Foundations For Learning

Foundation Phase
Numeracy
Lesson plans

Third term

Grade 1

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THIRD TERM OVERVIEW

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Counting: Whole Class	Daily rote counting to 100									
	Daily rational counting using abacus, number lines, number grids etc.									
	Count out unstructured objects to 34									
		Counting in 2s and 5s to 20		Counting in 2s and 5s to 30		Counting in 10s to 50		Counting in 2s, 5s and 10s to 50		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Concept Develop ment and Number Sense	Daily oral mental calculations									
	Reads and writes number names an symbols 1 to 10	Reads and writes number names an symbols 11 and 12	Reads and writes number names an symbols 13 and 14	Reads and writes number names an symbols 15 and 16	Reads and writes number names an symbols 17 and 18	Reads and writes number names an symbols 19 and 20	Reads and writes number names an symbols 21 to 24	Reads and writes number names an symbols 25 to 28	Reads and writes number names an symbols 29 to 32	Reads and writes number names an symbols 33 and 34
			Odd and even numbers		Orders numbers	Double and halve even numbers			Orders numbers	
	Addition and subtraction of single digit numbers		Developing number relationship 1 to 20			Repeated addition		Number sentences with 2 operations		
					Addition and subtraction of 1 to 5 to any number			Addition and subtraction of 5 to 9 to numbers to 20		
					Understanding money					
	Copy patterns		Create own pattern using shape/ colour		Create, copy and describe number patterns					
	Recognising and describing 2D shapes and 3D objects and their properties.									Creating a 3D object
	Time	Mass Symmetry	Time	Time Symmetry		Mass Collecting data				Collecting an sorting 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			
WEEK 3	Oral activities dealing with counting to 100 using objects, number line, etc. Oral activity dealing with counting out to 34 and grouping into 2s and 5s	Practical and written activites dealing with 2D shapes and 3D objects	Oral activities dealing with estimation.
ASSESSMENT TASK 1 COMPLETED			
WEEK 4			
WEEK 5	Oral and practical activities dealing with ordering numbers from smallest to biggest.	Practical activities dealing with sequencing of time and reading number names and symbols	
WEEK 6		Practical activities dealing with identifying mass. Practical activities dealing with creating and describing number patterns. Oral and practical activities dealing with recognizing money. Practical activities dealing with collecting and sorting data	Practical activities dealing with estimating a number of objects.
ASSESSMENT TASK 2 COMPLETED			
WEEK 7			
WEEK 8		Written activities dealing with addition and subtraction, number patterns, repeated addition and doubling. Oral and written activities to develop number relationships.	Oral, practical and written activities dealing with solving problems and explaining solutions.
ASSESSMENT TASK 3 COMPLETED			
WEEK 9			
WEEK 1O			

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

THIRD TERM: WEEK 1 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1's from 1 to 100 while pointing on a number line/ number grid or count using an abacus.
• Count forwards and backwards up to 50
• Ask questions like which number is before __; after _____; between
• Count in 5's up to 20 using concrete objects e.g. fingers, counting cubes</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7
LO 2 AS 1
LO 3 AS 1
LO4 AS 5</td><td rowspan="3">• vocabulary
• more and less; before and after
• Knows, reads and writes number names and symbols from 1-10 and explores their relationship
• Recognises 2D and 3D shapes
• Describes the time of day e.g. morning, afternoon and night
• Sequences events using language such as 'yesterday', 'today' and tomorrow
• Number patterns: Sequencing numbers 1-10 using a variety of activities
• Recognises addition, subtraction and equals signs (+, -, =)</td><td colspan="5">Daily:
• Revision of cardinal value 1-10
• Numerosity 1-10</td></tr>
<tr><td>DAY 1</td><td>DAY 2</td><td>DAY 3</td><td>DAY 4</td><td>DAY 5</td></tr>
<tr><td>Patterns

2D and 3D shapes

Time</td><td>Patterns

2D and 3D shapes

Time</td><td>Patterns

2D and 3D shapes

Time</td><td>Patterns

2D and 3D shapes

Time</td><td>Numerosity 1-10

Numbers and number names</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS6,7,11</td><td>• Recognises addition, subtraction and equals signs (+, -, =)
• Estimates up to 10 objects
• Identifies odd and even numbers
• Revision of cardinal value of numbers 1-10
• Performs calculations: add and subt. from 1 to 10
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-34; Group 2 works in 1-20; Group 3 works in 1-20</td><td></td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one doubling and one halving word problem.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one doubling and one halving word problem.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one grouping and one sharing word problem.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one grouping and one sharing word problem.</td><td></td></tr>
</table>

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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes
- You will also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- 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

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
- Count forwards and backwards up to 50
- Count in 5's up to 20 using concrete objects, abacus or fingers

Choose from the following (to make up the 10 mins.):

- You need to develop numerosity of numbers 1-10. Prepare charts e.g. Friends of 6 on one chart. You would ask e.g. what is one more than 5? 3+3=? 10-4=? Which number comes after 5? Which number is before 7? Which number is between 5 and 7? Half of 12 is ___ You can think of other examples. Make charts for each number and these charts can be used for oral and recorded work.
- Have a series of number lines prepared on different charts e.g. a number line with numbers from 0-10/11-23 etc. depending on how many numbers you could fit on a number line. Have some questions written down under each number line e.g. which number comes after 21? Which number comes before 29? Which number is between 11 and 13? and so on. You could do one chart a day, asking the questions while learners use their individual number lines to place a counter on the correct answer.
- Learners count out the odd numbers or even numbers on their number lines, placing counters on the numbers as they say them.
- Have a set of numbers 1 to 10 and number names one to ten. Write either a numeral or a word on the board and ask different learners to find the matching number or number name and place it on the board next to the correct number or word e.g. you write 9 and a learner finds the card with "nine" on and sticks it next to the number on the board.

- Revise ordinal numbers from 1st to 10th. Call out 10 learners and let them stand in a line. Ask questions such as :who is first? Who is second? and so on. Now call another ten learners but tell them where to stand e.g. Thandi, you are third; Mary, you are tenth; Sbo, you are fifth, etc. The second lot of learners must stand in the correct order by matching themselves to learners in the first line.
- Teach a new number rhyme or song e.g. there were 10 in the bed and the little one said 'roll over, roll over'.

DAY 1 (to take no more than 20 minutes)

- Learners work in pairs. Hand out a set of number cards to each pair. The learners must choose 3 numbers. Hand out a container with different objects. The learners must count out different objects for each number and place them under each number card e.g. if the learners chose 2, 5 and 8 they would place 2 bottle caps under 2, 5 shells under 5 and 8 buttons under 8. Let learners establish if they have a particular pattern developing or not.
- Have large cut-outs of brightly coloured shapes e.g. circle, square, rectangle, square, diamond and oval. Get the learners to identify the shapes. Ask them some of the properties of each shape.
- Get pictures of a rising sun, people getting up, having breakfast, a setting sun and of people sleeping. Ask questions e.g. when does the sun rise? When do they get up? When do they eat breakfast? What time do they eat lunch? When do they go home from school? When does the sun set? When do they go to sleep? Try and get the words from the learners even if have to prompt. Write the words down on cards for future use.

DAY 2 (to take no more than 20 minutes)

- Learners work in pairs. Hand out a set of number cards to each pair. The learners must choose the same 3 numbers that they chose on day one. Tell them to arrange the numbers from biggest to the smallest 8, 5 and 2. The learners must count out different objects for each number and place them under each number card like they did previously. Encourage learners to look at the relationship between the numbers e.g. 5 is 3 less than 8 and 2 is 3 less than 5.
- Place the large shapes that you used on day 1 on the board. Revise the names and properties of each shape. Call out a few learners and give them each a flashcard with the names of each shape written on a card. The learners must try and match the name and the shape. They must place the name under each shape. Revise the words. Do some phonic work. Ask the learners to sound out the first and last letter of each shape. This would help in word recognition.
- Ask the learners what day it is. What day was it yesterday? What day will it be tomorrow? The understanding of yesterday, today and tomorrow needs to be developed.

-

DAY 3 (to take no more than 20 minutes)

- Get the learners to write down the addition and subtraction number sentences for friends of 8 e.g. 0+8=8, 1+7=8 .etc and 8-0=8, 9-1=8,10-2=8 etc. The learners will discover a number pattern.

- Give the learners sheets of paper and templates of the different shapes. Learners must trace around the shapes, colour it in and then write down the name of each shape. They can use your reference chart to complete their work.
- Revise the different times of a day e.g. morning, midday, afternoon, evening and night. Revise yesterday, today and tomorrow. Get the learners to give you sentences that bring out the meaning of these words or relate incidents that happen during different times of the day. Discuss the use of past, present and future.

DAY 4 (to take no more than 20 minutes)

- Get the children to complete the following number patterns e.g. 0+2=? 1+2=? 2+2=? 3+2=? Encourage learners to look for the pattern.
- Revise the shapes and the names of the shapes with the learners. Reinforce the properties of each shape. Hand out templates of the shapes to the learners and get to make patterns using the shapes e.g. triangle, triangle, circle, triangle, triangle, circle and so on. Get them to write the names e.g. square under each shape. This would assist the learners in learning the names of the shapes.
- Revise the days of the week and the months of the year with the learners. Discuss the number of days and months. Hand out copies of a calendar of one month only. Let the learners look at the calendar. Ask them what month it is. Get them to count the number of days. Discuss other details on the calendar e.g. what is the date of the first Wednesday? Are there any public holidays? etc.

  ***Tip**: This is an extremely important activity. It will prepare the child to read a calendar. Do not assume that the learners would just know it. You would be surprised that most learners do not know how to read the calendar.*

DAY 5 (the whole lesson)

- Get the learners seated around you. Take out one of your numerosity charts you have made. Ask the learners to tell you something about the number you chose. They would probably give you addition and subtraction number sentences that have the answer. Encourage them to think about concepts before/after/between/double/halve/more/less and tell you e.g. half of 22 is 11. This chart can be used again for revision, consolidation, oral and recorded work.
- Take the learners on a Shape Walk around the school. They must look for the shapes you have been dealing with as well as any others they know e.g. the dirt bin lid is like a circle, a tree is like a triangle, the window is square, etc.
- Back in the classroom, divide the class into about 4 groups. Each group has a different activity. After 20 minutes rotate the groups so that each group does at least 2 of the activities. Some ideas of suitable activities are:
  - jigsaw puzzles
  - building blocks
  - sorting buttons into colour and size
  - card games such as Snap
  - board games e.g. Snakes and Ladders.

ASSESSMENT	**Formal :** 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:

- 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 at least 2 different word problems to solve every time you work with them. 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.*

Groups 1 & 2

- Sequencing numbers/Fill in the missing numbers 1-20.
- Activities for before/after/between/more/less.
- Odd and even numbers.
- Addition and subtraction up to 10.
- Patterns drawings.
- Ordinal value 1-10.

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.
- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.

Working with the groups

GROUP 1

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

- Make big templates of different shaped balloons to use during the term. Use prestik and stick a different number of buttons, seeds, little pictures of hearts, stars etc. Stick any number up to and including 20. Show the learners one balloon then cover it. Ask learners to estimate

how many pictures/objects are stuck on the balloon. Give each learner a chance to write down how many s/he thinks there are. Uncover the balloon and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

***Tip**: It is important that learners write their estimate down as this makes them think carefully and not just take a wild guess. It also helps develop a sense of responsibility because there is no right or wrong answer.*

- Put a pile of counters in the middle of the group and let each learner count out 5 counters. Ask them how they can double the number of counters they have – by putting 2 piles together. Let them do this and count the number – double 5 is 10. Ask how they can double 10 and once again 2 piles are put together. Repeat this till there is only one pile of counters. If time allows, repeat the activity starting with a different number.
- This is a written activity that, depending on the ability of your learners, can be completed under your direct supervision or given as an independent activity. Have work charts/ worksheets or work cards prepared. The learners can complete the addition and subtraction (1-10) number sentences e.g. 4+5=? 10-8=? Learners can draw pictures or use counting objects to compete their work.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 the word problems will be one problem type 3 and one problem type 4 and on Wednesday you will ask one problem type 5 and one problem type 6 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  ***Tip:** Make sure the learners understand that the = sign does not mean **the answer,** but means that what is on each side of the sign means the same e.g. 10 = 3+7. Refer to the annexure on Problem types in order to get the learners to solve different problems.*

GROUP 2

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

- Make big templates of different shaped balloons to use during the term. Use prestik and stick different number of buttons, seeds, little pictures of hearts, stars etc. Stick any number up to and including 15. Show the learners one balloon, then cover it. Ask learners to estimate how many pictures/objects are stuck on the balloon. Give each learner a chance to write down how many s/he thinks there are. Uncover the balloon and count the pictures/ objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

  ***Tip**: It is important that learners write their estimate down as this makes them think carefully and not just take a wild guess. It also helps develop a sense of responsibility because there is no right or wrong answer.*
- Put a pile of counters in the middle of the group and let each learner count out 5 counters. Ask them how they can double the number of counters they have – by putting 2 piles

together. Let them do this and count the number – double 5 is 10. Ask how they can double 10 and once again 2 piles are put together. Repeat this till there is only one pile of counters. If time allows, repeat the activity starting with a different number.

- This is a written activity. Depending on the ability of your learners, this activity can be completed under your direct supervision or given as an independent activity. Have work charts/worksheets or work cards prepared for this activity. The learners can complete the addition and subtraction
  (1-10) number sentences e.g. 4+5=? 10-8=? Learners can draw pictures or use counting objects to compete their work.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Tuesday the word problems will be one problem type 3 and one problem type 4 and on Thursday you will ask one problem type 5 and one problem type 6 word problem.
  Tip: *Make sure the learners understand that the = sign does not mean* ***the answer,*** *but means that what is on each side of the sign means the same e.g. 10 = 3+7. Refer to the annexure on Problem types in order to get the learners to solve different problems.*

GROUP 3

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

- Make big templates of different shaped balloons to use during the term. Use prestik and stick different number of buttons, seeds, little pictures of hearts, stars etc. Stick any number up to and including 10. Show the learners one balloon at a time then cover it. Ask learners to estimate how many pictures/objects are stuck on the balloon. Give each learner a chance to write down how many s/he thinks there are. Uncover the balloon and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
  Tip*: It is important that learners write their estimate down as this makes them think carefully and not just take a wild guess. It also helps develop a sense of responsibility because there is no right or wrong answer.*
- Put a pile of counters in the middle of the group and ask the learners to each count out 20 counters. Once they have done this, ask them to arrange the counters in groups of 2. Learners count in 2s by pointing to each group as they count. Now ask them to arrange the counters in groups of 5 and once again count the counters, but in 5s.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 the word problem will be one problem type 3. On Tuesday the word problem will be one problem type 4. On Wednesday the word problem will be one problem type 5 and Thursday you will ask one problem type 6 word problem.

• Learners are not expected to write a number sentence but rather to show their thinking as to how they found a solution to the problem.	
Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

THIRD TERM: WEEK 2 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1's from 1 to 100 while pointing on a number line/ number grid or count using an abacus.
• Count forwards and backwards up to 50
• Count in 2's up to 20 using objects
• Count in 5's up to 20 using objects e.g. fingers, counting cubes</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7
LO 2 AS 1
LO 3 AS 1
LO4 AS 5</td><td rowspan="2">• More and less; before and after
• Knows, reads and writes number names and symbols from 1-10 and explores their relationship
• Recognises 2D and 3D shapes
• Describes the time of day e.g. morning, afternoon and night
• Sequences events using language such as 'yesterday', 'today' and tomorrow
• Number patterns: Sequencing numbers 1-10 using a variety of activities
• Recognises addition, subtraction and equals signs (+, -, =)
• Is able to add and subtract 1-5 to any number to 20.
• Measurement : time, mass</td><td colspan="5">Daily:
• Revision of cardinal value 1-10
• Numerosity 1-10</td></tr>
<tr><td>DAY 1

Patterns

2D and 3D shapes

Mass

Cardinal value 11</td><td>DAY 2

Patterns

2D and 3D shapes

Mass

Cardinal value 11</td><td>DAY 3

Patterns

2D and 3D shapes

Mass

Cardinal value 12</td><td>DAY 4

Patterns

2D and 3D shapes

Mass

Cardinal value 12</td><td>DAY 5

Time

Numbers and number names

Identifies symmetry of self</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS6,7,11</td><td>• Recognises addition, subtraction and equals signs (+, -, =)
• Estimates up to 10 objects
• Identifies odd and even numbers
• Revision of cardinal value of numbers 1-10
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-30; Group 3 works in 1-20</td><td></td></tr>
<tr><td></td><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one doubling and one halving word problem.</td><td>Groups 2 and 3 work with teacher, one group at a time.
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Group 2 works on their own.
Ask one grouping and one sharing word problem.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one grouping and one sharing word problem.</td><td></td></tr>
</table>

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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes
- You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- 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

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
- Count forwards and backwards in 1s up to 50
- Count in 2s up to 20 using concrete objects, abacus or fingers
- Count in 5s up to 20 using concrete objects, abacus or fingers

  Tip: *Make sure learners have access to concrete objects when counting in multiples of 2 and 5. This must not be a rote counting exercise with no meaning, but rather a rational counting activity where learners think about what they are counting.*

Choose from the following (to make up the 10 mins.):

- You need to develop the numerosity of numbers 1 to10 every day if possible. Use the date (or any other number you choose) and every learner gives you one number fact about the chosen number. Facts cannot be repeated, so everyone has to listen all the time. You can prepare charts e.g. Friends of 6 on one chart. You would ask e.g. what is one more than 5? 3+3=? 10-4=? Which number comes after 5? Which number is before 7? Which number is between 5 and 7? Half of 12 is ___ You can think of other examples. Make charts for each number and these charts can be used for oral and recorded work.

