

Foundations For Learning

**Foundation Phase
Numeracy
Lesson plans**

Fourth term

Grade 1

Kindly send any response that you may have to:

Dr Jennifer J Joshua

E-mail: joshua.j@doe.gov.za

Department of Education

Sol Plaatje House

123 Schoeman Street

Pretoria

South Africa

Private Bag X895

Pretoria

0001

Tel: +27 12 312 6220

Fax: +27 12 312 6222

www.education.gov.za

© Department of Education

Design and layout: Shereno (012) 344 2817

Table of Contents

Fourth Term	5
Overview of Lesson Plans	5
Overview of Assessment Tasks	6
Week 1: Overview	7
Week 1: Lesson plans	8
Week 2: Overview	15
Week 2: Lesson plans	16
Week 3: Overview	23
Week 3: Lesson plans	24
Week 4: Overview	31
Week 4: Lesson plans	32
Week 5: Overview	39
Week 5: Lesson plans	40
Week 6: Overview	49
Week 6: Lesson plans	50
Week 7: Overview	57
Week 7: Lesson plans	58
Week 8: Overview	65
Week 8: Lesson plans	66
Week 9: Overview	73
Week 9: Lesson plans	74
Week 10: Overview	81
Week 10: Lesson plans	82

FOURTH TERM OVERVIEW

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Class Counting: Whole	Daily rote counting to 200									
	Daily rational counting using abacus, number lines, number grids etc.									
	Rational counting in 1s, 2s, 5s, 10s forwards and backwards, starting and stopping at any number 1 to 100			Daily rational counting in 2s, 5s and 10s from 100 to 200			Daily rational counting in 2s, 5s and 10s starting and stopping at any number from 100 to 200			
	Counts out objects to 50 to 100		Counts out objects in pictures				Counts out objects in pictures			
	Counts on in 1s from 1 to 100			Counts on in 1s from 100 to 200						

Concept Development and Number Sense										
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	
Builds up concept of numerosity of numbers to 100										
Place value of 2 digit numbers using flard cards. Expanded notation of 2 digit numbers										
Double and halve 2 digit numbers, practically and written										
Add and subtract a single digit number to a two-digit number			Addition and subtraction of two 2 digit numbers							
Fractions	Building up to, or breaking down to, a whole 10		Build up and break down 3-digit numbers							
Repeated addition leading to multiplication			Calculates multiplication of a 2-digit by a 1 digit number							
Recognises and completes given number patterns as well as patterns in the environment.										
Calculates time in hours and minutes			Estimates, measures and compares length		Estimates, measures and compares length		Estimates, measures and compares length		Time	
		Positional relationships				Positional relationships			Positional relationships	
		Collects and sorts data according to given criteria and draws graphs		Analyses data						
Problem solving. Work with 3 ability groups at their own level. 4 different word problem types done every week during group teaching time.										

THE ASSESSMENT FRAMEWORK

ACTIVITIES THAT WILL BE USED FOR ASSESSMENT			
	COUNTING	CONCEPT DEVELOPMENT	PROBLEM SOLVING
WEEK 1			
WEEK 2	Oral activities dealing with counting in 2s, 5s and 10s to 200	Practical activities dealing with ordering fractions. Written activities dealing with counting, fractions and number relationships.	Oral and written activities dealing with calculating hours and minutes.
ASSESSMENT TASK 1 COMPLETED			
WEEK 3		Practical and written activities dealing with collecting, sorting and analyzing data.	
WEEK 4			
WEEK 5	Daily oral and written work dealing with aspects of counting	Practical and written activities dealing with number relationships, sequencing numbers, doubling and halving. Written activities dealing with expanded notation and understanding place value. Recording collected data and constructing a pictograph	
ASSESSMENT TASK 2 COMPLETED			
WEEK 6			
WEEK 7	Daily oral and written work dealing with aspects of counting and mental calculations.	Written activities dealing with addition and subtraction of two 2 digit numbers. Written activities dealing with multiplication of single digit numbers. Practical work with flard cards dealing with expanded notation of 3-digit numbers. Practical and written activities dealing with recognizing the orientation and position of 2D shapes and 3D objects.	Oral, practical and written activities dealing with solving problems and explaining solutions.
ASSESSMENT TASK 3 COMPLETED			
WEEK 8			
WEEK 9			
WEEK 10			

The criteria for the assessment are drawn from the Learning Outcomes, the Assessment Standards and the Milestones

FOURTH TERM: WEEK 1 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2,	- Says the number names from 1 to 100 in sequence (rote counting). - Counts out to at least 34 objects reliably, i.e. says the number names from 1 to 34 in sequence while indicating objects in a collection, e.g. counters	Daily: - Rote count in 1s from 1-100 - Rational count from 1-100 on a number line - Count in 2s, 5s and 10s from 1-100				
NUMBER SENSE AND MENTAL LO1 AS 3,4,7,8,9 LO 2 AS 2,3,4 LO4 AS 5	- Writes and reads numbers to 100 - Writes and reads number names from 1-34 - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$ - $20+10=4=34$ - Doubles and halves numbers to 34 - Completes repeated addition of 2, 5 and 10 - Copies and extends simple number sequences to at least 100, in order to describe them - Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance.	Daily: - Reads number names and symbols from 1-34 - Orders numbers 1-10 - Numerosity of numbers to 34				
		DAY 1 Growing patterns: Count even numbers 2-34 Count in 2s Repeated addition of 2 Double even numbers	DAY 2 Repeating patterns Count in 2s Repeated addition of 2 Halve even numbers	DAY 3 Growing patterns Count in 5s Repeated addition of 5 Double and halve even numbers	DAY 4 Repeating patterns Count in 5s Repeated addition of 5 Length	DAY 5 WHOLE CLASS ACTIVITY Add and subtract 1-5 to any number Length
GROUP TEACHING LO 1 AS 6,7,8,9,10,11	- Solve different types of problems and explain solutions to problems with whole numbers to at least 34, using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-60; Group 2 works in 1-34; Group 3 works in 1-30 Group 1 and 3 work with teacher, one group at a time. Ask one grouping and one sharing type word problem. Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one grouping and one sharing type word problem. Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask one change and one equalize type word problem. Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one change and one equalize type word problem. Group 1 works on its own.	

WEEK 1 : WHOLE CLASS

WEEK 1	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - By now you would have made sufficient resources that would assist you with these activities. Get learners to bring objects that could be used for counting. Store your resources for future use. Have a good retrieval system. Work with other teachers to make resources. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - This is the start of the last term and learners need to be constantly engaged is consolidating concepts developed through the year. Keep the structure of the lessons the same and make sure planning is done every day.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities.</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Learners rote count in 1s from 1-100 and further if they can. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting. - Rational count on a number line from 1-100 - Count in 2s, 5s and 10s using a number line or number grid <i>Choose from the following (to make up the 10 mins.):</i> - Use your number grids and number lines and let learners read out the number names and symbols from 1-34. - Count out odd and even numbers on a number line or grid - Revise ordinal numbers from 1st to 10th - Point to any number up to 34 and learners add/subtract 1/2/3/4/5 to the number according to your instructions. - Choose one number a day for numerosity e.g. 5 You would ask e.g. what is one more than 5? $2+3=?$ $10-5=?$ Which number comes after 5? Which number is before 6? Which number is between 4 and 6? Half of 10 is _____. You can think of the other examples. Make charts for each number and these charts can be used for oral and recorded work. - Choose a single digit number and let learners double or halve it. <u>DAY 1</u> (to take no more than 20 minutes) - You are going to do a growing pattern - counting in 2s from 1-34. Learners can use counting objects. Let learners work in pairs and use the same counting objects. Each learner places an object in a pile so that they can count in 2s. Hand out small pieces of paper. Learners must write down number 2 on each piece. They then place the number under each group of 2 objects e.g. if they put out 3 groups of 2 objects, they will say $2+2+2=?$ They would count in 2s to find the answer. Learners record this in their books.	

- Learners use the same counting objects. Get them to place a certain number of objects on the desk/table e.g. 5 Tell them to double the number by placing the correct number of objects next to the first set of objects. Learners should be able to say that double means that you are adding the same number of objects/the same number. Do a few examples and walk around and assist the learners that have not grasped the concept of doubling.

DAY 2 (to take no more than 20 minutes)

- Write a repeating pattern on the board and ask learners to identify the pattern e.g. 2, 4, 6 2, 4, 6 2, 4, 6. Hand out strips of paper. Tell the learners they must choose 3 consecutive, even numbers and repeat them to form a pattern. After learners have written them down, get some of them to read out their patterns to the class.
- Write some repeated addition of 2 on the board, e.g. $2+2+2+2=$. Get the learners to put the correct number of objects on the table. Now let them write number 2 on pieces of paper and place them under each group. Get the learners to count out in 2s and get the answer. Point to the second example. Some learners will be able to count out in 2s and give you the answer. Others might still need to use counters. Do this a few times.
- Hand out paper cut-outs of oranges or apples. Give one fruit to each pair. Tell them that you do not have enough to give every child. They are going to share and give half to their friend. See if they will be able to work out what is half and how they are going to get half. Discuss why we need to share and most times be able to share equally so that both get the same amount. Now get one learner to fold the fruit in half and cut along the folded line. They now have two equal pieces to share. Now hand out 4 oranges (cut-outs) to each pair. Tell them to share the fruit equally. Observe what happens. Now use counters. Tell them to take out e.g. 10 and share that equally. Do halving of even numbers only.

DAY 3 (to take no more than 20 minutes)

- Tell the learners to count in 5s up to 50 and to place the number cards on their desks/tables as they count. Ask three or four learners to describe the pattern e.g. it is growing, numbers end in 5 or 0, etc.
- Learners can work in pairs and make groups of 5 objects on their tables. They write the number 5 on pieces of paper and place the number 5 under each group. Then they count in 5s to get the answer. Let the learners copy the repeated addition pattern in their books.
- Get the learners to count out the even numbers on the number line or grid. Let them choose an even number. They must double and halve the number.

DAY 4 (to take no more than 20 minutes)

- Ask learners to write a repeating pattern using multiples of 5 e.g. 5 10 15, 5 10 15, 5 10 15. Walk around and observe what the different groups are doing.
- Write a few examples of repeated addition of 5 on the board e.g. $5+5+5+5=$ Ask learners to put the correct number of objects on their tables. Now get them to write number 5 on pieces of paper and place them under each group. Ask the learners to count out in 5s and get the answer. Point to the second example. Some learners will be able to count out in 5s and give you the answer. Others might still need to use counters. Do a few more examples.

- Get a few learners to hold up their name cards in front of the class. Ask the class to estimate whose name is the longest, whose name is the shortest, which two names are of the same length etc. Learners can count the letters to verify. You can also ask who the tallest/shortest learner is. Who has long/short hair? Who is wearing long/short socks?

DAY 5 (the whole lesson)

- Put the learners into groups of 4. Give each group a card with simple instructions e.g.

<u>First estimate then measure:</u> - how many footsteps from your desk to the door - how many footsteps from the door to the teachers cars - how many footsteps from the front to the back of the classroom.	<u>First estimate then measure:</u> - how many exercise books from your desk to the door - how many exercise books from the teacher's table to the door - how many exercise books from the front of the classroom to the back.	<u>First estimate then measure:</u> - how many hand-spans from the door to your desk - how many hand-spans from your desk to the teacher's table - how many hand-spans from one side of the classroom to the other.
--	---	--

Learners must record the information in a chart e.g.

Name	Estimate	Actual	Difference
Nare			
Tim			

- Have charts/work cards/worksheets prepared to provide learners with activities to add and subtract 1-5 to any number. Learners can use counting objects, the abacus, counting grid/ number line or draw pictures to complete their work.

ASSESSMENT	Formal : No formal, recorded Assessment Informal: Unrecorded assessment of learners oral responses and ability to participate.
-------------------	---

WEEK 1 : GROUP TEACHING

Week 1	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)
Notes to teacher: - While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. - The written work provided must include practice in using the variety of techniques indicated in the Assessment Standards e.g. number lines, doubling and halving, etc. - You will give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. - You will use the group teaching time for assessing learners ability to solve problems. By this time in the year you will expect learners to be able to record their thinking using numbers and not only drawings. Although you are assessing during the problem solving activity, learners may still have access to counters, number grids, etc.	
DAILY ACTIVITIES	
<u>Examples of activities to be done independently.</u> <i>Work from a Learner's Book, worksheets, work cards, work charts etc.</i> Groups 1 and 2 - Sequencing numbers/Fill in the missing numbers 1-34 - Activities for before/after/between/more/less - Odd and even numbers - Addition and subtraction up to 20 - Patterns drawings - Number value 1-34 - Ordinal value 1-20 Group 3 - Write the numbers 1 to 10 in their books, drawing the correct number of pictures next to each number and writing the correct word. - Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc. - Give the learners number cards 1 to 10. They arrange them from smallest to biggest then copy the numbers into their books. - Addition and subtraction up to 10 - Ordinal value 1-10 <u>Working with the groups</u> <u>GROUP 1</u> On Monday and Wednesday this group works with the teacher for 20 minutes. - Put a book and some matchboxes in the middle of the group. Ask the learners to estimate how many matchboxes would be required to cover the surface of the book. Give each learner a chance to say how many s/he thinks there are. Get the learners to place the matchboxes on the book and count how many there are. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?	

- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (25)*
 - *What numbers did you use to make 25? 20 and 5. Show me.*
 - *Put them back together to look like 25.*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 60. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 grouping and 1 sharing and on Wednesday you will ask 1 equalise and 1 change type word problems. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 2

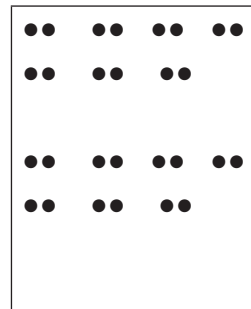
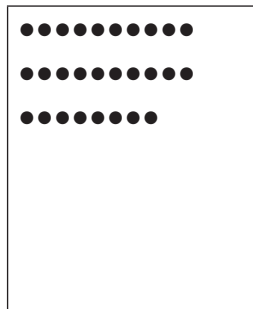
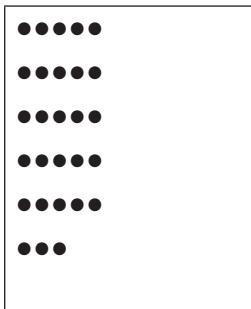
On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Put a book and some matchboxes in the middle of the group. Ask the learners to estimate how many matchboxes would be required to cover the surface of the book. Give each learner a chance to say how many s/he thinks there are. Get the learners to place the matchboxes on the book and count how many there are. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (25)*
 - *What numbers did you use to make 25? 20 and 5. Show me.*
 - *Put them back together to look like 25.*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 grouping and 1 sharing and on Thursday you will ask 1 equalise and 1 change type word problems. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Place a pile of counters in front of each learner. Tell each learner a different number between 20 and 34 and he/she must count out that number of counters. Once all the numbers have been counted out, ask the group to arrange the piles in the correct order from smallest to biggest. Show the group the number names on flash-cards and as you show a number name, that learner must take the card and place it next to his/her pile of counters.
- Place some counters in front of each learner and ask them to count out any number they like. Once they have done this, ask them to arrange the counters in as many different patterns as they can, e.g. the number counted out is 28 and these can be arranged as:



Encourage the learners to write the numbers of the patterns e.g. $28 = 5+5+5+5+5+3$

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 20. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 grouping and 1 sharing and on Wednesday and Thursday you will ask 1 equalise and 1 change type word problems. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Assessment

Formal : No formal, recorded Assessment

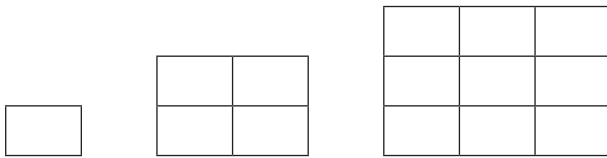
Informal : Unrecorded assessment of learners oral responses and ability to participate

FOURTH TERM: WEEK 2 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Says the number names from 1 to 100 in sequence (rote counting). - Counting out objects to 34 - Counting in multiples of 2, 5, and 10 using concrete objects and number square	Daily: - Rote count in 1s from 1-100 - Rational count from 1-100 on a number line/number square - Count in 2s, 5s and 10s from 1-100				
NUMBER SENSE AND MENTAL LO1 AS 7,8,9 LO 2 AS 2,3,4 LO4 AS 1,2	- Number knowledge and mental computation: - Completes repeated addition of 2, 5 and 10 - Estimate the number of objects in a collection up to at least 34, and check by counting.	Daily: - Count in 10s - Add and subtract 1-5 to any number e.g. 1+1, 11+1, 21+1, 101, 1101, 2101				
		DAY 1 Patterns Halve odd numbers Repeated addition of 2, 5 and 10	DAY 2 Patterns Halve odd numbers Repeated addition of 2, 5 and 10	DAY 3 Patterns Repeated addition of 2, 5 and 10 Halve odd numbers	DAY 4 Patterns Time	DAY 5 WHOLE CLASS ACTIVITY Time (Integrated with Arts and Culture)
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems with whole numbers to at least 34, using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. Ask one addition and one subtraction word problem. Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one addition and one subtraction word problem. Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask one combination and one grouping with a remainder word problem. Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one combination and one grouping with a remainder word problem. Group 1 works on its own.	

WEEK 2: WHOLE CLASS

WEEK 2	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - By now you would have made sufficient resources that would assist you with these activities. Get learners to bring objects that could be used for counting. Store your resources for future use. Have a good retrieval system. Work with other teachers to make resources. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - Keep revising concepts already dealt with and extend the learners thinking wherever possible. Assessment Task 1 will be completed this week.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Learners rote count to at least 100 and further if they can. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting. - Let the learners place a counter on each number on their number grid as they count. Ask questions such as <i>what number did we count to? How many counters on your grid? If you put 2 more counters, what number will you get?</i> Now count backwards, removing one counter each time. <i>Tip:</i> Use this towards Assessment Task 1 <i>Choose from the following (to make up the 10 mins.):</i> - Count out the odd numbers or even numbers on each number line. - Do some doubling of numbers and nearly doubles e.g. $3+3=6$; $3+4=7$ You can show 3 fingers and 3 fingers on the other hand and for nearly doubles show 3 fingers in one hand and 4 fingers on the other hand and the learners count. - Learners count in 2s, touching a different part of their body each time e.g. 2 – head, 4 – shoulders, 6 – tummy, 8- knees, 10- toes, etc. - Ask simple word problems which require concentration and thinking but that learners are able to work out in their heads e.g. 3 people got in the taxi and at the next stop 2 got out and 1 got in. At the next stop 1 got out and 2 got in. How many shoes/eyes/fingers/noses were there in the taxi at the end? - Using a number line, count in 2s placing a counter on the number as it is counted. <i>Tip:</i> This is one of the activities for Assessment Task 1. • <u>DAY 1</u> (to take no more than 20 minutes) - Put a pile of counters in the middle of the group and working with a partner, learners design a growing pattern e.g.	



and so on

- Give each learner a strip of cardboard about the length of a chocolate bar. Tell them to design their own chocolate. This can be done during the technology lesson. Now put learners in pairs and collect one strip from each pair for another activity. Tell them that they now have to share the chocolate equally between the two of them. Discuss how they think they are going to do it. Introduce the word half to the learners. Let them fold the strip in half and share it between the 2 of them.
- Get 5 learners to stand in front of the class. Tell the class that they are going to add up the eyes e.g. $2+2+2+2+2=10$. Ask one learner to write the repeated addition number sentence on the board. You can get them to add hands/legs/ears etc. each time asking a learners to write the number sentence on the board. You could also use bundles of ice-cream sticks/ pencils etc. to count out in 5s and 10s.

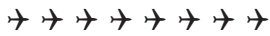
DAY 2 (to take no more than 20 minutes)

- Let learners count out any number of objects up to 35. They must put their objects into different patterns and then record what they did e.g. $30 = 5+5+5+5+5+5$ or $30=10+10+10$.
Tip: Observe the learners and record those who are not able to do this. This is an Assessment Task 1 activity
- Choose an odd number e.g. 5. Tell the children to quickly draw 5 cupcakes and cut them out. They must now share the 5 cupcakes with their partner. What will happen to the last one? Learners will know that they would have to cut or tear it in half. Learners must be made aware of things that can be cut/torn/broken so that we can get half. Ask them what would happen if we had to share 5 pens between two children.

DAY 3 (to take no more than 20 minutes)

- Write a number pattern on the board and as soon as someone identifies the pattern they say STOP! They then describe the pattern and say how it continues. Some ideas are:
 - 2, 4, 6, 8
 - 90, 80, 70,
 - 7, 9, 11, 13
 - 24, 25, 26, 27
- Prepare a worksheet to assess repeated addition or write the work on the board e.g.

1. Write the number sentence for



2. Fill in the missing numbers.

2	4				
---	---	--	--	--	--

10	20				
----	----	--	--	--	--

	10	15		25	
--	----	----	--	----	--

Tip: This activity is part of Assessment Task 1.

DAY 4 (to take no more than 20 minutes)

- Hand out number cards (1-10) to the learners. Tell them to arrange the odd numbers from smallest to biggest and the even numbers from biggest to smallest. Let learners choose a number from the even numbers. Learners double and halve this number. Now let a learner choose an odd number. Let learners double the number by using nearly doubles i.e. $2+2=4$ so $2+3=5$. Do this a few times, first with the even number and then with the odd number.
- Revise days of the week and months of the year. Take out the clock face and revise o' clock. Discuss things that take a long time and then discuss things that take a short time. Write the events on a card and display them e.g.

Short time : a balloon to pop

Long time: a tree to grow

Don't forget to discuss that fast things can still take a long time e.g. the taxi drives fast, but it takes a long time to get from Cape Town to Durban.

DAY 5 (the whole lesson)

- Put learners into groups of 7 and give each learner a piece of paper. Each learner chooses one day of the week and writes it at the top of the page. The group then cuts out and pastes (or draws) something that happens on their day e.g. there is soccer practice on a Tuesday, or favourite TV programme on Saturday, etc. Once all the days have been completed, staple the pages together and put the 'Time book' in the book corner.

ASSESSMENT	Formal: Recorded Assessment Task 1: During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : - Says the number names from 1 to 100 in sequence (rote counting). - Counts out to at least 34 objects reliably, i.e. says the number names from 1 to 34 in sequence while indicating, or physically moving, objects in a collection, e.g. counters or pictures or beads on an abacus. - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines. - Number knowledge and mental computation: - Completes repeated addition of 2, 5 and 10 - Estimate the number of objects in a collection up to at least 34, and check by counting
-------------------	--

WEEK 2: GROUP TEACHING

Week 2	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)
Notes to teacher: - You will give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. - While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.) - If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually. Assessment Task 1 will be completed this week.	
DAILY ACTIVITIES	
<u>Examples of activities to be done independently.</u> <i>Work from a Learner's Book, worksheets, work cards, work charts etc.</i> Addition and subtraction up to 20 e.g.	
10+1= 11+1= 12+1= 13+1= 14+1= 15+1=	15-1= 14-1= 13-1= 12-1= 11-1= 10-1=
2+1= 12+1= 22+1= 32+1=	2-1= 12-1= 22-1= 32-1=

- Numerosity of numbers 10 to 20 e.g.

All about 15

$$10+5= \quad 20-5=$$

$$5+5+5= \quad 20-10+5=$$

15 is 1 more than ☐

15 is 1 less than ☐

Choose your own number between 10 and 20 and put it in the block. ☐

Use your number in each block.

$$\square = \quad + \quad$$

$$\square = \quad - \quad$$

$$4 + \quad = \square$$

☐ comes between ☐ and ☐

Write 5 number sentences where 12 is the answer.

1. _____

2. _____

3. _____

4. _____

5. _____

Working with the groups

GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Put 8 pairs of shoes in the middle of the group (or babies booties, or a picture of 8 people). Let the learners look at them for a moment, then cover the shoes. Ask learners to estimate how many shoes there are and write the number down. Now let the group count the shoes one by one, then in 2s. Ask who estimated too many, who estimated too few and who estimated the exact number.

Tip: This is part of Assessment Task 1.

- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:

-What number did you make? (25)

-What numbers did you use to make 25? 20 and 5. Show me.

-Put them back together to look like 25.

-Put the cards back in their place and make the new number of ...

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/ he solved the problem. On Monday the word problems will be 1 addition and 1 subtraction and on Wednesday you will ask 1 combination and 1 grouping with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

•

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Put 8 pairs of shoes in the middle of the group (or babies booties, or a picture of 8 people). Let the learners look at them for a moment, then cover the shoes. Ask learners to estimate

how many shoes there are and write the number down. Now let the group count the shoes one by one, then in 2s. Ask who estimated too many, who estimated too few and who estimated the exact number.

Tip: *This is part of Assessment Task 1.*

- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (25)*
 - *What numbers did you use to make 25? 20 and 5. Show me.*
 - *Put them back together to look like 25.*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 addition and 1 subtraction and on Thursday you will ask 1 combination and 1 grouping with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Put 8 pairs of shoes in the middle of the group (or babies booties, or a picture of 8 people). Let the learners look at them for a moment, then cover the shoes. Ask learners to estimate how many shoes there are and write the number down. Now let the group count the shoes one by one, then in 2s. Ask who estimated too many, who estimated too few and who estimated the exact number.

Tip: *This is part of Assessment Task 1.*
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (25)*
 - *What numbers did you use to make 25? 20 and 5. Show me.*
 - *Put them back together to look like 25.*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 addition and 1 subtraction and on Wednesday and Thursday you will ask 1 combination and 1 grouping with

a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Assessment	Formal: Recorded Assessment Task 1: During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : - Says the number names from 1 to 100 in sequence (rote counting). - Counts out to at least 34 objects reliably, i.e. says the number names from 1 to 34 in sequence while indicating, or physically moving, objects in a collection, e.g. counters or pictures or beads on an abacus. - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines. - Number knowledge and mental computation: - Completes repeated addition of 2, 5 and 10 - Estimate the number of objects in a collection up to at least 34, and check by counting
-------------------	--

SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FOURTH TERM

TASK 1 : WEEK 2

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	- Says the number names from 1 to 100 in sequence (rote counting). - Counts out to at least 34 objects reliably, i.e. says the number names from 1 to 34 in sequence while indicating, or physically moving, objects in a collection, e.g. counters or pictures or beads on an abacus. - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines. - Number knowledge and mental computation: - Completes repeated addition of 2, 5 and 10	Wk 2	- Use the daily oral activities to assess counting in 2s, 5s and 10s. - Use the practical activity on Day 2 to assess repeated addition. - Use the written activities on Day 3 to assess repeated addition and counting in multiples of 2, 5 and 10.
PROBLEM SOLVING	Estimate the number of objects in a collection up to at least 34, and check by counting	Wk 2	Use the practical activity during the Group Teaching session to assess estimation.

FOURTH TERM: WEEK 3 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Counting out objects to 34 - Counting to 100 on abacus and number line/number square - Counting in multiples of 2, 5, and 10 using concrete objects and number square	Daily: - Rote count in 1s from 20-60 - Rational counting from 1-100 using counting objects - Counting forwards and backwards 2s from 1-50				
NUMBER SENSE AND MENTAL LO1 AS 3,4,7,8,9 LO 2 AS 2,3,4 LO5 AS1,2,3,4,5	- Writes and reads number symbols from 1-100 - Writes and reads number names from 1-34 - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, $20+10+4=34$ - Doubles and halves numbers - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Completes repeated addition of 2, 5 and 10 - Copies and extends simple number sequences to at least 100 - Collects, sorts, explains and constructs pictographs	Daily: - Patterns: Body percussion - Number sequences	Orders numbers 10-20 Numerosity 20-34	Designs own patterns Double and halve numbers	Orders numbers 10-20 Double and halve numbers Data handling	WHOLE CLASS ACTIVITY Data handling
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems with whole numbers to at least 34, using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. . Ask one doubling and one halving word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one doubling and one halving word problem Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask one grouping and one sharing with a remainder word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one grouping and one sharing with a remainder word problem Group works on its own.	

