.' <br> 'Which note is worth the most money?' |  |
|  | Ask them to look at the notes and arrange them in order of value, from the smallest to the largest. | 'Which coin comes before 10K?' <br> Give each group a strip |  |
|  | Explain that the coins are worth less than the notes. | of paper or cardboard and ask them to draw the money on the card to make |  |
|  | Ask them to arrange all their money in order of value from the smallest coin to the largest note. | a money number line. |  |

## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

Week 15
Money
Day 2

Lesson
title

15
minutes

## Combining coins

Learning outcomes

3y the end of the lesson, most pupils will be able to:
Count up to 100 in Tens.
Order coins and notes by value.

## Teaching aids

## Before the lesson:

Collect bundles of Tens and Units, to go around the class.
Have ready the money number line from Day 1.

Have ready real or model money of Kobo and Naira, five 5K coins, two 5K coins and one 10K coin for each group.

## Daily practice

## Whole class teaching

Ask the pupils if anyone can count past 20.

Count with the class in ones to 100, writing the following numbers on the chalkboard as the pupils say them: 10, 20, 30, 40, 50, etc.
Explain that these numbers can all be made with bundles of Ten.

Give out the bundles of Ten, one to each pupil if possible.
Call out a number between 1 and 9 and ask the pupils to stand in groups of that number.
Ask each group to put their bundles of Ten together and say how many bundles they have.
Repeat with different numbers between 1 and 9 .

| 10 minutes | 25 minutes |  | $\left\lvert\, \begin{aligned} & 10 \\ & \text { minutes } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |
| Whole class teaching | Group task |  | Individual task |
| Look at the ideas you wrote on the chalkboard on Day 1. | Ask the pupils to look at the money number line they made on Day 1. | Ask the pupils to show you how to make 3 K , using three 1K coins. | Ask the pupils to find three different ways of using the coins they have to make 10K. |
| Ask the pupils if they can think of any different answers and write them on the chalkboard too. |  |  |  |
|  | Ask how their money number line is different from other number lines. (The numbers on the money line go up in jumps, eg: $1 \mathrm{~K}, 5 \mathrm{~K}$, 10 K , etc and the money line has N1 instead of 100K.) | Ask them to make the following amounts with the coins they have: <br> 4K <br> 6K <br> 8K <br> 12K |  |
|  | Ask, 'Can anyone tell me why this is?' | Ask each group to show you how they made each |  |
|  | Explain that there are only coins and notes for certain amounts, but it is possible to make all amounts using coins and notes. | amount and record their ideas on the chalkboard, by drawing the coins. |  |
|  | Also, 100K would be very heavy to carry, so instead you replace them with N1. |  |  |

## Numeracy

 lesson plans Primary 1
## Term 2

Involving pupils in
their learning

## Week 15

Money
Day 3

## Ordering Kobo

| 10 minutes | 25 minutes | Macmillan New Primary Mathematics 1 | $\begin{array}{\|l\|} 10 \\ \text { minutes } \end{array}$ | Song |
| :---: | :---: | :---: | :---: | :---: |
| Introduction | Main activity |  | Plenary |  |
| Whole class teaching | Pair task |  | Whole class teaching |  |
| Ask the pupils to tell you what they learned on Day 2 about making different amounts of money. | Ask pupils to complete Macmillan New Primary Mathematics 1, page 91, Exercise 1. |  | Sing '10 currant buns' with the class. |  |
| Ask them which coins they would use to make 9K. | Ask them to use their money number line to order the amounts correctly on the page, from the largest to the smallest. |  |  |  |
|  | While they are doing this, bring pairs out one at a time and give them a set of mixed money. |  |  |  |
|  | Help them to buy and sell two items in the shopping corner, encouraging them to use different combinations of coins to make 10K. |  |  |  |

## Term 2

Involving pupils in
their learning

## Week 15

Money
Day 4

Lesson

## Shopping for two items



By the end of the lesson, most pupils will be able to:
Expand two-digit numbers into Tens and Units.
Work out the cost of two items.

## Teaching aids

## Before the lesson:

Read Macmillan New Primary
Mathematics 1, page 46, Exercise 2.
Have ready 10 bundles of Ten and 10 Units for each group.

Set up the shopping corner in the classroom as on the previous day.

Have ready samples of money, at least five 5K coins, two 5K coins and one 10K coin per group.

15
minutes Macmillan
New Primary
Mathematics 1

## Daily practice

## Group task

Ask pupils to use their bundles of Tens and Units to make the numbers in Macmillan New Primary Mathematics 1, page 46, Exercise 2, questions $1-5$.

Move around the groups and help them understand.


## Numeracy

lesson plans
Primary 1

## Term 2

Involving pupils in
their learning

## Week 15

Money
Day 5

Lesson

## Making 1 Naira




## Gredits

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.

Special thanks go to:

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.