  Tip*: In the beginning this activity can take some time, especially in a big class. By doing it every day, learners become familiar with the activity and it take less and less time. However, because all the learners are involved throughout the whole activity a lot of learning takes place.*

- Have a series of number lines prepared on different charts e.g. a number line with numbers from 0-10/11-23 etc. depending on how many numbers you could fit on a number line. Have some questions written down under each number line e.g. which number comes after 21? Which number comes before 29? Which number is between 11 and 13? and so on. You could do one chart a day.
- Count out the odd numbers or even numbers on each number line. Ask learners what they are counting in (2s). Discuss the link between odd and even numbers, and counting in 2s. Let learners investigate if only odd and even numbers are used or whether any other numbers are used when counting in 2s.

DAY 1 (to take no more than 20 minutes)

- Have a packet of numbers from 1 to 20 for each group. There must be enough numbers in the packet for each pair to choose 4 numbers. Hand out a container with different objects to each group. Learners arrange their numbers from smallest to biggest, then they count out different objects for each number and place them under each number card e.g. if the learners have 3, 6, 7, 9 they would place 3 bottle caps under 3, 6 shells under 6, 7 buttons under 7 and 9 seeds under 9. Let learners establish if they have a particular pattern developing or not. Ask what they think the next number in their row will be.
- Have large cut-outs of brightly coloured shapes e.g. circle, square, rectangle, square, diamond and oval. Get the learners to identify the shapes. Ask them to describe the properties of each shape. Hand out templates of all the shapes you have made for the learners and ask them to sort out the shapes on their tables. Give them pieces of paper. They must write the names of the shapes and place it on top of each set of shapes.
- Get a variety of heavy and light objects/items e.g. leaf, stone/rock, feather, brick, a stack of books bundled together, a page, a school bag, desk, chair, pencil, etc. Try to find objects in your immediate environment. Place these items on a table. Pick up or point to one object at a time and ask the learners to say whether the object is light or heavy. Then let different learners take turns to pick up two objects and say which one is heavy and which one is light. Write the words heavy and light on flash cards and show it to the learners. Point to the words and let them say it.
- Call 10 girls to stand in front of the class and let the learners count the girls. Call a boy to join the girls in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Introduce number 11 to the learners. Give each group a stack of books and ask them to count out 11 and bundle them together with rubber band. Show the learners your number chart 11. Ask them to count the pictures on this chart. Place this chart next number 10.

DAY 2 (to take no more than 20 minutes)

- Use long strips of cardboard and draw/make different patterns e.g. circle, circle, triangle, circle, circle, triangle, circle, circle, triangle, circle, triangle, circle, circle, triangle, circle, circle, triangle. The learners must study the pattern and spot the mistake. Give them a sheet of paper and they must complete the pattern correctly. They then must write the numbers under the pattern e.g. 2 1 2 1 2 1

- Design a matching activity where learners match the shape to the correct word e.g. the shape of a triangle and the word triangle.
  Tip: *You can design a worksheet, make a chart or use the chalkboard.*
- Place the items/objects that you used for the concepts heavy and light. Place the flash cards with the words heavy and light on two separate tables. Let a few learners pick up an item/ object and place it on the correct table. Let the learners describe the object e.g. "the brick is heavy", when it is being placed on the table marked heavy. Ask questions such as "Is a brick always heavy? Is a brick heavier than a learner? If you have a bucket of cement and a brick, will the brick be heavy? Why?"
- Hand a container with different objects to each group. Get the learners to count out 11 objects. Revise the number chart 11. Get the learners to divide their page in four parts. They are to write the number 11 in one block, the word eleven in another block, draw eleven pictures in the third block and write something about 11 in the last block e.g. *there are 11 people in my family,* or *10+1=11* and so on.

DAY 3 (to take no more than 20 minutes)

- Write the following pattern on the board e.g. 0+3=? 1+3=? 2+3=? 3+3=? As soon as a learner identifies the pattern he/she puts up his/her hand and tells you what the pattern is. Ask what the next number sentence will be, and the next, etc. Once the pattern has been completed to 10+3=?, let different learners fill in the answers on the board. Ask if they will be able to use the same numbers but make a different pattern. Allow learners some time to think and talk about this. If no one comes up with 3+0=? 3+1=? 3+2=? Leave it for another day.
  Tip*: Often learners will reflect on the question once they are at home and find another pattern. All they need is time to reflect.*
- Give the learners sheets of A4 paper (or even newspaper) and small templates of the different shapes. Learners must trace around the shapes, colour them in and then write down the name of the shape inside each shape. They must then cut out the shapes and create as many pictures as they can using the shapes. Do not paste the shapes down as they can then not be used for other pictures.
- Take the learners outside and show them the see-saw if your school has one. If you do not have one, you can improvise and make a see-saw using a strong plank and something to balance it on in the centre, or show learners a picture of one. Ask if anyone knows how a see-saw works? Ask them what will happen if a grade 7 child sits on one side and a grade R child sits on the other side? Discuss all the answers. Collect a number of objects from your classroom. Make a scale with a light plank and three bricks. Get 2 children to place their objects on either side and watch what happens e.g. on one side there was a big book and a pencil on the other side. Ask the learners why the book made that side go down. The learners should be able to give you answers like the book is heavier, the pencil is light and that side did not go down. Try and give as many learners a chance to do this activity. Place two of the same objects on either and discuss with learners that they have the same weight and therefore the scale is balanced. Try and get different types of scales for the forthcoming lessons.

- Revise the number charts 1-11. Get 11 girls to stand in front of the class and ask learners to count the girls. Get a boy to join the girls in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Introduce number 12 to the learners. Give each group a stack of books/pencils/rulers and ask them to count out 12 and bundle them together with rubber band. Show the learners your number chart 12. Ask them to count the pictures on this chart. Place this chart next number 11.

DAY 4 (to take no more than 20 minutes)

- Write the following pattern on the board e.g. 3+0=? 3+1=? 3+2=? 3+3=? As soon as a learner identifies the pattern he/she puts up his/her hand and tells you what the pattern is. Ask what the next number sentence will be, and the next, etc. Once the pattern has been completed to 3+10=?, let different learners fill in the answers on the board. Ask if anyone can make a different pattern using these number sentences. Be prepared for learners to identify patterns you did not think of.
- Revise the shapes and the names of the shapes with the learners. Reinforce the properties of each shape. Hand out templates of the shapes to the learners and, working in pairs, let them make patterns using the shapes e.g. triangle, triangle, circle, triangle, triangle, circle and so on. They can write the names e.g. square under each shape. This would assist the learners in learning the names of the shapes.
- Get the learners to collect heavy and light objects and place it on their tables. Ask the learners to pick a heavy object. Now let them compare their object with their friend's object and find out which is heavier. Do the same for light/lighter objects. Reinforce the words heavy/light, heavier/lighter as well as the written words for heavy and light.
- Hand a container with different objects to each group. Each learner must count out 12 objects. Revise the number chart 12. Ask the learners to divide their page in four parts. They are to write the number 12 in one block, the word twelve in another block, draw twelve pictures in the third block and write something about 12 in the last block.

DAY 5 (the whole lesson)

- Get the learners seated around you. Revise the different times of the day, yesterday/ today/tomorrow, days of the week, months of the year and calendar that you taught them in week 1. You will need a drum to beat - or you can make one with a tin and stick to bang. Choose two learners Nandipha and Mandisa. Ask Nandipha to get you a glass of water to drink. While she is doing this, let Mandisa bang the drum and the learners must count the drum beats. Record the number of beats on the chalkboard. Now tell Mandisa that she must collect all the learner's Numeracy books. Let Nandipha bang the drum while the learners count the drum beats. Record the number of beats on the chalkboard. Compare the number of drum beat for both the activities. Which took longer? Repeat this activity a few times using other learners and giving other instructions. Discuss the time differences and eventually lead learners to the conclusion that you could use a clock or watch to time yourself.

• Let the learners take off their shoes and socks and take the class outside. Tell them to each find their own space and do a few warm up exercises. Now ask them to show you their right hands, then their left hands. Let the learners investigate if their two hands are identical – look at the similarities as well as the differences. Do the same with legs and feet. Working in pairs, ask learners to look at their partners and identify features on one side of the body that are on the other side of the body e.g. eyes, ears, half a mouth, etc. Ask them to look for similarities as well as differences. Let learners now work in groups of 6. Give each group a large sheet of paper. They choose one of the group members to lie on the paper and the rest of the group will draw the outline of that person. Once the outline has been drawn, learners cut out the shape but DO NOT colour it in. Learners fold the outline in half , open it up and discuss the left hand side and right hand side of a person. Let them colour in the outline (or paint if this is available) filling in all the details. Display the outlines in the classroom.	
ASSESSMENT	**Formal :** Formal, recorded Assessment **Informal:** Unrecorded assessment of learners' oral responses and ability to participate.

WEEK 2: GROUP TEACHING

Week 2	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 at least 2 different word problems to solve every time you work with them. 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.*

Groups 1 & 2

- Sequencing numbers/Fill in the missing numbers 1-20
- Activities for before/after/between/more/less
- Odd and even numbers
- Addition and subtraction up to 10
- Number value 1-10
- Ordinal value 1-10
- Colour by number activities

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.
- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.
- Addition and subtraction up to 10
- Ordinal value 1-10
- Activities for before/after/between/more/less

Working with the groups

GROUP 1

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

- Use the balloon shaped templates from Week 1 and attach a different number of buttons, seeds, little pictures of hearts, stars etc. up to and including 20. Show the learners one template at a time. Let them look at it for a few moments, cover the template and learners record the number of objects they estimate are on the template. Uncover the template and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Each learner places his/her hands in front of them with the fingers slightly spread out. As you point to each hand, learners count in 5s. Ask questions such as *How many learners are there? How many hands are there? How many fingers are there? How many fingers on 1 hand? How many fingers on 3/4/5 etc. hands?*
- Have flash cards with number sentences on prepared for this activity. Flash the addition and subtraction number sentences e.g. 4+1=? 10-1=? and learners call out the answer. The first one to answer gets the card. Once all the cards have been flashed, learners count up the number of cards they have and the one with the most cards is the winner. Let this learner have a turn to flash the number sentences and hand out the cards to the learner with the first correct answer .

  ***Tip**: The number sentences should only have + and -1 and + and – 2. They should be easy enough for learners to work out the answers without using counters or a number line. If this is too easy for the group, extend the numbers to 34+1 and 34-1.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one problem type 7 and one problem type 8 and on Wednesday you will ask one problem type 17 and one problem type 20 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  ***Tip:** Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

GROUP 2

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

- Use the balloon shaped templates from Week 1 and attach a different number of buttons, seeds, little pictures of hearts, stars etc. up to and including 20. Show the learners one template at a time. Let them look at it for a few moments, cover the template and learners record the number of objects they estimate are on the template. Uncover the template and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

- Put a pile of counters in the middle of the group and ask learners to count out 20 counters each. Encourage them to arrange the counters in a way that is easy for them to count. Give a few learners an opportunity to count their counters aloud. Now ask the learners to arrange their counters in groups of 2 and give other learners a change to count in 2s. Remember to ask questions such as *How many 2s in 20*? *If 10 2s are 20, what are 9 2s? If 9 2s are 18 what are 8 2s?*
- This is a written activity. Depending on the ability of your learners, this activity can be completed under your direct supervision or given as an independent activity. Have work charts/worksheets or work cards prepared for this activity. The learners can complete the addition and subtraction
  (1-10) number sentences e.g. 4+5=? 10-8=? Learners can draw pictures or use counting objects to compete their work.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Tuesday the word problems will be one problem type 7 and one problem type 8 and on Thursday you will ask one problem type 17 and one problem type 20 word problems. Once learners have found a solution, encourage them to record their thinking by using numbers.
  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

GROUP 3

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

- Make big templates of different shaped balloons to use during the term. Use prestik and stick different number of buttons, seeds, little pictures of hearts, stars etc. Stick any number up to and including 10. Show the learners one balloon at a time then cover it. Ask learners to estimate how many pictures/objects are stuck on the balloon. Give each learner a chance to write down how many s/he thinks there are. Uncover the balloon and count the pictures/ objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
  Tip*: It is important that learners write their estimate down as this makes them think carefully and not just take a wild guess. It also helps develop a sense of responsibility because there is no right or wrong answer.*
- Each learner places his/her hands in front of them with the fingers slightly spread out. As you point to each hand, learners count in 5s. Ask questions such as *How many learners are there? How many hands are there? How many fingers are there? How many fingers on 1 hand? How many fingers on 3/4/5 etc. hands?*

• Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 the word problem will be one problem type 7. On Tuesday the word problem will be one problem type 8. On Wednesday the word problem will be one problem type 17 and Thursday you will ask one problem type 20 word problem. Learners are not expected to write a number sentence but rather to show their thinking as to how they found a solution to the problem. ***Tip:*** *Make sure the learners understand that the = sign does not mean* ***the answer,*** *but means that what is on each side of the sign means the same e.g. 10 = 3+7. Refer to the annexure on Problem types in order to get the learners to solve different problems.*	
Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

THIRD TERM: WEEK 3 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1to100
• Count in 1’s from 1 to 100 while pointing on a number line/ number grid or count using an abacus.
• Count in multiples of 2s up to 20 using objects.
• Count in multiples of 5s up to 20 using objects.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7
LO 2 AS 1
LO 3 AS 1
LO4 AS 5</td><td rowspan="3">• Knows, reads and writes number names and symbols from 1-10 and explores their relationship
• Recognises 2D shapes and 3D objects
• Number patterns: Sequencing numbers 1to10 using a variety of activities
• Recognises addition, subtraction and equals signs (+, -, =)
• Identifies odd and even numbers
• Is able to add and subtract single digit numbers e.g. 6+2=? 7+2=? 8+2=?
• Describes the time of day e.g. morning, afternoon and night
• Sequences events using language such as ‘yesterday’, ‘today’ and tomorrow</td><td colspan="5">Daily:
• Numbers and number names 11-20
• Numerosity 1-14</td></tr>
<tr><td>DAY 1</td><td>DAY 2</td><td>DAY 3</td><td>DAY 4</td><td>DAY 5</td></tr>
<tr><td>Patterns

Odd and even numbers

Knows, reads and writes number names and symbols for 13</td><td>Patterns

Odd and even numbers

Knows, reads and writes number names and symbols for 13

Time</td><td>Patterns

2D shapes and 3D objects

Knows, reads and writes number names and symbols for 14

Time</td><td>Patterns

2D shapes

Knows, reads and writes number names and symbols for 14</td><td>Whole Class activity

3D objects

Orders numbers (1st to 10th)</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS6,7,11</td><td>• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-30; Group 3 works in 1-20</td><td></td></tr>
<tr><td></td><td></td><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 11 and one problem type 12 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type 11 and one problem type 12 word problems</td><td>Groups 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 25 and one problem type 30 word problems</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type 25 and one problem type 30 word problems</td><td></td></tr>
</table>

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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes e.g. cylinders, balls, boxes.
- You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- Recognising and describing patterns is an important concept that needs to be developed. You need to encourage learners to identify patterns in different contexts e.g. counting in 2s and odd and even numbers.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
  Tip*: You must do this every day giving different learners a chance to count aloud while pointing to the numbers on the number line or pushing the beads on the abacus because this is an assessment activity.*
- Count forwards and backwards up to 50

Choose from the following (to make up the 10 mins.):

- Let the learners choose a number between 1 and 14. If the number 10 is chosen, you will ask questions to extend learners thinking about that number e.g. 10 is 1 more than what number? How much is seven plus three? What is 14 take away 4? Which number is before 11? Which number is between 9 and 11? 10 is half of what number? You can think of other examples. Make charts for each number and these charts can be used for oral and recorded work.
- Revise months of the year. How many months are there in a year? Which is the first month? Which is the last month? Give the learners a copy of a calendar for one month e.g. June. Ask questions like how many days are there in this month? How many days does it take to make a week? How many weeks are there in June? What public holiday do we celebrate in June? Etc

- Put a pile of counters in the middle of each group. Ask learners to each count out 34 counters. Let learners put the counters in piles of either 2 or 5 and tell you what they have done. Ask 5 or 6 learners to count their counters in the multiple they chose. Learners who put their counters in the same multiple i.e. piles of 2 or 5, will check if the one counting is correct.
  ***Tip**: Do this activity every day this week until all learners have had a chance to count out aloud for the class. This is an assessment activity and, through observation, you will be able to assess the learners' abilities to count out as well as to count in 2s and 5s.*

DAY 1 (to take no more than 20 minutes)

- Put learners into teams, or use the groups they are sitting in as a team. Call one learner from each group to the board and when you say "Go", the learner at the board writes a number sentence about the number 8. As soon as the learner has done this, he/she returns to the group/team and gives the chalk to another learner in the group. This learner then writes another number sentence on the board – a different one to the one already there. Continue like this till everyone in the group has had a turn to write one the board. Make sure that all the number sentences are different. The team to finish first is the winner.
- Design activities for recording odd and even numbers. You can use one or some of the following activities.
  - Have a number grid from 1-20. Let the learners colour the even numbers in green and colour the odd numbers in blue. (Learners must be encouraged to choose their own colours).
  - Have a number line from 1-20. Circle the even numbers.
  - Have a number line from 1-20. Draw a triangle around the odd numbers.
  - Have dot-to-dot activities where learners can join the odd or even numbers to make a picture.
  - Give them 8 words on a chart. Tell them to count the letters in each word and write down the number. They then must write down the numbers from smallest to biggest. They must then circle the even numbers or odd numbers.
- Revise the number charts 1-12. Let 12 learners stand in front of the class and ask the learners to count them. Let one learner join the group in front. Ask the learners how many children are standing in front of the class. Get the learners to count them all. Introduce number 13 to the learners. Give each group a stack of books, or rulers, or pencils and ask them to count out 13 and bundle them together with a rubber band. Show the learners your number chart 13. Ask them to count the pictures on this chart. Place this chart next to number 12.