WEEK 3: WHOLE CLASS

WEEK 3	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - The last term is generally shorter than the other terms and this makes assessment more of a challenge. It is important that you retain the ethos of learning and teaching that you have established through the year. Therefore assessment must be continuous as part of the everyday activities learners will be engaged in.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count in 1's from 20-60 - Count from 1-100 using counting objects. Give each learner a different number to count. - Count in 2's forwards and backwards from 1-50 <i>Choose from the following (to make up the 10 mins.):</i> - Count out odd and even numbers on a number line or grid - Count in 10s and when you clap your hands they count on in 1s e.g. 10, 20, 30 (clap), 31, 32, 33, etc. This is very difficult, so make it fun. Some learners will manage, but others are not at this developmental stage yet. - Clap a pattern which learners echo back to you by clapping. Repeat the pattern, but add another element to make it more complicated. Learners echo the pattern by clapping the pattern. - Add and subtract 1-5 to any number up to 34 <u>DAY 1</u> (to take no more than 20 minutes) - Use body percussion to create patterns e.g. clap, clap, click, click, click, stamp. - Put a pile of counters in the middle of each group as well as a packet of numbers (cut from a calendar). Each learner takes a number out of the packet, counts out the correct number of counters, then writes the number and the number names in his/her book. - Give each learner a strip of paper. Let them fold it in half, then half again, and then in half again. This will make 8 blocks on the strip. Learners write any numbers in each of the 8 blocks. In their books learners copy the 8 numbers and add 1 to each number then take 1 away e.g.	

12	$12+1=13$	$12-1=11$
6	$6+1=7$	$6-1=5$
23		
18		
22		
35		
10		
2		

At the end of the lesson, collect all the strips to use during the week.

DAY 2 (to take no more than 20 minutes)

- Use body percussion to create patterns e.g. clap, stamp, clap, stamp, clap, clap, clap.
- Have a collection of large objects e.g. ball, box, rubbish basket, chair etc. Take the learners outside and place the objects in a row leaving a bit of space between each object. Get all the learners to stand facing the objects. Point to the first object and ask them the position of this object. Do the same for the other objects. You could also use some of the learners to stand in the different positions e.g. Mqobi is fifteenth.
- Work with numbers 20-34. Choose one number a day and develop its relationship with other numbers e.g. 20 you would ask: what is one more than 20? $10+10=?$ $30-10=?$ Which number comes after 20? Which number is before 21? Which number is between 19 and 21? Half of 40 is _____. You can think of the other examples.

DAY 3 (to take no more than 20 minutes)

- Provide learners with different objects and tell them to design a repeat pattern e.g. matchstick, matchstick, bottle cap, matchstick, matchstick, bottle cap etc. When everyone has finished, ask one or two learners to describe their pattern to the rest of the class.
- Learners work with a partner. Hand out counting objects and a number card 10 to 20 to each pair. The first learner must count out the number of objects to match the card e.g. 12 objects. Now ask the partner to count out the correct number of objects in order to double the number 12. They must now count out all the objects in order to get the answer. Now ask them to share the objects with his/her partner so that they both have the same number of objects. Ask questions to gauge the learners understanding of the concept of halving.

DAY 4 (to take no more than 20 minutes)

- Hand out the strips of paper for Day 1. Learners copy the numbers into their books and add 2 to each number, then subtract 2 from each number. Collect the strips for use another day.
- Draw a number line with pictures instead of numbers on the board. The words tenth to twentieth can be written on a chart for learners to use as a reference.



Ask the following type of questions:

- What picture is 10th?
- What picture is 16th?
- What position is the smiling face?
- What position is the tick? And so on

DAY 5 (the whole lesson)

- Put small pictures of different objects into a packet or box and hand them out to each group. There must be the same number of pictures of objects in each packet. e.g.
 - Transport : cars, trains, aeroplanes, helicopters, boats, ships.
 - Colours: red, blue, green, yellow, orange, black
 - Fruit: oranges, apples, bananas, pineapples, peaches, grapes
 - Vegetables: potatoes, pumpkin, onions, beans, peas, carrots.

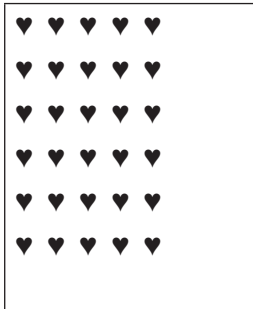
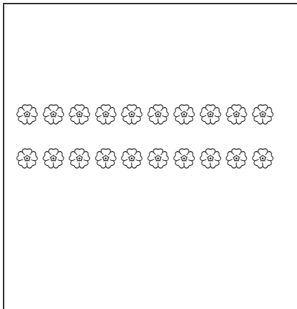
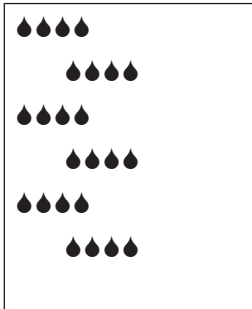
Tell the group to sort the pictures then to arrange them e.g. the cars in a row (vertically or horizontally) trains, in a row. They must then count out the number of e.g. cars. Ask questions e.g. how many helicopters do you have? How many trains? Do you have more boats than ships?
- Give each group a sheet of paper, marked with rows and columns. Learners must paste the pictures into the correct columns to make a pictograph.

ASSESSMENT

Formal : No formal, recorded Assessment

Informal: Unrecorded assessment of learners oral responses and ability to participate.

WEEK 3: GROUP TEACHING

Week 3	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)													
Notes to teacher:														
- By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. - While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.) - If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.														
DAILY ACTIVITIES														
<u>Examples of activities to be done independently.</u> <i>Work from a Learner's Book, worksheets, work cards, work charts etc.</i>														
- Sequencing numbers/Fill in the missing numbers 1-24 - Give the learners number cards 20 to 30. They arrange them from smallest to biggest then copy the numbers into their books, write the number name and draw the correct number of pictures. - Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books, e.g.														
  														
- Spider diagrams - Addition and subtraction number sentences. - Simple tables e.g.														
<table><tr><td></td><td>10</td><td>11</td><td>12</td><td>13</td></tr><tr><td>+3</td><td>13</td><td></td><td></td><td></td></tr></table>						10	11	12	13	+3	13			
	10	11	12	13										
+3	13													

Working with the groups

GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 25 minutes.

- Place 4 gloves in the middle of the group. Let them look at them for a moment, then cover the gloves. Ask learners to estimate how many fingers can fit into the gloves. Once everyone has written their estimate down, uncover the gloves and count the number of fingers. Ask who estimated too many, who estimated too few and who estimated the correct number.
- Let the learners count how many are in the group, then each learner will put out counters representing the number of eyes in the group i.e. in 2s. Learners count in 2s, then write the repeated addition number sentence e.g. $2+2+2+2+2+2+2=14$
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*
 - *What number will you get if you add 2 to 34? Show me.*
 - *What is your new number? (36)*
 - *What numbers did you use to make 36? 30 and 6.*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 doubling and 1 halving and on Wednesday you will ask 1 grouping and 1 sharing with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 25 minutes.

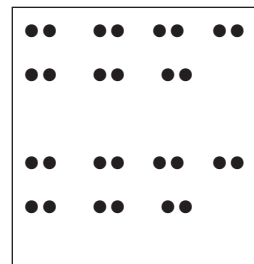
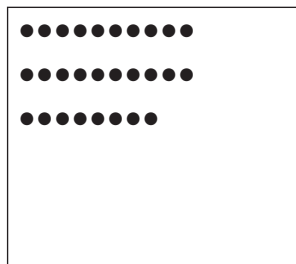
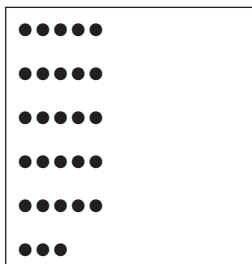
- Place 3 gloves in the middle of the group. Let them look at them for a moment, then cover the gloves. Ask learners to estimate how many fingers can fit into the gloves. Once everyone has written their estimate down, uncover the gloves and count the number of fingers. Ask who estimated too many, who estimated too few and who estimated the correct number.
- Let the learners count how many are in the group, then each learner will put out counters representing the number of eyes in the group i.e. in 2s. Learners count in 2s, then write the repeated addition number sentence e.g. $2+2+2+2+2+2+2=14$
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:

- What number did you make? (34)
- What numbers did you use to make 34? 30 and 4. Show me.
- Put them back together to look like 34.
- What number will you get if you add 2 to 34? Show me.
- What is your new number? (36)
- What numbers did you use to make 36? 30 and 6.
- Put the cards back in their place and make the new number of ...
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/ he solved the problem. On Tuesday the word problems will be 1 doubling and 1 halving and on Thursday you will ask 1 grouping and 1 sharing with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Place 2 gloves in the middle of the group. Let them look at them for a moment, then cover the gloves. Ask learners to estimate how many fingers can fit into the gloves. Once everyone has written their estimate down, uncover the gloves and count the number of fingers. Ask who estimated too many, who estimated too few and who estimates the correct number.
- Place some counters in front of each learner and ask them to count out any number they like. Once they have done this, ask them to arrange the counters in as many different patterns as they can, e.g. the number counted out is 28 and these can be arranged as:



Encourage the learners to write the numbers of the patterns e.g. $28 = 5+5+5+5+5+3$

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/ he solved the problem. On Monday and Tuesday the word problems will be 1 doubling and 1 halving and on Wednesday and Thursday you will ask 1 grouping and 1 sharing with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

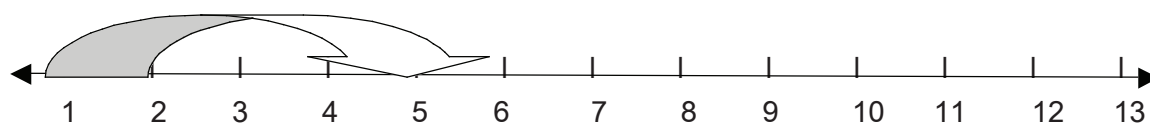
Assessment	Formal : No formal, recorded Assessment Informal : Unrecorded assessment of learners oral responses and ability to participate
-------------------	--

FOURTH TERM: WEEK 4 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Counts out to at least 34 objects - Counting in multiples of 2, 5, and 10 using concrete objects and number square	Daily: - Rote count in 1's from 35 to 75 - Rational counting in 1's backwards and forwards 1-100 on the number line or number square/grid. - Counting backwards and forwards in 5's up to 50				
NUMBER SENSE AND MENTAL LO1 AS 3,4,7,8,9 LO 2 AS 2,3,4 LO3 AS 2 LO 4 AS5	- Writes and reads number symbols - Writes and reads number names from 1-34 - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, $20+10+4=34$ - Doubles and halves numbers to 34 - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Completes repeated addition of 2, 5 and 10 - Copies and extends simple number sequences to at least 100 - Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance.	Daily: - Mental calculations - Reads and writes numbers to 100 - Reads and writes number names to 34.	DAY 2 Design a pattern e.g. rubbings Add and subtract 5 to 9 to any single digit number Double and halve 20-30	DAY 3 Learners identify a given pattern Add and subtract 5 to 9 to any single digit number Orders numbers 20-30	DAY 4 Patterns: Design patterns e.g. rubbings Add and subtract 5 to 9 to any single digit number Orders numbers 20-30	DAY 5 WHOLE CLASS ACTIVITY Compares 3D objects by measuring using non-standard measures
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems with whole numbers to at least 34, using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. Ask one grouping with a remainder and one repeated addition word problem Group 2 works on its own	Groups 2 and 3 work with teacher, one group at a time. Ask one grouping with a remainder and one repeated addition word problem Group 1 works on its own	Groups 1 and 3 work with teacher, one group at a time. Ask one doubling and one halving word problem Group 2 works on its own	Groups 2 and 3 work with teacher, one group at a time. Ask one doubling and one halving word problem Group 1 works on its own	

WEEK 4 : WHOLE CLASS

WEEK 4	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - Being able to identify the relationship between numbers is important and this is why there are many number pattern activities. This also helps to develop an understanding of the numerosity of a number. By now you will be extending the learners thinking about numbers beyond just the obvious numbers e.g. that $10=5+5$. Learners should be able to identify that $14-4=10$, $20-10=10$, $2+2+2+2+2=10$ and so on. - Much of the work this week is revision of work already done, although you are now either using bigger numbers, or using a different context. - Do not spend too long on the whole class activities as the main learning takes place during the group teaching part of the lessons.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count (say the numbers in sequence) from 1 to at least 100. - Count from 1-100 using counting objects e.g. an abacus. - Count in 2's forwards and backwards from 1-50 using concrete objects e.g. legs of children. <i>Choose from the following (to make up the 10 mins.):</i> - Show learners a number on the number grid and they write the number name in their book. - Each learner has their own number line or number grid. As they count in 2s starting at 2 (even numbers), they put two counters on each number as they say it. When you stop them, ask questions such as <i>how many counters are there up to the number 12?</i> - Repeat the activity, but starting at 1 (odd numbers). Learners put 1 counter on the number 1 then 2 counters on each other number as they say it (3, 5, 7). Make sure you ask questions about how many counters there are up to a certain number. - Give 10 learners a number from 1 to 10 and let them stand in order in front of the classroom. Ask questions such as: <i>who is sixth? Who is 10th? Where is Lucy? Etc.</i> - Point to any number on the number grid and learners will tell you the number that is 2 more, or 2 less. Let someone write the number sentence on the board each time. <u>DAY 1</u> (to take no more than 20 minutes) - Prepare a series of patterns that you are going to say e.g. clap, clap, click, click, stomp / apple, apple, plum, plum, apple, apple, plum, plum / 2, 4, 6, 8, 10. Learners must identify the patterns and say whether the pattern is repeating or growing. <i>Tip: Being prepared will save you time and will alleviate discipline problems.</i> - Give each learner a number line to paste in their books, or let them draw a number line in their books. On the board, write number sentences with the pattern of adding 5 or subtracting 5. Learners must copy these into their books and work out the answers using the number line and showing how they got the answer e.g.	



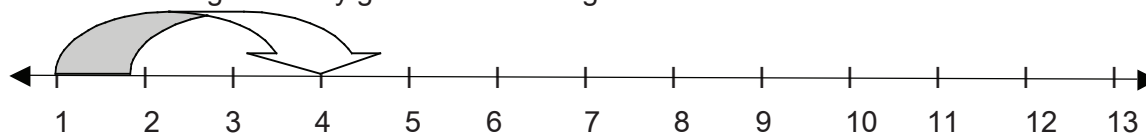
$$1+5= \quad 2+5= \quad 3+5= \quad 4+5= \quad 5+5=$$

$$10-5= \quad 9-5= \quad 8-5= \quad 7-5= \quad 6-5=$$

- Let the learners refer to the number line and make up 5 of their own number sentences.

DAY 2 (to take no more than 20 minutes)

- Ask the learners what patterns they can see e.g. the tablecloth on the teacher's table, the clouds, the plants in the garden, the arrangement of the learners' desks. Now let them design their own patterns e.g. rubbings. They can use objects inside and outside the classroom e.g. leaves or coins. They can create a pattern with a R2 and R5 coin etc.
- Give each learner a number line to paste in their books, or let them draw a number line in their books. On the board, write number sentences with the pattern of adding 4 or subtracting 4. Learners must copy these into their books and work out the answers using the number line and showing how they got the answer e.g.



$$1+4= \quad 2+4= \quad 3+4= \quad 4+4= \quad 5+4= \quad 6+4=$$

$$10-4= \quad 9-4= \quad 8-4= \quad 7-4= \quad 6-4= \quad 5-4=$$

Working on number lines is very good because the learners get to count forwards for addition and backwards for subtraction. They also get to count on.

- Let the learners refer to the number line and make up 5 of their own number sentences.

DAY 3 (to take no more than 20 minutes)

- Prepare a series of patterns that you are going to say e.g. 2, 4, 6, 8, 10, counting in 3's, 5's, odd numbers etc. Learners must identify the patterns and say whether the pattern is repeating or growing.
- Call 4 learners to the board. Give them each a different number. They must write the number, the number name and draw the correct number of crosses (x) to indicate the value. Repeat the activity until half the class have had a turn to write on the board.
- Repeat the number line activity, using the pattern of adding and subtracting 3 to numbers.

DAY 4 (to take no more than 20 minutes)

- Call 4 learners to the board. Give them each a different number. They must write the number, the number name and draw the correct number of crosses (x) to indicate the value. Remember, half the class had a turn to write on the board in Day 3, so today give the others an opportunity to participate.

- Prepare a number line from 20th - 30th. Draw small pictures on top of each number. Ask questions e.g. which picture is 21st, 29th etc. and then ask e.g. what is the position of the triangle? Get learners to say/read the ordinal positions and link this to telling/reading the date every day. Hand position cards and their names to groups of learners. They must work together to match the corresponding position and the name e.g. 21st - twenty first
- Repeat the number line activity you have been doing this week, using the pattern of adding and subtracting 2 to the numbers.

Tip: If your learners are able to do this well, use bigger numbers on the number line.

DAY 5 (the whole lesson)

- Get the learners to work in pairs. Hand out pieces of wool of different lengths to each pair. They must use a finger and a hand span to measure their pieces of wool.
- Each pair gets a card with instructions of what to measure with their pieces of wool, e.g.

Use the shortest piece to measure:

- Your desk
- Your Numeracy book
- The height of the door

Now use the longest piece to measure the same things

Use the shortest piece to measure:

- Your reading book
- The chalkboard duster
- Your partner's height

Now use the longest piece to measure the same things

Use only 2 different cards so that pairs can compare their results once everyone is finished. Learners record the measurements using the following table:

<i>Object</i>	<i>Short piece of wool</i>	<i>Long piece of wool</i>
Desk		
Numeracy book		
Height of the door		

- Give the learners a sheet of block paper. They colour in the correct number of blocks according to the information they collected e.g.

<i>Shortest piece</i>	1	2	3	4	5	6	7	8	9
<i>Desk</i>									
<i>Book</i>									
<i>Door</i>									
<i>Longest piece</i>									
<i>Desk</i>									
<i>Book</i>									
<i>Door</i>									

Discuss the results with the class e.g. in this group the desk measured 5 short pieces, what did other groups get when they measured the desk? Why are the measurements different (the pieces of wool are not the same length) and so on.

Tip: Use this activity towards Assessment Task 2 which will be completed by the end of Week 5.

ASSESSMENT	Formal : Formal, recorded Assessment: Assess the learners ability to record collected data. Informal: Unrecorded assessment of learners oral responses and ability to participate.
-------------------	--

WEEK 4: GROUP TEACHING

Week 4	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)													
Notes to teacher:														
• Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time the focus is on solving problems which represent real life situations. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. • While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.) • If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.														
DAILY ACTIVITIES														
<u>Examples of activities to be done independently.</u> <i>Work from a Learner's Book, worksheets, work cards, work charts etc.</i>														
• Strips of paper: add and subtract 1 to each number; add and subtract 2 to each number etc.														
<table><tr><td>12</td></tr><tr><td>6</td></tr><tr><td>23</td></tr><tr><td>18</td></tr><tr><td>22</td></tr></table>	12	6	23	18	22	<table><tr><td>12+1=13</td></tr><tr><td>6+1=7</td></tr></table>	12+1=13	6+1=7	<table><tr><td>12-1=11</td></tr><tr><td>6-1=5</td></tr></table>	12-1=11	6-1=5			
12														
6														
23														
18														
22														
12+1=13														
6+1=7														
12-1=11														
6-1=5														
• Spider diagrams • Addition and subtraction number sentences. • Simple tables e.g.														
<table><tr><td></td><td>26</td><td>27</td><td>28</td><td>29</td></tr><tr><td>+5</td><td>31</td><td></td><td></td><td></td></tr></table>		26	27	28	29	+5	31							
	26	27	28	29										
+5	31													
• Sequencing numbers/Fill in the missing numbers 1-30 • Creating own patterns using shapes or colours or numbers. • Completing numbers grids.														

Working with the groups

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 25 minutes.*

- Hand out counting objects and let learners count out up to 34. Have number name cards turned upside down. Learners can choose a card, turn it over, read the number e.g. twenty seven and then count out 27 objects.
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*
 - *What number will you get if you add 2 to 34? Show me.*
 - *What is your new number? (36)*
 - *What numbers did you use to make 36? 30 and 6.*
 - *Can you show me the number on the number line? On the abacus?*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/ he solved the problem. On Monday the word problems will be 1 grouping with a remainder and 1 repeated addition and on Wednesday you will ask 1 doubling and 1 halving type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

•

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 25 minutes.*

- Hand out counting objects and let learners count out up to 34. Have number name cards turned upside down. Learners can choose a card, turn it over, read the number e.g. twenty seven and then count out 27 objects.
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*
 - *What number will you get if you add 2 to 34? Show me.*
 - *What is your new number? (36)*
 - *What numbers did you use to make 36? 30 and 6.*

- Can you show me the number on the number line? On the abacus?
- Put the cards back in their place and make the new number of ...
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 grouping with a remainder and 1 repeated addition and on Thursday you will ask 1 doubling and 1 halving type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Hand out counting objects and let learners count out up to 34. Have number name cards turned upside down. Learners can choose a card, turn it over, read the number e.g. twenty seven and then count out 27 objects.
- Let each learner count out 20 counters and then arrange them in the following ways:
 - 5 equal rows. Ask how many counters are in each row.
 - 4 equal rows. Ask how many counters are in each row.
 - 3 rows. Ask how many counters are in each row. Are the rows equal?
 - 2 equal rows. Ask how many counters are in each row.
 - Any pattern the learner chooses to make.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 grouping with a remainder and 1 repeated addition and on Wednesday and Thursday you will ask 1 doubling and 1 halving type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Assessment	Formal : No formal, recorded Assessment Informal : Unrecorded assessment of learners oral responses and ability to participate
-------------------	--

FOURTH TERM: WEEK 5 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- In the range 1 to at least 34: - Say which of two given numbers is smaller/bigger. - Orders more than two given numbers from smaller to bigger	Daily: - Rote count in 1's from 41 to 80 - Says which of 2 numbers is bigger or smaller - Orders numbers, smaller to bigger				
NUMBER SENSE AND MENTAL LO1 AS 3,4,7,8,9 LO 2 AS 2,3 LO4 AS 5	- Writes and reads number symbols from 1-100 - Writes and reads number names from 1-34 - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, $20+10+4=34$ - Doubles and halves numbers - Know or can easily establish addition and subtraction 1-10 - Copies and extends simple number sequences to at least 100, in order to describe them create own patterns. - Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance.	Daily: - Reads and writes number symbols to 100 - Reads and writes number names to 34				
		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
		Recognises and extends number patterns Add and subtract 5 to 9 to any number from 11-20	Designs own number patterns Double and halve 1-34	Makes own patterns Relationship between numbers 1 to 34 Double and halve	Number patterns Add and subtract 5 to 9 to any number from 11-20	WHOLE CLASS ACTIVITY Measurement : length
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34				
		Group 1 and 3 work with teacher, one group at a time. Ask one sharing with a remainder and one change type word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one sharing with a remainder and one change type word problem Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask one equalize and one array type word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one equalize and one array type word problem Group 1 works on its own.	

WEEK 5: WHOLE CLASS

WEEK 5	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - Being able to identify the relationship between numbers is important and this is why there are many number pattern activities. This also helps to develop an understanding of the numerosity of a number. By now you will be extending the learners thinking about numbers beyond just the obvious numbers e.g. that $10=5+5$. Learners should be able to identify that $14-4=10$, $20-10=10$, $2+2+2+2+2=10$ and so on. - Much of the work this week is revision of work already done, although you are now either using bigger numbers, or using a different context. - Do not spend too long on the whole class activities as the main learning takes place during the group teaching part of the lessons. Assessment Task 2 will be completed this week.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Ask what the date is. Learners start at that number and count in 1s till you clap your hands. You will start at a different number each day, so make sure you end at a different number, too. - Point to two different numbers on the number grid and ask learners to tell you which number is smaller, or which number is bigger. <i>Tip:</i> This is an assessment activity, so ask a few different learners each day so as to assess their understanding. <i>Choose from the following (to make up the 10 mins.):</i> - Give each pair of learners 10 small pieces of paper. One piece has a number written on it. That is the starting number. Learners write consecutive, bigger numbers on each of the pieces and then arrange them in order. Walk around and observe how the learners are managing. <i>Tip:</i> This is an assessment activity, so you may want to do it every day so as to observe every learner. Only record those who are not able to do the activity. - Hide some numbers on the walls of the classroom i.e. put them randomly among the charts etc. that are on the wall. You will need to make sure that there is a number for each learner. Learners look for a number, take it down, write it in their books and then write the number name. <i>Tip:</i> This is an assessment activity, so do it every day this week as that gives learners a fair change to show what they can do. <u>DAY 1</u> (to take no more than 20 minutes) - Design activities to assess counting patterns up to 34. The following examples could be used.	

- Dot to dot in counting in 2's, 5's and 10's to form a picture.
- Complete a number grid or square
- Fill in the missing numbers on the number line to complete the number pattern.

Tip: Use this activity towards Assessment Task 2.

- Tell the learners they are going to make their own number patterns. They choose any number between 11 and 20 and write it in their books. They now add and subtract the numbers 1 to 9 to their number, writing the number sentences and the answers e.g.

$11+5=16$	$11-5=6$
$11+6=17$	$11-6=5$
$11+7=18$	$11-7=4$
$11+8=19$	$11-8=3$
$11+9=20$	$11-9=2$

Discuss the different patterns that are made.

DAY 2 (to take no more than 20 minutes)

- Take the learners outside and ask them to get into groups of 4 legs, 6 legs, 20 fingers, 10 noses, etc. Each time ask questions such as: How many children in the group of 4 legs? If 2 children have 4 legs, what are two two's? If two two's are 4, what are three two's? and so on.
- Still outside, let the learners sit in pairs. Ask what it means to double – two things exactly the same. This is not a new concept as learners have done this during problem solving activities in their groups. Now tell the learners to work together, taking turns to hold up some fingers and the partner holds up the same number of fingers i.e. the first learner holds up 5 fingers, so the partner holds up 5 fingers as well. Ask different pairs to say what they are doing e.g. 5 and 5 make 10, or double 5 is 10.

DAY 3 (to take no more than 20 minutes)

- Let half the class stand behind their chairs. Call out a number sentence, learners put up their hands if they know the answer, choose 3 or 4 learners to tell you the answer - even if the 1st answer is correct - and then check the answer with those sitting down. All the learners who told you the correct answer can now sit down. Repeat the activity until everyone is sitting down.

Tip: By not choosing the 1st correct answer, you are making everyone really think about what the answer really is. This prevents learners from just guessing and helps develop confidence.

- Give the class a worksheet similar to the following (or write it on the board). These are the activities you want to assess, but remember, this is not a test. It is part of the everyday teaching and learning that takes place in a familiar environment.

Fill in the missing parts.

Word	Number	Picture
	12	
eighteen		
		

Write 6 number sentences about the number in the block.

28

_____	_____
_____	_____
_____	_____

Draw double the number each time.

◆ ◆ ◆ ◆ ◆ ◆	
× × × × ×	
× × × × ×	

Tip: Use this towards Assessment Task 2.

DAY 4 (to take no more than 20 minutes)

- Hand out little pieces of paper to the learners. They must refer to the number line or the counting grid and design different number patterns e.g. counting in 2s from 24 to 34, counting in 5s from 5 to 30. The learners must write the numbers on the pieces of paper and place them correctly on their tables/desks. As you walk around to observe, get a few learners to tell you the pattern they have created.

Tip: You can make reference to workbooks for more ideas.

- Tell the learners they are going to make their own number patterns. They choose a number between 11 and 20 (but not the same one they chose on Day 2) and write it in their books. They now add and subtract the numbers 1 to 9 to their number, writing the number sentences and the answers e.g.

$11+5=16$	$11-5=6$
$11+6=17$	$11-6=5$
$11+7=18$	$11-7=4$
$11+8=19$	$11-8=3$
$11+9=20$	$11-9=2$

Discuss the different patterns that are made.

DAY 5 (the whole lesson)

- Put the learners into groups of 4. Give each group a card with simple instructions e.g.

First estimate then measure:

- how many footsteps from your desk to the door
- how many footsteps from the door to the teachers cars
- how many footsteps from the front to the back of the classroom.

First estimate then measure:

- how many exercise books from your desk to the door
- how many exercise books from the teacher's table to the door
- how many exercise books from the front of the classroom to the back.

First estimate then measure:

- how many hand-spans from the door to your desk
- how many hand-spans from your desk to the teacher's table
- how many hand-spans from one side of the classroom to the other.

Learners must record the information in a chart e.g.

Name	Estimate	Actual	Difference
Nare			
Tim			

Tip: Use this activity towards Assessment Task 2.