DAY 2 (to take no more than 20 minutes)

- Get the learners to work in pairs. Hand out counting cubes or other objects of different colours. Learners can create a pattern using different coloured cubes e.g. red, red, blue, green, green, red, red, blue, green, green, red, red, blue, green, green and so on.

- Design activities for recording odd and even numbers. You can use one or some of the following activities.
  - Have a number grid from 1-20. Get the learners to colour the even numbers in green and colour the odd numbers in blue. (Learners must be encouraged to choose their own colours).
  - Have a number line from 1-20. Circle the even numbers.
  - Have a number line from 1-20. Draw a triangle around the odd numbers.
  - Have dot-to-dot activities where learners can join the odd or even numbers to make a picture.
  - Give them 8 words on a chart. Tell them to count the letters in each word and write down the number. They then must write down the numbers from smallest to biggest. They must then circle the even numbers or odd numbers.
- Hand a container with different objects to each group. Get the learners to count out 13 objects. Revise the number chart 13. Get the learners to divide their page in four parts. They are to write the number 13, the word thirteen and draw thirteen pictures in each block. They must complete all four blocks, drawing different pictures in each block.
- Revise the days of the week. Ask the learners how many days there are in a week? Which is the first day of the week? Etc. Show them the words Sunday to Saturday. Put them up muddled (in any order) on the board and ask the some learners to help you arrange them in the correct order. Put up the abbreviations and ask them if they can match them for you. Ask them which is the first day of the week? Which is the second day of the week? Etc. Let the learners help you put up the position words and numbers next to the days of the week.

DAY 3 (to take no more than 20 minutes)

- Get the learners to complete the following number patterns e.g. 0+5=? 1+5=? 2+5=? 3+5=? By now the learners should be able to identify the pattern.
- Give the learners sheets of paper and templates of the different shapes. Learners must trace around the shapes, colour them in and then write down the name of the shape inside each shape. They must then cut out the shapes and create as many pictures with the shapes as they can.
- Get a few objects e.g. box, ball, cone, paper towel holder. Learners can describe the objects and place the correct label next to the object.
- Revise the number charts 1-13. Get 13 girls to stand in front of the class. Get the learners to count the girls. Get a boy to join the girls in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Introduce number 14 to the learners. Give each group a stack of books, or rulers, or pencils and ask them to count out 14 and bundle them together with a rubber band. Show the learners your number chart 14. Ask them to count the pictures on this chart. Place this chart next to number 13.

DAY 4 (to take no more than 20 minutes)

- Get the children to complete the following number patterns e.g. 0+6=? 1+6=? 2+6=? 3+6=? Check that learners are able to identify the number pattern.

- Design a worksheet with the different shapes. Write the names of the shapes in a cloud or word bank to be used as reference for spelling. Learners must write the names for each shape. Draw a picture of a house using the different shapes. Learners must be able to identify the shapes and count out the number of each shape used.
  ***Tip**: Use this as an assessment activity towards Assessment Task 1.*
- Hand a container with different objects to each group. Get the learners to count out 14 objects. Revise the number chart 14. Get the learners to divide their page in four parts. They are to write the number 14, the word fourteen and draw fourteen pictures in each block. They must complete all four blocks, drawing different pictures in each block.

DAY 5 (the whole lesson)

- Take the class outside and put them into groups of 6. Put a pile of 3-D objects (cereal boxes, balls, empty toilet roll holders, blocks of wood, balls of string, etc) in the middle of each group. Ask learners to sort the objects and then to tell you how they have sorted them. Once each group has had a turn to say how they have sorted the objects, you will give instructions as to how the objects must be sorted e.g. put all the big cubes together.
  ***Tip**: As the learners are sorting the objects, you will need to record your observations as this is an assessment activity towards Assessment Task 1.*
- Tell the learners the story of the gingerbread boy. Talk about the character the gingerbread boy met first, second, third, fourth etc. Ask them to think of some other characters he may have met. You need 10 of these. Draw them yourself or cut pictures from magazines e.g. the lady, the man, the dog, the cow, the sheep, the hen, the horse, the duck, the pig and the fox. Let the learners go back to their desks. Give each learner a long strip of paper. Let them draw the gingerbread boy first. Then they draw each of the characters he meets. When they have drawn these characters they label them with the word and the number. They must label the characters.

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 : • Counts out objects to 34 • Counts to 100 on the number line • Counts in multiples of 5 using concrete objects • Recognises 2D shapes and 3D objects • Estimates up to 10 objects.

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 at least 2 different word problems to solve every time you work with them. 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.*

- 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.
- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.
- Addition and subtraction up to 10.
- Ordinal value 1-10.
- Activities for before/after/between/more/less.
- Colouring in activities.
- Colour by number activities.
- Activities involving patterns.

Working with the groups

GROUP 1

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

- Make big heart-shaped templates and attach a different number of buttons, seeds, little pictures of hearts, stars etc. up to and including 20. Show the learners one template at a time. Let them look at it for a few moments, cover the template and learners record the number of objects they estimate are on the template. Uncover the template and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

***Tip**: As this is an assessment activity you need to record the learners' responses over the 2 days.*

- Let each learner choose a number between 40 and 50. They write this number at the top of a piece of paper. They must now investigate how many 2s and how many 5s are in their number. Allow them access to counters, number lines, number grids, etc. Encourage learners to record their thinking e.g. if they count in 2s using their fingers, encourage them to then record their thinking by writing *2, 4, 6,* etc. and then count the number of multiples.
  ***Tio**: this is an assessment activity so make sure each learner has an opportunity to tell you how many multiples of 2 and 5 in their number. You will record this as part of Assessment Task 1.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one problem type 11 and one problem type 12 and on Wednesday you will ask one problem type 25 and one problem type 30 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  ***Tip:** Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

GROUP 2

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

- Make big heart-shaped templates and attach a different number of buttons, seeds, little pictures of hearts, stars etc. up to and including 20. Show the learners one template at a time. Let them look at it for a few moments, cover the template and learners record the number of objects they estimate are on the template. Uncover the template and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
  ***Tip**: As this is an assessment activity you need to record the learners' responses over the 2 days.*
- Let each learner choose a number between 20 and 30. They write this number at the top of a piece of paper. They must now investigate how many 2s and how many 5s are in their number. Allow them access to counters, number lines, number grids, etc. Encourage learners to record their thinking e.g. if they count in 2s using their fingers, encourage them to then record their thinking by writing *2, 4, 6,* etc. and then count the number of multiples.
  ***Tio**: this is an assessment activity so make sure each learner has an opportunity to tell you how many multiples of 2 and 5 in their number. You will record this as part of Assessment Task 1.*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one problem type 11 and one problem type 12 and on Thursday you will ask one problem type 25 and one problem type 30 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

GROUP 3

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

- Make big heart-shaped templates and attach a different number of buttons, seeds, little pictures of hearts, stars etc. up to and including 20. Show the learners one template at a time. Let them look at it for a few moments, cover the template and learners record the number of objects they estimate are on the template. Uncover the template and count the pictures/objects. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

  Tip*: As this is an assessment activity you need to record the learners' responses over the 2 days.*
- Let each learner choose a number between 15 and 20. They write this number at the top of a piece of paper. They must now investigate how many 2s and how many 5s are in their number. Allow them access to counters, number lines, number grids, etc. Encourage learners to record their thinking e.g. if they count in 2s using their fingers, encourage them to then record their thinking by writing *2, 4, 6,* etc. and then count the number of multiples.

  Tio*: this is an assessment activity so make sure each learner has an opportunity to tell you how many multiples of 2 and 5 in their number. You will record this as part of Assessment Task 1.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 the word problem will be one problem type 11 and on Tuesday ask one problem type 12. On Wednesday you will ask one problem type 25 and on Thursday one problem type 30 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

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 : • Counts out objects to 34 • Counts to 100 on the number line • Counts in multiples of 5 using concrete objects • Recognises 2D shapes and 3D objects • Estimates up to 10 objects.

THIRD TERM: WEEK 4 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1 to 100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count in multiples of 2s up to 30 using objects
• Count in multiples of 5s up to 30 using objects</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7,8,9
LO 2 AS 1, 2
LO 3 AS 1
LO4 AS 1,2,3</td><td rowspan="2">• Knows, reads and writes number names and symbols from 1-20 and explores their relationship
• Orders numbers 1st to 10th
• Recognises 2D and 3D shapes
• Describes the time of day e.g. morning, afternoon and night
• Sequences events using language such as ‘yesterday’, ‘today’ and tomorrow
• Number patterns: Sequencing numbers 1-10 using a variety of activities
• Identifies odd and even numbers
• Is able to add and subtract 1 to 5 to any number up to 20.</td><td colspan="5">Daily:
• Number names and symbols 11 to 20
• Numerosity 1 to 16</td></tr>
<tr><td>DAY 1

Patterns

Cardinal value of 15

2-D shapes</td><td>DAY 2

Orders numbers 1st to 10th
Cardinal value of 15

3-D objects

Odd and even numbers</td><td>DAY 3

Patterns

Cardinal value of 16

Odd and even numbers</td><td>DAY 4

Patterns

Cardinal value of 16

Time</td><td>DAY 5

Symmetry of self

Numerosity 1-16

Time</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO 1
AS6,7,9,10,11</td><td rowspan="2">• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-30; Group 3 works in 1-20</td><td rowspan="2"></td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 15 and one problem type 16 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type 15 and one problem type 16 word problems.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 26 and one problem type 32 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type 26 and one problem type 32 word problems.</td></tr>
</table>

WEEK 4: WHOLE CLASS

WEEK 4	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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- Remember, you are not only concentrating on new work to be taught. Most of the work done on a daily basis will be revision of work already learnt.
- Remind learners to bring some clothing for the activity on Day 5.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
- Count forwards and backwards up to 50
- Count in 2s and 5s up to 30 using concrete objects, abacus or fingers. Each time question the learners using questions such as : *how many 2s in 12? If 6 2s are 12, how much are 7 2s? If 6 2s are 12, how much as 3 2s? etc.*

Choose from the following (to make up the 10 mins.):

- You need to develop the numerosity of numbers 1-16. This means that learners will know and understand the numbers and their relationship to each other. Get the learners to choose a number between 1 and 16 e.g. the number 10 is chosen. You would ask questions such as e.g. what is one more than 10? How much is 3 plus 7? If I take 4 away from 14, how many will I have? Which number comes after 10? Which number is before 11? 10 is between which 2 numbers? 10 in half of which number? You can think of other examples. Make charts for each number and these charts can be used for oral and recorded work.
- Have a series of number lines prepared on different charts e.g. a number line with numbers from 0-10/11-23 etc. depending on how many numbers you could fit on a number line. Have some questions written down under each number line e.g. which number comes after 21? Which number comes before 29? Which number is between 11 and 13? and so on. You could revise one chart a day.
- Count out all the odd or even numbers on each number line.
- Revise one of the number rhymes taught during the term.

- Call out 10 learners and randomly give each a number to hold. Ask the class if the learners are in the correct order from 1st to last, then tell the 10 learners to re-arrange themselves from 1st to 10th. Ask questions such as :*who is first? Who in 7th? What number comes before 6th? What number is last? Will 10th always be last?* Send the learners holding the numbers 6 to 10 back to their places, then ask *which number is last? Why is 10th not last? Etc.*

DAY 1 (to take no more than 20 minutes)

- Get the children to use their counters and make patterns using two colours and count in 2's e.g. 2 red counters, 2 green counters, 2 red counters, 2 green counters and so on. They then can write down the numbers for multiples of 2.
- Revise the number charts 1-14. Call 14 learners to stand in front of the class. Get the rest of the learners to count the number in front. Call one more learner to join those in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Ask if anyone knows how to write 15 and let them write it on the board. Write the word "fifteen" next to the numeral on the board. Let learners work with a partner and find 15 objects that are the same. Learners draw 15 pictures in their book, write the number 15 as well as the word 'fifteen'.
- Give the learners sheets of paper and templates of the different shapes. Get them to trace around the shape, colour it in and then cut them out. Put the learners into groups, collect all the circles and give them to one group, all the triangles to another group and so on. Give each group a large chart paper. They must stick on the shapes e.g. circles to make different pictures e.g. sun, ball clock, cat etc. The other groups must create pictures with the shape given to them.

DAY 2 (to take no more than 20 minutes)

- Hand out number cards 1-10, position number cards (1st to 10th) and position word cards (first, second, etc) to the learners. They must work in pairs. They must match the correct number, position number and position word on their tables.
- Hand a container with different objects to each group. Get the learners to count out 15 objects. Revise the number chart 15. Get the learners to divide their page in four parts. They are to write the number 15, the word fifteen and draw fifteen pictures in each block. They must complete all four blocks, drawing different pictures in each block
- Get a few objects e.g. box, ball, cone, paper towel holder and put them in a packet. Call out a learner and let him/her feel in the packet for an object. S/he must describe the object and the class must guess what the object is. After a few guesses, the learner pulls the object out of the packet and sees who guessed correctly.
- Design activities for recording odd and even numbers. You can use one or some of the following activities.
  - Have a number grid from 1-20. Get the learners to colour the even numbers in green and colour the odd numbers in blue. (Learners must be encouraged to choose their own colours).
  - Have a number line from 1-20. Circle the even numbers.

- Have a number line from 1-20. Draw a triangle around the odd numbers.
- Have dot-to-dot activities where learners can join the odd or even numbers to make a picture.
- Give learners 8 words on a chart. Tell them to count the letters in each word and write down the number. They then write down the numbers from smallest to biggest. Finally they circle the even numbers and put squares around the odd numbers.

DAY 3 (to take no more than 20 minutes)

- Get the children to use their counters and make patterns using two colours and count in 5's e.g. 5 red counters, 5 green counters, 5 red counters, 5 green counters and so on. Then they write down the numbers for multiples of 5.
- Revise the number charts 1-15. Call 15 learners to stand in front of the class then the rest of the class counts the number of learners in front. Call 1 learner to join those in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Ask if anyone knows how to write the number 16 and let them write it on the board. Write the word "sixteen" next to the numeral on the board. Let learners work with a partner and find 16 objects that are the same. Learners draw 16 pictures in their book, write the number 16 as well as the word 'sixteen'.
- Design activities for recording odd and even numbers. You can use one or some of the following activities.
  - Have a number grid from 1-20. Get the learners to colour the even numbers in green and colour the odd numbers in blue. (Learners must be encouraged to choose their own colours).
  - Have a number line from 1-20. Circle the even numbers.
  - Have a number line from 1-20. Draw a triangle around the odd numbers.
  - Have dot-to-dot activities where learners can join the odd or even numbers to make a picture.
  - Give them 8 words on a chart. Tell them to count the letters in each word and write down the number. They then must write down the numbers from smallest to biggest. They must then circle the even numbers or odd numbers.