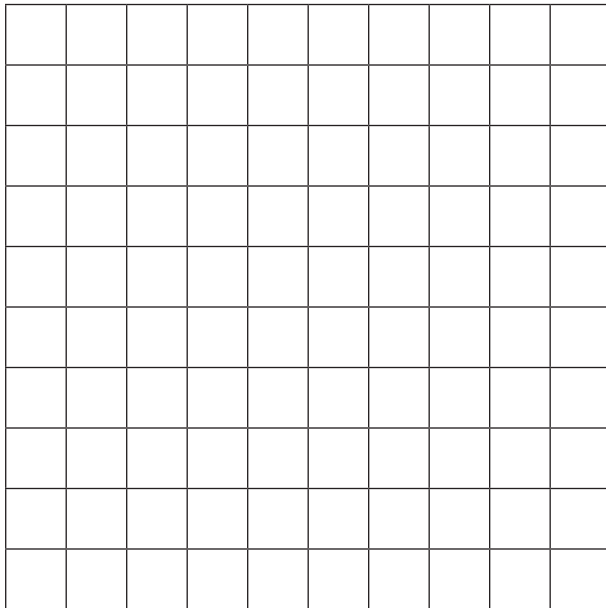
ASSESSMENT

Formal: Recorded Assessment Task 2 : During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems :

- Writes and reads number symbols from 1-100
- Writes and reads number names from 1-34
- In the range 1 to at least 34:
 - Say which of two given numbers is smaller/bigger.
 - Orders more than two given numbers from smaller to bigger
 - Orders first to last.
- Number knowledge and mental computation:
 - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$
 - Doubles and halves numbers 1 to 34
 - Know or can easily establish addition and subtraction facts in the range 1 to 10
- Copies and extends simple number sequences to at least 100, in order to describe them create own patterns.
- Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance.
- Collects, sorts, explains and constructs pictographs

WEEK 5: GROUP TEACHING

Week 5	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)
Notes to teacher: • Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time the focus is on solving problems which represent real life situations. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. • While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.) • If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually. • Assessment Task 2 will be completed this week. If you need to assess learners in a smaller group, do it this week.	
DAILY ACTIVITIES	
<u>Examples of activities to be done independently.</u> <i>Work from a Learner's Book, worksheets, work cards, work charts etc.</i> Groups 1 & 2 • Sequencing numbers/Fill in the missing numbers 1-20 • Odd and even numbers • Addition and subtraction up to 34 • Number value 1-20 • Ordinal value 1-20 • Numerosity up to 34 • Doubling and halving up to 20 • Numbers and number names <u>Working with the groups</u> <u>GROUP 1</u> <i>On Monday and Wednesday this group works with the teacher for 20 minutes.</i> • Hand out magazines or library books to the learners. Hand out different pieces of wool and ask them to estimate which piece of wool would be able to go around the length of the book/magazine. You can also ask them to estimate which piece would go around the width of the book/magazine. • Each learner needs to have a blank number square with 100 squares.	



Let learners work out where different numbers will be on the blank number square for themselves. For example, ask them:

- Put a counter on the block for 99. What number will be on the next block after this?
- Put a counter on the number that is 2 more than 10. What will the number be?
- The number after 20 is 21. What do you think the number after 30 is? Put a counter on the number. And after 40? Put a counter on the number, And after 50? Is there a pattern?
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 sharing with a remainder and 1 change type and on Wednesday you will ask 1 equalize and 1 array type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Hand out magazines or library books to the learners. Hand out different pieces of wool and ask them to estimate which piece of wool would be able to go around the length of the book/magazine. You can also ask them to estimate which piece would go around the width of the book/magazine.
- Let each learner count out 30 counters and then arrange them in the following ways:
 - 5 equal rows. Ask how many counters are in each row.
 - 6 equal rows. Ask how many counters are in each row.
 - 3 rows. Ask how many counters are in each row. Are the rows equal?
 - 2 equal rows. Ask how many counters are in each row. What is half of 30?
 - Double the number. How can you do it? (put two groups together).
 - Any pattern the learner chooses to make.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 sharing with a remainder and 1 change type and on Thursday you will ask 1 equalize and 1 array type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Hand out magazines or library books to the learners. Hand out different pieces of wool and ask them to estimate which piece of wool would be able to go around the length of the book/magazine. You can also ask them to estimate which piece would go around the width of the book/magazine.
- The learners must take out numbers 1-9 and numbers 10, 20 and 30 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (24)*
 - *What numbers did you use to make 24? 20 and 4. Show me.*
 - *Put them back together to look like 24.*
 - *Can you show me 24 on the number line?*
 - *Can you show me 24 on the abacus?*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 sharing with a remainder and 1 change type and on Wednesday and Thursday you will ask 1 equalize and 1 array type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

Assessment	Formal: Recorded Assessment Task 2 : During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : • Writes and reads number symbols from 1-100 • Writes and reads number names from 1-34 • In the range 1 to at least 34: - Say which of two given numbers is smaller/bigger. - Orders more than two given numbers from smaller to bigger - Orders first to last. • Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Doubles and halves numbers 1 to 34 - Know or can easily establish addition and subtraction facts in the range 1 to 10 • Copies and extends simple number sequences to at least 100, in order to describe them create own patterns. • Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance. • Collects, sorts, explains and constructs pictographs
-------------------	---

SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FOURTH TERM

TASK 2 : WEEK 5

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	- Writes and reads number symbols from 1-100 - Writes and reads number names from 1-34 - In the range 1 to at least 34: - Say which of two given numbers is smaller/bigger. - Orders more than two given numbers from smaller to bigger - Orders first to last. - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Doubles and halves numbers 1 to 34 - Know or can easily establish addition and subtraction facts in the range 1 to 10 - Copies and extends simple number sequences to at least 100, in order to describe them create own patterns. - Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance. - Collects, sorts, explains and constructs pictographs	Wk 4 Wk 5	- Use the practical activity on Day 5 to assess the collecting and sorting of data. - Use the daily oral activities to assess the ordering of numbers. - Use the daily activities to assess the reading and writing of number names and number symbols. - Use the written activity on Day 1 to assess learners understanding of number patterns. - Use the written activities on Day 3 to assess the numerosity of numbers, doubling and halving as well as writing number names and symbols. - Use the practical activity on Day 5 to assess measuring of length.
PROBLEM SOLVING	Compares 3D objects by measuring using non-standard measures e.g. how many footsteps cover a particular distance.	Wk 5	Use the practical activity during the Group Teaching session to assess estimation and measurement.

FOURTH TERM: WEEK 6 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Says the number names from 1 to 100 in sequence (rote counting). - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines	Daily: - Rote count in 1s to 100 - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/grid. - Counting in 2s, 5s and 10s from 1 to 100				
NUMBER SENSE AND MENTAL LO1 AS 7,8,9 LO 2 AS 2, 5 LO 3 AS 4	- Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Adds and subtracts 10 to whole tens e.g. $20+10=?$, $30-10=?$ - Know or can easily establish addition and subtraction facts in the range 1 to 10 - Demonstrates understanding of 2D shape and 3D objects including orientation and position	Daily: - Numerosity of numbers from 10-30 - Mental calculations	Geometric patterns Addition and subtraction of 5 to 9 to any number from 20-34	Geometric patterns Addition and subtraction of 10 to a whole 10	Geometric patterns Addition and subtraction of 10 to a whole 10	WHOLE CLASS ACTIVITY Space and Shape – a group dance (integrating with Arts and Culture)
GROUP TEACHING LO 1 AS 6,7,9,10,11	Solves and explains solutions to practical problems that involve equal sharing and grouping with whole numbers to at least 34 and with solutions that include remainders, by using concrete objects and drawings	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. Ask one equal grouping and one sharing with a remainder word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one equal grouping and one sharing with a remainder word problem Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask one equal sharing and one grouping with a remainder word problem Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask one equal sharing and one grouping with a remainder word problem. Group 1 works on its own.	

WEEK 6: WHOLE CLASS

WEEK 6	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - By now you would have made sufficient resources that would assist you with these activities. Get learners to bring objects that could be used for counting. Store your resources for future use. Have a good retrieval system. Work with other teachers to make resources. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - This is the last term of the year and many teachers stop teaching and just let the learners do things on their own. This is when learners get out of hand! Young children like the routine of school and they love learning. Your planning needs to be just as good as it has been the whole year.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count in 1s to at least 100. - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/ grid. - Counting forwards and backwards in 2s from 1 to 100, using counters or other real objects e.g. the children themselves. <i>Choose from the following (to make up the 10 mins.):</i> - Let learners choose any number between 1 and 34. Each learner in the class tells a different number fact about that number. Make sure you start with different learners each day otherwise it is always the same learners who have difficulty at the end. You can also vary this activity by only letting the girls answer, or only the boys while the other group listens for mistakes. - Learners close their eyes and listen to the number of knocks you make on the board and the instructions you give before recording their answer. After each one, ask a number of learners what the answer is, even though the first answer may be correct. This makes each learner listen carefully, work out the answer and become confident in what they are doing. Use the following examples, or make up your own : 4 knocks, then ask what number is double this 5 knocks, then ask what 2 more will be 2 knocks, then ask what half this number will be 14 knocks, then ask what number is 4 more, etc. - Put a pile of counters in the middle of each group. Ask learners to estimate how many there are before counting them. Learners to work together with a partner to count the pile of counters	

DAY 1 (to take no more than 20 minutes)

- Cut a strip of A4 paper into 4 long pieces. Staple the pieces together and give each learner a 'book'. Each day learners will use one page of their book. They will use geometric shapes to create and extend patterns e.g.



Learners must first extend the pattern and write the even numbers from 1-10 inside each square. Once they have finished, they must write their names on the back of the page.

- Write the following on the board. Call different learners keep adding or subtracting 2 until they reach 50 or 0. The rest of the class can check the answers using their number grids.

$$2 \quad \boxed{+2} \rightarrow 4 \quad \boxed{+2} \rightarrow \underline{\quad} \quad \boxed{+2} \rightarrow \underline{\quad} \quad \boxed{+2} \rightarrow \underline{\quad} \quad \boxed{+2} \rightarrow \dots 50$$

$$50 \quad \boxed{-2} \rightarrow 48 \quad \boxed{-2} \rightarrow \underline{\quad} \quad \boxed{-2} \rightarrow \underline{\quad} \quad \boxed{-2} \rightarrow \underline{\quad} \quad \boxed{-2} \rightarrow \dots 0$$

DAY 2 (to take no more than 20 minutes)

- Learners will use geometric shapes to create and extend patterns in their pattern books e.g.



Learners must first extend the pattern and write the odd numbers from 1-10 inside each square.

- Revise addition and subtraction of single-digit numbers up to 10 using two operations by letting learners work in groups of three. Give each learner a strip of paper. Learners work together and add the first number on one strip to the first number of the second strip and then take away the first number on the third strip. Repeat using the second numbers and so on. Learners record the number sentences in their books and can use counters or a number line or a number grid to check their answers. For example :

Strip 1		Strip 2		Strip 3	
4	+	4	-	2	=6
6	+	3	-	8	=1
2	+	5	-	7	=0

DAY 3 (to take no more than 20 minutes)

- Learners will use geometric shapes to create and extend patterns in their pattern books e.g.



Learners must first extend the pattern and write the even numbers from 10 -20 inside each square.

- Call one learner to the front of the class. Ask how many fingers this learner has – 10. Call a second learner to the front and ask how many fingers there are now -20. Count the fingers

and ask questions such as: *how much is 10 plus 10? How many learners are in the front? How many fingers altogether?* Call a third learner to the front and ask how many fingers there are, etc. Repeat the activity until there are 10 learners in the front. Let the class count in 10s while you point to each learner in turn. Start at the first learner again and ask how much is 10 plus 10? How can I find out? How many learners are needed to make 20 fingers? How much is 20 plus 10? and so on.

DAY 4 (to take no more than 20 minutes)

- Learners must use geometric shapes to create and extend patterns in their pattern books e.g.



Learners must first extend the pattern and write the odd numbers from 10-20 inside each square.

- Every learner will use their own number grid. They count out 10 squares and place a counter on the number 10. Now ask them to count another 10 and place a counter on the number. Ask what number the second counter is on – 20. Ask them to count another 10 and place a counter on the number. Ask what the number is – 30. Repeat counting on 10 and placing a counter. Once they have reached 100, ask what pattern they see. Discuss what they did, why all the numbers are in a row, etc.

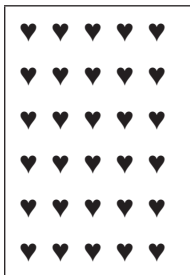
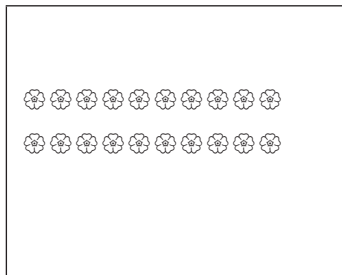
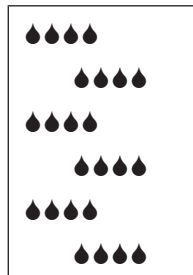
DAY 5 (the whole lesson)

- Take the class outside and put them into 4 or 5 equal rows, depending on the size of your class. Tell them you are going to teach them a dance, one sequence at a time. Make sure you use an even rhythm when teaching the sequences. Practice each sequence until everyone has it correct, then put the whole dance together. Some ideas are:
 - Take 2 steps to the right, stamp, stamp, then 2 steps to the left, stamp, stamp.
 - Take 2 steps to the front, clap, clap and 2 steps to the back, clap, clap.
 - Take 1 step to the right and 1 step to the front, 1 step to the left and 1 step back.
 - Turn around and clap your hands.