DAY 4 (to take no more than 20 minutes)

- Hand out number cards 1-20 to the learners. They can work in pairs. They must pick out and arrange the multiples of 2 from 2 to 20. They can then find the numbers that are multiples of 5 and arrange them underneath the row of multiples of 2. Learners can decide how they will show the numbers that are multiples of both 2 and 5.
- Hand a container with different objects to each group. Get the learners to count out 16 objects. Revise the number chart 16. Get the learners to divide their page in four parts. They are to write the number 16, the word sixteen and draw sixteen pictures in each of the 4 blocks.
- Take the learners outside to play a game – What's the time Mr Wolf? Get one learner to be the wolf. The rest of the learners follow the wolf and ask – what's the time Mr Wolf? The

- wolf would reply by saying e.g. two o' clock - they would go on asking the time and the wolf would answer by stating the time initially only with __ o' clock. When the wolf says '12 o'clock', the children will run and the wolf will try to catch one of them. The learner that gets caught can be the next wolf.

DAY 5 (the whole lesson)

- Get the learners to take out their jerseys, T-shirts and shorts that they brought for this lesson. Get them to fold the garments in half/in the middle. See if they understand that the two sides are the same. Ask which part of their body they will be able to put into half the object i.e. how many arms can they fit into half the jersey? Is it the left arm or the right arm? Working with a partner, learners hold up the folded garment against their partner and see how it fits – on only half the body.
- Still working with a partner, one learner sits in front of the other. The learner at the back will respond to questions you ask e.g. what can you see? Can you see eyes? Can you see ears? Can you see a nose? The partners then turn and face each other. The same learner will still respond to the questions e.g. can you see eyes? How many? Are they the same? Can you see ears? Do they look the same as when you looked at them from the back? How are they different? Etc. Repeat the activity, with the second learner responding to the questions this time.
- Give learners a piece of paper and on one side they draw a head from the front and on the other side of the paper they draw a head from the back.
  Tip: *Observe whether learners are able to recognise symmetry in self, with the emphasis on 'left', 'right', 'front' and 'back'. Use these activities as part of Assessment Task 2.*
- Get the learners to choose a number between 1 and 16. If the number 10 is chosen, each learner must tell you a different number fact about 10 e.g. it comes between 9 and 11, it is double 5, and so on.
- Make a large clock face or use the one that has been provided by the school. Discuss the numbers on the clock as well as the two different hands. Teach the learners the time initially by showing them ___o' clock. Depending on the ability of the learners, you can go with more detail or you can continue during the next lesson. Discuss the many different ways to read the times e.g. watch, clock, microwave, cell phone etc. Discuss why there is a need to know the time e.g. be on time for school, wedding, party, have lunch, change of periods at school etc.

ASSESSMENT	**Formal :** Formal, recorded Assessment **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:

- 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 at least 2 different word problems to solve every time you work with them. 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.
- During the problem solving activity, you must read the problem to the learners and then allow them to talk about the problem to each other. When learners talk about mathematics it helps them to clarify their own thinking. This leads to a greater understanding of concepts,

DAILY ACTIVITIES

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

- Sequencing numbers by filling in the missing numbers 1-20 on a number line
- Addition and subtraction up to 16 e.g.

10+1=	15-1=	2+1=	2-1=
11+1=	14-1=	12+1=	12-1=
12+1=	13-1=	22+1=	22-1=
13+1=	12-1=	32+1=	32-1=
14+1=	11-1=		
15+1=	10-1=		

- Activities for before/after/between/more/less
- Number names and symbols 11-20
- Numerosity 1-16 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 16 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*.

- Make a big template of a butterfly. Use prestik and stick any number of dots up to and including 15 onto the wings. Show the learners the template, asking them to estimate the number of dots, then cover the template. Give each learner a chance to write down how many s/he thinks there are. Uncover the template and count the dots. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Add or take off some dots and repeat the activity
- Let the group choose a number between 10 and 15. Each learner has a turn to roll one or two dice and they add that number onto the chosen number e.g. the chosen number is 13 and the dice show 5 dots and 3 dots. The learner must add 5 and 3 onto 13. Make sure each learner in the group has a turn to roll the dice and add the numbers.
- Put some coins and notes in the middle of the group and ask the learners to sort them. Then let each learner take one coin and describe it to the rest of the group i.e. the shape, what the side feels like, what number and picture is on the front and back of the coin etc. Learners who have the same coin can add to the description. Do the same with the notes.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one problem type 19 and one problem type 20 and on Wednesday you will ask one problem type 21 and one problem type 27 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

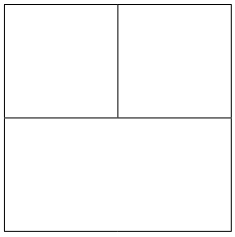
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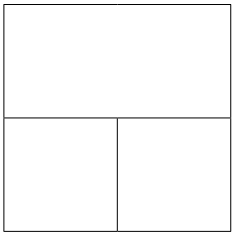
GROUP 2

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

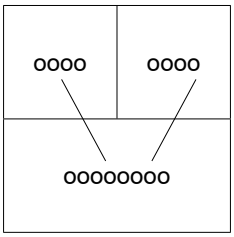
- Make a big template of a butterfly. Use prestik and stick any number of dots up to and including 15 onto the wings. Show the learners the template, asking them to estimate the number of dots, then cover the template. Give each learner a chance to write down how many s/he thinks there are. Uncover the template and count the dots. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Add or take off some dots and repeat the activity
- Let the group choose a number between 10 and 15. Each learner has a turn to roll one die (dice) and add that number onto the chosen number e.g. the chosen number is 13 and the die shows 5 dots. The learner must add 5 onto 13. Make sure each learner in the group has a turn to roll the die and add the numbers.

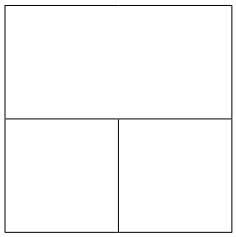
- Place a chart in front of the learners e.g.





Letting the learners take turns, tell them to either double or halve the number you give them using their counters and putting them in the correct place. For example, if you say double 4 the learner will use his/her counters and place them like this:





- Put some coins and notes in the middle of the group and ask the learners to sort them. Then let each learner take one coin and describe it to the rest of the group i.e. the shape, what the side feels like, what number and picture is on the front and back of the coin etc. Learners who have the same coin can add to the description. Do the same with the notes.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one problem type 19 and one problem type 20 and on Thursday you will ask one problem type 21 and one problem type 27 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

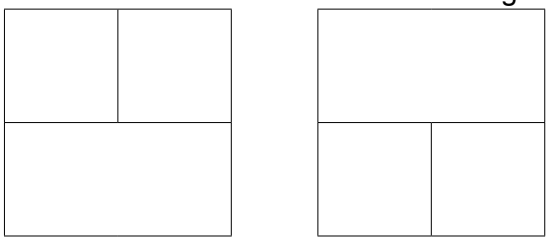
GROUP 3

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

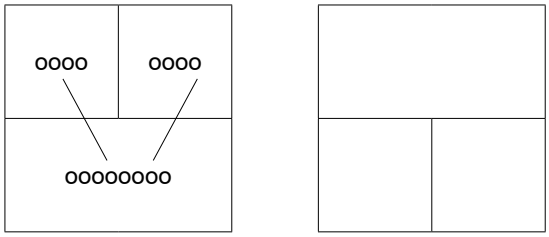
- Let the group choose a number between 7 and 10. Each learner has a turn to roll one die (dice) and add that number onto the chosen number e.g. the chosen number is 8 and the die shows 4 dots. The learner must add 4 onto 8. Make sure each learner in the group has a turn to roll the die and add the numbers.

  Tip*: Allow learners to have access to counters and number grids for this activity.*

- This is a written activity. Depending on the ability of your learners, this activity can be completed under your direct supervision or given as an independent activity. Have work charts/worksheets or work cards prepared for this activity. The learners can complete the addition and subtraction (1-12) number sentences e.g. 10+2=? 12-8=? Learners can draw pictures or use counting objects to compete their work.
- Place a chart in front of the learners e.g.



Letting the learners take turns, tell them to either double or halve the number you give them using their counters and putting them in the correct place. For example, if you say double 4 the learner will use his/her counters and place them like this:



- Put some coins and notes in the middle of the group and ask the learners to sort them. Then let each learner take one coin and describe it to the rest of the group i.e. the shape, what the side feels like, what number and picture is on the front and back of the coin etc. Learners who have the same coin can add to the description. Do the same with the notes.
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  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

THIRD TERM: WEEK 5 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 2 and 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count in multiples of 2s up to 30 using objects
• Count in multiples of 5's up to 30 using objects</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7,8
LO 2 AS 1,2
LO4 AS 1,2,3</td><td rowspan="2">• Knows, reads and writes number names and symbols from 1-20 and explores their relationship
• Orders numbers 1st to 10th
• Describes the time of day e.g. morning, afternoon and night
• Sequences events using language such as 'yesterday', 'today' and tomorrow
• Number patterns: Sequencing numbers 1-10 using a variety of activities
• Designs own patterns, including multiples of 2 and 5
• Solves money problems.
• Is able to add and subtract 1 to 5 to any number up to 20.</td><td colspan="5">Daily:
• Number names and symbols 11 to 20
• Numerosity of number to 18
• Ordinal value 1st to 10th</td></tr>
<tr><td>DAY 1

Patterns

Cardinal value 17

Time

Money problems</td><td>DAY 2

Patterns

Cardinal value 17

Time</td><td>DAY 3

Patterns

Cardinal value 18

Mass

Money problems</td><td>DAY 4

Orders numbers 1st to 10th

Number names and symbols 10 to 18

Mass

Money problems</td><td>DAY 5

Whole class activity.

Technology:

Making number books.</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO 1
AS6,7,9,10,11</td><td rowspan="2">• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-30; Group 3 works in 1-25</td><td rowspan="2"></td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 15 and one problem type 16 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
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Ask one problem type 22 and one problem type 25 word problems.</td></tr>
</table>

WEEK 5: WHOLE CLASS

WEEK 5	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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes. You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- You will do activities towards Assessment Task 2 during this week.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
- Count forwards and backwards up to 50.
- Count in 2s and 5s up to 30 using concrete objects, abacus or fingers. Each time question the learners using questions such as : *how many 2s in 12? If 6 2s are 12, how much are 7 2s? If 6 2s are 12, how much as 3 2s? etc.*

Choose from the following (to make up the 10 mins.):

- You need to develop the numerosity of numbers 1-16. This means that learners will know and understand the numbers and their relationship to each other. Get the learners to choose a number between 1 and 16 e.g. the number 10 is chosen. You would ask questions such as e.g. what is one more than 10? How much is 3 plus 7? If I take 4 away from 14, how many will I have? Which number comes after 10? Which number is before 11? 10 is between which 2 numbers? 10 in half of which number? You can think of other examples. Make charts for each number and these charts can be used for oral and recorded work.
- Make sure each learner has his/her own number line from1 to 20. As you give the command they must place a counter on the correct number. Say things like :*This is the number before 19. This is the number between 17 and 19. This number is 2 more than 16. This number is 1 less than 19.* Now ask which number has the most counters on – all the counters should be on 18. You can also let learners give the commands. Another activity would be for each learner to put their counter on a number and then tell the class something about the number e.g. put the counter on 14 and say 'this number is 1 less than 5 and 1 more than 3, etc.
- Ask the learners to put a counter on all the even numbers. They can now count the odd numbers – those numbers without counters on.

- Call out 10 learners and randomly give each a number to hold. Ask the class if the learners are in the correct order from 1st to last, then tell the 10 learners to re-arrange themselves from 1st to 10th. Ask questions such as :*Who is first? Who in 7th? What number comes before 6th? What number is last? Will 10th always be last?* Send the learners holding the numbers 6 to 10 back to their places, then ask *which number is last? Why is 10th not last? Etc.*
  ***Tip**: Use this activity towards Assessment Task 2. You will use an observation sheet to record which learners answer correctly. Do this activity every day so that all learners have to chance to respond to the questions.*

DAY 1 (to take no more than 20 minutes)

- Each learner must use their own number line to 20 and place counters on all the even numbers. Now ask them to count in 2s, placing a counter on the numbers as they count them. Ask what has happened – all the even numbers now have another counter on. Make sure that learners understand that counting in 2s and counting even numbers is the same. Now hand out strips of paper or cardboard with the number lines drawn. Get the learners to write the multiples of 2 on the number line. Ensure that the learners are doing it correctly. Tell them to look at the number line with counters on all the even numbers if they are not sure.
- Revise the number charts 1-16. Call 16 learners to stand in front of the class. Get the rest of the learners to count the number in front. Call one more learner to join those in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Ask if anyone knows how to write 17 and let them write it on the board. Write the word “seventeen” next to the numeral on the board. Let learners work with a partner and find 17 objects that are the same. Learners draw 17 pictures in their book, write the number 17 as well as the word ‘seventeen’.
- Revise days of the week, months of the year, the calendar for the month of August, o’ clock on the clock face and discuss why there is a need for us to know the time. Get the clock face out again and talk about minutes and hours.
- Tell the learners that the school is going to have a market day. Hot dogs will be sold at R5 each and a cup of coke will be R2. They need to calculate how much money they must have if they want to have a hot dog and a cup of coke. You can ask them that if they pay with R10 how much change will they get.

DAY 2 (to take no more than 20 minutes)

- Learners use their own number lines and as they count in 2s they place a counter on that number. Now let them count in 5s, placing a counter on the numbers as they count them. Ask what they found – some numbers have 2 counters on. This means that some numbers are multiples of 2 as well as 5. Hand out strips of paper or cardboard with the number lines drawn that were used on Day 1. Get the learners to write the multiples of 5 on the number line. Ensure that the learners are doing it correctly. If a number is a multiple of 2 as well as 5, they can put a circle around the number.
- Hand a container with different objects to each group. Get the learners to count out 17 objects. Revise the number chart 17. Get the learners to divide their page in four parts. They are to write the number 17, the word seventeen and draw seventeen pictures in each block. They must complete all four blocks, drawing different pictures each time.

- Design activities to assess the concept of time. These are examples of what you could assess at this stage.
  - Give each pair of learners cards with the names of the days of the week and the months of the year. Learners must sort them and put them in the correct order.
  - Display a picture and ask learners to write down which part of the day it is e.g. morning, evening, afternoon, night etc.

  Tip: *You may use any activities for assessment of time. This will depend on the ability of your learners. Use these activities as part of Assessment Task 2.*

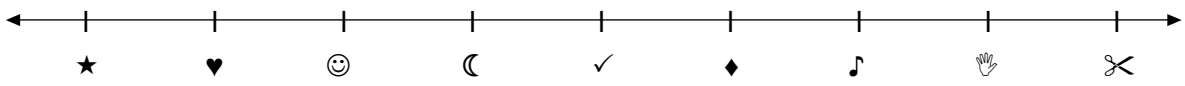
DAY 3 (to take no more than 20 minutes)

- Take the learners outside and tell them to get into groups of 2, then 5, then 1, then 10. If there are learners left over discuss how many children are in the class, so how many groups of 2, etc. can be made with that number.
- Still outside, ask them to make a group of 17. Depending on the size of your class, you may only get 1 or 2 groups. Ask how many more learners must join the group to make a group of 18. Let learners work in pairs and see if they can count 18 of the same objects e.g. cars, blades of grass, trees, bricks, etc.
- Give each group a pile of coins and ask them to sort them. Each group has a chance to explain how they sorted their coins e.g. according to size, colour, year, etc.

DAY 4 (to take no more than 20 minutes)

- Give half the class cards with numerals on e.g. 6, 12, etc. and the other half the class cards with the number names on e.g. six, twelve, etc. Learners must find their partner. Once all the partners have been found, ask the learners to order themselves from the smallest to the biggest number. Each pair then records their number and number name in their books and draws the correct number of pictures.

  Tip*: You can record your observations and use this an one of the activities in Assessment Task 2.*
- Design an activity to assess ordinal numbers. Draw an empty number line on the board and draw pictures in the place of the numbers e.g.



  As you ask questions, learners will draw the pictures, or write the order, in their books, e.g.:
  - What picture is first?
  - What picture is last?
  - What picture is third?
  - What is the position of the hand?
  - What is the position of the flower?
  - What is the position of the heart?