Tip: *This is a fun activity to teach one 3D object in relation to another as all the learners are 3D objects!*

ASSESSMENT	Formal : No formal, recorded Assessment Informal: Unrecorded assessment of learners oral responses and ability to participate.
-------------------	--

WEEK 6: GROUP TEACHING

Week 6	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)													
Notes to teacher: - By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking. - While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.) - If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.														
DAILY ACTIVITIES														
Examples of activities to be done independently. <i>Work from a Learner’s Book, worksheets, work cards, work charts etc.</i> - Give the learners number cards 20 to 30. They arrange them from smallest to biggest then copy the numbers into their books, write the number name and draw the correct number of pictures. - Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books, e.g.    - Spider diagrams - Addition and subtraction number sentences. - Simple tables e.g. <table><tr><td></td><td>11</td><td>12</td><td>13</td><td>14</td></tr><tr><td>+9</td><td>20</td><td></td><td></td><td></td></tr></table>						11	12	13	14	+9	20			
	11	12	13	14										
+9	20													

Working with the groups

GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Hand out counting objects and get the learners to count out up to 34. Have number cards turned upside down. They can choose a card, turn it and read the number e.g. 27 and then count out 27.
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*

Repeat this with a few other 2-digit numbers. Then ask the following:

- *Show me the number 20. What number will you get if you add 10 to 20? Show me.*
 - *What is your new number? (30)*
 - *How do you know that it must be 30?*
 - *Can you show me the number on the number line? On the abacus?*
 - *Put the cards back in their place and make the new number of ...*
- Repeat the activity adding 10 to whole tens.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 equal grouping and 1 sharing with a remainder and on Wednesday you will ask 1 equal sharing and 1 grouping with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Tip: Assess the problem solving both days as this is an activity towards Assessment Task 3.

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Hand out counting objects and get the learners to count out up to 34. Have number cards turned upside down. They can choose a card, turn it and read the number e.g. 34 and then count out 34
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*

Repeat this with a few other 2-digit numbers. Then ask the following:

- Show me the number 20. What number will you get if you add 10 to 20? Show me.
- What is your new number? (30)
- How do you know that it must be 30?
- Can you show me the number on the number line? On the abacus?
- Put the cards back in their place and make the new number of ...

Repeat the activity adding 10 to whole tens.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 equal grouping and 1 sharing with a remainder and on Thursday you will ask 1 equal sharing and 1 grouping with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Tip: Assess the problem solving both days as this is an activity towards Assessment Task 3.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Hand out counting objects and get the learners to count out up to 34. Have number cards turned upside down. They can choose a card, turn it and read the number e.g. 34 and then count out 34
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - What number did you make? (34)
 - What numbers did you use to make 34? 30 and 4. Show me.
 - Put them back together to look like 34.

Repeat this with a few other 2-digit numbers. Then ask the following:

- Show me the number 20. What number will you get if you add 10 to 20? Show me.
- What is your new number? (30)
- How do you know that it must be 30?
- Can you show me the number on the number line? On the abacus?
- Put the cards back in their place and make the new number of ...

Repeat the activity adding 10 to whole tens.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 equal grouping and 1 sharing with a remainder and on Wednesday and Thursday you will ask 1 equal sharing and 1 grouping with a remainder type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Tip: Assess the problem solving both days as this is an activity towards Assessment Task 3.

Assessment	Formal: Recorded Assessment Task 3 : During the group teaching activities as indicated rate the learners against the following milestones, recording specific problems : • Solves and explains solutions to practical problems that involve equal sharing and grouping with whole numbers to at least 34 and with solutions that include remainders, by using concrete objects and drawings.
-------------------	--

FOURTH TERM: WEEK 7 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Says the number names from 1 to 100 in sequence (rote counting). - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines	Daily: - Rote count in 1s to at least 100 - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/grid. - Counting forwards and backwards in 2s, 5s and 10s from 1 to 100				
NUMBER SENSE AND MENTAL LO1 AS 7,8,9 LO 2 AS 5 LO 3 AS 5,6	- Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Adds and subtracts 10 to whole tens e.g. $20+10=?$, $30-10=?$ - Know or can easily establish addition and subtraction facts in the range 1 to 10 - Demonstrates understanding of 2D shape and 3D objects including orientation and position	Daily: - Develops the numerosity of numbers 1-34 - Mental calculations	DAY 2 Patterns in nature Addition and subtraction of whole 10s	DAY 3 Addition and subtraction of whole 10s Adds and subtracts 1 to 9 to numbers to make a pattern	DAY 4 Adds and subtracts 1 to 9 to numbers to make a pattern	DAY 5 WHOLE CLASS ACTIVITY 2D shapes and 3D objects including orientation and position
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems including money problems (mentally and in writing) with whole numbers to at least 34, involving addition, subtraction and repeated addition using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. . . Ask 1 combine and 1 repeated addition type word problem Group 2 works on its own	Groups 2 and 3 work with teacher, one group at a time. Ask 1 combine and 1 repeated addition type word problem Group 1 works on its own	Groups 1 and 3 work with teacher, one group at a time. Ask 1 compare and 1 repeated subtraction type word problem Group 2 works on its own	Groups 2 and 3 work with teacher, one group at a time. Ask 1 compare and 1 repeated subtraction type word problem Group 1 works on its own	

WEEK 7 : WHOLE CLASS

WEEK 7	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. - Being able to identify the relationship between numbers is important and this is why there are many number pattern activities. This also helps to develop an understanding of the numerosity of a number. By now you will be extending the learners thinking about numbers beyond just the obvious numbers e.g. that $10=5+5$. Learners should be able to identify that $14-4=10$, $20-10=10$, $2+2+2+2+2=10$ and so on. - Much of the work this week is revision of work already done, although you are now either using bigger numbers, or using a different context. - Do not spend too long on the whole class activities as the main learning takes place during the group teaching part of the lessons. Assessment Task 3 will be completed this week.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u>.(to take no more than 10 minutes) <i>These must be done daily:</i> - Learners say the number names in sequence from 1 to 100. <i>Tip: This is an assessment activity so let a few learners count every day. You can also use spare minutes in the day e.g. when waiting for the bell to ring, to let a few learners count.</i> - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/ grid. - Counting forwards and backwards in 2s, 5s and 10s from 1 to 100 <i>Choose from the following (to make up the 10 mins.):</i> - Play games with addition and subtraction to work out the secret number. Here are some examples: - Work out the secret number. My number is more than 17 and less than 20. It is an even number. What is my number? - Work out the secret number. My number is less than $10+4$ but more than $9+3$. What is my number? - Call 5 learners to the board and ask them to write the number 18. Now call another 5 learners and ask them to write the number word for the numeral on the board. Repeat this using other numbers. - Each learner uses his/her own number grid and works with a partner. One learner counts in 2s, and the other in 5s. As the one counts, the other places a counter on the numbers. This way they check each other as well as both doing the counting. <i>Tip: Observe the learners as they do this activity and record those learners who are not able to do it as this is part of Assessment Task 3.</i>	

DAY 1 (to take no more than 20 minutes)

- Take the learners outside to observe patterns in nature. Encourage learners to really look for patterns e.g. smooth or rough leaves, the way leaves grow, patterns made by stones, etc.
- Ask learners to show you 10 fingers. Now ask them to show you 20 fingers. Remember, flashing the same fingers twice does not make 20 – there are still only 10 fingers. As soon as 2 learners get together indicate that that is what you are looking for as 2 learners together have 20 fingers. Now ask them to show you 30 fingers. Ask how many they are adding each time (10 fingers).
- Once learners are in groups of 10 showing 100 fingers, start taking away 10 each time till there are only 10 fingers (1 learner) left i.e. every learner is showing 10 fingers by himself/herself.

DAY 2 (to take no more than 20 minutes)

- Discuss the weather and if possible, have pictures of sunny days, windy days, rainy days and cold days. Learners work in pairs and create patterns with the pictures e.g. 1 sunny day, 2 rainy days, 3 cold days and 4 windy days.
- Call 4 learners to the board and ask them to write $10+10=$ on the board, and fill in the answer. Call another 4 learners and they write $20+10=$ and the answer. Keep calling 4 learners at a time to add 10 to the previous answer. Discuss the pattern they are making.

DAY 3 (to take no more than 20 minutes)

- Ask what the date is and then let every learner tell you something about that number. By now the learners will be familiar with this activity and it should not take longer than 5 minutes. If you have a big class, you may want to use a new number halfway through the activity.

Tip: This activity forms part of Assessment Task 3.

- Let all the learners stand behind their chairs. One learner in each group sits down and writes the number sentence $60+10=$ in his/her book. They fill in the answer and draw the correct number of marks (grouped in 10s) to indicate what the number sentence means. The second learner sits down and writes $50+10=$, the third learner sits down and writes $40+10=$ and so on till everyone is sitting and has written a number sentence and drawn the correct number of marks. Learners may use their number grids to help them if they need to. Observe who is able to do it, recording those who are finding difficulty with the activity.

Tip: You can use this activity as part of Assessment Task 3.

DAY 4 (to take no more than 20 minutes)

- Each learner write his/her name, then counts how many letters there are in the name. Let learners group themselves according to the number of letters e.g. all those with 8 letters stand at the door, etc. Now ask the groups to double the number i.e. 8 letters doubled is 16, etc. Also let them halve the number if they can.
- Hand out a worksheet containing addition and subtraction of 10 to a whole 10 as well as 5 to 9 to numbers from 11 to 20, e.g.

Complete the pattern.

$$\begin{array}{ll} 11+5-1= & 20-9+1= \\ 11+6-1= & 20-8+1= \\ 11+7-1= & 20-7+1= \text{ etc.} \end{array}$$

Can you add 10?

$$10+10= \quad 20+10= \quad 30+10= \quad 40+10= \quad 50+10=$$

Tip: Use this towards Assessment Task 3.

DAY 5 (the whole lesson)

- Have a few 3D objects on a table. Get the learners to identify the different objects and to describe the shapes. The learners work in groups or pairs depending on the number of objects you have and follow your instructions e.g.
 - place the counter on the left of the box
 - place the counter on the right side of the box.
 - place the counter on the top of the box, etc.
- Using templates, learners cut out 2D shapes and make a picture with their shapes, pasting the shapes onto another piece of paper. Learners write their names at the top of the paper and these are displayed in the classroom.

ASSESSMENT

Formal: Recorded Assessment Task 2 : During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems :

- Says the number names from 1 to 100 in sequence (rote counting).
- Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines
- Number knowledge and mental computation:
 - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$
 - Adds and subtracts 1 to 9 to any number up to 34 (patterns)
 - Adds and subtracts 10 to whole tens e.g. $20+10=?$, $30-10=?$
 - Know or can easily establish addition and subtraction facts in the range 1 to 10

WEEK 7: GROUP TEACHING**Week 7** **GROUP TEACHING COMPONENT (Concept Development and Problem Solving)****Notes to teacher:**

- Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time the focus is on solving problems which represent real life situations. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.
- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)
- If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.
- **Assessment Task 3** will be completed this week. If you need to assess learners in a smaller group, do it this week.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learner's Book, worksheets, work cards, work charts etc.*

- Strips of numbers to add and subtract e.g.

Strip 1		Strip 2		Strip 3	
4	+	4	-	2	=6
6	+	3	-	8	=1
2	+	5	-	7	=0

- Fill in the numbers you would use when counting in 2s, 5s and 10s on a number line or number square
- Complete number sentences using 2 operations
- Complete addition and subtraction number sentences using single digits with complete 10 using open frame sentences e.g. $10 + \square = 19$ or $17 - \square = 10$

Working with the groups**GROUP 1**

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Have a set of flash cards with simple number sentences e.g. $3+4$, $10-2$, etc. place the cards face down on the floor in the middle of the group. Learners take turns to turn over a card and say the answer. If it is correct, they keep the card, but if it is wrong, they put it back. Once there are no more cards on the floor, the learner with the most cards is the winner.

Tip: Use this activity to assess learners' ability to do mental calculations.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 combine and 1 repeated

addition type and on Wednesday you will ask 1 compare and 1 repeated subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you ask both addition as well as subtraction problems this week.

Tip: Assess the problem solving both days as this is an activity towards Assessment Task 3.

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Have a set of flash cards with simple number sentences e.g. $3+4$, $10-2$, etc. place the cards face down on the floor in the middle of the group. Learners take turns to turn over a card and say the answer. If it is correct, they keep the card, but if it is wrong, they put it back. Once there are no more cards on the floor, the learner with the most cards is the winner.

Tip: Use this activity to assess learners' ability to do mental calculations.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 combine and 1 repeated addition type and on Thursday you will ask 1 compare and 1 repeated subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you ask both addition as well as subtraction problems this week.

Tip: Assess the problem solving both days as this is an activity towards Assessment Task 3.

GROUP 3

This group works with the teacher **every day** for 20 minutes.

- Have a set of flash cards with simple number sentences e.g. $3+4$, $10-2$, etc. place the cards face down on the floor in the middle of the group. Learners take turns to turn over a card and say the answer. If it is correct, they keep the card, but if it is wrong, they put it back. Once there are no more cards on the floor, the learner with the most cards is the winner.

Tip: Use this activity to assess learners' ability to do mental calculations.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 combine and 1 repeated addition type and on Wednesday and Thursday you will ask 1 compare and 1 repeated subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you ask both addition as well as subtraction problems this week.

Tip: Assess the problem solving on all days as this is an activity towards Assessment Task 3.

Assessment	Formal: Recorded Assessment Task 3 : During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : • Solve different types of problems and explain solutions to problems including money problems (mentally and in writing) with whole numbers to at least 34, involving addition, subtraction and repeated addition using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines
-------------------	--

SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FOURTH TERM

TASK 3 : WEEK 7

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	- Says the number names from 1 to 100 in sequence (rote counting). - Counts in 2s, 5s and 10s to 100, with and without using concrete objects, number grids and number lines - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Adds and subtracts 10 to whole tens e.g. $20+10=?$, $30-10=?$ - Know or can easily establish addition and subtraction facts in the range 1 to 10	Wk 7	- Use the daily oral activities to assess rote counting to 100 as well as counting in 2s and 5s. - Use the written activity on Day 3 to assess learners understanding of adding 10 to a whole 10. - Use the oral activity on Day 3 to assess learners understanding of the relationship of numbers. - Use the written activities on Day 4 to assess adding 10 to a whole 10 as well as adding and subtracting 5 to 9 to numbers 11 to 20.
PROBLEM SOLVING	- Solves and explains solutions to practical problems that involve equal sharing and grouping with whole numbers to at least 34 and with solutions that include remainders, by using concrete objects and drawings - Solve different types of problems and explain solutions to problems including money problems (mentally and in writing) with whole numbers to at least 34, involving addition, subtraction and repeated addition using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Wk 6 Wk 7	- Use the problem solving activities during group teaching to assess sharing and grouping problems - Assess learners ability to find solutions to problems during the group teaching sessions.

FOURTH TERM: WEEK 8 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- In the range 1 to at least 34: - Orders more than two given numbers from smaller to bigger - Counting in multiples of 2, 5, and 10	Daily: - Rote count in 1s from 1 to 100 - Counting forwards and backwards in 10s from 1 to 120 - Orders numbers from smallest to biggest				
NUMBER SENSE AND MENTAL LO1 AS 5,7,8,9 LO 2 AS 2, 5 LO 3 AS 5,6	- Recognise and identify at least the following: 5c, 10c, 20 c, 50 c, R1, R2 R5 coins and R10, R20, R50 and R100 notes and solve problems, such as: - which is more money: 5c or R1? - how much is 10c 10c 10c 5c 5c? - Number knowledge and mental computation: - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Completes repeated addition of 2, 5 and 10 - Adds and subtracts 10 to whole tens e.g. 20+10=?, 30-10=? - Know or can easily establish addition and subtraction facts in the range 1 to 10	Daily: - Mental calculations - Adds and subtracts 10 to a whole 10	Cultural patterns Solves money problems	Cultural patterns Adds and subtracts 5 to 9 to any number to 100	Cultural patterns Repeated addition and subtraction	WHOLE CLASS ACTIVITIES Number games
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 34, involving addition, subtraction and repeated addition using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. Ask 1 rate and 1 change type word problems Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask 1 rate and 1 change type word problems Group 1 works on its own.	Groups 1 and 3 work with teacher, one group at a time. Ask 1 array and 1 equal sharing type word problems Group 2 works on its own.	Groups 2 and 3 work with teacher, one group at a time. Ask 1 array and 1 equal sharing type word problems Group 1 works on its own.	

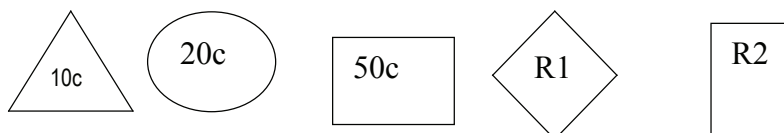
WEEK 8: WHOLE CLASS

WEEK 8	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - By now you would have made sufficient resources that would assist you with these activities. Get learners to bring objects that could be used for counting. Store your resources for future use. Have a good retrieval system. Work with other teachers to make resources. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count in 1s to at least 100. - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/ grid. - Counting forwards and backwards in 10s from 1 to 120 using a number grid. <i>Choose from the following (to make up the 10 mins.):</i> - Ask simple word problems which require concentration and thinking but that learners are able to work out in their heads e.g. 6 people got in the taxi and at the next stop 2 got out and 3 got in. At the next stop 4 got out and 2 got in. How many shoes/eyes/fingers/noses were there in the taxi at the end? - Play “I spy with my little eye” asking questions such as: - A number that is $10+10+10$. - A number that is bigger than 12 but smaller than 15 and is an even number. - A number that is in the 2s pattern when you count and is smaller than 10 - Clap a pattern which learners echo back to you by clapping. Repeat the pattern, but add another element to make it more complicated. Learners echo the pattern by clapping the pattern. - Let all the learners stand behind their chairs. Point to a number on the number grid and, taking turns, they tell you the number 3 more. If the learner is correct, he/she may sit down. Don't spend long on this activity – the purpose is to make the learners think quickly. <u>DAY 1</u> (to take no more than 20 minutes) - Show the learners real objects or pictures of Zulu cultural patterns e.g. small beaded squares that are letters telling a story. Give learners an A5 piece of paper and ask them to design their own story only using colours - Give each learner a card with a whole 10 written on it e.g. 10, 20, 30, etc. Make sure that at least half the class has the number 10. Take the class outside and tell them to get into groups that add up to 30, 40, 50, etc. Learners can group themselves as they like e.g. $30=10+10+10$ or $20+10$.	

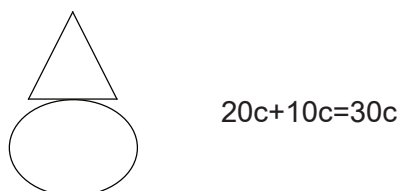
- Put a collection of coins in the middle of each table (real or pictures) and let the group sort them into the same denominations. Once they have done this, ask if they can add each pile. Let them use counters, number grids, etc. to help them if they need them.

DAY 2 (to take no more than 20 minutes)

- Today you will look at Ndebele patterns on a hut. Once you have discussed the symmetry and geometric shapes, give learners an A5 piece of paper on which they design their own pattern for around the door of a Ndebele hut.
- Draw the following shapes on the board and label them e.g.



Learners make their own combinations and work out the price e.g.



DAY 3 (to take no more than 20 minutes)

- Give each learner a paper plate, or a circle of paper, and they design their own plate pattern. Display these in the classroom.
- Write the following on the board. Call different learners keep adding or subtracting 5 until they reach 50 or 0. The rest of the class can check the answers using their number grids.

20 $\boxed{+5}$ $\rightarrow$ 25 $\boxed{+5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{+5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{+5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{+5}$ $\rightarrow$...50

50 $\boxed{-5}$ $\rightarrow$ 45 $\boxed{-5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{-5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{-5}$ $\rightarrow$ $\underline{\hspace{1cm}}$ $\boxed{-5}$ $\rightarrow$...0

DAY 4 (to take no more than 20 minutes)

- Discuss with learners what mandalas are. A mandala is a circular design that starts in the middle and radiates outwards. Mandala is a Hindu word meaning 'magic circle'. It is found in different cultures throughout the world. Hindus use other creative patterns during religious celebrations or rituals. These designs are made on the floor sometimes with rice, rice paste or mealie meal. Show the learners pictures of mandalas. (Make reference to art and culture textbooks)

- Put some counters in the middle of each group and each learner counts out 20. Ask the learners to arrange the counters in different repeat patterns e.g. $2+2+2 \rightarrow$ or $5+5+5 \rightarrow$ etc. Once they have made their patterns, they record them in their books.

DAY 5 (the whole lesson)

- For this activity you will need 20 hoops (or something similar) and 4 cards with each of the numbers 10, 20, 30, 40 and 50 (4 cards with 10, etc.). Take the learners outside and explain the game as follows
 - Each hoop has a number. When a sum is called out, learners need to find the hoop with the correct answer and stand in it. There is more than one hoop with the answer so everyone will be able to find a place
- Call out sums which have the answer in the hoops e.g. double 10, $40+10$, half of 20, etc. Make sure that some of the sums are easy, while others are more difficult. Remember, this is just a game.

ASSESSMENT

Formal : No formal, recorded Assessment

Informal: Unrecorded assessment of learners oral responses and ability to participate.

WEEK 8: GROUP TEACHING

Week 8 GROUP TEACHING COMPONENT (Concept Development and Problem Solving)

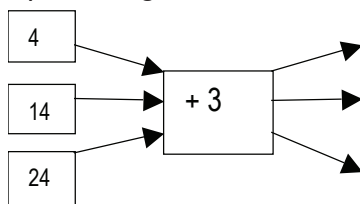
Notes to teacher:

- Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time the focus is on solving problems which represent real life situations. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.
- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)
- If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.
- **Remember to keep your lessons as structured as possible.** In this way you will maintain discipline at this difficult time of the year.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learner's Book, worksheets, work cards, work charts etc.*

- Spider diagrams



- Cards with the following kind of patterns

1+5=
11+5=
21+5=
31+5= etc.

11-5=
21-5=
31-5=
41-5= etc.

5+1=
5+2=
5+3=
5+4= etc.

5-1=
5-2=
5-3=
5-4= etc.

25+1=
25+2=
25+3=
25+4= etc.

- Numerosity of numbers 10 to 20 e.g.

All about 15

10+5= 20-5=
5+5+5= 20-10+5=
15 is 1 more than ☐
15 is 1 less than ☐

Choose your own number between 10 and 20 and put it in the block. ☐

Use your number in each block.

☐ = +

☐ = -

4 + = ☐

☐ comes between and

Write 5 number sentences where 12 is the answer.

1.

2.

3.

4.

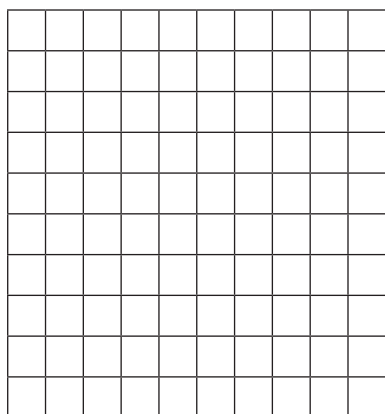
5.

Working with the groups

GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Learners must have rulers and paper clips. They first estimate how many paper clips are needed to make the length of the ruler, then place the paper clips along the ruler and count how many are needed.
- Each learner needs to have a blank number square with 100 squares.

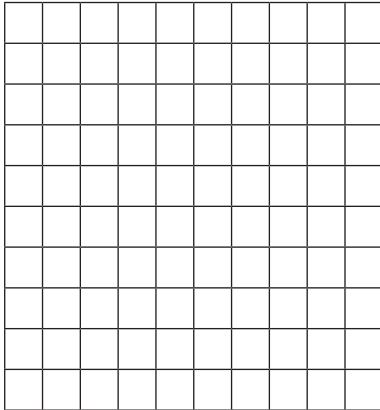


Let learners work out where different numbers will be on the blank number square for themselves. For example, ask them:

- Put a counter on the block for 99. Can you make this number with your flard cards?
 - What number will be on the next block after this?
 - Put a counter on the number that is 2 more than 10. What will the number be? Can you make the number with your flard cards? Show me.
 - The number after 20 is 21. What do you think the number after 30 is? Put a counter on the number. And after 40? Put a counter on the number, And after 50? Is there a pattern?
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 rate and 1 change type and on Wednesday you will ask 1 array and 1 equal sharing type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

GROUP 2

- Learners must have rulers and paper clips. They first estimate how many paper clips are needed to make the length of the ruler, then place the paper clips along the ruler and count how many are needed.
- Each learner needs to have a blank number square with 100 squares.



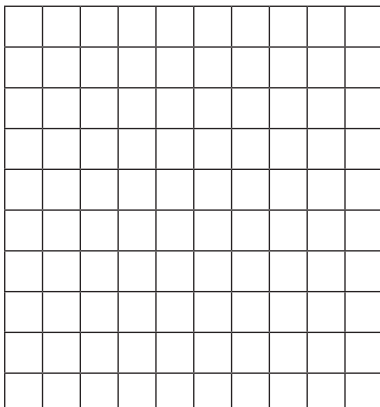
Let learners work out where different numbers will be on the blank number square for themselves. For example, ask them:

- Put a counter on the block for 99. Can you make this number with your flard cards?
- What number will be on the next block after this?
- Put a counter on the number that is 2 more than 10. What will the number be? Can you make the number with your flard cards? Show me.
- The number after 20 is 21. What do you think the number after 30 is? Put a counter on the number. And after 40? Put a counter on the number, And after 50? Is there a pattern?
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 rate and 1 change type and on Thursday you will ask 1 array and 1 equal sharing type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Learners must have rulers and paper clips. They first estimate how many paper clips are needed to make the length of the ruler, then place the paper clips along the ruler and count how many are needed.
- Each learner needs to have a blank number square with 100 squares.



Let learners work out where different numbers will be on the blank number square for themselves. For example, ask them:

- Put a counter on the block for 99.
- What number will be on the next block after this?
- Put a counter on the number that is 2 more than 10. What will the number be?
- The number after 20 is 21. What do you think the number after 30 is? Put a counter on the number. And after 40? Put a counter on the number, And after 50? Is there a pattern?
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 rate and 1 change type and on Wednesday and Thursday you will ask 1 array and 1 equal sharing type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills. Make sure you use both addition and subtraction problem situations this week.

Assessment	Formal : No formal, recorded Assessment. Informal : Unrecorded assessment of learners oral responses and ability to participate.
-------------------	--

FOURTH TERM: WEEK 9 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Counting out objects to 34 - Counting in multiples of 2, 5, and 10 using concrete objects and number square	Daily: - Rote count in 1s from 1 to 100 - Rational counting in 1's forwards and backwards 1-100 on the number line or number square/grid. - Counting forwards and backwards in 2s, 5s and 10s from 1 to 100				
NUMBER SENSE AND MENTAL LO1 AS 3,4;5,7,8,9 LO 2 AS 2,3,4 LO 3 AS 3	- Recognise and identify at least the following: coins and notes, and compare the values, and solve problems, such as: - how much is 10c 10c 10c 5c 5c? - Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, $20+10+4=34$ - Doubles and halves numbers 1 to 34 - Completes repeated addition of 2, 5 and 10 - Adds and subtracts 10 to whole tens e.g. $20+10=?$, $30-10=?$ - Demonstrates understanding of 2D shape and 3D objects including orientation and position	Daily: - Mental calculations - Develops the relationship between numbers	DAY 2 Number sequences Addition and subtraction of 10 to whole 10 e.g. $+10 = 20$	DAY 3 Knows, reads and writes numbers 1-34 Money problems	DAY 4 Orders numbers 1-34 Repeated addition and subtraction	DAY 5 WHOLE CLASS ACTIVITIES Box construction (integrate with Technology)
GROUP TEACHING LO 1 AS 6,7,9,10,11	- Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 34, involving addition, subtraction and repeated addition using drawings, appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - using concrete apparatus e.g. counters - number lines	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-75; Group 2 works in 1-50; Group 3 works in 1-34 Group 1 and 3 work with teacher, one group at a time. Ask one sharing and one grouping word problems including remainders Group 2 works on its own. Groups 2 and 3 work with teacher, one group at a time. Ask one sharing and one grouping word problems including remainders Group 1 works on its own. Groups 1 and 3 work with teacher, one group at a time. Ask one addition and one subtraction word problem Group 2 works on its own. Groups 2 and 3 work with teacher, one group at a time. Ask one addition and one subtraction word problem Group 1 works on its own.				