  Tip*: This is one of the activities making up Assessment Task 2.*

DAY 5 (the whole lesson)

- Put all the numbers from 10 to 18 in a packet. Call one learner from each group to come and take a number out of the packet. Working in groups of not more than 8 learners, each group makes a book about their number. They can use magazines, newspapers, scissors, glue, crayons and pencils when making their book. Each book should be at least an A4 page folded in half, giving 4 pages. Encourage learners to decorate their book.

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 : • Knows, reads and writes number names and symbols from 1-20 and explores their relationship • Orders numbers 1st to 10th • Describes the time of day e.g. morning, afternoon and night • Sequences events using language such as 'yesterday', 'today' and tomorrow

WEEK 5: GROUP TEACHING

Week 5	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 at least 2 different word problems to solve every time you work with them. 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.
- This week you will be exploring money as well as mass during the group teaching time.

DAILY ACTIVITIES

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

- Activities for before/after/between/more/less e.g.

Make 1 more			Make 1 less	
3			**4**	
7			**8**	
1			**2**	
9			**3**	
2			**5**	

- Addition and subtraction up to 20 e.g.

11+1=	11-1=	11+2=	11-2=
12+1=	12-1=	12+2=	12-2=
13+1=	13-1=	13+2=	13-2=
14+1=	14-1=	14+2=	14-2=

- Write the numbers 1 to 10 in their books, drawing the correct number of pictures next to each number and writing the correct word.

	6	
□□□		three
		four
□ □□ □□	5	
		Two
🏳		

- Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc.
  Fill in the missing parts e.g.
  □ □ ○ □ □ ○ -------- ---------- ----------
- Give the learners number cards 10 to 20. They arrange them from smallest to biggest then copy the numbers into their books.

Working with the groups

GROUP 1

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

- Ask learners if they think 10 children can fit in a hoop. Learners answer either yes or no. Put a hoop in the middle and count out 10 learners. Ask them to stand in the hoop. Can they all fit? Ask who said yes, and who said no. Now ask if 10 learners is the correct number to stand side by side and fit around the outside of the hoop. Learners estimate either yes or no. Get 10 learners to stand around the outside of the hoop and see who estimated correctly.
- Put some objects in the middle of the group and ask which objects are light and which objects are heavy. Make sure you have some small heavy objects as well as some large light objects. Let learners pick up the objects and feel them. They can then sort them into heavy and light piles.
- You will need a pile of coins and pictures of coins on a board. Ask the group to match the real coins with the pictures by placing the coin on top of the correct picture.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one problem type 15 and one problem type 16 and on Wednesday you will ask one problem type 22 and one problem type 25 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem*

GROUP 2

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

- Ask learners if they think 10 children can fit in a hoop. Learners answer either yes or no. Put a hoop in the middle and count out 10 learners. Ask them to stand in the hoop. Can they all

fit? Ask who said yes, and who said no. Now ask if 10 learners is the correct number to stand side by side and fit around the outside of the hoop. Learners estimate either yes or no. Get 10 learners to stand around the outside of the hoop and see who estimated correctly.

- Put some objects in the middle of the group and ask which objects are light and which objects are heavy. Make sure you have some small heavy objects as well as some large light objects. Let learners pick up the objects and feel them. They can then sort them into heavy and light piles.
- You will need a pile of coins and pictures of coins on a board. Ask the group to match the real coins with the pictures by placing the coin on top of the correct picture.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one problem type 15 and one problem type 16 and on Thursday you will ask one problem type 22 and one problem type 25 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *Refer to the annexure on Problem types in order to expose learners to different types of problems. How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem.*

GROUP 3

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

- Ask learners if they think 10 children can fit in a hoop. Learners answer either yes or no. Put a hoop in the middle and count out 10 learners. Ask them to stand in the hoop. Can they all fit? Ask who said yes, and who said no. Now ask if 10 learners is the correct number to stand side by side and fit around the outside of the hoop. Learners estimate either yes or no. Get 10 learners to stand around the outside of the hoop and see who estimated correctly.
- Put some objects in the middle of the group and ask which objects are light and which objects are heavy. Make sure you have some small heavy objects as well as some large light objects. Let learners pick up the objects and feel them. They can then sort them into heavy and light piles.
- You will need a pile of coins and pictures of coins on a board. Ask the group to match the real coins with the pictures by placing the coin on top of the correct picture.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 the word problem will be one problem type 15 and on Tuesday ask one problem type 16. On Wednesday you will ask one problem type 22 and on Thursday one problem type 25 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

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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 : • Knows, reads and writes number names and symbols from 1-20 and explores their relationship • Orders numbers 1st to 10th • Describes the time of day e.g. morning, afternoon and night • Sequences events using language such as 'yesterday', 'today' and tomorrow

THIRD TERM: WEEK 6 OVERVIEW

<table>
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LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count in multiples of 2s up to 50 using objects
• Count in multiples of 5s up to 50 using objects</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 3,4,5,7,8,9
LO 2 AS 1,2
LO4 AS 5
LO 5 AS 1 to 5</td><td rowspan="3">• Knows, reads and writes number names and symbols from 11-20 and explores their relationship
• Orders numbers (1st-10th)
• Designs own patterns, including multiples of 2 and 5
• Identifies symmetry of self
• Estimates up to 10 objects
• Solves money problems
• Measurement : time, mass
• Collects, sorts, explains and draws a collection of objects according to one attribute</td><td colspan="5">Daily:
• Numerosity 1-20
• Recognises nearly doubles e.g. 4+4=8; 4+5=9
• Repeated addition of 2 and 5</td></tr>
<tr><td>DAY 1</td><td>DAY 2</td><td>DAY 3</td><td>DAY 4</td><td>DAY 5</td></tr>
<tr><td>Patterns

Cardinal value 19

Mass

Money problems</td><td>Patterns

Cardinal value 19

Mass</td><td>Patterns

Cardinal value 20

Collects data

Money problems</td><td>Patterns

Cardinal value 20

Collects data

Money problems</td><td rowspan="2">Whole class activity

Collects data</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS5,6,7,9,10, 11</td><td>• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
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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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes. You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- **Assessment Task 2 will be completed by the end of this week.**

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from, e.g. 21 to 49. At the same time let a learner push the same number of beads across on the abacus.

Choose from the following (to make up the 10 mins.):

- Learners guess your secret number :
  - My secret number is an even number that is more than 15 but less than 17.
  - My secret number is more than 13 and is double 7, etc.
- You need to develop the numerosity of numbers 1 to 20. This means that learners will know and understand the numbers and their relationship to each other. Get the learners to choose a number between 1 and 20 e.g. the number 18 is chosen. You would ask questions such as e.g. what is one more than 18? How much is 13 plus 5? If I take 2 away from 20, how many will I have? Which number is before 19? 18 is between which 2 numbers? 18 is double which number? You can think of other examples.
- Put a pile of counters in the middle of the group. Let learners take turns to choose a number and then each group counts out the correct number of counters.
- Let all the learners stand behind their chairs/desks. They are going to count in 2s, pointing to their eyes as they count. The first learner will point to his/her eyes and say ‘2’, then sit down. The next learner will point to his/her eyes and say ‘4’, then sit down. Carry on until all the learners are sitting down.
-

DAY 1 (to take no more than 20 minutes)

- Hand out number cards 1 to 30. Get the learners to work in pairs. Ask them to arrange the multiples of 2 and multiples of 5 from smallest to biggest.

- Revise the number charts 1-18. Get 18 learners to stand in front of the class. Get the learners to count those in the front of the class. Get one more learners to join the group in front. Ask the learners how many children are standing in front of the class. Get the learners to count all of them. Introduce number 19 to the learners. Give each group a stack of books and ask them to count out 19 and bundle them together with a rubber band. Show the learners your number chart 19. Ask them to count the pictures on this chart. Place this chart next to number 18.

  Tip: *This activity being repeated will establish a thorough understanding of the relationship of numbers*
- Have a chart with pictures of objects that are heavy and light. Discuss the pictures with the learners. Tell the learners to fold the page in their books in half, lengthwise. They must write the words heavy and light at the top of the page, one word in each column. The learners must draw some pictures under the correct headings: heavy/light.
- Have a few cereal, toothpaste, tea bag boxes etc. on a table. Have labels with the price of each item next to the respective boxes e.g. tea box R5. Ask the learners how much they will need if they want to buy 2 boxes and so on.

DAY 2 (to take no more than 20 minutes)

- Get the learners to do the following e.g. 1+2=? 11+2=? 21+2=? Ask what pattern they can see.
- Hand a container with different objects to each group. Get the learners to count out 19 objects. Revise the number chart 19. Get the learners to divide their page in four parts. They are to write the number 19, the word nineteen and draw nineteen pictures in each block.
- Have an assortment of objects that are heavy and light. Give learners turns to pick up a heavy or a light object. Provide learners with a worksheet with pictures of heavy and light objects. The learners must look at each picture and write down the words heavy and light under each picture.

  Tip: *You may use this or any other activities for assessment of mass as part of Assessment Task 2. The activity will depend on the ability of your learners.*

DAY 3 (to take no more than 20 minutes)

- Ask learners to show you 20 fingers. Give them time to solve the problem. Insist that you want to **see** 20 fingers, you do not want to hear 2 claps, or see fingers flashing. As soon as some learners have solved the problem by putting their hands together to show 20 fingers, praise them and encourage other learners to get into pairs to show 20 fingers. Count each pairs' fingers so that learners understand that the fingers on 4 hands (or the fingers of 2 learners) make 20. Have fun by asking them to show you 19 fingers, 11 fingers, 15 fingers, and so on. Ask how they can show 30 fingers. Some learners should be able to do this. Write the number 20 and the word 'twenty' on the board. Let learners write the number and the word in the air with their fingers

- Ask the learners to pick up leaves around the school yard. Put them into boxes depending on the number of groups you have e.g. you might have the learners seated in 6 groups. Put a box on each table and tell the learners to sort out the leaves. They must place the same type/colour leaves in a row. Discuss the findings with each group. Give the learners a sheet of paper to record their findings. They can draw the number of leaves in each row, e.g.

small green leaves	small green leaves	small green leaves	small green leaves	small green leaves
very big leaves	very big leaves	very big leaves		
brown leaves	brown leaves	brown leaves	brown leaves	

DAY 4 (to take no more than 20 minutes)

- Hand a container with different objects to each group. Get the learners to count out 20 objects. Revise the number chart 20. Get the learners to divide their page in four parts. They are to write the number 20, the word twenty and draw twenty pictures in each block. They must complete all four blocks.
- Learners design their own patterns using concrete objects and the multiples of 2 and 5. They can use the 20 counters they have from the first activity. For example, they can make patterns of 2/5 objects in a group, they can arrange groups of 2 in different ways, they can make a pattern of 2 red, 2 blue, 2 red, etc. Walk around and encourage learners to tell you what they are doing.
  ***Tip**: Use this towards Assessment Task 2*
- Tell the learners that you have a coin in your hand and they must guess which coin it is. They are only allowed 5 questions, and you will only answer 'yes' or 'no'. A typical question would be "is the coin silver?". If you answer 'yes', then the next question should not be "is it 5 cents?" because a 5c coin is not silver.
  ***Tip**: You can use your observations towards Assessment Task 2.*

DAY 5 (the whole lesson)

- Put the learners into groups of 6 or 8 and give each group a packet. Get the learners to collect objects from inside and outside the classroom e.g. leaves, small stones, sticks, seeds, pencils, rulers, crayons etc. They must only collect 4 different types of objects, but they must collect as many of each as they can. Once they have collected objects, they must sort them into the same types. Make sure that each group has enough objects to sort out. Give the learners a sheet of paper with horizontal lines drawn on it. Learners must sort out the objects and then draw the correct number of different objects is each row. Walk around and check, helping where necessary.
  ***Tip**: This activity is part of 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 : • Knows, reads and writes number names and symbols from 11-20 and explores their relationship • Orders numbers (1^{st}-10^{th}) • Designs own patterns, including multiples of 2 and 5 • Identifies symmetry of self • Estimates up to 10 objects • Solves money problems • Measurement : time, mass • Collects, sorts, explains and draws a collection of objects according to one attribute

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 at least 2 different word problems to solve every time you work with them. 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.**

DAILY ACTIVITIES

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

- Sequencing numbers by filling in the missing numbers 1-20 on a number line
- Addition and subtraction up to 20 e.g.

10+1=	15-1=	2+1=	2-1=
11+1=	14-1=	12+1=	12-1=
12+1=	13-1=	22+1=	22-1=
13+1=	12-1=	32+1=	32-1=
14+1=	11-1=		
15+1=	10-1=		

- Activities for before/after/between/more/less
- Number names and symbols 11-20
- 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*.

- Use the big template of a butterfly made in Week 4. Use prestik and stick any number of dots up to and including 15 onto the wings. Show the learners the template, asking them to estimate the number of dots, then cover the template. Give each learner a chance to write down how many s/he thinks there are. Uncover the template and count the dots. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Add or take off some dots and repeat the activity

  ***Tip**: This is one of the activities making up Assessment Task 2.*
- Put some coins and notes in the middle of the group and ask the learners to sort them. Then let each learner take one coin and describe it to the rest of the group i.e. the shape, what the side feels like, what number and picture is on the front and back of the coin etc. Learners who have the same coin can add to the description. Do the same with the notes.
- Place 3 coins in front of the group. Let them look at the coins for a few moments, then tell them to close their eyes while you remove one of the coins. They open their eyes, and one learner describes the missing coin. Do this both days this week so that each learner gets an opportunity to describe the missing coin.

  ***Tip**: This activity is part of Assessment Task 2.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one sharing and one grouping with a remainder and on Wednesday you will ask one multiplication and one grouping word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  ***Tip:** How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

GROUP 2

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

- Use the big template of a butterfly made in Week 4. Use prestik and stick any number of dots up to and including 10 onto the wings. Show the learners the template, asking them to estimate the number of dots, then cover the template. Give each learner a chance to write down how many s/he thinks there are. Uncover the template and count the dots. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Add or take off some dots and repeat the activity

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GROUP 3

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

- Use the big template of a butterfly made in Week 4. Use prestik and stick any number of dots up to and including 10 onto the wings. Show the learners the template, asking them to estimate the number of dots, then cover the template. Give each learner a chance to write down how many s/he thinks there are. Uncover the template and count the dots. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Add or take off some dots and repeat the activity

  ***Tip**: This is one of the activities making up Assessment Task 2.*
- Put some coins and notes in the middle of the group and ask the learners to sort them. Then let each learner take one coin and describe it to the rest of the group i.e. the shape, what the side feels like, what number and picture is on the front and back of the coin etc. Learners who have the same coin can add to the description. Do the same with the notes.
- Place 3 coins in front of the group. Let them look at the coins for a few moments, then tell them to close their eyes while you remove one of the coins. They open their eyes, and one learner describes the missing coin. Do this both days this week so that each learner gets an opportunity to describe the missing coin.

  ***Tip**: This activity is part of Assessment Task 2.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 25. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be a sharing with a remainder problem and on Tuesday the problem will be a grouping with a remainder problem. On

<table>
<tr><td colspan="2">

- Wednesday you will ask one multiplication and on Thursday you will ask one grouping word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

</td></tr>
<tr><td>Assessment</td><td>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 :

• Knows, reads and writes number names and symbols from 11-20 and explores their relationship
• Orders numbers (1st-10th)
• Designs own patterns, including multiples of 2 and 5
• Identifies symmetry of self
• Estimates up to 10 objects
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• Measurement : time, mass
• Collects, sorts, explains and draws a collection of objects according to one attribute</td></tr>
</table>

THIRD TERM: WEEK 7 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 10 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count backwards and forwards from any given number
• Count in multiples of 10s up to 50 using objects</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 6,7,8,9
LO 2 AS 1, 2</td><td rowspan="3">• Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19
• Recognises nearly doubles e.g. 4+4=8 : 4+5=9
• Is able to add and subtract 1-5 to any number to 34
• Completes repeated addition of 2 and 5
• Solves problems, and explains solutions, using concrete objects and drawings with numbers up to 20</td><td colspan="5">Daily:
• Numerosity of numbers 1 to 20
• Recognises nearly doubles e.g. 3+3=6; 3+4=7
• Add and subtract 1 to 5 to any number to 34</td></tr>
<tr><td>DAY 1</td><td>DAY 2</td><td>DAY 3</td><td>DAY 4</td><td>DAY 5</td></tr>
<tr><td>Patterns

Cardinal value 21

Repeated addition of 2 and 5</td><td>Patterns

Cardinal value 22

Repeated subtraction of 2 and 5</td><td>Patterns

Cardinal value 23

Doubling up to 34</td><td>Patterns

Cardinal value 24

Halving up to 34</td><td>Repeated addition and subtraction of 2 and 5</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO 1
AS6,7,9,10,11</td><td rowspan="2">• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-35; Group 3 works in 1-30</td><td rowspan="2"></td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Ask one problem type 7 and one problem type 8 word problems.
Group 2 works on their own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask one problem type 7 and one problem type 8 word problems.
Group 1 works on their own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask one problem type 35 and one problem type 40 word problems.
Group 2 works on their own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask one problem type 35 and one problem type 40 word problems.
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</table>

WEEK 7: WHOLE CLASS

WEEK 7	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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes. You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- You will add one new number each day this week. Learners are familiar with all the numbers to 100 through the counting activities you do every day. You will now build up a deeper understanding of the individual numbers and their relationship to each other.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. Learners will clap each time they say a number.