WEEK 9: WHOLE CLASS

WEEK 9	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1. Ask learners to bring boxes, newspapers etc. for the lesson on Day 5.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count in 1s from 1 to 100 - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/ grid. - Counting forwards and backwards in 2s, 5s and 10s from 1 to 100 <i>Choose from the following (to make up the 10 mins.):</i> - Play games with addition and subtraction to work out the secret number. Here are some examples: - Work out the secret number. My number is more than 17 and less than 20. It is an even number. What is my number? - Work out the secret number. My number is less than $10+4$ but more than $9+3$. What is my number? - Call 5 learners to the board and ask them to write the number 18. Now call another 5 learners and ask them to write the number word for the numeral on the board. Repeat this using other numbers. - Each learner uses his/her own number grid and works with a partner. One learner counts in 2s, and the other in 5s. As the one counts, the other places a counter on the numbers. This way they check each other as well as both doing the counting. <u>DAY 1</u> (to take no more than 20 minutes) - Give each learner a strip of paper on which they start to draw a pattern using geometric shapes e.g. circle, circle, triangle, circle, circle, triangle. They must draw the pattern twice so that the pattern is evident. Once everyone has started their pattern, they swap papers (working anti-clockwise, giving the paper to the person on their left each time) and the next learner draws only one pattern before sending the strip to the next learner. Once the strip arrives back at the learner who started it, that learner checks if the pattern has been correctly completed.	

- Let learners take all the whole tens cards (10, 20, 30, etc.) out of their flard card packs. Write some open frame number sentences on the board and learners hold up the missing number. You will easily be able to see who has the wrong number. Some examples are:

$30 + \underline{\quad} = 40$	$\underline{\quad} + 10 = 50$
$60 = \underline{\quad} + 10$	$30 = 10 + \underline{\quad}$
$20 - 10 = \underline{\quad}$	$30 - \underline{\quad} = 20$
$70 = 80 - \underline{\quad}$	$40 = \underline{\quad} - 10$

DAY 2 (to take no more than 20 minutes)

- Ask a learner to choose any number between 5 and 15. Write the number on the board and draw 4 lines to the left and 4 lines to the right e.g.

_____ 9 _____

Tell learners this is a number line with only the number 9 on it. Ask the class how they know what the missing numbers are, then ask one learner to come and fill in the missing numbers to the right and one learners to fill in the numbers to the left. Discuss the pattern e.g. it is growing, it is +1 (or-1) each time.

Repeat the activity using a different number in the middle.

- Let learners take all the whole tens cards (10, 20, 30, etc.) out of their flard card packs. Write some open frame number sentences on the board and learners hold up the missing number. You will easily be able to see who has the wrong number. Some examples are:

$30 + \underline{\quad} = 40$	$\underline{\quad} + 10 = 50$
$60 = \underline{\quad} + 10$	$30 = 10 + \underline{\quad}$
$20 - 10 = \underline{\quad}$	$30 - \underline{\quad} = 20$
$70 = 80 - \underline{\quad}$	$40 = \underline{\quad} - 10$

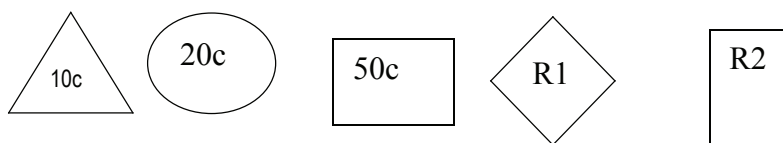
- Now write 4 number sentences on the board that learners copy into their books and complete on their own.

DAY 3 (to take no more than 20 minutes)

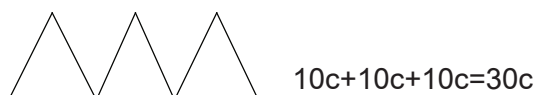
- Draw a table with 3 columns and the number of rows would depend on how many numbers you are going to need. Draw pictures in the first column e.g. 32, the learners must count the pictures; write the number in the second column and the number name in the third column e.g.

Picture	Number	Number name
♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪		
		seven

- Draw the following shapes on the board and label them e.g.



Learners make their own combinations and work out the price e.g.



DAY 4 (to take no more than 20 minutes)

- Ask a learner to choose any number between 5 and 15. Write the number on the board and draw 4 lines to the left and 4 lines to the right e.g.

_____ 11 _____

Tell learners this is a number line with only the number 11 on it. Ask the class how they know what the missing numbers are, then ask one learner to come and fill in the missing numbers to the right and one learners to fill in the numbers to the left. Discuss the pattern e.g. it is growing, it is +1 (or-1) each time.

- Prepare a number line from 21st - 34th. Draw small pictures on top of each number. Ask questions e.g. which picture is 21st, 29th etc. and then ask e.g. the star is ____? Get learners to say/read the ordinal positions and link this to telling/reading the date every day. Match position symbols to position names
- Write the following on the board. Learners copy it into their books and complete the activity.

10 +10 → 20 +10 → ____ +10 → ____ +10 → ____ +10 →

90 -10 → 80 -10 → ____ -10 → ____ -10 → ____ -10 →

DAY 5 (the whole lesson)

- Put learners into groups of 4. Each group is going to make an object using the 3D waste material they have been bringing to school this week i.e. boxes, toilet roll inners, yoghurt cartons, etc. The groups can decide what they want to make e.g. a robot, a basket, etc. and work as a group to build their object. They need to decorate their object as well as give it a name. Display the objects around the classroom.

ASSESSMENT

Formal : No formal, recorded Assessment

Informal: Unrecorded assessment of learners oral responses and ability to participate.

WEEK 9: GROUP TEACHING

Week 9 GROUP TEACHING COMPONENT (Concept Development and Problem Solving)

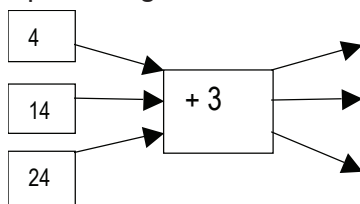
Notes to teacher:

- Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time the focus is on solving problems which represent real life situations. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.
- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)
- If you have experienced difficulty doing counting out activities with the whole class, you can do them during group teaching time. This would give a better indication as to how the learners are progressing with the counting out activities. You will be able to assist the slower learners by interacting with them individually.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learner's Book, worksheets, work cards, work charts etc.*

- Spider diagrams



- Cards with the following kind of patterns

1+5=
11+5=
21+5=
31+5= etc.

11-5=
21-5=
31-5=
41-5= etc.

25+1=
25+2=
25+3=
25+4= etc.

25-1=
25-2=
25-3=
25-4= etc.

- Numerosity of numbers 10 to 20 e.g.

All about 15

10+5= 20-5=
5+5+5= 20-10+5=
15 is 1 more than ☐
15 is 1 less than ☐

Choose your own number between 10

and 20 and put it in the block. ☐

Use your number in each block.

☐ = +

☐ = -

4 + = ☐

☐ comes between and

Write 5 number sentences where

12 is the answer.

1.

2.

3.

4.

5.

Working with the groups

GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Put some numeracy books in the middle of the group and a sheet of newspaper. Learners estimate how many books will be needed to cover the newspaper. Once they have written down their estimate, they cover the newspaper with books and count how many are needed. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*

Repeat this with a few other 2-digit numbers. Then ask the following:

- *Show me the number 20. What number will you get if you add 10 to 20? Show me.*
- *What is your new number? (30)*
- *How do you know that it must be 30?*
- *Can you show me the number on the number line? On the abacus?*
- *Put the cards back in their place and make the new number of ...*

Repeat the activity adding 10 to whole tens.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 75. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 grouping and 1 sharing and on Wednesday you will ask 1 addition and 1 subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Put some numeracy books in the middle of the group and a sheet of newspaper. Learners estimate how many books will be needed to cover the newspaper. Once they have written down their estimate, they cover the newspaper with books and count how many are needed. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*

Repeat this with a few other 2-digit numbers. Then ask the following:

- *Show me the number 20. What number will you get if you add 10 to 20? Show me.*

What is your new number? (30)

- *How do you know that it must be 30?*
- *Can you show me the number on the number line? On the abacus?*
- *Put the cards back in their place and make the new number of ...*

Repeat the activity adding 10 to whole tens.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 50. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 grouping and 1 sharing and on Thursday you will ask 1 addition and 1 subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

GROUP 3

*This group works with the teacher **every day** for 20 minutes.*

- Put some numeracy books in the middle of the group and a sheet of newspaper. Learners estimate how many books will be needed to cover the newspaper. Once they have written down their estimate, they cover the newspaper with books and count how many are needed. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- The learners must take out numbers 1-9 and numbers 10 to 90 from their flard cards pack. Tell them to arrange the numbers in sequence, as they like i.e. from left to right or from top to bottom. Ask them to make two-digit numbers and ask the following questions **each** time:
 - *What number did you make? (34)*
 - *What numbers did you use to make 34? 30 and 4. Show me.*
 - *Put them back together to look like 34.*
 - *Can you show me the number on the number line? On the abacus?*
 - *Put the cards back in their place and make the new number of ...*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 34. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 grouping and 1 sharing and on Wednesday and Thursday you will ask 1 addition and 1 subtraction type word problem. It is essential that learners verbalise their thinking as this helps them to clarify their thought. They know how they were thinking and this enables them to refine their thinking and problem solving skills.

Assessment

Formal : No formal, recorded Assessment

Informal : Unrecorded assessment of learners oral responses and ability to participate

FOURTH TERM: WEEK 10 OVERVIEW

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
COUNTING LO 1 AS 1,2	- Counting out objects to 34 - Counting to 100 on abacus and number line/number square - Counting in multiples of 2, 5, and 10 using concrete objects and number square	Daily: - Rote count 1 to 100 - Counting games				
NUMBER SENSE AND MENTAL LO1 AS 3,7,8 LO 2 AS 2,3,4 LO 3 AS 5,6	- Number knowledge and mental computation: - Continues developing the numerosity of numbers 1 to 34 e.g. $34=30+4$, 34 is more than 3 but less than 40, $20+10+4=34$ - Adds and subtracts 1 to 9 to any number up to 34 (patterns) - Completes repeated addition of 2, 5 and 10 - Know or can easily establish addition and subtraction facts in the range 1 to 10 - Demonstrates understanding of 2D shape and 3D objects including orientation and position	Daily: - Numerosity of numbers 1 to 34 - Addition and subtraction of a single digit to any number from 1-34				
		DAY 1 Patterns: wrapping paper Make own number book	DAY 2 Number patterns Make own number book	DAY 3 Repeated addition and subtraction Make own number book Make 3D objects to hang on a tree	DAY 4 Patterns: Party hats Make own number book Box construction	DAY 5 Number games
GROUP TEACHING		No Group Teaching this week				

WEEK 10 : WHOLE CLASS

WEEK 10	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
Notes to the teacher: - Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day. - Although this is the last week of the term and learners are excited, you need to keep the structure of the lessons as far as possible. This helps maintain discipline and learners like the security of doing what they have done all year. - All the lessons will be whole class lessons this week.	
DAILY ACTIVITIES	
COUNTING AND MENTAL/NUMBER SENSE <u>Daily Activities.</u> (to take no more than 10 minutes) <i>These must be done daily:</i> - Rote count in 1s from 1 to 100 - Rational counting in 1s forwards and backwards 1-100 on the number line or number square/ grid. - Counting forwards and backwards in 2s, 5s and 10s from 1 to 100 <i>Choose from the following (to make up the 10 mins.):</i> - Play games with addition and subtraction to work out the secret number. Here are some examples: - Work out the secret number. My number is more than 17 and less than 20. It is an even number. What is my number? - Work out the secret number. My number is less than $10+4$ but more than $9+3$. What is my number? - Ask simple word problems which require concentration and thinking but that learners are able to work out in their heads e.g. 20 people got in the bus and at the next stop 10 got out and 5 got in. At the next stop 2 got out and 5 got in. How many shoes/eyes/fingers/noses were there in the bus at the end? - Play “I spy with my little eye” asking questions such as: - A number that is $10+10+10$. - A number that is bigger than 12 but smaller than 15 and is an even number. - A number that is in the 2s pattern when you count and is smaller than 10 - Clap a pattern which learners echo back to you by clapping. Repeat the pattern, but add another element to make it more complicated. Learners echo the pattern by clapping the pattern. - Let all the learners stand behind their chairs. Point to a number on the number grid and, taking turns, they tell you the number 2 more. If the learner is correct, he/she may sit down. Don't spend long on this activity – the purpose is to make the learners think quickly.	

DAY 1

- Give each learner a sheet of newspaper. Using wax crayons or koki pens, they decorate the sheet using shapes, numbers, etc. This will be used as wrapping paper later in the week.
- Staple pages together to make a book. Learners are going to create their own number book, completing one page every day. They write their names on the front cover, create patterns to make a border and then decorate the page.

DAY 2

- Ask a learner to choose any number between 5 and 15. Write the number on the board and draw 4 lines to the left and 4 lines to the right e.g.

_____ 12 _____

Tell learners this is a number line with only the number 12 on it. Ask the class how they know what the missing numbers are, then ask one learner to come and fill in the missing numbers to the right and one learners to fill in the numbers to the left. Discuss the pattern e.g. it is growing, it is +1 (or-1) each time.

Repeat the activity using a different number in the middle. Then give the learners the following to write in their books, filling in the missing numbers:

				20				
				13				
				6				

- Learners continue to make their own number book. They can choose their own numbers e.g. even or odd numbers, counting in 5s or 10s and so on. Each page has to have the number as well as the correct number of pictures/drawings. Learners can use magazines to cut out pictures and paste them.

DAY 3

- Put some counters in the middle of each group and each learner counts out 20. Ask the learners to arrange the counters in different repeat patterns e.g. 2+2+2 → or 5+5+5→ etc. Once they have made their patterns, they record them in their books.
- Make sufficient play dough. Learners use the play dough to make shapes, objects, numbers etc. They must decorate them with beads, seeds etc. Help learners make a hole at the top of each object and thread some wool or string through so that it can be hung up.
- Learners continue to make their own number book.

DAY 4

- Learners complete their own number book before doing the other activities.
- Learners bring small boxes, big boxes, cardboard cylinders, etc. They put their number book inside the box they are going to wrap as a present for Mom, Dad, Granny etc. Using the paper they made on Day 1, they wrap the objects to look like gifts.
- Make party hats using paper folding skills. Learners decorate their hats.

DAY 5

- Take the class outside making sure each learner has a magazine or a newspaper. Each learner finds his/her own space and sits on the magazine. At the command, they skip around and when you blow the whistle each learner must find a magazine/newspaper to sit on. Each time you will remove one magazine so that there is always one short. The learner without something to sit on joins you to watch for the next one out. The winner is the last learner to sit on a magazine.

ASSESSMENT

Formal : No formal, recorded Assessment

Informal: Unrecorded assessment of learners oral responses and ability to participate.