Choose from the following (to make up the 10 mins.):

- Learners close their eyes and listen to the number of taps/claps/stamps/clicks etc. that they hear. Each tap/stamp/click counts as 2. Learners place a counter on the number on their number grids to indicate the correct number e.g. 6 taps, so learners place the counter on the number 12.
- Point to any number on the number line and ask questions such as: *What number is more than this number? What number is less than this number? What number is 1 more than this number? What number is 1 less than this number? Which numbers comes before this number? Which number comes after this number? This number is between which two numbers?*
- Do this practical activity outside if possible. Let the learners make a circle with you and sit down. Give each learner a card with a number. Call out a number e.g. 20. The learner with the correct number will stand in front of you so that the rest of the learners can see the number. Now ask the learners which number comes after number 20. See if the learners can identify the number 21. The learner with the number must come forward and stand in the correct position next to number 20. Other learners must check to see if the learner is in the correct place. Then ask the learners which number comes before 20. The learners must identify the correct number and the learner must then get into the correct position. Keep asking questions about the number 20 and learners with the correct numbers will come and stand next to the number. Ask questions such as :*what 3 numbers will add up to 20? How many 5s in 20? What number must I take away from 26 to make 20? Etc.*

- Call 1 learner to stand in front of the class and hold up his/her hands. Ask the learners to count the number of fingers (10). Now call a second learner to stand next to the first learner and count the number of fingers that 2 learners have (20). Keep calling another learner to join the line until there are 10 learners in front. Each time ask questions such as "How many learners? How many fingers?"

DAY 1 (to take no more than 20 minutes)

- Write the following patterns on the board and ask learners to identify the patterns e.g.

1+5=	11-5=	5+1=	5-1=	25+1=
11+5=	21-5=	5+2=	5-2=	25+2=
21+5=	31-5=	5+3=	5-3=	25+3=
31+5=	41-5=	5+4=	5-4=	25+4=
etc.	etc.	etc.	etc.	etc.

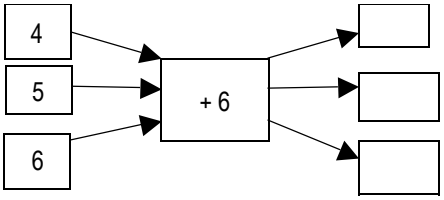
- Put a container of counters in the middle of each group. Ask learners to count out 20 counters. Ask how many more they will need to make 21 and let them count out 1 more. Ask a learners to write the number 21 on the board, ask another to point to the number on the number line, etc. Ask if anyone can write the word for 21. Remind the class that they know how to write the word twenty and they also know how to write the word one.
- Learners can work in pairs and use the counting objects for the group. Give each pair a piece of paper. Tell them to take out 6 counters and to make groups of 2. They must write 2 under each group of 2 and then write the + sign between the groups of 2. They must touch the groups of 2 and say 2+2+2= and then count 2 4 6 to get the answer. Repeat the activity building up the repeated addition of 2s.

DAY 2 (to take no more than 20 minutes)

- Using the patterns from Day 1 as a guide, learners make up their own number patterns adding and subtracting 1 to 5 using numbers up to 100 if possible. Leave the learners to work out their own patterns. The faster learners will make more complicated patterns than the slower learners.
- Hand a container with different objects to each group. Get the learners to count out 21 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 22. Get the learners to divide their page in two parts. They are to write the number 22, the word twenty two and draw 22 pictures in both blocks.
- Learners can work in pairs and use the counting objects for the group. Give each pair a piece of paper. Tell them to take out 10 counters, put them in groups of 2 and write the number 10. Learners must take one group of 2 away and record it as -2, then another group of 2 recording another -2. The number sentence will read as 10-2-2. Learners can count the number of counters left and complete the number sentence. Repeat the activity building up the understanding of repeated subtraction.

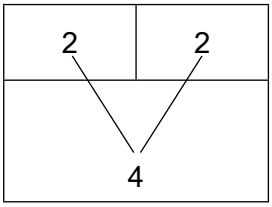
DAY 3 (to take no more than 20 minutes)

- Draw a spider diagram on the board and complete it with the class. Make sure you write the numbers in sequence so that learners are able to identify the pattern, e.g.



Once the spider diagram has been completed, ask a few learners to write the number sentences on the board i.e. 4+6=10, 5+6=11, 6+6=12, etc.

- Hand a container with different objects to each group. Get the learners to count out 22 objects. Ask them to add one more object and count out how many they have now. Show the learners your number chart 23. Ask them to count the pictures on this chart. Place this chart next to number 22.
- Hand out counters to the learners and let them work in pairs. Ask one learner to put out e.g. 2 counters. Now ask them what they are going to do to double the number of counters they have – the partner will put out the same number. Let learners verbalise that double 2 is 4. Then let someone complete the diagram on the board i.e.

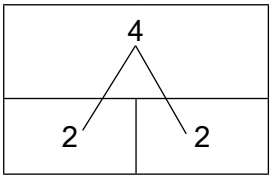


Get them to double a few numbers, each time talking about what they did and then recording it.

DAY 4

- Write addition and subtraction number patterns on the board and as soon as a learner is able to identify the pattern they say "Stop!" and tell you what the pattern is and what the next number sequence will be. An example of a number pattern is: 3+7=? 13+7=? 23+7=? and 10–7=? 20–7=? 30–7=? Ask learners to use their number grids and counters, placing a counter on 3, 13, 23, etc. then adding 7 onto each number and placing another counter on the answer. Make sure that learners are able to identify the patterns.
- Hand a container with different objects to each group. Get the learners to count out 23 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 24. Get the learners to divide their page in four parts. They are to write the number 24, the word twenty four and draw 24 pictures. They must complete all four blocks. They are to draw different pictures in each block.
- Learners work in pairs and put out e.g. 4 counters. Tell them to give half to their partner and to keep half. If they are not able to do this, tell them they must share so that they both have

the same number. At this stage, work with even numbers. Ask a learner to help you record what they have done by filling in the diagram on the board e.g.



Let the learners work out a few numbers, halving each time.

-

DAY 5 (the whole lesson)

- Take the class outside to a place here you can draw some grids with chalk e.g.

6	1	7	3
0	5	9	4
2	8	5	3

10	5	10	6
2	10	4	10
10	3	10	7

Divide the class into a number of smaller groups, each at a grid. Give the following instructions:

- they will take turns to jump and put each foot onto a number so that they are standing on 2 numbers e.g. 1 and 9
- the learner who is jumping must add the two numbers and say the answer
- the rest of the group must record the number sentence and check if the answer is correct.
- once everyone has had a turn, they can start again.

- You can change the rules to suit your class e.g. they can subtract the 2 numbers, they can jump onto one number then double or halve the number, they can add the numbers then write 5 other ways that number can be made, etc.

ASSESSMENT	**Formal :** Formal, recorded Assessment **Informal:** Unrecorded assessment of learners oral responses and ability to participate.

WEEK 7: GROUP TEACHING

Week 7	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 at least 2 different word problems to solve every time you work with them. 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.

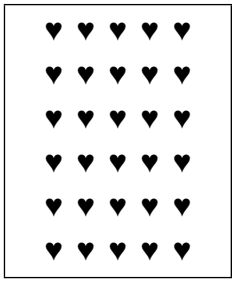
DAILY ACTIVITIES

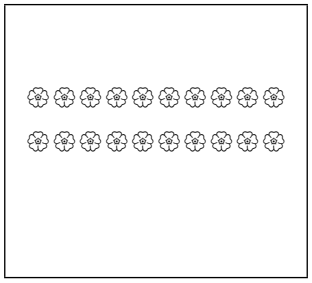
Examples of activities to be done independently. *Work from a Learner's Book, worksheets, work cards, work charts etc.*

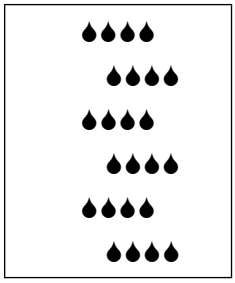
- Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc.

  Fill in the missing parts e.g.

  □ □ ○ □ □ ○ -------- ---------- ----------
- 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.

Working with the groups

GROUP 1

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

- Put 20 counters in front of the learners, let them look for a few moments, then cover the counters. Ask the learners to estimate how many counters there are. Get each learner to write his/her answer on a small piece of paper. Count the counters and ask the learners to join in the counting. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Use an egg carton (6 eggs) and write a single digit number in each division. Place 2 counters in the box and close the lid. Each learner has a turn to shake the box, open it and add the 2 numbers where the counters are. The rest of the group records the number sentence. Make sure each learner in the group has a turn to shake the box and add the numbers.
  ***Tip**: If this is too easy for this group, either make the numbers bigger, or let the learner choose a number between 10 and 20 as a starting number before they open the box. The 2 numbers are then added/subtracted from the chosen number.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one problem type 7 and one type 8 word problem and on Wednesday you will ask one problem type 35 and one type 40 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  ***Tip:** How learners record their solutions is not important though by now learners should be encouraged to record their thinking using numbers if possible. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer. You are not looking for a number sentence – just a solution.*

GROUP 2

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

- Put 20 counters in front of the learners, let them look for a few moments, then cover the counters. Ask the learners to estimate how many counters there are. Get each learner to write his/her answer on a small piece of paper. Count the counters and ask the learners to join in the counting. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Use an egg carton (6 eggs) and write a single digit number in each division. Place 2 counters in the box and close the lid. Each learner has a turn to shake the box, open it and add the 2 numbers where the counters are. The rest of the group records the number sentence. Make sure each learner in the group has a turn to shake the box and add the numbers.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one problem type 7 and one

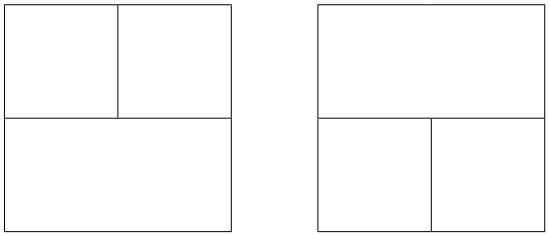
type 8 word problems and on Thursday you will ask one problem type 35 and one type 40 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

Tip: *How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

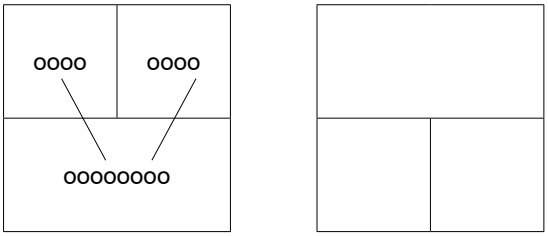
GROUP 3

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

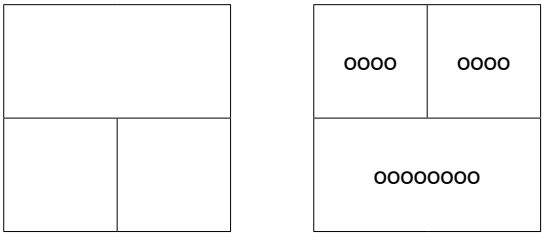
- Put 10 counters in front of the learners, let them look for a few moments, then cover the counters. Ask the learners to estimate how many counters there are. Get each learner to write his/her answer on a small piece of paper. Count the counters and ask the learners to join in the counting. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Place a chart in front of the learners e.g.



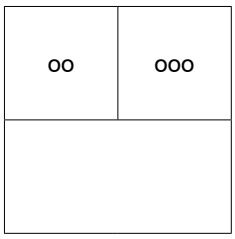
Letting the learners take turns, tell them to either double or halve the number you give them using their counters and putting them in the correct place. For example, if you say double 4 the learner will use his/her counters and place them like this:



If you say half of 8, the learner will use his/her counters and place them like this



- Ask learners to show you how to double 2, using the charts and counters. Now ask them to place 2 counters in one bock and 3 counters in the other i.e.



Ask if they can use doubling to work out how many counters there are. In other words, encourage learners to move the 2 counters from the 1st block and 2 counters from the 2nd block to double 2, then they will add the 1 left in the second block (double 2 is 4, plus 1, equals 5).Do a few more examples of doubling, then use numbers that are close to doubling e.g. 3+3, then 3+4 or 4+4, then 4+5 and so on.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be problem type 7 and on Tuesday the problem will be type 8. On Wednesday you will ask problem type 35 and on Thursday you will ask one type 40 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  Tip: *How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

THIRD TERM: WEEK 8 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count backwards and forwards from any given number
• Count in multiples of 2s, 5s and 10s up to 50 using objects</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO1 AS 6,7,8,9
LO 2 AS 1, 2</td><td rowspan="2">• Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19
• Recognises nearly doubles e.g. 4+4=8 : 4+5=9
• Is able to add and subtract 1-5 to any number to 34
• Completes repeated addition of 2 and 5
• Writes number sentences with more than one operation 3.g. 2+4-3=</td><td colspan="5">Daily:
• Numerosity 1 to 20
• Recognises nearly doubles e.g. 3+3=6; 3+4=7
• Repeated addition and subtraction of 2 and 5</td></tr>
<tr><td>DAY 1

Patterns

Cardinal value 25

Number sentence with more than one operation</td><td>DAY 2

Patterns

Cardinal value 26

Nearly doubles</td><td>DAY 3

Patterns

Cardinal value 27

Number sentence with more than one operation</td><td>DAY 4

Patterns

Cardinal value 28

Add and subtract 1-5 to any number to 34</td><td>DAY 5

Repeated addition and subtraction of 2 and 5

Number names and symbols 1-34</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO 1
AS6,7,9,10,11</td><td rowspan="2">• Estimates up to 20 objects.
• Solves practical problems involving sharing and grouping with numbers to 20, including remainders
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 20</td><td colspan="4">Ask each group the same problems. They can be solved using counters, drawings, etc.
Number range: Group 1 works in 1-50; Group 2 works in 1-35; Group 3 works in 1-30</td><td rowspan="2"></td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one sharing and one grouping word problems with remainder</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
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Group 1 works on their own.
Ask one sharing and one grouping word problems without a remainder</td></tr>
</table>

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.
- You would have collected quite a bit of concrete objects during the first two terms e.g. container with loose objects like bottle caps, ice-cream sticks, cubes; geometric shapes. You would also need semi-concrete apparatus e.g. number symbol cards e.g. 5, number name cards e.g. five, cards with dots to represent different numbers, pictures, number lines, flard cards
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- **Assessment Task 3 will be completed this week.**

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Point to the numbers on a number line or a number grid as learners count from 1 to 100. At the same time let a learner push the same number of beads across on the abacus.
- Count forwards and backwards from any given number to 100

Choose from the following (to make up the 10 mins.):

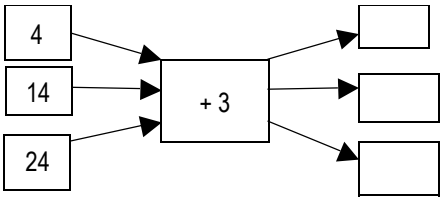
- Let the learners work in a group and write 6 number sentences for a number e.g. for the number 15. The first group to get 6 correct number sentences gets a point. Choose another number and repeat the activity. Keep doing this till one group has 5 points - they are the winners.

  Tip*: You need to give the winning group a reward e.g. a star on their foreheads, a stamp on their hands, go out first at playtime, etc. This helps with motivating all learners to think about what they are doing and increases mental agility. You can use this activity as part of Assessment Task 3.*
- Have a series of number lines prepared on different charts e.g. a number line with numbers from 0-10/11-23 etc. depending on how many numbers you could fit on a number line. Have some questions written down under each number line e.g. which number comes after 21? Which number comes before 29? Which number is between 11 and 13? and so on. You could do one chart a day.
- Make sure each learner has his/her own number line from1 to 30. As you give the command they must place a counter on the correct number. Say things like :*This is the number before 30. This is the number between 28 and 30. This number is 3 more than 26. This number is 2 less than 31.* Now ask which number has the most counters on – all the counters should be on 29.

- Learners position objects according to your instructions e.g. place a book 1st, a pencil 2nd, a ruler 3rd, a red crayon 4th etc. Learners can repeat the pattern. Ask questions such as "What do you see in 8th position?"
- Revise one of number rhymes taught during the term.

DAY 1 (to take no more than 20 minutes)

- Draw a spider diagram on the board and complete it with the class. Make sure you write the numbers in sequence so that learners are able to identify the pattern, e.g.



  Once the spider diagram has been completed, ask a few learners to write the number sentences on the board i.e. 4+3=7, 14+3=17, 24+3=27 etc.
- Revise the number charts 1-24. Put a container of counters in the middle of each group and ask the learners to count out 24 counters and then place a counter on the number 24 on their own number grid. Ask them to put one more counter then ask the learners how many counters they have now. Get the learners to count all the counters again. Introduce number 25 to the learners. Show the learners your number chart 25. Ask them to count the pictures on this chart. Place this chart next to number 24.
- Have a chart prepared with number sentences with more than one operation e.g. 4+2-1=. Hand out counters to the learners. Get the learners to read the first number sentence and ask them questions about the signs being used and see if they understand what is to be done. Get them to work out the first number sentence while you observe the learners. The learners that are coping can be asked to carry on with the next one while you work with the learners that are experiencing difficulty.

  Tip: *Most learners will be able to cope because you have started this type of work during your group work activities. Get those learners that need special attention and guidance into one group and work with them on the mat whilst the others get on with independent activities.*

DAY 2 (to take no more than 20 minutes)

- Write addition and subtraction number patterns on the board and as soon as a learner is able to identify the pattern they say "Stop!" and tell you what the pattern is and what the next number sequence will be. An example of a number pattern is: 8+1=? 18+1=? 28+1=? and 8–1=? 18–1=? 28–1=? Ask learners to use their number grids and counters, placing a counter on 8, 18, 28, etc. then adding 1 onto each number and placing another counter on the answer. Make sure that learners are able to identify the patterns.
- Hand a container with different objects to each group. Get the learners to count out 25 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 26. Get the learners to divide their page in four parts. They are to write

the number 26, the word twenty six and draw 26 pictures. They must complete all four blocks. They are to draw different pictures in each block.

- Hand out counting objects to the learners. They must work in pairs, choose a number e.g. 3, put out the correct number of counters and then double the number by putting out another 3 counters to get the answer 6. Ask each learner (still working in pairs) to take 3 counters and tell you what double 3 is. Now let one learner take 3 counters and the other learner take 4 counters. Ask them to show you how they can find the answer by doubling i.e. 3+3=6, so 3+4-7.

  ***Tip**: As you observe the learners, record your observations as this is one of the activities making up Assessment Task 3.*

DAY 3 (to take no more than 20 minutes)

- Let the learners count in 1s till you clap your hands. Stop them on 26 and let the learners place a counter on the number they stopped at i.e. 26. Ask questions such as *what number is 1 more than 26? What number comes between 26 and 28? Where is 27? How do you write the number 27? How do you write the word twenty seven? What can you tell me about the number 27? Etc.*
- Hand out counters to the learners as well as a prepared worksheet which will assess learners understanding of number sentences with more than one operation, doubles and nearly doubles, adding the numbers 1 to 5 to any number to 34. Revise one or two of the number sentences and then let the learners get on with their work. Walk around and observe and provide assistance if necessary. Here is an example of the type of work you can give the learners.

Complete the patterns.

10+1= 15-1=
11+1= 14-1=
12+1= 13-1=
13+1= 12-1=
14+1= 11-1=
15+1= 10-1=

Fill in the answer

3+4-1=
5-1+3=
4+4-2= 10-3+2=

Try thesel

2+2=☐ 2+3=☐

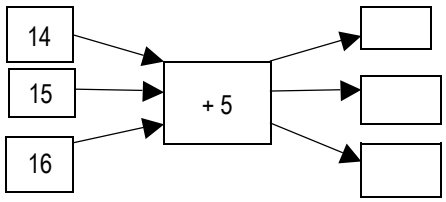
4+4=☐ 4+5☐

***Tip**: Use this as part of Assessment Task 3. Allow learners to use counters or drawings if they need them. You are assessing understanding, not memory.*

DAY 4 (to take no more than 20 minutes)

- Hand a container with different objects to each group. Get the learners to count out 27 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 28. Get the learners to draw a big circle using a template. They must draw 28 pictures inside and then write down the word twenty eight and the number 28.
- Hand out counters to the learners as well as a prepared worksheet which will assess learners understanding of adding and subtracting the numbers 1 to 5 to any number to 34 as well as repeated addition of 2 and 5. Revise one or two of the number sentences and then let the learners get on with their work. Walk around and observe and provide assistance if necessary. Here is an example of the type of work you can give the learners.

Fill in the missing numbers.



Write the number sentence for these pictures.

How many wings are there?

✈ ✈ ✈

☐+☐+☐ =☐

How many fingers are there?



☐+☐+☐+☐ = ☐

***Tip**: Use this as part of Assessment Task 3. Allow learners to use counters or drawings if they need them. You are assessing understanding, not memory.*

DAY 5 (the whole lesson)

- You will divide your class into 2 groups today. While you work with one group, the other will work on their own. After 30 minutes, swap the groups.
- Before the lesson make templates of the shapes - make different sizes as well. One group of learners will use these templates and trace around them, colour them and cut them out. Learners use the shapes that have been cut out to create a picture, e.g. a house with a garden. triangle roof, square house/walls, rectangle door, square windows, round sun, round flowers with triangle shaped leaves, etc.

  ***Tip**: You can extend the learners thinking by saying e.g. the house has 4 square windows, there are 5 round flowers each with 9 triangle shaped leaves, etc.*

- Work with the other group sitting in a circle with you. Do the following activities:
  - Place a 2l plastic bottle of water in the middle of the group and some different size cups. Ask how they can share the water so that everyone gets the same amount. Allow the learners to discuss what they can do to solve the problem and then to try out the best solution.
  - Place a pile of 5c coins in the middle of the group. Ask the group if they think there are enough coins for everyone in the group to get 3 5c coins. Ask them to suggest ways of finding out. Allow them to share them out one at a time and then discuss their initial estimates.
  - Show the group a pack of cards and ask them how many they think everyone can get. Using one of the suggestions, e.g. everyone can get 4, deal out 4 at a time to each member of the group. Discuss if there were enough, were there any over, was 4 too many to begin with, and so on.
- Change groups and the group that was building a shape picture will come and work with you, while the group that was with you will do the first activity.

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 : • Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19 • Recognises nearly doubles e.g. 4+4=8 : 4+5=9 • Is able to add and subtract 1-5 to any number to 34 • Completes repeated addition of 2 and 5 • Writes number sentences with more than one operation e.g. 2+4-3=? • Solves practical problems involving sharing and grouping with numbers to 20, including remainders • Solves problems, and explains solutions, using concrete objects and drawings with numbers up to 20

WEEK 8: GROUP TEACHING

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

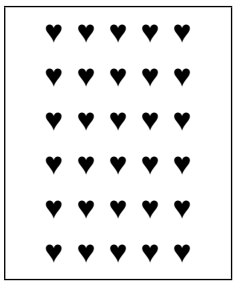
Notes to teacher:

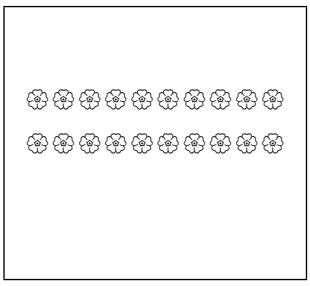
- By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided 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 at least 2 different word problems to solve every time you work with them. 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.**

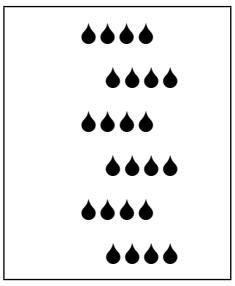
DAILY ACTIVITIES

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

- 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.

	10	11	12	13
+3	13			

Working with the groups

GROUP 1

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

- Take out a story or news that a learner wrote. Try to have about 20 to 25 words. Ask learners to estimate how many words have been used to write the news. Give each learner a chance to say how many s/he thinks there are. Count how many words were used. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Have 3 dice and let learners take turns to roll the dice. All the learners record their own number sentence using the 3 numbers and the signs + and – e.g. the dice show a 3, a 4 and a 2. One learner may record 3+4-2=5 and another learner will record 4-3+2=3.
  ***Tip**: This activity forms part of the 3rd Assessment Task so you need to record your observations.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 Monday the word problems will be one sharing and one grouping where there is a remainder and on Wednesday you will ask one sharing and one grouping without a remainder word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  ***Tip*:** *This activity forms part of the 3rd Assessment Task so you need to record your observations*

GROUP 2

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

- Take out a story or news that a learner wrote. Try to have about 20 to 25 words. Ask learners to estimate how many words have been used to write the news. Give each learner a chance to say how many s/he thinks there are. Count how many words were used. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Have 3 dice and let learners take turns to roll the dice. All the learners record their own number sentence using the 3 numbers and the signs + and – e.g. the dice show a 3, a 4 and a 2. One learner may record 3+4-2=5 and another learner will record 4-3+2=3.
  ***Tip**: This activity forms part of the 3rd Assessment Task so you need to record your observations.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 35. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one sharing and one grouping where there is a remainder and on Thursday you will ask one sharing and one grouping without a remainder word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

Tip**:** *This activity forms part of the 3rd Assessment Task so you need to record your observation. Remember, you are looking to see whether the learners can solve problems and explain how they reached a solution. You are not looking to see if they can write a number sentence for the problem.*

GROUP 3

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

- Take out a story or news that a learner wrote. Try to have about 20 to 25 words. Ask learners to estimate how many words have been used to write the news. Give each learner a chance to say how many s/he thinks there are. Count how many words were used. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Have 3 dice and let learners take turns to roll the dice. All the learners record their own number sentence using the 3 numbers and the signs + and – e.g. the dice show a 3, a 4 and a 2. One learner may record 3+4-2=5 and another learner will record 4-3+2=3.
  Tip*: This activity forms part of the 3rd Assessment Task so you need to record your observations.*
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Monday the word problem will be one sharing with a remainder and on Tuesday the problem will be one grouping where there is a remainder. On Wednesday you will ask one sharing without a remainder and on Thursday the problem will be one grouping without a remainder word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.
  Tip**:** *This activity forms part of the 3rd Assessment Task so you need to record your observation. Remember, you are looking to see whether the learners can solve problems and explain how they reached a solution. You are not looking to see if they can write a number sentence for the problem.*

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 : • Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19. • Recognises nearly doubles e.g. 4+4=8 : 4+5=9 • Is able to add and subtract 1-5 to any number to 34. • Completes repeated addition of 2 and 5. • Writes number sentences with more than one operation e.g. 2+4-3=? • Solves practical problems involving sharing and grouping with numbers to 20, including remainders • Solves problems, and explains solutions, using concrete objects and drawings with numbers up to 20.

THIRD TERM: WEEK 9 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 5 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1-100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count backwards and forwards from any given number
• Count in multiples of 2s, 5s and 10s up to 50 using objects</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7
LO 2 AS 1
LO 3 AS 1
LO4 AS 5</td><td rowspan="3">• Knows, reads and writes number names and symbols from 11-20 and explores their relationship
• Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19
• Recognises nearly doubles e.g. 4+4=8 : 4+5=9
• Is able to add and subtract 1-5 to any number to 34
• Completes repeated addition of 2 and 5
• Writes number sentences with more than one operation 3.g. 2+4-3=</td><td colspan="5">Daily:
• Numerosity of numbers 1 to34
• Orders numbers 1st - 20th
• Addition and subtraction of 1 to 9 to any number up to 34
• Knows, reads and writes number names and symbols from 11 to 20.</td></tr>
<tr><td>DAY 1</td><td>DAY 2</td><td>DAY 3</td><td>DAY 4</td><td>DAY 5</td></tr>
<tr><td>Patterns

Cardinal value 29

Doubles and halves numbers 1-34</td><td>Patterns

Cardinal value 30

Doubles and halves numbers 1-34</td><td>Patterns

Cardinal value 31

Number sentence with more than one operation</td><td>Patterns

Cardinal value 32

Time</td><td>Whole class activity.

Patterns linked to Technology</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO 1 AS6,7,11</td><td rowspan="2">• Estimates up to 20 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 30</td><td colspan="4">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 1-35; Group 3 works in 1-30</td></tr>
<tr><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 7 and one problem type 35 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type7 and one problem type 35 word problems.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 3 and one problem type 41 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
Ask one problem type 3 and one problem type 41 word problems.</td></tr>
</table>

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.
- You will continue to consolidate the concepts you have been developing through daily practise and drill. The more learners are able to discuss what they are doing, the better their understanding will be. So if you find learners talking to each other while they are working you should be glad because that means they understand what they are doing and are confident enough to talk to someone else about their thinking.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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 *what number did we count to? How many counters on your grid? If you put 2 more counters, what number will you get?* Now count backwards, removing one counter each time.

Choose from the following (to make up the 10 mins.):

- 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.
- Write sets of number symbols and number names from 11 to 20 on small pieces of paper or cardboard. Make enough sets so that everyone in the class gets a number. Give each learner a number symbol or number name then take them outside. Tell them to run around and when you blow the whistle (or clap your hands, or beat the drum, etc.) they must find at least one other learner with the same number – either a symbol or a number name. If you have an even number of learners, everyone should have a partner, but if they don't, discuss why not. Repeat the activity, but this time tell learners to find a partner whose number is either 1 more or 1 less than theirs i.e. a learner with 1 will find a partner with the number 2, 2 will find 3, etc. Learners will eventually form a group with the numbers 11 to 20. Tell learners to arrange themselves in order from 11 to 20.
- 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?

DAY 1 (to take no more than 20 minutes)

- Make a pattern using body percussion which the learners will repeat e.g. clap, clap, stamp, clap, clap, stamp. In groups learners add to this pattern e.g. clap, clap, stamp, click, clap, clap, stamp, click. Each group has a turn to perform their pattern while the other groups try to identify the changes to the original pattern.
- Write the pattern 4+2=, 14+2=, 24+2=, etc. on the board. Learners identify the pattern then complete it to 94+2=?
- Revise the number charts 1-28. Put a container of counters in the middle of each group and ask the learners to count out 28 counters and then place a counter on the number 28 on their own number grid. Ask them to put one more counter on the group of 28 and ask the learners how many counters they have now. Get the learners to count all the counters again. Introduce number 29 to the learners. Show the learners your number chart 29. Ask them to count the pictures on this chart. Place this chart next to number 28.
- Learners work in pairs. One learner puts out a certain number of counters e.g. 6. The other learner must put out the same number of counters. They then say 6 and 6 gives us 12 or 6+6=12. Therefore double 6 is 12. Now the first learner puts out the same number e.g. 6, and the other learner puts out one more than the same number i.e. puts out 7. They say 6+6=12 and 6+7=13 or double 6 is 12, double 6 plus 1 is 13.

DAY 2 (to take no more than 20 minutes)

- Write the following on the board e.g. 5–1=? 15–1=? 25–1=? As soon as a learner identifies the pattern the learner says STOP! The learner describes the pattern and says what the next number will be. Keep recording the pattern until you have the complete pattern to 95+1 written on the board.
- Hand a container with different objects to each group. Get the learners to count out 29 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 30. Get the learners to draw a big circle using a template. They must draw 30 pictures inside and then write down the word thirty and the number 30. Revise the number name and number symbol for 29.
- Hand out counting objects and number cards to the learners. They must work in pairs. One learner picks up a number e.g. 8 and puts out 8 counters. The other learner must find 8 in his/her pack and also put out 8 counters. They must double/add the 2 numbers and find the answer. The learners are building the concept of doubling by understanding that they are adding the same number e.g. 4+4=8.

DAY 3 (to take no more than 20 minutes)

- Get the learners to do the following e.g. 5–2=? 15–2=? 25–2=? They will begin to observe the pattern.
- Give each group different sets of interlocking counters e.g. paper clips, unifix blocks, beads and shoelaces, toothpicks and elastic bands, etc. Working in pairs, ask learners to count out 30 objects and put them together e.g. join all 30 unifix blocks in a long line, or thread 30 beads onto a shoelace, etc. Have a numberline or number grid on the board and place a marker on the number 30. Ask questions such as *if you make your group 1 less, how many will you have? Show me the number I must put the marker on. If you add 1 to your group how many will you have? Show me the number I must put the marker on? If I make the number 2 less, how many will you have?* and so on. Now ask learners to work with a partner and make their bodies into the shape of the number 31. In their books learners write the number symbol, number name and pictures for the number 31.
- Ask the following type of questions *I had 4 sweets and Mom gave me 2 more. Then I ate 1. How many do I have left.* After learners have worked out the answer (using counters if they need them), ask someone to write the number sentence on the board i.e. 4+2-1=5. Do a few similar examples and let learners write the number sentences in their books.

DAY 4 (to take no more than 20 minutes)

- Give each pair of learners a piece of paper and ask them to write the first 3 number sentences of a number pattern e.g. 6+3=, 16+3=, 26+3= or 25-1=, 24-1=, 23-1= etc. Each group then swaps their paper with another group and continues writing the number pattern once they have identified it.
- Hand a container with different objects to each group. Get the learners to count out 31 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 32. Get the learners to draw a big circle using a template. They must draw 32 pictures inside and then write down the word thirty two and the number 32.
- Revise days of the week, months of the year and one month on the calendar. Do what you did in your previous lessons. Use your clock face to revise time.

DAY 5 (the whole lesson)

- Give each learner a square piece of paper, 4 strips of 1 colour and 4 strips of a different colour. Using alternate colours, the learners paste one end on the strips at the one edge of the square and then the other end of the strips to the opposite edge of the square. There will be 4 strips across the square. Now show the learners how to paste the remaining strips on one of the other edges of the square, leaving the opposite end free. Learners use the free end and weave the strips through the ones already fixed at both ends. Once all the strips have been woven through, learners paste the free end to the last edge. Display the patterns on the walls, or where other classes can see them.

ASSESSMENT	**Formal :** 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:

- 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 at least 2 different word problems to solve every time you work with them. 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
- Addition and subtraction number sentences.
- Simple tables e.g.

	20	30	40	50
+5	25			

- 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 20 minutes.*

- Take out some used A4 paper. Ask the learners to estimate how many sheets would be required to cover the surface of your table. Give each learner a chance to say how many s/he thinks there are. Get the learners to place the sheets on the table. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number? Depending on the size of your table you might have a lot of sheets left over. You can ask the learners how many sheets it would take to cover 2 or even 3 tables with the paper you have.
- 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.
  - 4 rows. Ask how many counters are in each row. Ask if the rows are equal, and why.
  - 3 equal rows. Ask how many counters are in each row.

- 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 different 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 one type 7 and one type 35 problem and on Wednesday you will ask one type 3 and one type 41 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers. ***Tip****: Make sure learners are introduced to a variety of problems because different problems require different solution strategies. Individual skills and interests vary, so what is a problem for one learner will not be a problem for another learner.*

GROUP 2

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

- Take out some used A4 paper. Ask the learners to estimate how many sheets would be required to cover the surface of your table. Give each learner a chance to say how many s/he thinks there are. Get the learners to place the sheets on the table. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- 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 different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 35. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be one type 7 and one type 35 problem and on Thursday you will ask one type 3 and one type 41 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers. ***Tip****: Make sure learners are introduced to a variety of problems because different problems require different solution strategies. Individual skills and interests vary, so what is a problem for one learner will not be a problem for another learner.*

GROUP 3

*This group works with the teacher **every day** 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?

- Let each learner have a turn to throw 2 dice and add them together.
- This is a written activity. Depending on the ability of your learners, this activity can be completed under your direct supervision or given as an independent activity. Have work charts/worksheets or work cards prepared for this activity. The learners can complete the addition and subtraction
  number sentences e.g. 12+12=? 24-10=? Learners can draw pictures or use counting objects to compete their work.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be problem type 7 and on Tuesday the problem will be type 35. On Wednesday you will ask problem type 1 and on Thursday you will ask one type 41 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers. Remember, though, that it is the solution you are looking for, not a number sentence.

Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

THIRD TERM: WEEK 10 OVERVIEW

<table>
<tr><th>COMPONENT</th><th>MILESTONES</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th><th>DAY 5</th></tr>
<tr><td>COUNTING

LO 1 AS 1,2,</td><td>• Counts out objects to 34
• Counts to 100 on the number line
• Counts in multiples of 2, 5 and 10 using concrete objects</td><td colspan="5">Daily:
• Rote count from 1to100
• Count in 1s from 1 to 100 while pointing on a number line/ number grid or count using an abacus. Ask questions using before, after, between etc.
• Count backwards and forwards from any given number
• Count in multiples of 2s, 5s and 10s up to 50 using objects</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO1 AS 3,4,7
LO 2 AS 1
LO 3 AS 1
LO4 AS 5</td><td rowspan="2">• Knows, reads and writes number names and symbols from 11-20 and explores their relationship
• Orders numbers (1st-10th)
• Identifies numerosity (profile) of numbers 1 to 20 e.g. 18 is 1 more than 17 or 1 less than 19
• Is able to add and subtract 1-5 to any number to 20
• Designs own patterns, including multiples of 2 and 5
• Collects, sorts, explains and draws a collection of objects according to one attribute</td><td colspan="5">Daily:
• Numerosity of numbers 1to 34
• Orders numbers 1st to 10th
• Add and subtract 1 to 6 to any number up to 34</td></tr>
<tr><td>DAY 1

Patterns

Cardinal value of 33

Data handling pictograph</td><td>DAY 2

Patterns

Cardinal value of 34

Data handling pictograph</td><td>DAY 3

Patterns

Cardinal value of 11 to 20

Data handling pictograph</td><td>DAY 4

Patterns

Cardinal value of 21 to 34

Data handling pictograph</td><td>DAY 5

Length

Number names and symbols 1-34</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS6,7,11</td><td>• Estimates up to 10 objects
• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</td><td colspan="4">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</td><td></td></tr>
<tr><td></td><td>Group 1 and 3 work with teacher, one group at a time.
Group 2 works on their own.
Ask one problem type 27 and one problem type 30 word problems.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Group 1 works on their own.
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Group 2 works on their own.
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Group 1 works on their own.
Ask one problem type 28 and one problem type 32 word problems.</td><td></td></tr>
</table>

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.
- Delegate duties to responsible learners to help you hand out resources like counters, puzzles etc. to the learners.
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- As this is probably the last week of the term, make sure you keep teaching until the last day. Young children like the security of knowing what to do every day and of being kept meaningfully occupied. Discipline problems occur when the learners are bored!

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

Daily Activities.(to take no more than 10 minutes)

These must be done daily:

- 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.
- Learners point to the numbers on a number line or a number grid as they count from 1 to 100. If an abacus is available let learners push the beads across while the others count. This should not be a rote counting activity, but one where learners are engaged in thinking about what they are counting.
- Count forwards and backwards from any given number to 100
- Count in 2s, 5s and 10s up to 50 using concrete objects, an abacus or fingers

Choose from the following (to make up the 10 mins.):

- You need to develop the numerosity of numbers 1 to 20. This means that learners will know and understand the numbers and their relationship to each other. Get the learners to choose a number between 1 and 20 e.g. the number 18 is chosen. You would ask questions such as e.g. what is one more than 18? How much is 13 plus 5? If I take 2 away from 20, how many will I have? Which number is before 19? 18 is between which 2 numbers? 18 is double which number? You can think of other examples.
- Count out the odd numbers or even numbers on a number line by placing a counter on the number as it is counted.
- Do some doubling of numbers and nearly doubles by asking questions e.g. if 3+3=6 how much is 3+4=? Encourage learners to use counters to show what they are doing.
- Play “I spy with my little eye a number …” Complete the rhyme by asking questions such as:
  - that is an even number more than 10 but less than 13.
  - that is double 5.
  - that is 11 plus 2 take away 3.

DAY 1 (to take no more than 20 minutes)

- Write addition and subtraction number patterns on the board and as soon as a learner is able to identify the pattern they say "StopL" and tell you what the pattern is and what the next number sequence will be. An example of a number pattern is: 7+2=? 17+2=? 27+2=? and 7–2=? 17–2=? 27–2=? Ask learners to use their number grids and counters, placing a counter on 7, 17, 27, etc. then adding 2 onto each number and placing another counter on the answer. Make sure that learners are able to identify the patterns.
- Revise the number charts 1-32. Take out magazines or books that you have in the class. Get the learners to count out the 32 books while you or a learner places them on the desk. Put out one more book. Ask the learners how many books they have now. Get the learners to count all the books again. Introduce number 33 to the learners. Give each group a stack of books/magazines/rulers etc and ask them to count out 33 and bundle them together. Show the learners your number chart 33. Ask them to count the pictures on this chart. Place this chart next to number 32.
- Get the learners to take out their lunches and check what they have for lunch. Get the learners to group and sort themselves out according to the foods that they have e.g. cheese, peanut butter, cold meat, fish, fruit and yoghurt. Once the learners have sorted themselves out, get to stand in lines and count each group. Ask questions like how many learners have cheese/peanut butter/cold meat/fish/fruit and yoghurt. Which is the most popular food for today? Etc.

DAY 2 (to take no more than 20 minutes)

- Write addition and subtraction number patterns on the board and as soon as a learner is able to identify the pattern they say "StopL" and tell you what the pattern is and what the next number sequence will be. An example of a number pattern is: 8+3=? 18+3=? 28+3=? and 8–3=? 18–3=? 28–3=? Ask learners to use their number grids and counters, placing a counter on 8, 18, 28, etc. then adding 2 onto each number and placing another counter on the answer. Make sure that learners are able to identify the patterns.
- Hand a container with different objects to each group. Get the learners to count out 33 objects. Ask them to add one more object and count out how many they have now. Revise the number chart 34. Get the learners to draw a big circle using a template. They must draw 34 pictures inside and then write down the word thirty four and the number 34.
- Establish what mode of transport the learners use to come to school e.g. bus, car, taxi, van, walking. Give each learner a small piece of paper on which they write the word or draw a picture of how they come to school. Get them to sort and group themselves according to their mode of transport. Ask them to stand in lines and count each line of learners. Each line then sticks their picture on a prepared grid i.e. all the cars together in a line, all the taxi's in a line, etc. Ask questions like how many children come to school by car/bus/taxi/van/walking. The most number of children come to school by_____.

DAY 3 (to take no more than 20 minutes)

- Ask the learners to make up their own pattern using +4 and -4. Choose a few learners to share their pattern with the rest of the class.
- Hand out number cards 11-20 and counting objects. Get the learners to take out one card, read the number and put out the correct number of counters. Walk around and observe. You can also call out a number and the learners must put out the correct number of counters.
- Hand out different counting objects to each group of learners. Tell them to sort out the objects and place them in a line on their desks. They then must count up each group of objects and write the number on a piece of paper. Ask questions to see if children understand what they are doing. Have graphs prepared on charts and hand them out to each group. Learners must make a pictograph of the number of different objects that they have in their groups e.g. 5 matchsticks, 7 bottle caps, 3 shells, 10 beans etc.

DAY 4 (to take no more than 20 minutes)

- Learners will use their number grids and counters and place a counter on the numbers 10, 20, 30 etc. Now ask them to put their fingers on the number 10, count on 5 and place another counter (on the 15). Do the same with 20, 30, etc. Encourage learners to identify the different patterns as they emenge.
- Hand out number cards 21-34 and counting objects. Get the learners to take out one card, read the number and put out the correct number of counters. Walk around and observe. You can also call out a number and the learners must put out the correct number of containers.
- Write down the names of the 12 months of the year on a chart. Give each learner a piece of paper on which they write their name. Now let the learners sort themselves into groups according to the month of their birthday. Get one group at a time come up to your chart and complete the graph by sticking their names in the correct column e.g.

Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		Alan									
Sipho		Dudu									
Mary	Thoko	Ria									

DAY 5 (to take no more than 20 minutes)

- Hand out strips of paper, scissors, glue and a chart to each group. Tell the learners to take out their pencil cases. They are to use the strip of paper and measure their pencil case. They must write their name of the paper and then stick it (under each other) on the chart provided for each group. After this activity is complete they must check who has the longest pencil case/who has the shortest pencil case and whose pencil cases are of the same length. Revise words short, shorter, long, longer, shortest, longest with the learners. Revise tall and short as well.
- Let each group choose their own number for 1 to 34 and then make a poster about their number. They must also decorate the poster, and write all their names at the bottom of the poster. Display the posters.

ASSESSMENT	**Formal :** Formal, recorded Assessment **Informal:** Unrecorded assessment of learners oral responses and ability to participate.

WEEK 10: GROUP TEACHING

Week 10	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 at least 2 different word problems to solve every time you work with them. 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.*

- Sequencing numbers by filling in the missing numbers 1-20 on a number line.
- Activities for before/after/between/more/less.
- Matching number names and symbols 20 to 34.
- Designing own patterns.
- Addition and subtraction up to 20 e.g.

10+1=	15-1=	2+1=	2-1=
11+1=	14-1=	12+1=	12-1=
12+1=	13-1=	22+1=	22-1=
13+1=	12-1=	32+1=	32-1=
14+1=	11-1=		
15+1=	10-1=		

- 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.

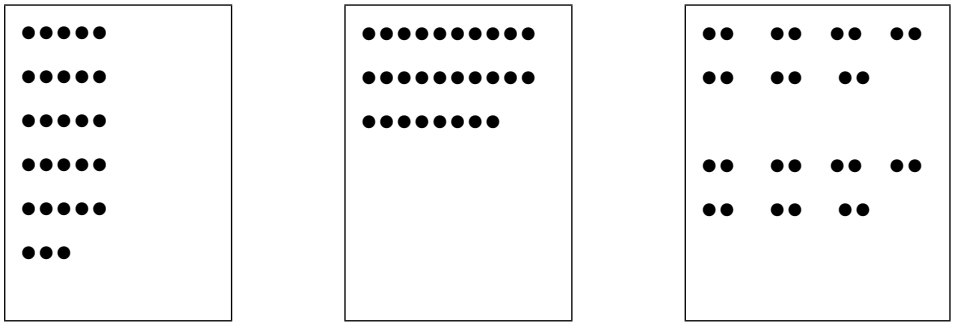
1. _____
2. _____
3. _____
4. _____
5. _____

Working with the groups

GROUP 1

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

- Ask the learners to estimate how many steps it would take to reach the back of the classroom. Get a learner to take the steps and count. Ask who estimated too many and who estimated too few. Did anyone estimate 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:



If your learners are able to write down what they have done, encourage them to do so. You will expect something like this:

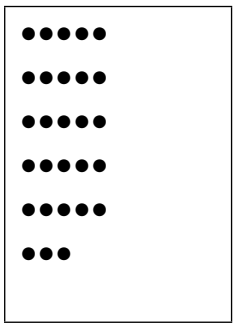
28 = 5+5+5+5+5+3 or 28 = 10+10+8 or 28 = 14+14, etc.

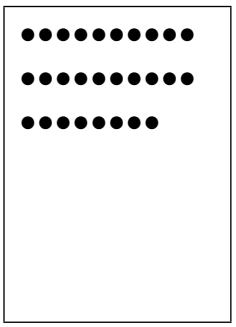
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 60. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be one type 27 and one type 30 problem and on Wednesday you will ask one type 28 and one type 32 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

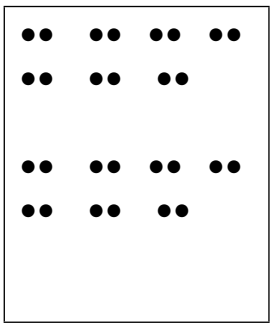
GROUP 2

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

- Get the learners to estimate how many hand spans they would use to measure the length of their desk. Ask who estimated too many and who estimated too few. Did anyone estimate 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:







- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different 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 one type 27 and one type 30 problem and on Thursday you will ask one type 28 and one type 32 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

GROUP 3

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

- Get the learners to estimate how many hand spans they would use to measure the length of their desk. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- 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.
- This is a written activity. Depending on the ability of your learners, this activity can be completed under your direct supervision or given as an independent activity. Have work charts/worksheets or work cards prepared for this activity. The learners can complete addition and subtraction number sentences e.g. 14+4=? 28-1=? Learners can draw pictures or use counting objects to compete their work.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 30. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be problem type 27 and on Tuesday the problem will be type 30. On Wednesday you will ask problem type 28 and on Thursday you will ask one type 32 word problem. Once learners have found a solution, encourage them to record their thinking by using numbers.

  Tip: *How learners record their solutions is not important. At this stage you are not looking for a neat number sentence, but rather a solution to a problem. Learners must be encouraged to record their thinking using pictures as well as numbers. The solution needs to be clearly marked, for example, putting a circle around the number that is the answer.*

Assessment	**Formal :** Formal, recorded Assessment **Informal :** Unrecorded assessment of learners oral responses and ability to participate

Notes: