Foundations For Learning

Foundation Phase Numeracy Lesson plans

Fourth term

Grade 3

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FOURTH 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 in 10s to 750 Whole class : Daily counting in multiples of 2, 3, 5 , 10, 20, 25, 50, 100 and 1000									
	Whole class: Daily rational counting in 1s, 2s, 5s,10s, 20s, 25s and 100s forwards and backwards, starting and ending at any number as indicated									
	Mental calculations daily									

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Concept Development and Number Sense	Orders numbers			Orders numbers		Orders numbers			Orders numbers	
	Reads and writes number names and symbols							Reads and writes number names and symbols		
	Calculates addition and subtraction of two 3-digit numbers					Calculates addition and subtraction of two 3-digit numbers				
	Rounds off numbers to nearest 10			Builds up multiplication tables of 2, 5, 10						
				Calculates division of 2-digit by 1-digit numbers				Calculates division of 2-digit by 1-digit numbers		
	Expanded notation of 3-digit numbers Builds up and breaks down 3-digit numbers practically and written									
	Develops number relationships of numbers 500 to 1000									
			Extends number sequences			Extends number sequences	Money problems	Extends number sequences Copies geometric patterns		
	Investigates distances around objects		Draws map of the classroom. Investigates area of a surface.			Data handling		Reads maps		Investigates distance.
	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	Count unstructured objects, put into groups and write the number name and number symbol.	Oral activities to round off to the nearest 10. Written activities dealing with extending number sequences, addition and subtraction of 2- and 3-digit numbers. Practical activities dealing with measuring in the context of capacity.	
ASSESSMENT TASK 1 COMPLETED			
WEEK 3			
WEEK 4			
WEEK 5		Daily mental calculations. Written activities dealing with expanded notation, building up and breaking down 3-digit numbers and multiplication. Written and practical activities dealing with division. Practical activity dealing with investigating the area of a surface.	Written activity dealing with drawing a map.
ASSESSMENT TASK 2 COMPLETED			
WEEK 6			
WEEK 7	Count structured objects, write the number name and number symbol.	Written activities dealing with addition, subtraction, multiplication and division. Written and oral activities dealing with the relationship of numbers. Written activity collecting and interpreting data.	Oral, practical and written activities dealing with solving problems and explaining solutions
ASSESSMENT TASK 3 COMPLETED			
WEEK 8			
WEEK 9			
WEEK 1O			

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

FOURTH 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</td><td>• Counts forwards and backwards in multiples of 2s to 1000.
• Counts in 2s and 5s forwards and backwards from any given number to 1000.</td><td colspan="5">Daily :
• Counts in 10s, forwards and backwards from any given number to 1000
• Counts in multiples of 2, 3, 5, 10, 20, 25, 50, 100 and 1000
• Counting in 1s, 2s, 5s, 10s, 20s, 25s and 100s forwards and backwards starting and ending at any number as indicated</td></tr>
<tr><td rowspan="4">NUMBER SENSE AND MENTAL

LO1
AS3,5,8,9,10
LO 4 AS6</td><td rowspan="4">• Reads and writes number names and symbols for 1 to 750
• Number knowledge and mental computations
- Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34
- Uses flard cards to build up and break down 3-digit numbers to 1000
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Rounds off numbers to the nearest 10</td><td colspan="5">Daily:
• Estimate - numbers
• Multiplication of 2, 5 and 10
• Revision of ordering numbers 1st to 1000th</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>Estimate, measure and compare capacity using non standard and standard measures</td><td>Knows and reads and writes number names and symbols

Expanded notation of of numbers to 1000</td><td>Knows and reads and writes number names and symbols for 1 to 750

Round off numbers to the nearest 10.</td><td>Knows and reads and writes number names and symbols for 1 to 750

Doubling, halving, addition, subtraction, deomposing</td><td rowspan="2">WHOLE CLASS ACTIVITY

Investigate the distance around objects and shapes using string around object.</td></tr>
<tr><td>GROUP TEACHING

LO1
AS7,8,10,11,12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off 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 up to 750; Group 2 works up to 500; Group 3 works up to 300</td></tr>
<tr><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 sharing with a remainder and 1 change type word problem
Group 2 works in its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 sharing with a remainder and 1 change type word problem
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher one group at a time
Ask 1 compare and 1 repeated addition type word problem
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher one group at a time
Ask 1 compare and 1 repeated addition type word problem
Group 1 works on its own.</td></tr>
</table>

WEEK 1: WHOLE CLASS

WEEK 1	WHOLE CLASS COMPONENT (Counting and Mental/Number Sense)

Notes to the teacher:

- Week 1 will be spent doing revision and consolidation of the concepts covered in during Term3.
- The Numeracy time allocation is an hour and forty-five minutes (1H45) per day. It would be ideal to have all this time together. The Numeracy time is divided into 3 components viz. Counting (10 minutes), Mental and Number sense (20 to 30 minutes) and group teaching (30 minutes per group).
- Start the day using the containers AND looking at the clocks telling the time.
- There should be large numbercharts – 1 – 200; 201 – 400; 401 – 600; 601 – 800; 801 – 1000. If you do not have them, then make them!
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- This is now the last term of the year and you will need to plan carefully in order to fit all the assessment in before writing reports. Remember, though, that assessment is continuous and is part of the everyday teaching and learning activities.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Daily rote counting to 1000.
- Daily rational counting in multiples of 2, 3, 5, 10, 20, 25 and 100 to 1000 some days using structured (grouped together) objects or pictures and other days using loose objects.
- Daily rational counting in 1, 2s, 5s, 10s, 20s, 25s, and 100s forwards and backwards, starting and ending at any number as indicated to and from 1000.

Choose from the following (to make up 10 min).

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Write number names and symbols to 750 on pieces of paper and 'hide' them on the walls (put them randomly among the pictures, posters, etc on the walls). Put 10 different ones every day. Learners must find the hidden number words and symbols during the day.
- Point to numbers on the number line or number grid and learners round off to the nearest 10.
- Hand out the containers with all the counters etc. and let the learners work in pairs or fours. Let them estimate the number of counters, then count them by putting them into groups of 3s, 4s, 5s, 10s. Learners show the number using flard cards for expanded notation.
- Using numbers in the range 1-100, take any number and double it. Multiply the answer by 2.
- Using numbers in the range 1-50, multiply by 10 and halve the answer.

DAY 1 (to take no more than 20 minutes)

- Today the learners will be measuring capacity. You must put them into 5 groups. You must make sure that there are different measuring spoons, cups, jugs, bottles etc in groups at different working stations as well as a bucket of water.
- The learners must try and estimate how many bottles, spoons, cups or jugs it will take to fill the bucket and record their estimation. For the next step the learners must measure accurately by pouring water into the containers, bottles, then cups etc and record the correct measurement and compare the estimation. At this stage you will just be using cups and bottles.

DAY 2 (to take no more than 20 minutes)

- Write down 3-digit numbers on cards e.g. 462, 228, 321 etc. and number names on other cards e.g. six hundred and seventy-four, five hundred and twenty-nine etc. You must make enough cards so that half the class gets number symbols and half the class gets number names. Take the class outside and, using a demarcated area, tell learners to find their partner i.e. symbol and word. If there is no matching card, they must find the symbol or word that is the closest to their number. The matching pairs stand on one side and the unmatched pairs stand on the other. The matched pairs have to say what the difference is between the unmatched pairs e.g. symbol is 349, word is three hundred and eighty four, difference is 35.
- Each learner chooses their own 3-digit number between 600 and 1 000 and writes it as expanded notation using 50s, 100s and 200s e.g.
  - 738 → 50+50+50+50+50+50+50+50+50+50+50+50+50+50+30+8
  - 738→ 100+100+100+100+100+100+100+30+8
  - 738→ 200+200+200+200-50-10-2 etc.

DAY 3 (to take no more than 20 minutes)

- Let the learners work in the groups as they are seated. Each group must have 2 large pieces of paper, one where you have drawn a number line and marked it off in 10s to 100 and a second piece on which you have drawn a number line and marked it off in 10s from 200 to 300. Give each group an envelope with different numbers e.g. 45, 44, 62, 37, 24, 33, 49, 65, 77, 98, 12, 21, 36, 18 etc and 209, 245, 246, 248, 206, 227, 225 etc. Each learner in the group has a turn to place a number at the nearest 10. When all the numbers have been used, let the "team leader" show and discuss with the rest of the class what her/his group did.

DAY 4 (to take no more than 20 minutes)

- Put learners in groups on the floor. Give each group a large piece of paper with the following exercises written on different pieces of paper:

With this number 278	**With this number 621**
1. Write as expanded notation	1. Write the number name
2. Double	2. Round off to the nearest 10
3. Halve	3. Add 254
4. Add 21	4 Subtract 310
5. Subtract 143	5. Write as expanded notation
With this number 162	**With this number 636**
1. Double	1. Add 32
2.Add 30	2.Subtract 14
3. Multiply by 2	3. Write as expanded notation
4. Subtract 41	4. Write the number name
5. Round of to the nearest 10	5. Divide by 3.
Make up your own as well	

Learners must work in groups and when all have completed let the "team leader" of each group put the paper on the wall to display it. During the day learners can look at the papers and check that they are correct..

DAY 5 (whole lesson)

- Today the learners are going to investigate the distance around objects and shapes using string. Put the learners into groups and give each group a ball of wool or string. Give them a list of objects to measure with the wool or string. The learners must measure the object e.g. table, then cut the wool/string, write table on a piece of paper and glue the wool/sting to the paper. They must do the same with each object/shape that they measure. Each group can have 10 different objects to measure. When all have completed you can display all the different measure objects with the wool/string around the classroom.

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

WEEK 1: GROUP TEACHING

WEEK 1	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)

Notes to teacher:

- For the first part of the lesson (about 30 minutes) do the counting and number sense activities with the whole class. Then explain the activities they will do while you are busy with a group. This is the Independent work suggested. Have extra activities, such a jig-saw puzzle, ready for the quick workers. Work with 2 groups a day for about 30 minutes each.
- Do not be afraid to ask learners to solve a problem. They come to school already being good problem solvers! You are not asking them to write down number expressions. You are giving them a problem situation and asking them to solve it through talking to each other, using concrete apparatus, drawing pictures and then explaining how they solved the problem and what their solution is. Learners are working in 3 mixed ability or social groups.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learners' Book, worksheets, work cards, work from the board, etc.*

1. Write the numbers in words.

407 – four hundred and seven

246 _____

242 _____

539 _____

640 _____

322 _____

123 _____

467 _____
323 _____
400 _____
379 _____

2. Find 859 on the 901 – 100 numberchart.
   How many 100s in 859?
   How many ones in 859?
   How many tens in 859?
   What number comes before 859?
   What number comes after 859?
   What is ten less than 859?
   What is ten more than 859?

3. Write the numbers for :

Six hundred and fifty seven is _____
Three hundred and thirty-six is _____
Four hundred and seventy-three is _____
One hundred and forty-five is _____
Five hundred and sixty is _____
Two hundred and eighty nine is _____

4. Fill in the missing numbers.

574 _____ 594	541 _____ 561
636 _____ 656	605 _____ 625
239 _____259	523 _____ 543
277 _____297	465 _____ 485
472 _____492	567 _____ 587

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes.*

- Cut out some pictures of people e.g. different men, women, children, and make your own picture with 6 people. Place the picture in the middle of the group and let the learners look at it for a moment, then cover it. Ask learners to estimate how many fingers and toes altogether there would be in the picture if they could see them all. Once learners have written down their estimates, uncover the picture and let the learners tell you how they can find out the number of fingers and toes (count 20 for each person). Once the number has been found, learners say who estimated too many or too few, or the correct number.
- Give the learners a number sentence, e.g. 48 ÷ ∏=12, and let them make their own word problem around the numbers. Let the learners write down their problems which can be used for one of the other groups.

- Make sure each learner has access to paper, writing tools, counters and a number square. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Use the number range 1 to 750. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 sharing with a remainder and 1 change type, using types 3 and 35 and on Wednesday you will ask 1 compare and 1 repeated addition type word problem, using types 12 and 22. Learners must discuss the problem, record how they found their solution and then tell the group how they reached a solution. It is important that learners are given an opportunity to verbalise their thinking while others listen critically to identify similarities and differences in their own thinking.

GROUP 2

*On **Tuesday and Thursday** this group works with the teacher for 30 minutes.*

- Cut out some pictures of people e.g. different men, women, children, and make your own picture with 4 people. Place the picture in the middle of the group and let the learners look at it for a moment, then cover it. Ask learners to estimate how many fingers and toes altogether there would be in the picture if they could see them all. Once learners have written down their estimates, uncover the picture and let the learners tell you how they can find out the number of fingers and toes (count 20 for each person). Once the number has been found, learners say who estimated too many or too few, or the correct number.
- Give the learners a number sentence, e.g. 30 ÷ ☐=15, and let them make their own word problem around the numbers. Let the learners write down their problems which can be used for one of the other groups.
- Make sure each learner has access to paper, writing tools, counters and a number square. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Use the number range 1 to 500. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 sharing with a remainder and 1 change type, using types 3 and 35 and on Thursday you will ask 1 compare and 1 repeated addition type word problem, using types 12 and 22. Learners must discuss the problem, record how they found their solution and then tell the group how they reached a solution. It is important that learners are given an opportunity to verbalise their thinking while others listen critically to identify similarities and differences in their own thinking.

GROUP 3

This group works with the teacher for 25 minutes everyday.

- Cut out some pictures of people e.g. different men, women, children, and make your own picture with 5 people. Place the picture in the middle of the group and let the learners look at it for a moment, then cover it. Ask learners to estimate how many fingers and toes altogether there would be in the picture if they could see them all. Once learners have written down their estimates, uncover the picture and let the learners tell you how they can find out the number of fingers (count 10 for each person). Once the number has been found, learners say who estimated too many or too few, or the correct number.

• Give the learners a number sentence, e.g. 3 x ∏=15 , and let them make their own word problem around the numbers. Let the learners write down their problems which can be used for one of the other groups. • Make sure each learner has access to paper, writing tools, counters and a number square. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Use the number range 1 to 300. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 sharing with a remainder and 1 change type, using types 3 and 35 and on Wednesday and Thursday you will give 2 of the problems developed by Group 2. Learners must discuss the problems, record how they found their solution and then tell the group how they reached a solution. It is important that learners are given an opportunity to verbalise their thinking while others listen critically to identify similarities and differences in their own thinking.	
Assessment	**Formal:** No formal recorded assessment. **Informal**: Unrecorded assessment of learners' oral responses and ability to participate.

FOURTH 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</td><td>• Counts forwards and backwards in multiples of 5s to 1000
• Counts in multiples of 3s.</td><td colspan="5">Daily :
• Count in 3s forwards and backwards from any given number.
• Count from a given number to any number forwards and backwards
• Counting in multiples of 5s to 1000</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO1 AS 3, 5, 8, 9
LO3 AS 5, 6</td><td rowspan="3">• Reads and writes number symbols and number names to at least 1 000
• Number knowledge and mental computations
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Builds up and breaks down 3 digit numbers e.g. 235=200+30+5 OR 100+100+30+5 OR 100+50+50+20+15
- Rounds off numbers to the nearest 10
• Investigates the distance around objects and shapes using string
• Estimates, measure and compares capacity using non-standard and standard measures</td><td colspan="5">Daily:
• Counts odd and even numbers from any given number to 1000.
• Adds on numbers using number chart.
• Tell the time throughout the day.</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>Reads and writes number names and symbols from 1 to 750.

Round off numbers to the nearest 10.</td><td>Round off numbers to the nearest 10.

Builds up and breaks down numbers</td><td>Estimates, measure and compares capacity using non-standard and standard measures

Calculate using addition and subtraction of two three digit numbers.</td><td>Estimates, measure and compares capacity using non-standard and standard measures

Calculate using addition and subtraction of two three digit numbers.</td><td rowspan="2">WHOLE CLASS ACTIVITY

Investigate the distance around objects and shapes using string.</td></tr>
<tr><td>GROUP TEACHING

LO1 AS 7,8,10, 11, 12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 works in 500 to 1000; Group 2 works up to 750; Group3 works up to 500</td></tr>
<tr><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 grouping and 1 comparison type word problem
Group 2 works on its own</td><td>Groups 2 and 3 work with teacher, one group at a time..
Ask 1 grouping and 1 comparison type word problem
Group 1 works on its own</td><td>Groups 1 and 3 work with teacher, one group at a time
Ask 1 multiplication and 1 rate type word problem
Group 2 works on its own</td><td>Groups 2 and 3 work with the teacher.
Ask 1 multiplication and 1 rate type word problem
Group 1 works on its own</td></tr>
</table>

WEEK 2: WHOLE CLASS

WEEK 2	WHOLE CLASS COMPONENT (Counting and Mental/Number Sense)

Notes to the teacher:

- Ensure that you have all the resources required for every lesson. All other teaching aids must be made or organized before the day commences. It is not good practice to make resources like charts during instruction time. A well organized educator has very little discipline problems and ensures that maximum time is spent with the learners.
- Look at the clock everyday, during the day and draw the learners attention to the time. Tell the dime and ask "what is the time?", "how many minutes to break?"', " for how many minutes have we been working?" etc.
- As this is the final term of the year, you need to consolidate the work done during the year, making sure learners understand the concepts you have been dealing with. This doe NOT mean that no new work is done! Rather, new work should be an extension of what learners have already engaged in during the year.
- **Assessment Task 1 will be completed this week.**

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Learners count in multiples of 3s to 750 using structured (grouped) objects (concrete or pictures).
- Learners count in 5s to 1000, forwards and backwards, starting and stopping at any number.

Choose from the following (to make up 10 min).

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Learners add 9 to the numbers you point to on the number chart. Use numbers from 100 to 200.
- Learners take away 9 from the numbers you point to on the number chart. Use numbers from 100 to 200.
- Learners count in any multiple e.g. 3s and stop when you clap your hands e.g. at 42. Ask questions such as: *how many 3s in 42? If 14 3s are 42, how much are 7 3s? If 7 3s are 21 how much are 6/8 3s? etc.*
- Tell them a story and then ask questions e.g.
  - 6 ladies and 2 men got in the taxi
  - At the next stop 3 ladies got out and 2 men got in the taxi.
  - At the next stop 3 men got out and 1 lady with a baby got into the taxi.
  - How many feet were in the taxi? How many toes in the taxi? How many eyes in the taxi?

DAY 1 (to take no more than 20 minutes)

- Learners use either a blank piece of paper or their books. Write a number between 500 and 750 on the board. Learners copy the number and write the number word. Walk around and check. Repeat the activity till learners have written 5 number words.
- Have the learners sit or stand in a circle. One learner stands in the middle of the circle and calls out a number e.g. 77 which the class must round off to the nearest 10. The first learner to answer correctly gets a turn to stand in the middle of the circle and call out the next number that must be rounded off to the nearest 10. If the circle is too big, make 2 circles but then you must keep a watchful eye on each group.

***Tip**: Use this activity towards Assessment Task1. Only record learners who are not able to round off correctly.*

- Learners write 10 different 3-digit numbers between 500 and 750 in their books. They then add and subtract 300 to each number e.g.

569+300=	569-300=
677+300=	677-300=
834+300=	834-300=

DAY 2 (to take no more than 20 minutes)

- Play the rounding off game from Day 1 for 5 minutes.
- Ask learners the following type of questions
  - *There are 75 beans in a bottle. How many must be added to make 90 beans?*
  - *There are 4 necklaces each with 10 beads. How many more beads are needed to have double the number of necklaces?*
  - *Dad had R100 in his pocket. He bought some groceries for R69 and spent the rest on the taxi fare. How much did the taxi cost?*

  Learners record the answers in their books. Discuss the answers and learners can mark their own books.
- Learners draw the following type of table in their books and fill in the missing spaces in the column "I need". Write about 10 3-digit numbers in the 'Number' column. This table has been filled in to show what it should look like when completed.

Number	I have	I need
371	1	300+70
639	30 + 9	600

- Learners now write any 5 numbers from the chart in their books and record 3 other ways the numbers can be built up, or broken down e.g.

  371 →100+100+100+70+1

  →250+100+21

  →400-50+21 and so on

  ***Tip**: Use both these activities as part of Assessment Task 1.*

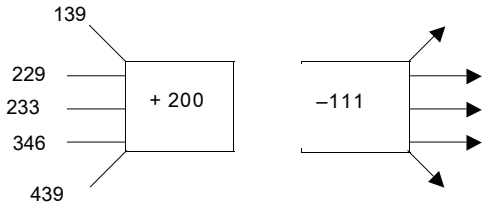
DAY 3 (to take no more than 20 minutes)

- Give each group a plastic bottle/packet (marked 100) with dried beans in and a card with instructions. Learners count the beans starting at 100 (e.g. 100, plus 39) and then follow the instructions. Some ideas for instruction cards are:
  - How many must be added to make 275?
  - How many must be removed to make 85?
  - How many 10s must be added to make 300?
  - How many groups of 25 can you make? and so on.

  ***Tip**: This type of activity forms part of Assessment Task 1 so you will be able to assess learners ability to count unstructured objects.*

- Give each learner a worksheet similar to this (or write it on the board) to complete.

1. Complete the spider diagrams.



2. Fill in the missing numbers

	999	888	777
- 300			

3. Can you see the patterns? Fill in the answers.
234+100
235+100
236+100 etc.

***Tip**: Use this for Assessment Task 1.*

DAY 4 (to take no more than 20 minutes)

- Take the class outside and put the learners into groups of not more than 8. Each group must have a basin of water as well as a cup measuring 250ml, a 2 litre bottle, a 5 litre bottle, buckets, basins and any other empty container. Learners estimate how many cups, 2 litres and 5 litre bottles it will take to fill the different containers and then check by doing it. Make sure learners record both their estimates as well as the actual number e.g.

	Ken			Thembi	
Number of:	Estimate	Actual		Estimate	Actual
cups in 2 litres					
2 litres in basin					

***Tip**: Use this for Assessment Task 1.*

DAY 5 (The whole lesson with the whole class)

- Put the learners into pairs. Give each pair 10 number cards with numbers ranging from 1 to 750. They each write down 5 numbers as well as the number names on their whiteboards/ paper. When they have finished, let them swop with another pair to check.
- Learners stay in their pairs for this activity. Give each pair a ball of wool or string. Today they are going to measure themselves. They must each have a piece of A4 paper and write their

name on it. They must list what they are going to measure: head, neck, waist, wrist, ankle, knee, fist, hips, around the shoulders and length of body. Each time they measure, they must cut the wool/string the exact length and paste it next to what they have measured e.g. head	
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 given unstructured collections of objects**,** pictures or marks up to at least 1000 by structuring them (e.g. grouping into multiples of 25, 50, 100) and records the result by - writing the number name - showing it with flard cards - writing it in expanded notation • Reads and writes number symbols and number names from 1 to at least 1 000 • Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49–15 = 34 - Uses flard cards to build up and break down 3-digit numbers to 1000 - Extends number sequences to 1000 - Rounds off numbers to the nearest 10 • Investigates the distance around objects and shapes using string • Uses marked measuring containers in litres; 2 or 5 litre amounts to estimate measure and order different capacities.

GROUP TEACHING: WEEK 2

WEEK 2	**GROUP TEACHING COMPONENT (Concept Development and Problem Solving)**

Notes to teacher:

- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. 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.)
- You will assess learners' ability to use flard cards to build up and break down 3-digit numbers during the group sessions for **Assessment Task 1**

DAILY ACTIVITIES

<u>Examples of activities to be done independently</u>. *Work from a Learners' Book, worksheets, workcards, work from the board, etc.*

Examples of Independent work:

1.Fill in these numbers:

6 + 2 =	3 + 5 =	2 + 3 =
12 + 14 =	7 + 11=	6 + 7 =
8 + 22 =	21+ 21=	10 + 11 =

2. Colour all the odd numbers brown and the even numbers yellow:

973 2046 525 1372 1396 247 650 6243 696 962 27 734 1011

Put the numbers in the correct columns:

Even Odd

3. Solve these problems:

a) There are ten marbles in one packet.
How many marbles are there in 8 packets?

b) There are ten biscuits in one packet.
How many biscuits are in 12 packets?

c) There are ten buttons in one packet.
How many buttons in 7 packets?

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes.*

- Do an expanded notation exercise with the learners. Let the learners choose a set of numbers, e.g. 9; 96; 996. They write the numbers in their books/on a piece of paper then use their flard cards to show the expanded notation, e.g. 96=90+6 and 996=900+90+6 which they record next to the numbers. Encourage the learners to talk about the value of each digit in the number e.g. in 996, the middle digit (9) has a value of 90. Each learner now chooses his/her own set of 3 numbers e.g. 7; 75; 775 and repeats the activity. Ask the learners if they can see a pattern in the numbers.
  ***Tip**: Use this as part of Assessment Task 1.*
- Make sure each learner has access to paper, writing tools, and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. **By now, learners should not be drawing pictures as the numbers are too large!** Use the number range 500 to 750. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 grouping and 1 comparison type word problem and on Wednesday you will ask 1 multiplication and 1 rate type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure learners have enough time to solve the problems.

GROUP 2

*On **Tuesday and Thursday** this group works with the teacher for 30 minutes.*

- Do an expanded notation exercise with the learners. Let the learners choose a set of numbers, e.g. 5, 54, 554. They write the numbers in their books/on a piece of paper then use their flard cards to show the expanded notation, e.g. 54=50+4 and 554=500+50+4 which they record next to the numbers. Encourage the learners to talk about the value of each digit in the number e.g. in 554, the middle digit (5) has a value of 50. Each learner now chooses his/her own set of 3 numbers e.g. 7; 75; 775 and repeats the activity. Ask the learners if they can see a pattern in the numbers.
  ***Tip**: Use this as part of Assessment Task 1.*
- Make sure each learner has access to paper, writing tools, and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. **By now, learners should not be drawing pictures as the numbers are too large!** Use the number range 300 to 500. Let each learner tell the group how s/he solved the problem. On

Tuesday you will ask 1 grouping and 1 comparison type word problem and on Thursday you will ask 1 multiplication and 1 rate type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure learners have enough time to solve the problems.

GROUP 3

This group works with the teacher for 30 minutes every day.

- Do an expanded notation exercise with the learners. Let the learners choose a set of numbers, e.g. 2, 25, 225. They write the numbers in their books/on a piece of paper then use their flard cards to show the expanded notation, e.g. 25=20+5 and 225=200+20+5 which they record next to the numbers. Encourage the learners to talk about the value of each digit in the number e.g. in 225, the middle digit (2) has a value of 20. Each learner now chooses his/her own set of 3 numbers e.g. 3; 33; 333 and repeats the activity. Ask the learners if they can see a pattern in the numbers.

  ***Tip**: Use this as part of Assessment Task 1.*
- Make sure each learner has access to paper, writing tools, and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. **By now, learners should not be drawing pictures as the numbers are too large!** Use the number range 100 to 300. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 grouping and 1 comparison type word problem and on Wednesday and Thursday you will ask 1 multiplication and 1 rate type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure learners have enough time to solve the problems.

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 given unstructured collections of objects, pictures or marks up to at least 1000 by structuring them (e.g. grouping into multiples of 25, 50, 100) and records the result by - writing the number name - showing it with flard cards - writing it in expanded notation • Reads and writes number symbols and number names from 1 to at least 1 000 • Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49–15 = 34 - Uses flard cards to build up and break down 3-digit numbers to 1000 - Extends number sequences to 1000 - Rounds off numbers to the nearest 10 • Investigates the distance around objects and shapes using string • Uses marked measuring containers in litres; 2 or 5 litre amounts to estimate measure and order different capacities

SUGGESTED ASSESSMENT TASKS : GRADE 3 NUMERACY FOURTH TERM

TASK 1 : WEEK 2

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	• Counts given unstructured collections of objects, pictures or marks up to at least 1000 by structuring them (e.g. grouping into multiples of 25, 50, 100) and records the result by - writing the number name - showing it with flard cards - writing it in expanded notation • Reads and writes number symbols and number names from 1 to at least 1 000 • Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49–15 = 34 - Uses flard cards to build up and break down 3-digit numbers to 1000 - Extends number sequences to 1000 - Rounds off numbers to the nearest 10 • Investigates the distance around objects and shapes using string • Uses marked measuring containers in litres; 2 or 5 litre amounts to estimate measure and order different capacities.	Wk 2	• Use the oral activity on Day 1 to assess rounding off to the nearest 10. • Use the written activity on Day 2 to assess expanded notation of 3-digit numbers. • Use the practical activity on Day 3 to assess counting unstructured objects and the written activity to assess addition and subtraction knowledge and skills. • Use the practical activities on Days 4 and 5 to assess capacity and perimeter.
PROBLEM SOLVING	- Uses flard cards to build up and break down 3-digit numbers to 1000	Wk 2	• Use the practical activities using flard cards to assess learners understanding of expanded notation of 3-digit numbers.

FOURTH 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</td><td>• Counts forwards and backwards in multiples of 10s
• Counts in multiples of 4</td><td colspan="5">Daily :
• Counts in 10s to 1000.
• Count in multiples of 4.
• Counts in multiples of 2, 3, 5, 10, 25, 50 and 100 from any given number to any number forwards and backwards.</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL

LO 1 AS 5, 8, 9, 10
LO 2 AS 2
LO 3 AS 6
LO 4 AS 6</td><td rowspan="2">• Number knowledge and mental computations
- Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34
- Uses flard cards to build up and break down 3-digit numbers to 1000
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Extends number sequences to 1000
- Rounds off numbers to the nearest 10
• Is able to read and draw a simple map of the school and classroom
• Investigates the area of a surface (e.g. a desk) using tiling.</td><td colspan="5">Daily:
• Estimate the number of objects in a picture
• Mental calculations
• Number sequences</td></tr>
<tr><td>DAY 1

Team games
– round off to the nearest 10.
– expanded notation to 1000.</td><td>DAY 2

Calculates using addition and subtraction of two and three digit numbers e.g. 300+259=?</td><td>DAY 3

Extends number sequences.

Builds number relationships.</td><td>DAY 4

Draws a simple map of the classroom.</td><td>DAY 5

WHOLE CLASS

Tessellations activity. (Integrate with technology)</td></tr>
<tr><td rowspan="2">GROUP TEACHING

LO1 AS 8, 10,11, 12</td><td rowspan="2">• Solves different types of problems and explains solutions using whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the following techniques:
- building up and breaking down numbers
- doubling and halving
- number lines</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids etc.
Number range: Group 1 works to 1000, Group 2 works to 750 and Group 3 works to 500</td><td rowspan="2"></td></tr>
<tr><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 change and 1 sharing with a remainder type word problem
Groups 2 works on its own</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 change and 1 sharing with a remainder type word problem.
Group1 works on its own</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 2 word problems using multiplication.
Group 1works on its own</td><td>Group 2 and 3 work with teacher.
Round off to 10.
Ask 2 word problems using multiplication.
Group1 works on its own</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 to 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.
- Every learner needs to have a set of counters. An example is to use white kidney beans as counters. Count out 100 and place in a plastic money bag. This is a cheap and can be used very easily by the learners

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Learners count in multiples of 3s.
- Count forwards and backwards in 10s to 1000.
- Count in multiples of 2, 3, 5, 25, 50 and 100 from any given number, forwards and backwards

Choose from the following (to make up 10 min)

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Learners think of two numbers that equal 50, 40, 117, 194, 70, 150, 200 and write them down. Each time learners check with the rest of the group, and the group where everyone had different numbers, gets a point. After 5 numbers the group with the most points wins.
- Show the class a picture where objects have been grouped into 10s, 20s, 25s e.g. fingers, boxes of apples, beads on a string, spots on a butterfly, etc. Learners estimate number of objects, then count and say the difference between their estimate and the actual amount.
- Make up a story collecting objects in 3s, giving different learners a turn to answer e.g.
  - Dad went to the shop and bought 6 tins with 3 long nails in each tin. How many nails did he buy?
  - When Dad got home he saw that he needed double the number of nails. How many more tins did he have to buy?
  - Dad only used 33 nails. How many tins were over?

DAY 1 (to take no more than 20 minutes)

- Start the day with a quick revision of recognising numbers and number names.
- Divide the class in four teams – a, b, c, d. Give each learner a piece of scrap paper to write on and each learner will have a turn to answer. Learners decide who will start and how they will take turns e.g. going clockwise around the group. You will say a 3-digit number, and the

- first learner will round off to the nearest 10, write the number and hold up the piece of paper. Give 4 points to the first correct answer held up, 3 points for the second answer held up, 2 points for third and 1 point for the fourth. Add up the teams totals and colour in totals on the class bar graph.
- Use the same 4 teams for the next game. Each learner will get a chance to expand a three-digit number. Divide the board into 4 columns and let a learner from each team stand at the board. You will give them a number, which they write in their column and then write as expanded notation. Give 4 points to the first one finished, 3 point to the second one and so on. At the end, count up the points and the team with the most points wins.

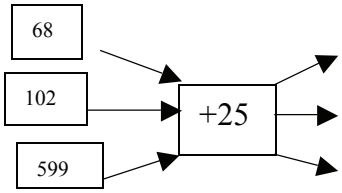
DAY 2 (to take no more than 20 minutes)

- Hand out a worksheet, or write on the chalkboard, 2 and 3-digit numbers to be added or subtracted. Make it interesting by using a variety of different ways e.g.

1. Add 9 to each of these numbers. Write the number sentence and fill in the answer
   358, 785, 596, 472, 991

2. Fill in the missing numbers:
   473+ 251= 296+_____ = 344
   ___+ 450=620 524= 675 - _____

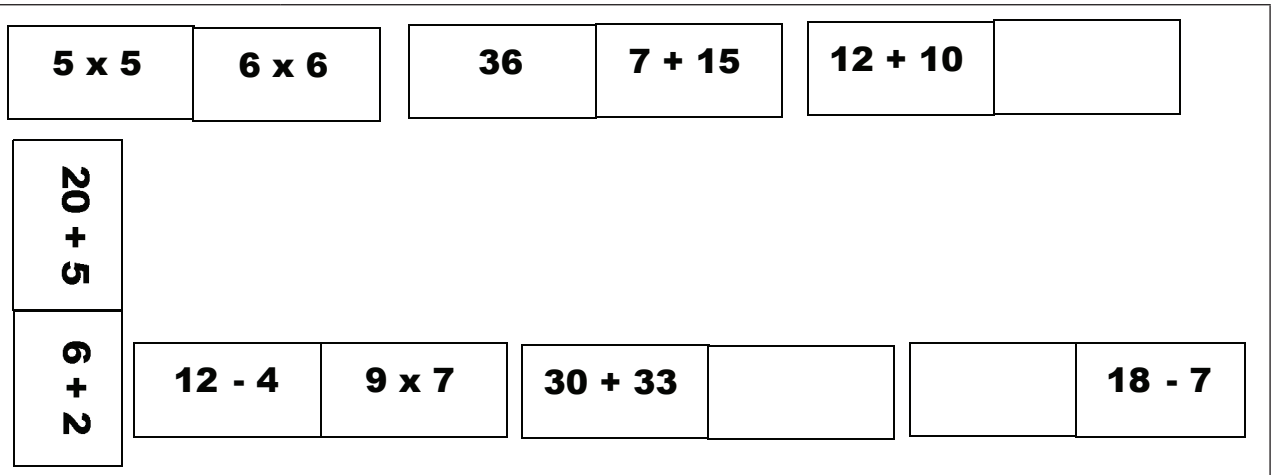
3. Try these



Learners who finish quickly and have all their work correct, can help you mark the other learners' work.

DAY 3 (to take no more than 20 minutes)

- Play the following number game with the whole class. Make a set of at least 30 dominoes for the classroom. Let the learners play in pairs if you have more than 30 learners. Hand out the cards, and choose one learner to start the game by placing his/her card on the board. Anyone who can match one side of the domino then comes and places the card in the correct place i.e. matching one of the sides. Each time there will be 2 sides that can be matched. The following are examples of a few dominoes and how they can be placed. Only the end squares can be used to play. In other words, once a square has been matched, it can no longer be used. It is advisable that you design your own according to the learner's ability.

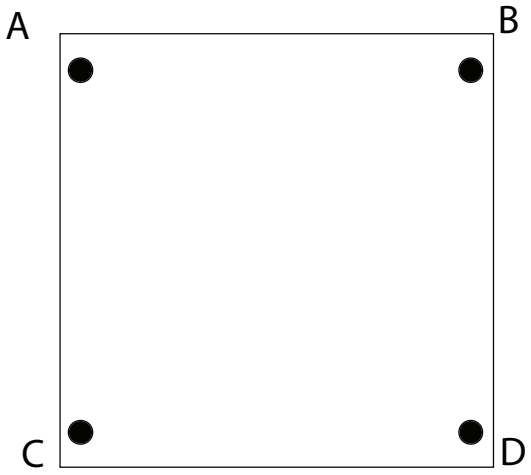


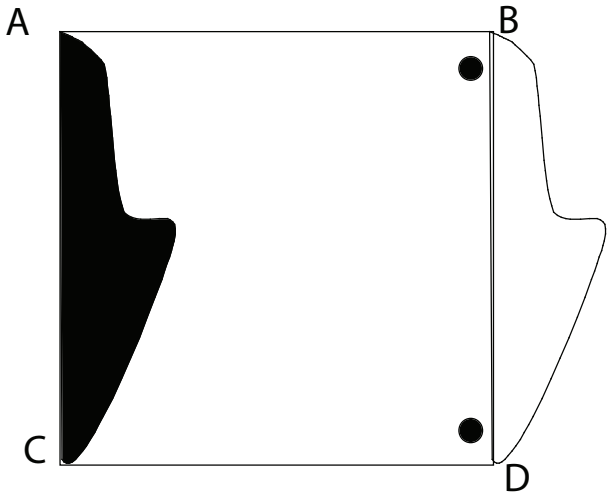
DAY 4 (to take no more than 20 minutes)

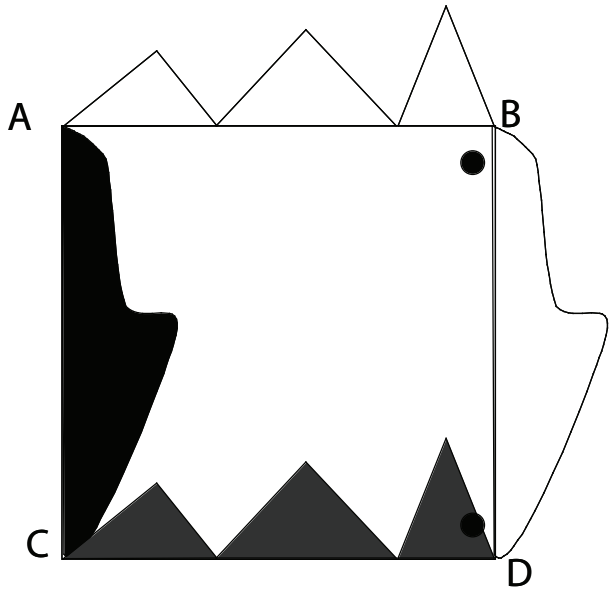
- Write a number on the board e.g. 784. Learners must write the number in their books then listen to your instructions and record the number sentences each time. Give the following type of instructions:
  - write the number that is 10 more. (784+10=794)
  - write the number that is 100 more.
  - write the number that is 10 less.
  - write the number that is 100 less.
  - if I add 200, what will the number be?
- Discuss the layout of the classroom – where the door is in relation to the windows, how many windows there are, where the chalkboard is in relation to the door and the windows and so on. Give each learner an A4 sheet of paper. They draw as large a rectangle/square as possible on the paper, then draw in the details of the room i.e. the position of the door etc. Display the papers.

DAY 5 (Whole lesson)

- During this activity the learners will learn to tessellate. Explain that tessellation means to fit together without any spaces. You will need pieces of hard card, pencils, pairs of scissors, tracing paper and carbon paper.
- Draw a square on the card about 6 cm x 6 cm. Put a dot on each corner and label the corners A to D on the outside. Trace the square with the corner dots onto tracing paper and label on the inside of the square. On the paper take a “bite” out along the A to C edge by drawing a line. See the example provided. Trace this design onto tracing paper. Move the tracing paper so that dots B and D are on dots A and C. Trace the same design again. This will make a ‘bump’.
- Using the carbon paper, trace your shape onto the index card. The area of your shape should still be the same as the area of your 6cm x 6cm square. Cut out your shape.
- Trace around the shape. Move the shape to the right and trace around the three sides that are not touching. Repeat across your page. Move the shape up and trace around the three sides which are not touching. Fill your page. Colour your design.







Assessment	**Formal:** No formal assessment this week. **Informal**: Unrecorded assessment of learners' oral responses and ability to participate.

WEEK 3: GROUP TEACHING

WEEK 3	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)

Notes to teacher:

- 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 counter bags)
- Learners **must do** the work set. Once they have completed this they may choose any mathematical activity e.g. jigsaw puzzle.
- You will use the group teaching time for assessing learners' ability to solve problems. By this time in the year you will expect learners to be able to record their thinking using numbers and NOT drawings. If the learner needs to draw pictures, use smaller numbers as it is in the drawing of marks that the mistakes come. Or you can ask the learner to tell you how he/she is thinking and you can record it on the board using numbers.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learners' Book, worksheets, work cards, work from the board, etc.*

Independent Work:

1. Fill in the missing numbers:

_____ is 10 more than 107 _____ is 10 less than 407

_____ is 10 more than 989 _____ is 10 less than 210

2. Arrange the following numbers in order from the smallest to the largest.

625 243 902 107 520 1000 327 750 409 810

a) Write down all the even numbers:

b) Write down all the odd numbers:

c) Double the odd numbers:

d) What is the difference between the smallest and the largest numbers?

3. Think of a number:_____

Add 1 _____

Multiply by 2 _____

Subtract the number you first thought of._____

Subtract 2._____

You now have the number you first though of_____

Working with the group

GROUP 1

*On **Monday and Wednesday** this group works with the teacher for 30 minutes.*

- Each learner estimates how many toe-to-toe footsteps s/he will take from the mat to the door. Once they have recorded their estimate, they measure how many footsteps they actually take and then say if they estimated too many, too few or correctly.

- Give each learner 2 small pieces of paper. On one piece they write any number sentence and on the other they write the answer. Put all the pieces in a packet, give it a good shake and then place each piece face downwards in the middle of the group. Learners take turns to turn over two pieces of paper. If they match the number sentence and the answer, they keep the pieces and can have another turn, but if they do not have a match, they replace the pieces in the same place. This allows everyone the opportunity to remember where the different numbers are. Play the game until all the numbers have been matched.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 sharing with a remainder and 1 change type word problem and on Wednesday you will ask 2 multiplication type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem☺ You need to give learners something to think about.

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes.*

- Have a set of number cards between 400 and 500. Shuffle the cards and let each learner take one card. They read the number and then say how many must be added to make 550 e.g. the number on the card is 442, so the learner says 108 more must be added (**8** to make 450 and **100** to make 550) . Repeat the activity, but subtracting to make 350 e.g. the card is 442, so the learner says that 92 must be taken away (**2** to make 140, **40** to make 400 and **50** to get to 350.
- Give each learner 20 counters. Let them count the counters by putting them in groups of 2. Ask the following type of questions:
  - How many counters do you have? 20
  - How many groups of 2 did you make? 10
  - How much are 10 twos? 20
  - How much is 20 divided into groups of 2? *This is the point at which you may need to engage the learners in a discussion of what division means. If they find it too difficult, put it into a simple story e.g. There are 20 sandwiches and 2 are put onto each plate. How many plates are needed?*
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 sharing with a remainder and 1 change type word problem and on Thursday you will ask 2 multiplication type word problems. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem☺ You need to give learners something to think about.

GROUP 3

This group works with the teacher every day.

- Each learner estimates how many toe-to-toe footsteps s/he will take from the mat to the door. Once they have recorded their estimate, they measure how many footsteps they actually take and then say if they estimated too many, too few or correctly.
- Have a set of number cards between 100 and 200. Shuffle the cards and let each learner take one card. They read the number and then say how many must be added to make the next 100 e.g. the number on the card is 142, so the learner says 58 more must be added to make 200 (8 to make 150 and 50 to make 200). Repeat the activity, but subtracting to make the smaller 50 e.g. the card is 142, so the learner says that 92 must be taken away to make 50 (2 to get to 140, 40 to get to 100 and 50 to get to 50).
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 500. Let each learner tell the group how s/he solved the problems. On Monday and Tuesday you will ask 1 sharing with a remainder and 1 change type word problem and on Wednesday and Thursday you will ask 2 multiplication type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL̲ You need to give learners something to think about.

Assessment	**Formal:** No formal assessment this week. **Informal**: Unrecorded assessment of learners' oral responses and ability to participate.

FOURTH 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</td><td>• Counts forwards and backwards in multiples of 2, 3, 5, 10, 20, 25, 50, 100 from 1 to 1000.
• Counts in multiples of 2 , 5 10, 20, 25, 100 starting at any number up to at least 1000.</td><td colspan="5">Daily :
• Count in 10s and 20s forwards and backwards to 1000 from any given number to 1000.
• Count in 20s to 1000
• Counts in 1s, 2s, 5s, 10s, 20s, 25s and 100s forwards and backwards starting and ending at any number as indicated.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL

LO 1 AS 3, 5, 8, 9, 10
LO 2 AS 2
LO 3 AS 6
LO 4 AS 6</td><td rowspan="3">• Number knowledge and mental computations
- Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up multiplication tables of 2, 5 and 10 to 100
- Extends number sequences to 1000
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Is able to read and draw a simple map of the school and classroom
• Investigates the area of a surface (e.g. a desk) using tiling.</td><td colspan="5">To be done daily
• Ordering of numbers
• 2, 3, 5, and 10 multiplication tables.
• Mental calculations</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>Engage in using expanded notation of three digit numbers in various ways.

Extend number sequences to 1000.</td><td>Build up multiplication tables of 2.

Calculate division of 2-digit by 1-digit numbers</td><td>Build up multiplication tables of 5

Calculate division of 2-digit by 1-digit numbers</td><td>Build up multiplication tables of 10

Investigate the area of a surface using tiling.</td><td>Whole class activity.

Draw a map of the school</td></tr>
<tr><td>GROUP TEACHING

LO1 AS 7, 8, 10, 11, 12</td><td>• Solves different types of problems and explains solutions using whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the following techniques:
- building up and breaking down numbers
- doubling and halving
- number lines</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 to 1 000; Group 2 to 750; Group 3 to 500</td><td></td></tr>
<tr><td></td><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 equalize and 1 grouping with a fraction type word problem.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 equalize and 1 grouping with a fraction type word problem.
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 repeated addition and 1grid type word problem.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 repeated addition and 1grid type word problem
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</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 to 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.
- Tell the time everyday, throughout the day.
- Make sure your planning and preparation is done thoroughly. Learners tend to get out of hand very quickly at this time of the year. However, young children like to be kept meaningfully occupied and this will only happen if you are sure of the teaching and learning that will take place each day.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Learners must count in 1s, 2,s 5s, 10s, 20s, 25s and 100s starting at any given number as indicated.
- Have a quick game counting in 3s. Start with any number. Each learner has a turn to add 3. e.g. start with 21 but first let learners estimate what the last number will be. Do this every day, starting at a different number each time..

Choose from the following (to make up 10 min)

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Let every learner write any number to 1 000 on a piece of paper. Collect the numbers and place in 3 packets. Send the packets around the class and learners take out a number. Now tell them to put themselves on order from the smallest to the biggest number.
- Choose a learner to give you a number between 90 and 190 e.g. 179. Write in on the board and draw 4 spaces to the left of the number and 4 spaces to the right of the number. Call one learner to fill in the spaces to the right by counting on in 1s. Now call another learner to fill in the spaces to the left, starting at the number and counting back in 1s e.g.

____ ____ _____ _____ 179 ____ ____ ____ ____

- Redo the activity using the same number in the middle, but this time counting forwards and backwards in 2s.
- Count in multiples of 2, 3, 5, 10, 20, 25, 50 and 100 to 1000 using structured objects e.g. pictures of eyes, matchsticks in bundles of 20, etc.

DAY 1 (to take no more than 20 minutes)

- Using a number chart, point to a number e.g. 237. Ask the learners to add 5 (242), then keep adding 5 giving different learners a chance to answer. Write the numbers on the board. As soon as a learner recognises and describes the pattern, choose a new number and add 9, etc. until everyone has had a turn to answer.

- Learners choose their own number between 600 and 700 and write it at the top of the page. They then write the expanded notation in at least 5 different ways.
- Call out a number e.g. 457. Learners must write the sequence of the next 10 numbers e.g. 457, 458, 459, 460. 461, 462, 463, 464, 465, 466, 467. When they have completed they must hold up their work or you can walk around and observe their work. Now do the same with other numbers e.g. 673; 798; 945 etc.

DAY 2 (to take no more than 20 minutes)

- Learners must write down the multiplication table of 2 from 1x2 to 20x2. Ask questions such as *A duck has two legs, how many legs will 8 ducks have*? Once you have established the answer, learners must mark the answer in their multiplication table, i.e. 8x2=16. Then ask the question: *One spider has 8 legs. How many legs do two spiders have?* Establish the answer and write it on the board i.e. 2x8=16. Then ask learners to find the number sentence in their multiplication table that could indicate the same thing. Learners should be able to tell you that 8x2 is the same as 2x8. Let learners record 2x8=16 next to 8x2=16. Keep working in this way - asking questions, establishing the answer, marking the answer, writing the equivalent number sentence next to the one already written in the multiplication table. Some examples of other questions are:
  - A butterfly has two wings, how many wings will 9 butterflies have? One box has 9 apples. How many apples are there in 2 boxes?
  - A duck has two legs. How many legs will 10 ducks have? A caterpillar has 10 legs, how many legs will 2 caterpillars have? etc.
- Write the number 20 on the board. Ask the following type of questions, each time writing the answer on the board:
  - How many 2s in 20? 10 2s in 20. How else can this be written? As repeated addition (2+2+2+2+2+2+2+2+2+2) or as multiplication 10x2.
  - How much are 10 2s? 20. How can this be written? As repeated addition or as multiplication.
  - What is the difference between the 2 questions? The first one is grouping into 2s and the second one is repeated addition.
  - If I group into 2s can I write 10x2? No, because that means 10 2s. How can I write it? If no one can tell you, introduce the division sign ÷ and write 20÷2=10. Ask if anyone can tell what the difference is between 10x2=20 and 20÷2=10. Discuss the differences.
    Tip*: You have done grouping and sharing problems throughout the year, so learners should have a good understanding of the concept. You are now introducing the social knowledge of how to write the division sign.*

DAY 3 (to take no more than 20 minutes)

- Learners write as many multiples of 3 as possible in 5 minutes, writing the complete number sentence each time i.e. 1x3=3, 2x3=6 and so on. After 5 minutes stop the learners and let them each count how many they were able to do. Now let them work with a partner and, after checking the answers with each other, see if the two of them are able to complete

a few more. Go through each of the multiples with the class so that they can check their answers. Record on the board those multiples that no one got correct, or were not able to do. Discuss how the answers could be found e.g. I don't know what 7x3 is, so how can I work it out? I know 3x3 is 9, so 6x3 is 18. Therefore 7x3 is 1 more than 6x3, that is 18 plus another 3 which is 21.

- Write the number 20 on the board. Ask the following type of questions, each time writing the answer on the board:
  - How many 5s in 20? 4 5s in 20. How else can this be written? As repeated addition (5+5+5+5) or as multiplication 4x5.
  - How much are 4 5s? 20. How can this be written? As repeated addition or as multiplication.
  - What is the difference between the 2 questions? The first one is grouping into 5s and the second one is repeated addition.
    - If I group into 5s can I write 4x5? No, because that means 4 5s. How can I write it? Remind learners of the division sign ÷ and ask if they can now write a number sentence for the number of 5s in 20. Learners should be able to record 20÷5=4.

DAY 4 (to take no more than 20 minutes)

- Build up the multiplication tables of 10. Get the learners to make up stories and in the story they keep adding on 10. e.g. The farmer went to pick apples. He found 10 apples on the first tree, he walked to the second tree and found 10 more, now he has 20. The next tree also had 10 apples on so now he has 30 and so on. Record the number sentences on the board as learners tell the story.
- Working in pairs learners find out how many objects or shapes are needed to cover an area as if it were being tiled. The following are some ideas:
  - How many books are needed to cover your desk?
  - How many magazines are needed to cover the teacher's table?
  - How many newspapers are needed to cover the classroom floor?
  - How many triangles are needed to cover your Numeracy book?
  - How many cubes are needed to cover your seat/chair?

DAY 5 (The whole lesson)

- Take the learners outside. Let them walk around the school grounds and then through the school buildings. Keep stopping and ask what they can see e.g. the teachers cars, dustbins, benches, etc. Ask if they can see these from the classroom. Point out different landmarks and their relationship to other objects e.g. the playground is next to the Grade 7 classroom, the toilets are next to the fence, the Principal's office is near the hall, etc.
- When they get back to the classroom, let them draw a plan of the school (buildings, passages, gardens, pathways, etc.) Encourage learners to indicate certain landmarks or anything else they found interesting. Learners may choose to draw a map of only one section of the school if they like. Display the maps and discuss similarities and differences in the drawings.

***Tip**: Use this activity towards Assessment Task 2.*

Assessment	**Formal :** No 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:

- 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.)
- Your group teaching session will be built around the problem solving you have planned. 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.
- Solving problems is therefore the starting point, not the end point, of concept development.
- Even though this is the final term, learners need to maintain their routine as well as the constant exposure to the different concepts.

DAILY ACTIVITIES

Examples of activities to be done independently. *Work from a Learners' Book, worksheets, work cards, work from the board, etc.*

1. Calculate the answer then **halve** it.

125 + 164 = _____ 420 + 130 + 100 = _____

319 + 181 = _____ 393 + 420 + 100 =_____

500 + 160 = _____ 721 + 113 + 100 = _____

2. Fill in the missing numbers.

	4	6	10	5	2	8	3
x10							

3.Fill in the missing numbers.

Number	x 3	+30	÷ 3	-30
12				
15				
21				

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes.*

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:

1. Is it 6+9? (no)
2. Is it 20-4? (no)
3. Is it 7x2? (no)
4. Is it 10x2? (no)
5. Is it 24÷2? (yes)

If they identify the number, the group gets 1 point and if they don't, you get the point.

- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 grouping where the remainder becomes a fraction and 1 equalize type word problem and on Wednesday you will ask 1 repeated addition and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

  ***Tip**: An example of a grid type problem is the following:*
  A farmer planted 12 trees in each row. If he planted 9 rows, how many trees did he plant?
  A farmer planted 12 trees in a row. If he had 96 trees, how many rows did he plant?

GROUP 2

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

- Give each learner 36 counters. Let them count the counters by putting them in groups of 3. Ask the following type of questions:
  - How many counters do you have? 36
  - How many groups of 3 did you make? 12
  - How much are 12 threes? 36
  - How much is 36 divided into groups of 3? *This is the point at which you may need to engage the learners in a discussion of what division means. If they find it too difficult, put it into a simple story e.g. There are 36 candles and 3 are put into each packet. How many packets are needed?*
- Repeat the activity using groups of 12, 4 and 9. Make sure that you ask questions each time to ensure an understanding of what is being done.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 grouping where the remainder becomes a fraction and 1 equalize type word problem and on Thursday you will ask 1 repeated addition and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

***Tip**: An example of a grid type problem is the following:*
A farmer planted 10 trees in each row. If he planted 9 rows, how many trees did he plant?
A farmer planted 10 trees in a row. If he had 90 trees, how many rows did he plant?

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Learners set out their flard cards in sequence. Ask learners to build a 3-digit number e.g.627. Once they have expanded it and then built it up again, ask them to do the following:
  - Show the number you will get when you add 10 to 627. What is the new number? 637. Which number changed? Why did the 20 change and not the 600 or the 7?
  - Show the number you will get when you add 30 to 627. What is the new number? 657. Which number changed? Why did the 20 change and not the 600 or the 7?
  - Show the number you will get when you take 5 away from 627. What is the new number? 622. Which number changed? Why did the 7 change and not the 600 or the 20? Repeat the activity using other 3 digit numbers.
- Give each learner 12 counters. Let them count the counters by putting them in groups of 2. Ask the following type of questions:
  - How many counters do you have? 12
  - How many groups of 2 did you make? 6
  - How much are 6 twos? 12
  - How much is 12 divided into groups of 2? *This is the point at which you may need to engage the learners in a discussion of what division means. If they find it too difficult, put it into a simple story e.g. There are 12 candles and 2 are put into each packet. How many packets are needed?*
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 500. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 grouping where the remainder becomes a fraction and 1 equalize type word problem and on Wednesday and Thursday you will ask 1 repeated addition and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL You need to give learners something to think about.

  ***Tip**: An example of a grid type problem is the following:*
  A farmer planted 5 cabbages in each row. If he planted 10 rows, how many cabbages did he plant?
  A farmer planted 5 cabbages in a row. If he had 50 cabbages, how many rows did he plant?

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

FOURTH 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</td><td>• Counts forwards and backwards in multiples of 2, 3, 5, 10, 20, 25, 50 and 100 from 1 to 1000
• Counts in multiples of 2, 5, 10, 20, 25, 100 starting any number up to at least 1000, e.g. 224, 244, 264</td><td colspan="5">Daily :
• Counting in 25s to 1000.
• Counting in multiples of 2, 3, 5, 10, 20 25, 50 and 100 to 1000.
• Counts in 1s, 2s, 5s, 20s, 25s and 100s forwards and backwards, starting and ending at any number as indicated</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL
LO 1 AS 5,8,9,10
LO 2 AS 2, 4
LO 3 AS 6
LO 4 AS 6</td><td rowspan="3">• Number knowledge and mental computations
- Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up and breaks down 3-digit numbers as expanded notation
- Builds up multiplication tables of 2, 5 and 10 to 100
- Extends number sequences to 1000
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Is able to read and draw a simple map of the school and classroom
• Investigates the area of a surface (e.g. a desk) using tiling.</td><td colspan="5">Daily
• Mental calculations
• Expanded notation of 3-digit numbers</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>Calculates using division of two-digit by one digit e.g.75÷5 = ?

Multiplication of 5.</td><td>Multiplication of 10

Extends number sequences to 1 000</td><td>Develops number relationships e.g. 25 is quarter of 100

Multiplication of 2, 3, 5 and 10.</td><td>Calculates using division of two-digit by one digit e.g.75÷5 = ?

Completes a map of the classroom.</td><td rowspan="2">WHOLE CLASS ACTIVITY

Investigates the area of a surface using tiling (integrate with Arts and Culture)</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS 7,8, 10, 11,12</td><td>• Solves different types of problems and explains solutions using whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the following techniques:
- building up and breaking down numbers
- doubling and halving
- number lines</td><td colspan="4">Ask each group the same problems. They can be solved using number grids, numbers, etc.
Number range: Group 1 works in 1-1000; Group 2 works in 1-750; Group 3 works in 1-500</td></tr>
<tr><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 division and 1 multiplication word problem.
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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.
- Learners will learn about working with numbers and build a solid number knowledge if you present them with a range of similar tasks, but with different contexts and different concrete resources to use. If you do this, you will find that there is less need for learners to use counting to find the answer. Instead they will be able to use their number knowledge confidently.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Learners count in 25s to 1000, clapping every time they say a whole 100.
- Count in 1s, 2s, 5s, 10, 20s, 25 and 100s forwards and backwards starting and ending at any given number.
- Learners count in 5s till you clap your hands. Only clap once they have counted more than 50. Once they have stopped e.g. at 65, ask questions such as: *How many 5s in 65? If 13 5s are 65, how much are 12 5s? If 12 5s are 60, how much are 24 5s?* Do the same counting in 2s and 10s.

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

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Tell the learners that you are going to clap a number and that each clap counts 5. So if you clap twice, the number is 10. Make sure you use numbers more than 50 e.g. 15 claps =75. Remember to ask questions to make sure learners are thinking about what they are counting.
- Learners stand behind their chairs/desks. Use the date as the starting number. Each learner then adds 3 to the previous number. If they are correct, they sit down. If they get it wrong, give them another chance.
- Let the learners play *I have, who has…….*? Give each learner a card. On the card write down a number and after the number a problem. The answer on one card has to be the number on another card. E.g. – 10. I have 10. Who has 5 less than me? The child to answer is the one who has 5.

  I have 5. Who has 5 times 3? The next learner should say 15.

  I have 15. Who has double 15?

  I have 30. Who has 30 plus 15?

  I have 45. Who has 45 times 2?

Tip: *Use any of these activities to assess mental calculations as part of Assessment Task 2.*

DAY 1 (to take no more than 20 minutes)

- Start the lesson by asking each learner to take a handful of beans (counters), estimate the number of beans, count the beans and then divide the number of beans into the same number of piles as learners in the group. For example, if one handful of beans is 75 and there are 5 learners in the group, there will be 5 piles with 15 beans each. Once everyone in the group has made their piles of beans, they say how many beans they have and how many are in each pile. All the learners must write the number sentence each time in their book e.g. 75÷ 5=15.
- Now ask the learners to write the number sentences as multiplication e.g. 75÷5=15 15x5=75.

DAY 2 (to take no more than 20 minutes)

- Put some counters in the middle of the group and each learner must count out 40. They must line the counters up in front of themselves. Talk about how one counter can represent a different number e.g. it can be counted as 1, or 2, or 4 and so on. Count the counters as follows:
  - each counter represents 1, so there are 40 counters
  - each counter represents 2, so the 40 counters will add up to 80
  - each counter represents 5, so the 40 counters will add up to 200
  - each counter represents 10, so the 40 counters will add up to 400.
  - Each counter represents 25, so the 40 counters will add up to 1 000.
- Draw the following table on the board:

Count back					Count forwards				Use these intervals
				475					Count in 1s
				475					Count in 2s
				475					Count in 5s
				475					Count in 10s

Choose a learner to give you a number between 450 and 500 e.g. 475. Write it in each row. Call two learners at a time to fill in the spaces to the right and the left by counting on in the intervals indicated.

- Draw another table exactly like the first one, but write the number 634 in the middle. Learners copy this table into their books and complete it on their own.
  ***Tip**: Use this activity as part of Assessment Task 2.*

DAY 3 (to take no more than 20 minutes)

- Give the learners a worksheet with a number of different activities for them to complete. Use this written activity for assessment purposes e.g.

1. Choose your own number and write it in the box

Write your number in the box each time and answer the questions.

- What 3 numbers added together make ☐ ?
- What 4 numbers added together make ☐?
- What 3 numbers when subtracted give you ☐?
- ☐ is half of what number?
- ☐ is double what number?
- ☐ is less than _____ and more than _____
- Write 4 number sentences about your number.

2. Fill in the missing numbers.

652= 600+___ + 2 598= 90+___ + ___

___ +7+50=577 40+____ =440

3. Fill in the answers and say how you got the answer.

3x2= _____

6x2= _____

12x2= _____

12x4= _____

24x4= _____

4. Complete the table.

Number of fingers	70	100	30	120
Number of children				

DAY 4 (to take no more than 20 minutes)

- Take the class outside and let them stand in a circle. Count how many learners are in the circle i.e how many are in the class e.g. 54. Ask them to find out:
  - How many groups of four 54 learners can make.
  - How many groups of two 54 learners can make.
  - How many groups of three 54 learners can make.
  - How many groups of six 54 learners can make.

  Make sure you ask questions each time e.g. how many twos in 54? How much are 27 twos?

- Give each learner an A4 sheet of paper. They draw the shape of the classroom, as large as possible. Write the following type of instructions on the board:
  - Mark where the door is.
  - Mark where the windows are.
  - Draw the desks.
  - Draw the teacher's table.
  - Where is the chalkboard?
  - Fill in 2 other things in the classroom.

  Learners follow the instructions and draw a plan of the classroom.
  ***Tip**: Use this towards Assessment Task 2.*

DAY 5 (whole lesson)

- Working in pairs learners find out how many objects or shapes are needed to cover an area as if it were being tiled. The following are some ideas:
  - How many books are needed to cover your desk?
  - How many magazines are needed to cover the teacher's table?
  - How many newspapers are needed to cover the classroom floor?
  - How many triangles are needed to cover your Numeracy book?
  - How many cubes are needed to cover your seat/chair?

  Remind the learners that they did this activity in Week 4. Today they need to use other objects and investigate other surfaces.
- Give each group some coloured paper (or magazines), scissors, glue, templates of 2D shapes with straight sides and crayons. Each learner is given an A4 white paper on which they draw the outline of a simple picture e.g. a kite, a balloon, a flower, a car, etc. Then they choose a shape and, using the template, cut out the shape using the coloured paper (or the magazine). Learners glue these different coloured shapes to fill in their picture, like a mosaic. However, they must not make a pattern, but rather 'tile' the picture so that there are no gaps. Display the pictures.
  ***Tip**: Use this towards Assessment Task 2.*

ASSESSMENT	**Formal: Recorded Assessment Task 2:** During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : • Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34 - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up and breaks down 3-digit numbers as expanded notation - Builds up multiplication tables of 2, 5 and 10 to 100 - Extends number sequences to 1000 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Is able to read and draw a simple map of the school and classroom • Investigates the area of a surface (e.g. a desk) using tiling.

WEEK 5: GROUP TEACHING

Week 5	GROUP TEACHNG COMPONENT (Concept Development and Problem Solving)

Notes to teacher:

- You should give the learners at least 2 different word problems to solve every time you work with them. However, it is better to give them one problem situation that they really engage in rather than 2 simple word problems which they can solve with no thinking being required. 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.)
- Learners **must do** the work set. Once they have completed this they may choose any mathematical activity e.g. jigsaw puzzle
- **Assessment Task 2** will be completed this week.

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

Independent Work

1. 8 x 3 = 16 x 3 = 20 x 3 = 9x3 =
   12 x 3 = 10 x 3 = 15 x 3 = 18 x 3 =
   25 x 3 = 24 x 3 = 30 x 3 = 33 x 3 =
   100 x 3 = 50 x 3 = 120 x 3 = 70 x 3 =
2. Fill in the missing numbers:

467, 468, 469, ____, ____, ____, ____, ____

310, 410, ____, 610, ____, ____, 810, _____, _____

320, ____, 360, _____, 400, ____, 440, _____, _____

910, 920, ____, ____, 950, 960, _____, _____, ____, _____

950, 850, ____, ____, 550, _____, _____, 250, ____

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes.*

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:
  1. Is it 6+9? (no)
  2. Is it 20-4? (no)
  3. Is it 7x2? (no)
  4. Is it 10x2? (no)
  5. Is it 24÷2? (yes)

  If they identify the number, the group gets 1 point and if they don't, you get the point.

  ***Tip**: You are assessing mental calculations towards Assessment Task 2. You will only need to record those learners who are having difficulty.*

- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 division and 1 multiplication type word problem and on Wednesday you will ask 1 multiplication and 1 division type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

  ***Tip**: You can use this activity for assessing learners understanding of multiplication and division.*

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes*.

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:
  6. Is it 6+9? (no)
  7. Is it 20-4? (no)
  8. Is it 7x2? (no)
  9. Is it 10x2? (no)
  10. Is it 24÷2? (yes)

  If they identify the number, the group gets 1 point and if they don't, you get the point.

  ***Tip**: You are assessing mental calculations towards Assessment Task 2. You will only need to record those learners who are having difficulty.*
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 multiplication and 1 division type word problem and on Thursday you will ask 1 multiplication and 1 division type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

  ***Tip**: You can use this activity for assessing learners understanding of multiplication and division.*

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:

11. Is it 6+9? (no)
12. Is it 20-4? (no)
13. Is it 7x2? (no)
14. Is it 10x2? (no)
15. Is it 24÷2? (yes)

If they identify the number, the group gets 1 point and if they don't, you get the point☺

***Tip**: You are assessing mental calculations towards Assessment Task 2. You will only need to record those learners who are having difficulty.*

- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 500. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 multiplication and 1 division type word problem and on Wednesday and Thursday you will ask 1 multiplication and 1 division type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem☺ You need to give learners something to think about.

  ***Tip**: You can use this activity for assessing learners understanding of multiplication and division.*

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 : • Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34 - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up and breaks down 3-digit numbers as expanded notation - Builds up multiplication tables of 2, 5 and 10 to 100 - Extends number sequences to 1000 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Is able to read and draw a simple map of the school and classroom • Investigates the area of a surface (e.g. a desk) using tiling.

SUGGESTED ASSESSMENT TASKS : GRADE 3 NUMERACY FOURTH TERM

TASK 2 : WEEK 5

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	• Number knowledge and mental computations - Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34 - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up and breaks down 3-digit numbers as expanded notation - Builds up multiplication tables of 2, 5 and 10 to 100 - Extends number sequences to 1000 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Is able to read and draw a simple map of the school and classroom • Investigates the area of a surface (e.g. a desk) using tiling.	Wk 4 Wk 5	• Use the practical activity on Day 5 to assess drawing a map of the school. You can also use the activity in Week 5, Day 4 to assess the same knowledge and skills. • Use the daily mental activities to assess learners' ability to do quick mental calculations. • Use the written activities on Days 2 and 3 to assess learners knowledge of numbers and operations. • Use the practical activity on Day 5 to assess whether learners have an understanding of the area of a surface.
PROBLEM SOLVING	- Adds and subtracts to at least 50 to do quick mental calculations like: 23+18=41; 49 – 15 = 34 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=	Wk 5	• Use the activities during Group teaching time to assess learners' ability to do mental calculations. It will be easier to assess this when working with a small group. • Learners' solutions to the word problems will give an indication as to their understanding of multiplication and division.

FOURTH TERM: WEEK 6 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</td><td>• Counts given structured collections of objects, pictures or marks to at least 1000 and records the result by
- writing the number name
- showing it with flard cards
- writing it in expanded notation</td><td colspan="5">Daily :
• Counting in multiples using structured (grouped) objects.
• Records number of objects as expanded notation and number name
• Shows number using flard cards
• Compares groups of structured objects.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL
LO 1 AS 5, 8, 9, 10
LO 2 AS 2, 3
LO 4 AS 1, 2, 3, 4, 5</td><td rowspan="3">• Number knowledge and mental computations
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up multiplication tables of 2, 5 and 10 to 100
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Is able to read and interpret data in a simple table</td><td colspan="5">Daily :
• Mental calculations
• Doubling and halving odd and even numbers.
• Ordering numbers on a number line</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>Multiplication tables 2, 3, 5, and 10.

Magic squares</td><td>Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=

Number sequences to 1000.</td><td>Data Handling</td><td>Number sequences to 1 000

Data Handling</td><td rowspan="2">WHOLE CLASS ACTIVITY

Number game.</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS 5, 7, 8, 10, 11,12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off to 10</td><td colspan="4">Ask each group the same problems. They can be solved using number grids, numbers, etc.
Number range: Group 1 works to 1000; Group 2 works to 1 000; Group 3 works to 750.</td></tr>
<tr><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 array and 1 sharing with remainder leading to fractions type word problem.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
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Ask 1 repeated subtraction and 1 grouping with remainder type word problem.
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Ask 1 repeated subtraction and 1 grouping with remainder type word problem.
Group 1 works on its own.</td></tr>
</table>

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.
- The activities this week involve collecting and analyzing data. You will need to prepare the data collection sheets before Day 2 as the learners need to take it home and collect the data.
- You will continue expanded notation of three number digits, adding and subtracting, doubling and halving.
- Make sure learners are meaningfully occupied every day as there is still a lot to learn this year!

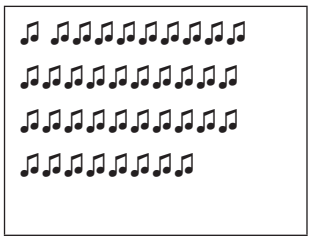
DAILY ACTIVITIES

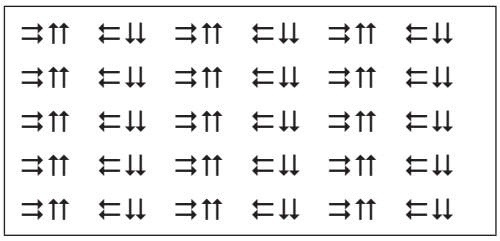
COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Give learners structured collections of objects to count. They should count at least 2 groups every day. Some examples are:
  - 10 beads threaded on some string or wool and tied as a necklace.
  - Pictures of cars with 4 wheels or toy cars
  - Pictures of pairs of shoes, baby booties, etc. cut from wrapping paper or magazines
  - 100 Beans in a small plastic packet e.g. bank bag.
  - Computer generated pictures e.g.





- Learners count their objects, make the number with their flard cards, record the number, expanded notation and number name in their books e.g.

Date	Number	Number name	Expanded notation	Multiplication	Other relationship
	76	seventy six	70+6	38x2=76	80-4=76
	120	one hundred and twenty	100+20	30x4=120	50+70=120

***Tip**: Give learners a worksheet with the table drawn. They paste the worksheet into their books and fill it in each day. This table has been filled in using the computer generated pictures for the examples.*

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

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Point to a number on the number grid (1 to 100) and ask learners to double or halve it mentally.

- Start at any number between 500 and 600 and count on in 2s, 20, 10s, 100s, 5s, 50s.
- Make up stories and ask questions at the end. Learners are not allowed to use their pencils to work out the answers – they need to listen and mentally calculate the answer. One example is:
  - The bus picked up 15 school children at the first stop, 2 children at the next stop and 21 children at the last stop.
  - 12 children got out at the first school. How many were still in the bus?
  - Half the children got out at the next school. How many feet got out the bus?
  - How many fingers were left in the bus?

  Make up your own stories.

DAY 1 (to take no more than 20 minutes)

- Start the lesson by asking learners the 2, 3, 5 and 10 times table. Give each group a different multiple e.g. x2, x5 etc. Each learner writes down as many facts as possible in 1 minute. The group then looks at which facts were wrong, or no one was able to do e.g. everyone got 9x5 wrong. They then try and work out the correct answer using the knowledge they have e.g. if 10x5 is 50, then 9x5 is 5 less than 50, that is 45.
- If you have not already introduced your learners to magic squares, you should begin to do so. Draw a 3x3 square on the board, fill in the numbers from 11 to 19 as indicated and ask learners to find out why it is a magic square e.g.

18	11	16
13	15	17
14	19	12

***Tip**: . A magic square is when the numbers in each of the rows or columns adds up to the same thing. In this example the magic number is 45: 18+11+16=45, or 18+15+12=45, or 18+13+14=45 and so on.*

DAY 2 (to take no more than 20 minutes)

- Give each learner a market research questionnaire. Discuss it with the class. Learners take it home and ask for help to fill it in. It MUST be returned the next day, completed.
- Write some numbers on the board and as soon as someone identifies the pattern, they tell you to stop. They then explain the pattern and say how it will continue. E.g.
  356, 361, 366, 371, (counting in 5s)
- Give each pair a card with 3 numbers to be added, two of which will make a complete 10. However, one of the numbers will be missing. Learners identify the 2 numbers that make 10, filling in the missing number, e.g.

124+___+17=147
___ + 4 + 18=388

254-___+9=259
772-___+3=773

DAY 3 (to take no more than 20 minutes)

- Each learner will read from their own questionnaire while the class sorts the data. Draw a table for the data collection on a big piece of paper. Ask the class what cell phone providers there are. As the learners answer, write the name of the cell phone provider on the table e.g. MTN, Vodacom etc. Learners take turns to make a mark on the paper next to the relevant cell phone provider. Every fifth learner must draw a line diagonally through the other 4 lines i.e. ~~IIII~~. This is called a tally. Continue in this way until all the data has been collected. Total each line e.g. all the MNT, then all the Vodacom etc. and check that the total of the cell phones is the same as the number of learners in the class. Do this for each of the categories.

DAY 4 (to take no more than 20 minutes)

- Write some numbers on the board and as soon as someone identifies the pattern, they tell you to stop. They then explain the pattern and say how it will continue. E.g.
  356, 357, 359, 362, 366, 371 (adding1, then 2, then 3, then 4, then 5 etc.)
- Display the table of data collected on day 3 and revise how it was sorted. Give each group one of the categories e.g. cell phones. The group must decide how they want to display the data in a graph and then draw the graph. They will also have to decide whether to mark the graph in 1s, 2, 5s, etc. Display the different graphs next to the original data table.
  Tip: *Use this whole data handling activity towards Assessment Task 3.*

DAY 5 (the whole lesson)

- Arrange the class in groups of 3 or 4 learners. Each learner must have a classwork book and a pencil. Tell learners that they are now going to play a game. In each group they have to write their names on the scoring sheet, with several lines between the names so that there is space to write the points they will score. Hand out the container with number bond cards to each group. Also hand out the second empty container to each group.
- Explain to the class how the game will work:
  - Learners will take turns of one minute to draw cards and complete the number sentences in their classwork books. For example if the card reads 30+40, the learner has to write 30+40=70 in his/her classwork book, then draw a next card and continue until the minute is up. Learners has to give answers to all the cards they draw: skipping of cards is not allowed.Tell the class the beginning and end of each one-minute period
  - When a turn is completed, the other members of the group have to check the learner's work. The learner gets one point for every correct answer, and loses one point for every wrong answer.

- Do not put used cards for which correct answers are produced back into the container with the other cards. Put them in the second container. Only cards for which wrong answers are given are put back in the original container.
- Learners have to play in alphabetical order according to their first names. Learners may use number grids to help them find the answers.
- Tell the class that there will be one trial game before the real game starts. Each player will get at least one turn of one minute in the trial game. All cards are put back into the original container after the trial game.
- Use your watch to tell learners when to start the first round of the trial game. When the sixty seconds is over, call STOP. Learners now need time to mark the answers and award the points, before you say START again to set the second round in motion.
- The game continues until all the cards have been used. Some groups will finish before others. Within each group, the learner with most points at the end wins the game. The first group of learners who finish all the cards wins the team competition.
-

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

WEEK 6: GROUP TEACHING

Week 6	GROUP TEACHNG COMPONENT (Concept Development and Problem Solving)

Notes to teacher:

- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. 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.)
- Your group teaching session will be built around the problem solving you have planned. 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.
- Solving problems is therefore the starting point, not the end point, of concept development.
- Even though this is the final term, learners need to maintain their routine as well as the constant exposure to the different concepts.

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

Independent Work:

1. Fill in the missing numbers.

	14	16	10	15	12	18	13
x10							

2.Fill in the missing numbers.

Number	x 3	+30	÷ 3	-30
12				
15				
21				

3. Cards which require expanded notation as well as number names e.g.

678	600+ 70+8	six hundred and seventy eight
	40+9 +900	
		seven hundred and eighty four

4. Counting cards.

Count back				**Number**	Count forwards				Use these intervals
									Count in 1s
									Count in 2s
									Count in 5s
									Count in 10s

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes*.

- Use the computer generated cards (see Daily activities). Place one card in the middle of the group, let them look at it for a few seconds, then cover it. Learners estimate and record how many there are and round off to the nearest 10. Count the number of pictures, round off and ask who had estimated correctly, who had estimated too many and who had estimated too few.
- Give the group the following kind of simple problems and ask them to record the number sentence and answer. Some examples are
  - Share 10 fizzers among five children.
  - Share 15 sausages among three children.
  - Share five chocolates among three children.
  - Share 11 sausages among four children
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 sharing where the remainder becomes a fraction and 1 array type word problem and on Wednesday you will ask 1 repeated subtraction and 1 grouping with a remainder type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL. You need to give learners something to think about

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes*.

- Give each learner 50 counters. Let them count the counters by putting them in groups of 5. Ask the following type of questions:
  - How many counters do you have? 50
  - How many groups of 5 did you make? 10
  - How much are 10 fives? 50
  - How much is 50 divided into groups of 5? *This is the point at which you may need to engage the learners in a discussion of what division means. If they find it too difficult, put it into a simple*
- Repeat the activity using groups of 10 and 2. Make sure that you ask questions each time to ensure an understanding of what is being done. Then ask them to put the counters into any equal size groups, with no counters over.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 sharing where the remainder becomes a fraction and 1 array type word problem and on Thursday you will ask 1 repeated subtraction and 1 grouping with a

remainder type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Give each learner 50 counters. Let them count the counters by putting them in groups of 5. Ask the following type of questions:
  - How many counters do you have? 50
  - How many groups of 5 did you make? 10
  - How much are 10 fives? 50
  - How much is 50 divided into groups of 5? *This is the point at which you may need to engage the learners in a discussion of what division means. If they find it too difficult, put it into a simple*
- Repeat the activity using groups of 10 and 2 . Make sure that you ask questions each time to ensure an understanding of what is being done. Then ask them to put the counters into any equal size groups, with no counters over.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 sharing where the remainder becomes a fraction and 1 array type word problem and on Wednesday and Thursday you will ask 1 repeated subtraction and 1 grouping with a remainder type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

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

FOURTH TERM: WEEK 7 OVERVIEW

<table>
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LO 1 AS 1</td><td>• Counts given structured collections of objects, pictures or marks to at least 1000 and records the result by
- writing the number name
- showing it with flard cards
- writing it in expanded notation</td><td colspan="5">Daily :
• Counting in multiples using structured (grouped) objects.
• Records number of objects as expanded notation and number name
• Shows number using flard cards
• Compares groups of structured objects.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL
LO 1 AS 5, 6, 8, 9, 10
LO 2 AS2
LO5 AS 1,2,3, 4, 5</td><td rowspan="3">• Number knowledge and mental computations
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up multiplication tables of 2, 5 and 10 to 100
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Is able to read and interpret data in a simple table</td><td colspan="5">Daily :
• Mental calculations
• Number sequences
• Number relationships</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>Calculates using addition and subtraction of two three digit numbers.</td><td>Calculates using addition and subtraction of two three digit numbers.</td><td>Builds up multiplication tables of 2, 3, 5 and 10 up to 100.</td><td>Building up and breaking down 3-digit numbers</td><td>WHOLE CLASS ACTIVITY

Compares length using standard measures.

Reads and interprets data.</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS 7, 8, 10, 11,12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off to 10</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 works to 1000; Group 2 works to 1 000; Group 3 works to 750.</td><td></td></tr>
<tr><td></td><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 compare and 1 combination type word problem
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 compare and 1 combination type word problem
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 change and 1 repeated addition type word problem
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Ask 1 change and repeated addition type word problem
Group 1 works on its own.</td><td></td></tr>
</table>

WEEK 7: WHOLE CLASS

WEEK 7	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)

Notes to the teacher:

- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- Continue to look and the time at the beginning of each lesson throughout the day.
- Money was covered in Terms 2 and 3, but it is important to keep revising it as the concept is a very important skill to master.
- Counting leads to an understanding of each of the four operations. Do not let learners simply rote count. The activities provided all make learners engage in what they are learning.

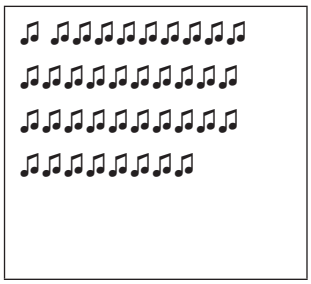
DAILY ACTIVITIES

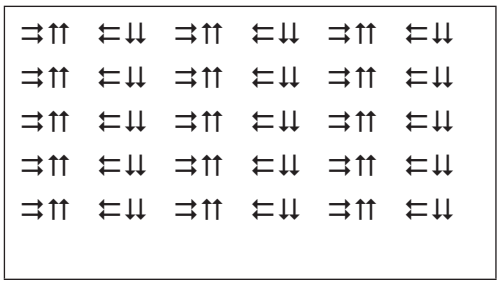
COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Give learners structured collections of objects to count. They should count at least 2 groups every day. Some examples are:
  - 10 beads threaded on some string or wool and tied as a necklace.
  - Pictures of cars with 4 wheels or toy cars
  - Pictures of pairs of shoes, baby booties, etc. cut from wrapping paper or magazines
  - 100 Beans in a small plastic packet e.g. bank bag.
  - Computer generated pictures e.g.





- Learners count their objects, make the number with their flard cards, record the number, expanded notation and number name in their books e.g.

Date	Number	Number name	Expanded notation	Multiplication	Other relationship
	76	seventy six	70+6	38x2=76	80-4=76
	120	one hundred and twenty	100+20	30x4=120	50+70=120

***Tip**: Do this every day and observe learners as this activity is part of Assessment Task 3.*

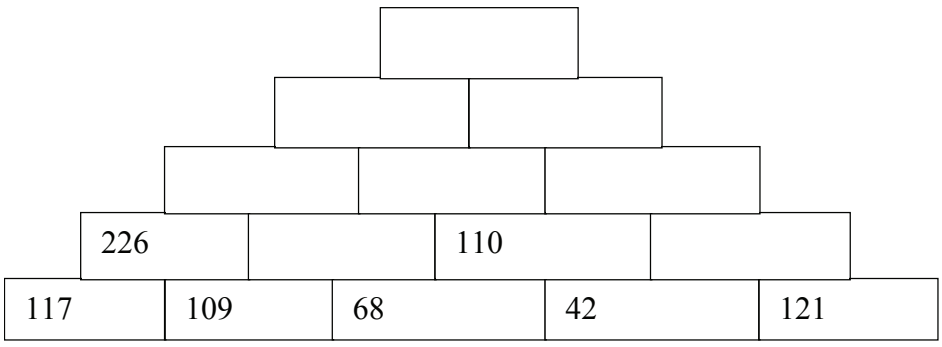
Choose from the following (to make up the 10 mins.):

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Choose a 3 digit number and the first learner adds 1 to the number, the next learner adds 2 to the number and so on until 9 has been added to the number. The next learner takes away 1 from the last number said, the next learners takes away 2 and so on until 9 has been taken away. Choose another 3 digit number and continue like this until everyone has had a turn.
- Let the learners stand behind their chairs. Start by asking how much 321 plus 100 is. The first learner with the correct answer sits down and may not answer any more. Keep adding or subtracting whole 10s or 100s e.g. 321+100=421, 421+10=431, 471-10=461, 461+200 etc. As learners answer correctly they sit down till there are only a few learners left standing. These learners get a chance to answer first the next time you play this game.
- Ask the learners what numbers make up a number, e.g. "what two numbers make up 224, 300, 126 etc…"

DAY 1 (to take no more than 20min)

- Give each learner a small piece of scrap paper. Half the class writes a 3 digit number on their piece of paper and the other half the class writes a whole 10 or 100 i.e. 10, 20, 20, 300, etc. Take the class outside and let them run around in a demarcated area. When you give the signal (blow your whistle, or clap your hands, beat a drum etc.) each learner finds a partner where one has a 3 digit number and the other a whole 10 or 100. Ask the pairs how much they make together and the highest number wins. Then play the game again, but this time the lowest number wins. Play one more time, and this time the numbers closest to 500 (when rounding off) win. Before going back to the classroom collect the pieces of paper to use again.
- Draw a pyramid on the board that learners copy into their books (or give them a worksheet with the pyramid template). Learners complete the pyramid by adding or subtracting.



***Tip**: Mark this activity and record how the learner did because this is part of Assessment Task 3.*

DAY 2 (to take no more than 20 minutes)

- Let every learner write any number between 650 and 750 on a piece of paper. Collect the numbers and place in 3 packets. Send the packets around the class and learners take out a number. Write all the whole 10s from 650 to 750 e.g. 650, 660, 670, etc. Place these numbers around the classroom. Now tell learners to stand in front of the nearest 10 to the number on their paper.

- Give each learner a card with written instructions. Learners write the answers in their books. Some examples of cards are the following:

- Take a handful of counters. - Estimate the number. - Count the number. - Add 350 to the number. - Write the expanded notation of the new number. - Write the number using 4 numbers. - Write the number using 5 numbers. - Double the number.

- Choose you own 3 digit number. - Write 2 addition number sentences to make your number. - Write 2 subtraction number sentences to make your number. - Write 2 multiplication number sentences to make your number. - Write your number in words. - Decorate your number.

***Tip**: Every learner has a different card, so you can use this activity towards Assessment Task 3.*

DAY 3 (to take no more than 20 minutes)

- Let the learners sit in groups of 5 or 6 on the floor. Each group must have a pile of beans that they will estimate by taking handfuls at a time. Once they have estimated and counted their handful of beans, they will then divide each handful among themselves and write the number sentence. E.g. 48 ÷ 6 = 8. Do this a number of times and observe the learners so that you can assess them.
- Give learners a worksheet containing multiplication number sentences. Learners need to write and explain how they got the answer, e.g.

3x5=	I know this because_____.
6x5=	I know this because _____.
12x5=	I know this because _____.
12x10=	I know this because _____.
24x10=	I know this because _____.
24x9=	I know this because _____.

***Tip**: This is one of the activities for Assessment Task 3.*

DAY 4 (to take no more than 20 minutes)

- Hand out copies of the four sheets with fake money notes, and a pair of scissors, to each learner. Each learner has to write his/her initials or first or second name on each of the notes before cutting, so that they can keep hold of their own money later on. Learners have to cut out the notes and place them in an envelope.
- Learners should work in pairs, or in groups of three. One learner states a three-digit amount, for example *five hundred and eighty-seven rand.* The other learner (or the other two learners) have to make up this amount of money from their notes, in four different ways, for example:

R500 + R80 + R7
R200 + R300 + R50 + R30 + R4 + R3
R100 + R400 + R20 + R60 + R1 + R6
R100 + R100 + R100 + R100 + R100 + R40 +R10 +R10 + R10 + R10 + R2 + R5

- The learners should check together whether the different representations show the same amount, and that it is the amount stated by the first learner. Each learner should then write a report of the work in his/her classwork book, indicating the numbers only (not the money to which it refers), for example as follows for the above case:

  500 + 80 + 7 = 200 + 300 + 50 + 30 + 4 + 3
  = 100 + 400 + 20 + 60 + 1 + 6
  = 100 + 100 + 100 + 100 + 100 + 40 +10 +10 + 10 + 10 + 2 + 5
- Another learner then gets the opportunity to nominate an amount.
- Circulate between the learners and check as many reports as you can. Where there are mistakes, point this out to learners by saying *"This is not true, you must correct it!"* They should then interrupt what they are busy with, to first correct the work with mistakes. They should call you when they have corrected, so that you can check again.

DAY 5 (whole lesson)

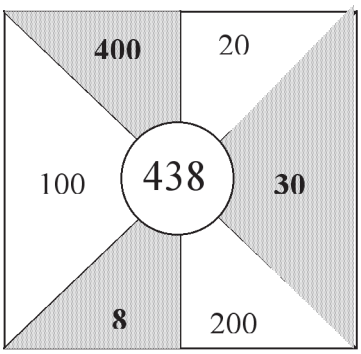
- Today learners will compare length using standard measures and after collecting and recording the data, the learners will read and interpret the data.
- Start the lesson by asking the learners to compare the lengths of themselves with others. Let them arrange themselves from the shortest to the tallest in the class. Let them discuss who is the shortest, the tallest, the same height. Let them estimate in centimetres how tall they are. Make sure that you have tape measures in the class. Tape measures are not impossible to get hold ofL Put the learners into groups of 2s, 3s, or 4s and let them stand against the wall and using the tape measure, measure themselves.
- Give them a data sheet that has the following on it:
  My name:
  My age: _____ months_____
  My height:

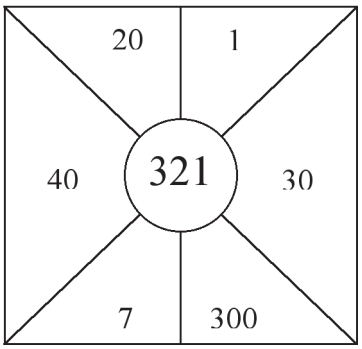
Body	Estimation	Exact measurement	Difference
Closed fist			
Leg			
Foot			
Stride			
Height			
Reach			
Arm			

• Draw up a class graph of height, foot and arm lengths. Give the learners a questionnaire to fill in e.g. How many learners are taller than 1 metre? How many learners are shorter than 1 metre? Etc. ***Tip:****This can be used towards Assessment Task 3 if you need to.*	
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 : • Counts given structured collections of objects, pictures or marks to at least 1000 and records the result by - writing the number name - showing it with flard cards - writing it in expanded notation • Number knowledge and mental computations - Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259= - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up multiplication tables of 2, 5 and 10 to 100 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Is able to read and interpret data in a simple table

WEEK 7: GROUP TEACHING

Week 7	GROUP TEACHNG COMPONENT (Concept Development and Problem Solving)
Notes to teacher: • Your group teaching session will be built around the problem solving you have planned. 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. • Solving problems is therefore the starting point, not the end point, of concept development. • Even though this is the final term, learners need to maintain their routine as well as the constant exposure to the different concepts. • **Assessment Task 3** will be completed this week.	
<u>Examples of activities to be done independently.</u> *Work from a Learner's Book, worksheets, workcards, etc.* **Independent Work:** 1. Use 901 – 1000 number grid to answer the questions. a) Find 905. Colour the block yellow. Count on in fives. Colour each fifth block yellow. Write the numbers in the yellow block from biggest to smallest. b). Find 955. Colour it in green. Count backwards in 15s. Colour every 15th block green. 2. Colour in the shapes that make up each number in the circle. Example:	





3. Fill in the missing numbers.

	60	75	10	95	80	25	40
÷ 5							

4. Fill in the missing numbers.

a	**b**	**2a-b**
6	9	3 (12-9=)
25	21	
30		50
	15	135

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes.*

- Ask the learners to estimate how many times they can jump up and down in 1 minute. Let them record their estimates then time them while they jump and count their own jumps. At the end of the minute they record how many times they jumped. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- Put some counters in the middle of the group. Show the group a division number sentence and ask them to write the answer e.g. 25÷5=, 40÷10=. Once everyone has written an answer, let one or two learners explain how they reached the answer. Learners can use the counters if they need them. Do only 5 as that will give you a good idea if the learners understand or not.

  ***Tip**: Use this towards Assessment Task 3.*
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 compare and 1 combination type word problem and on Wednesday you will ask 1 repeated subtraction and 1 change type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about

***Tip**: Use any of the problem solving activities for Assessment Task 3.*

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes*.

- Ask the learners to estimate how many words they think you can write down in 1 minute. Let them record their estimates then they time you while you write words. At the end of the minute they count how many words you wrote down. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- Put some counters in the middle of the group. Show the group a division number sentence and ask them to write the answer e.g. 25÷5=, 40÷10=. Once everyone has written an answer, let one or two learners explain how they reached the answer. Learners can use the counters if they need them. Do only 5 as that will give you a good idea if the learners understand or not.

  ***Tip**: Use this towards Assessment Task 3.*
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 compare and 1 combination type word problem and on Thursday you will ask 1 repeated subtraction and 1 change type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about

  ***Tip**: Use any of the problem solving activities for Assessment Task 3.*

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Ask the learners to estimate how many times they can click their fingers in 1 minute. Let them record their estimates then time them while they click their fingers and count their own clicks. At the end of the minute they record how many times they clicked their fingers. Ask who estimated too many, who estimated too few, and who estimated the correct number.
- Put some counters in the middle of the group. Show the group a division number sentence and ask them to write the answer e.g. 25÷5=, 40÷10=. Once everyone has written an answer, let one or two learners explain how they reached the answer. Learners can use the counters if they need them. Do only 5 as that will give you a good idea if the learners understand or not.

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- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 compare and 1 combination type word problem and on Wednesday and Thursday you will ask 1 repeated subtraction and 1 change type word problem. It is important that learners are given the opportunity to reflect on their thinking as

well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about ***Tip**: Use any of the problem solving activities for Assessment Task 3.*	
Assessment	**Formal: Recorded Assessment Task 3:** During the whole class and group teaching activities as indicated rate the learners against the following milestones, recording specific problems : • Number knowledge and mental computations - Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259= - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up multiplication tables of 2, 5 and 10 to 100 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - number lines - rounding off to 10

SUGGESTED ASSESSMENT TASKS : GRADE 3 NUMERACY FOURTH TERM

TASK 3 : WEEK 7

COMPONENT	MILESTONES	WKS	TASKS
COUNTING AND MENTAL/NUMBER SENSE	• Counts given structured collections of objects, pictures or marks to at least 1000 and records the result by - writing the number name - showing it with flard cards - writing it in expanded notation • Number knowledge and mental computations - Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259= - Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc. - Builds up multiplication tables of 2, 5 and 10 to 100 - Calculates division of 2-digit by 1-digit numbers e.g. 75÷5= • Is able to read and interpret data in a simple table	Wk 6 Wk 7	• Use the practical activity and written activities this week to assess Data Handling. • Use the daily counting activities to assess learners' ability to count structured objects. • Use the written activities on Days 1, 2 and 3 to assess learners' knowledge of numbers and operations. • Use the practical activity on Day 5 to assess whether learners have an understanding of collecting and analyzing data.
PROBLEM SOLVING	• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below - building up and breaking down numbers - doubling and halving - number lines - rounding off to 10	Wk 7	• Use the activities during Group teaching time to assess learners' ability to calculate division of a 2-digit number by a 1-digit number. It will be easier to assess this when working with a small group. • Learners' solutions to the word problems will give an indication as to their understanding of multiplication and division.

FOURTH 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</td><td>• Count in 10s to 1000
• Counts in multiples of 2, 5, 10, 20, 25, 50 and 100 up to at least 1000.</td><td colspan="5">Daily :
• Counting in multiples of 2, 3, 5, 10, 25, 50 and 100
• Counting in 10s to 1000
• Counting iin1s, 2s, 5s, 10s, 20s, 25s and 100s forwards and backwards, starting and ending at any number as indicated.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL
LO 1 AS 5, 8, 9, 10
LO 2 AS 2, 5
LO 3 AS 6</td><td rowspan="3">• Number knowledge and mental computations
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up multiplication tables of 2, 5 and 10 to 100
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Identifies and copies geometric patterns from different cultures.
• Is able to read and draw a simple map of the school and classroom</td><td colspan="5">Daily :
• Doubles and halves three digit numbers up to 1000 .
• Reads and writes number name and symbols from 1 - 1000
• Numerosity of numbers to 1 000</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>Engages in using expanded notation of three-digit numbers in a variety of ways.

Addition and subtraction of two 3-digit numbers</td><td>Copies geometric patterns from different cultures.</td><td>Number sequences

Multiplication of 2, 5 and 10</td><td>Calculates using addition and subtraction of two and three-digit numbers.</td><td>WHOLE CLASS ACTIVITY

Plan a school garden.</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS 7, 8, 10, 11, 12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off to 10</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 works to 1000; Group 2 works to 1 000; Group 3 works to 750</td><td rowspan="2"></td></tr>
<tr><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 sharing without a remainder and 1 combine type word problem
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time
Ask 1 sharing without a remainder and 1 combine type word problem
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 grouping without a remainder and 1 grid type word problem
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 grouping without a remainder and 1 grid type word problem
Group 1 works on its own.</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.
- Add beans to the bean jar everyday.
- Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.
- **Activities for Assessment Task 3** will be found as part of the everyday teaching and learning activities.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Daily rote counting to 1000.
- Daily rational counting in multiples of 2, 3, 5, 10, 20, 25 and 100 to 1000 some days using structured (grouped together) objects or pictures and other days using loose objects.
- Daily rational counting in 1, 2s, 5s, 10s, 20s, 25s, and 100s forwards and backwards, starting and ending at any number as indicated to and from 1000.

Choose from the following (to make up 10 min).

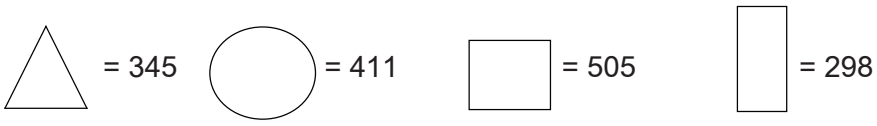
Each activity should be covered at least once during the week. The more times each activity is done the better.

- Write number names and symbols to 750 on pieces of paper and 'hide' them on the walls (put them randomly among the pictures, posters, etc on the walls). Put 10 different ones every day. Learners must find the hidden number words and symbols during the day.
- Point to numbers on the number line or number grid and learners round off to the nearest 10.
- Hand out the containers with all the counters etc. and let the learners work in pairs or fours. Let them estimate the number of counters, then count them by putting them into groups of 3s, 4s, 5s, 10s. Learners show the number using flard cards for expanded notation.
- Using numbers in the range 1-50, multiply by 10 and halve the answer.

DAY 1 (to take no more than 20 minutes)

- Give each group an A4 piece of paper and let them draw a number out of a packet. Use the number learners wrote for activities earlier this term. They write this number at the top of the paper and then see how many different ways they can write the value of the number in 2 minutes. Display the papers on the walls and tell the class that they can add to any of the papers during the week.

  ***Tip**: Remind the class every day to add to the papers on the wall. Learners can do this when they have time e.g. if they have finished all the set work and are waiting for the next instruction.*
- Draw the following on the board:



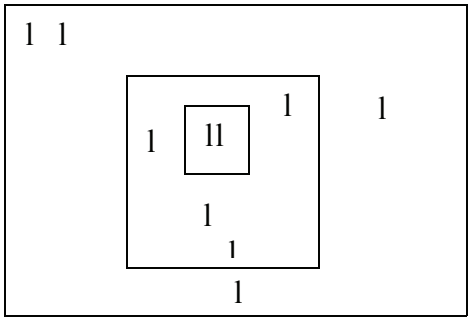
Ask learners to make up their own shape problems and write them in their books. They must not forget to fill in the answers. Some examples could be:

DAY 2 (to take no more than 20 minutes)

- Give the learners 5 minutes to add to the papers displayed on the wall.
- Discuss patterns found in different cultures. Learners are going to make their own class geometric pattern. Give each learner a half an A5 piece of paper on which they draw their own geometric pattern. Once everyone has finished, members of the group paste their pieces of paper onto a larger sheet. Once there are 4 or 5 larger sheets, these are joined together to form a class geometric pattern. Display it where other classes can admire it.

DAY 3 (to take no more than 20 minutes)

- Take the class outside and put them into groups of not more than 8 learners. Each group has a newspaper, a magazine, a book and some objects. Place an open newspaper on the ground, a magazine on top of the newspaper and an exercise book on top of the magazine. Learners take turns to throw 10 toothpicks/matches/buttons at once onto the collection. Anything landing on the newspaper counts as 100, anything landing on the magazine counts as 10 and the exercise book as a single digit. However, the number landing on the exercise book also indicates how many times the whole number must be doubled. Anything landing on the ground means the score has to be halved. E.g



In this diagram, the learner would have a score of 442 (4 counting 100 each, 4 counting 10 each and 2 counting 1 each). This score would then be doubled twice (2 on the exercise book). Learners keep a record of each throw and the learner with the highest score is the winner.

DAY 4 (to take no more than 20 minutes)

- Arrange the class in groups of 3 or 4 learners. Each learner must have a classwork book and a pencil. Tell learners that they are now going to play a game. In each group they have to

write their names on the scoring sheet, with several lines between the names so that there is space to write the points they will score. Hand out the container with number bond cards to each group. Also hand out the second empty container to each group.

- Explain to the class how the game will work:
  - Learners will take turns of one minute to draw cards and complete the number sentences in their classwork books. For example if the card reads 30+40, the learner has to write 30+40=70 in his/her classwork book, then draw a next card and continue until the minute is up. Learners has to give answers to all the cards they draw: skipping of cards is not allowed.Tell the class the beginning and end of each one-minute period
  - When a turn is completed, the other members of the group have to check the learner's work. The learner gets one point for every correct answer, and loses one point for every wrong answer.
  - Do not put used cards for which correct answers are produced back into the container with the other cards. Put them in the second container. Only cards for which wrong answers are given are put back in the original container.
  - Learners have to play in alphabetical order according to their first names. Learners may use number grids to help them find the answers.
  - Tell the class that there will be one trial game before the real game starts. Each player will get at least one turn of one minute in the trial game. All cards are put back into the original container after the trial game.
  - Use your watch to tell learners when to start the first round of the trial game. When the sixty seconds is over, call STOP. Learners now need time to mark the answers and award the points, before you say START again to set the second round in motion.

The game continues until all the cards have been used. Some groups will finish before others. Within each group, the learner with most points at the end wins the game. The first group of learners who finish all the cards win the team competition.

DAY 5 (the whole lesson)

- Discuss a garden – flower or vegetable garden. Discuss what to plant, where to plant and how to design a garden.
- Put the learners into groups of 2, give them paper, pencils and crayons. Send them outside to look at the schoolground. They must decide where they would start a garden and how they would design it. On their papers they must plan, design and colour etc. their garden.

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

WEEK 8 : GROUP TEACHING

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

Notes to teacher:

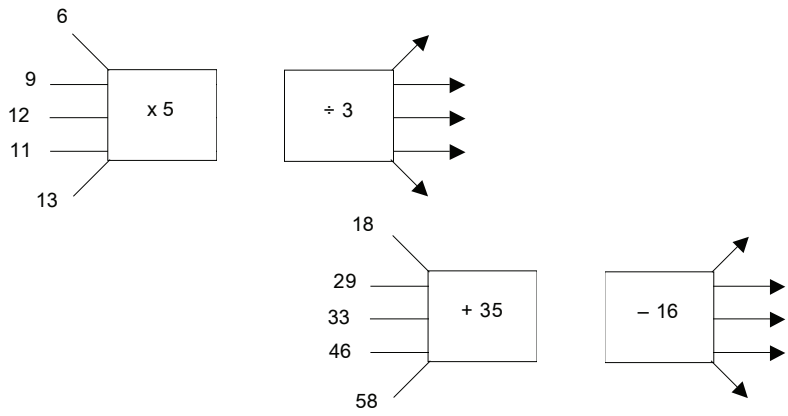
- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt.
- Learners must complete ALL the work that you have set for the lesson.
- The only reason learners get out of hand at this time of the year is because there is not enough work to keep them meaningfully occupied. So although you may not feel like teaching a full lesson and want to do 'fun' activities, this is not what learners enjoy!

DAILY ACTIVITIES

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

Independent Work:

1. Butterfly/spider sums



2. Counting activities.
3. Complete tables, using any of the 4 operations.
4. Magic squares.
5. Pyramids, using adding, subtracting, doubling and halving.

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes*.

- Let the learners sit in a circle. The first learner has to say a number e.g. 20. The next child has to double the number, saying 40. The following learner doubles to 80. The doubling has to continue until each learner has had a turn. Repeat the activity, this time halving the numbers.

- Learners pack out their flard cards. Ask them to do the following:
  - make 3-digit numbers, showing the expanded notation each time
  - make a 3 digit number, then add or subtract whole 10s e.g. 457 add 50, 457 take away 50
  - make a 3-digit number, then add or subtract whole 100s e.g. 457 add 200
  - make a 3-digit number, then add or subtract single digit numbers e.g. 457 +9

  Make sure you ask questions each time as you have done the whole year.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 sharing without a remainder and 1 combine type word problem and on Wednesday you will ask 1 grouping without a remainder and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL You need to give learners something to think about.

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes*.

- Let the learners sit in a circle. The first learner has to say a number e.g. 20. The next child has to double the number, saying 40. The following learner doubles to 80. The doubling has to continue until each learner has had a turn. Repeat the activity, this time halving the numbers.
- Learners pack out their flard cards. Ask them to do the following:
  - make 3-digit numbers, showing the expanded notation each time
  - make a 3 digit number, then add or subtract whole 10s e.g. 457 add 50, 457 take away 50
  - make a 3-digit number, then add or subtract whole 100s e.g. 457 add 200
  - make a 3-digit number, then add or subtract single digit numbers e.g. 457 +9

  Make sure you ask questions each time as you have done the whole year.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 sharing without a remainder and 1 combine type word problem and on Thursday you will ask 1 grouping without a remainder and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL You need to give learners something to think about.

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Let the learners sit in a circle. The first learner has to say a number e.g. 20. The next child has to double the number, saying 40. The following learner doubles to 80. The doubling has to continue until each learner has had a turn. Repeat the activity, this time halving the numbers.
- Learners pack out their flard cards. Ask them to do the following:
  - make 3-digit numbers, showing the expanded notation each time
  - make a 3 digit number, then add or subtract whole 10s e.g. 457 add 50, 457 take away 50
  - make a 3-digit number, then add or subtract whole 100s e.g. 457 add 200
  - make a 3-digit number, then add or subtract single digit numbers e.g. 457 +9

  Make sure you ask questions each time as you have done the whole year.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 sharing without a remainder and 1 combine type word problem and on Wednesday you will ask 1 grouping without a remainder and 1 grid type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

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

FOURTH 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</td><td>• Counts given unstructured collections of objects, pictures or marks up to at least 1000 by structuring them and records the result by
- writing the number name
- writing it in expanded notation</td><td colspan="5">Daily :
• Counting in multiples of 2, 3, 5, 10, 20, 25, 50 and 100 to 1000.
• Counts in10s to 1000
• Counts objects and puts them into groups of 2, 3, 5, 10 etc.</td></tr>
<tr><td rowspan="2">NUMBER SENSE AND MENTAL
LO 1 AS 5, 8, 9, 10
LO 2 AS 2, 3
LO 3 AS 6</td><td rowspan="2">• Number knowledge and mental computations
- Adds and subtracts to at least 50 to do quick mental calculations like:23+18=41
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Calculates division of 2-digit by 1-digit numbers e.g. 75÷5=
• Identifies and copies geometric patterns from different cultures.
• Is able to read and draw a simple map of the school and classroom</td><td colspan="5">Daily :
• Recognises and orders numerals and number names up to 1000
• Numerosity of numbers to 200
• Estimate groups of numbers.
• Mental calculations</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>GROUP TEACHING

LO 1 AS 8, 10, 11, 12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off to 10</td><td>Calculates using addition and subtraction of 2 and 3-digit numbers.</td><td>Number sequences

Problem solving activities</td><td>Read a simple map.</td><td>Calculates division of 2-digit numbers by 1-digit numbers

Patterns</td><td rowspan="2">WHOLE CLASS ACTIVITY

Decorate paper to wrap presents.</td></tr>
<tr><td colspan="5">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 works to 1 000; Group 2 works to 1 000; Group 3 works to 750</td></tr>
<tr><td></td><td></td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1addition and 1 grouping with a remainder word problem.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 addition and 1 grouping with a remainder word problem.
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 subtraction and 1 multiplication word problem.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 subtraction and 1 multiplication word problem.
Group 1 works on its own.</td><td></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.
- Weeks 9 and 10 will be fun weeks, though the lessons will remain structured

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily: (Choose a few for each day of the week)

- Have a quick game counting in 3s. Start with any number. Each learner has a turn to add 3. e.g. start with 21 but first let learners estimate what the last number will be. Do this every day, starting at a different number each time.
- Give each group a tin/packet of objects to count. Tell the group to count them in the easiest way possible. Every learner in the group must participate. Once the counters have been counted, learners write the number, the expanded notation and the number name.

Choose from the following to make up the 10 minutes:

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Play the card game "I have, who has". By now learners will be familiar with how it is played.
- Point to a number on the number grid and learners tell you the number that is 9 more or 9 less. You can play this often by just changing the number that is added or subtracted.
- Point to any number between 1 and 50 and ask questions such as: *what is twice this? What is five times this? What is 10 times this? Etc.*

DAY 1 (to take no more than 20 minutes)

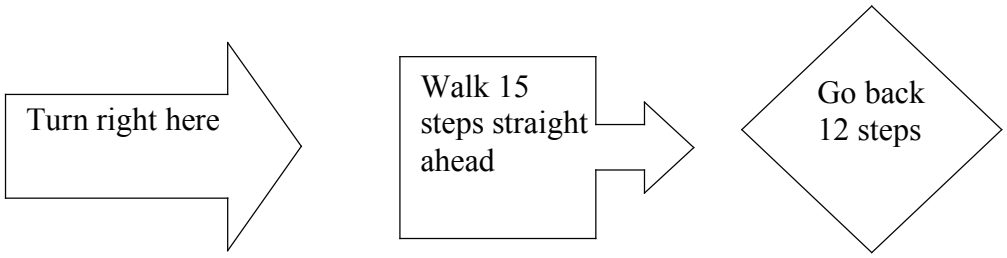
- Ask the learners to estimate the following, then count the actual number using a calendar:
  - The number of days to the end of the term.
  - The number of days to Christmas.
  - The number of days to the first day of the next school term.
- Put the learners into groups of 4 or 6. Each group has 2 dice – one with 3-digit numbers and one with single digit numbers. Each member of the group has a turn to throw both dice, then everyone in the group writes the number sentence where they subtract the single digit from the 3-digit number. The thrower checks that the answer is correct. Once everyone has had a turn to throw the dice, they can repeat the activity, this time adding the two numbers.

DAY 2 (to take no more than 20 minutes)

- Write some number patterns on the board. As soon as someone can identify the pattern they tell you to stop. They then describe the pattern and say how it will continue. Some examples:
  - 79, 82, 85, 88, etc (counting in 3s)
  - 88, 87, 85, 82, 78, etc. (subtracting 1, then 2, then 3, etc.)
  - 17, 20, 18, 21, 19, 22, 20 etc. (adding 3, then subtracting 2)
- Give the class the following situation:
  - You have yellow and red blocks and are building towers of three blocks each. How many different combinations can you make to build towers? (8 towers can be built)
  - You have yellow, red and blue blocks. You only use 2 blocks for each tower. How many different towers can you build? (9)

DAY 3 (to take no more than 20 minutes)

- Make some direction signs and place them around the area outside the classroom. Let learners go on a treasure hunt – the directions will lead them to a special place. At that place have a packet of sweets, enough for every learner in the class. Let the class go in groups of 4 – one group at a time - to follow the directions. As the groups find the treasure, they keep quite so as not to give the place away! When everyone is there, hand out the sweets. Some ideas for directions are:



DAY 4 (to take no more than 20 minutes)

- Give each learner a strip of paper on which they write a number pattern. Learners write their names on the back of the strip. Collect all the strips, muddle them up and hand them out. Learners identify the pattern on the strip and write 3 more numbers. The strips get given back to the person who's name is on the strip and the learner checks that the pattern has been correctly identified.
- Let the learners sit in groups of 5 or 6 on the floor. Each group must have a pile of beans/ counters that they will estimate by taking handfuls at a time. Once they have estimated and counted their handful of beans, they will then divide each handful among themselves and write the number sentence. E.g. 48 ÷ 6 = 8. Do this a number of times, each time recording the number sentence.

DAY 5 (the whole lesson)

- Today the learners are going to make a paper chain to decorate their classroom. Give the learners A4 paper and let them colour the whole page. They then cut strips about 4cm wide, make a circle with the first one by gluing it together. The other strips are threaded through

- each other and glued to make circles. Hang the chains to decorate the classroom.
- Give the learners large pieces of paper/newsprint and let them decorate the papers with patterns. The whole piece of paper must be thoroughly decorated. You could also do potato prints on the paper. These pieces of paper can be used to wrap presents.

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

WEEK 9: GROUP TEACHING

Week 9	**GROUP TEACHNG COMPONENT (Concept Development and Problem Solving**

Notes to teacher:

- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. 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.)
- You will doing fun activities during the last two weeks of the term although the lessons will still be structured and planned for.

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

Independent work:

1. Fill in the missing numbers.

a	b	2a-b
6	9	3 (12-9=)
25	21	
30		50
	15	135

2. Spider diagrams
3. Number strips and a die – add, subtract, multiply and divide.

Working with the group

GROUP 1

*On **Monday** and **Wednesday** this group works with the teacher for 30 minutes*.

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:
    1. Is it 6+9? (no)
    2. Is it 20-4? (no)
    3. Is it 7x2? (no)

4. Is it 10x2? (no)
5. Is it 24÷2? (yes)

If they identify the number, the group gets 1 point and if they don't, you get the point.

- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 grouping with a remainder and 1 addition type word problem and on Wednesday you will ask 1 subtraction and 1 multiplication type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

GROUP 2

*On **Tuesday** and **Thursday** this group works with the teacher for 30 minutes*.

- Play "10 questions". Tell learners you are thinking of a number that is between 10 and 20. They are allowed to ask only 10 questions in order to identify the number. However the questions have to contain an operation – either plus (+), minus (-), multiply (x) or divide (÷). Here is an example:
  1. Is it 6+9? (no)
  2. Is it 20-4? (no)
  3. Is it 7x2? (no)
  4. Is it 10x2? (no)
  5. Is it 24÷2? (yes)

  If they identify the number, the group gets 1 point and if they don't, you get the point.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 grouping with a remainder and 1 addition type word problem and on Thursday you will ask 1 subtraction and 1 multiplication type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problem. You need to give learners something to think about.

GROUP 3

*This group works with the teacher **every day** for 30 minutes.*

- Put some counters in the middle of the group. Show the group a division number sentence and ask them to write the answer e.g. 25÷5=, 40÷10=. Once everyone has written an answer, let one or two learners explain how they reached the answer. Learners can use the counters if they need them. Do only 5 as that will give you a good idea if the learners understand or not.

- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 grouping with a fraction and 1 addition type word problem and on Wednesday and Thursday you will ask 1 subtraction and 1 multiplication type word problem. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes. Therefore make sure the learners have enough time to solve the problem. If they solve the problem straight away, it is not a problemL You need to give learners something to think about.

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

FOURTH TERM: WEEK 10

<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, 4</td><td>• Counts forwards and backwards in multiples of 2, 3, 5, 10, 20, 25, 50 and 100 up to 1000.
• Counts in 10s up to 1000.</td><td colspan="5">Daily :
• Counting in multiples of 2, 3, 5, 10, 20, 25 50 and 100 to 1000.
• Count in 10s to 1000.
• Count in 1s, 2s, 3s ,5s, 10s, 20s, 25s and 100s forwards and backwards starting and ending at any number as indicated.</td></tr>
<tr><td rowspan="3">NUMBER SENSE AND MENTAL
LO 1 AS 3, 5, 8, 9, 10
LO 3 AS 1, 2, 5</td><td rowspan="3">• Reads and writes number symbols and number names from 1 to at least 1 000
• Number knowledge and mental computations
- Calculates using addition and subtraction of two 3-digit numbers e.g. 300+259=
- Develops number relationships e.g. 525 is: 25 less than 250, 230-5, 52 tens+5 etc.
- Builds up and breaks down 3 digit numbers e.g. 235=200+30+5 OR 100+100+30+5 OR 100+50+50+20+15
• Investigates the distance around objects and shapes using string</td><td colspan="5">Daily :
• Recognises and orders numerals and number names up to 1000.
• Multiplication of 2,3,5, and 10.
• Numerosity of numbers to 200.</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>Develops number relationships

Builds up and breaks down 3 digit numbers</td><td>Investigates distance around objects with string</td><td>Number games</td><td>Making racing cars using 3D objects</td><td rowspan="3">WHOLE CLASS ACTIVITY

Shape and Space – musical bumps</td></tr>
<tr><td>GROUP TEACHING

LO 1 AS 8, 10, 11, 12</td><td>• Solve different types of problems and explain solutions to problems including money problems with whole numbers to at least 1 000, involving addition, subtraction, multiplication and division using appropriate symbols and the techniques listed below
- building up and breaking down numbers
- doubling and halving
- number lines
- rounding off to 10</td><td colspan="4">Ask each group the same problems. They can be solved using numbers, number grids, etc.
Number range: Group 1 works to 1000; Group 2 works to 1 000; Group 3 works to 750.</td></tr>
<tr><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 1 addition and 1 subtraction word problem
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask 1 addition and 1 subtraction word problem
Group 1 works on its own.</td><td>Groups 1 and 3 work with teacher, one group at a time.
Ask 2 word problems using multiplication.
Group 2 works on its own.</td><td>Groups 2 and 3 work with teacher, one group at a time.
Ask word problems using division.
Group 1 works on its own.</td></tr>
</table>

WEEK 10: WHOLE CLASS

WEEK 10	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)

Notes to the teacher:

- Being able to identify the relationship between numbers is important and this is why there are many number pattern activities. This also helps to develop an understanding of a number i.e. the numerosity of a number. By now you will be extending the learners thinking about numbers beyond just the obvious numbers e.g. that 26=20+6. Learners should be able to identify that 10-4=6, 20-4=16, 30-4=26 and so on.
- Although this is probably the last week of the year, keep the class occupied with structured activities using the knowledge and skills they have gained over the year.

DAILY ACTIVITIES

COUNTING AND MENTAL/NUMBER SENSE

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

To be done daily:

- Rote count from 100 to 200 – with learners whispering the odd numbers and saying the even numbers aloud.
- Working with partner, learners count the number of footsteps to the office and back, the number of tiles on the verandah outside the classroom, the number of tyres on the teachers' cars, etc.

Choose from the following to make up 10 minutes:

Each activity should be covered at least once during the week. The more times each activity is done the better.

- Play "I spy", giving different learners a chance to ask the questions.
- Put structured (grouped) objects in the middle of each group. Learners work together to count the objects, write the number and the number name.
- Using a number chart, point to a number e.g. 237. Ask the learners to add 5 (242), then keep adding 5 giving different learners a chance to answer. Write the numbers on the board. As soon as a learner recognises and describes the pattern, choose a new number and add 9, etc. until everyone has had a turn to answer.
- Call out a number e.g. 457. Learners must write the sequence of the next 10 numbers e.g. 457, 458, 459, 460. 461, 462, 463, 464, 465, 466, 467. When they have completed they must hold up their work or you can walk around and observe their work

DAY 1 (to take no more than 20 minutes)

Start the lesson with an estimation exercise which will lead to addition, subtraction and division.

- Learners choose their own number between 800 and 900 and write it at the top of the page. They then write the expanded notation in at least 5 different ways.
- Give each learner a piece of paper on which they write 5 number sentences without the answers. Swap the papers and the next learner fills in the answers. Swap the paper again, and the third learner checks if the answer is correct.

DAY 2 (to take no more than 30 minutes)

- Working in pairs, each learner cuts a piece of string equal to their height. They then do the following with the piece of string:
  - Fold it in half and find something on your body that is half your height.
  - Fold it in thirds and find something on your body that is a third of your height.
  - Fold it in quarters and find something on your body that is a quarter of your height.
  - What else can you find out?

  Record the findings in a table e.g.

Half my height	A third of my height	A quarter of my height	What else?

DAY 3 (to take no more than 30 minutes)

- Today the learners are going to construct a slide for a marble to run down from the desk into a cup on the floor. They may only use objects in the classroom e.g. rulers, and must work in groups of 4. Once all the slides are built, other groups test them out and then vote for the best one.

DAY 4 (to take no more than 30 minutes)

- Give each learner a strip of paper on which they write a number pattern. Learners write their names on the back of the strip. Collect all the strips, muddle them up and hand them out. Learners identify the pattern on the strip and write 3 more numbers. The strips get given back to the person who's name is on the strip and the learner checks that the pattern has been correctly identified.
- Every learner gets a long biscuit, 6 Smarties and some icing sugar. Learners spread the icing sugar onto the biscuit, place 4 Smarties for wheels and use the other 2 for decorating their racing car.

DAY 5 (the whole lesson)

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

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

WEEK 10: GROUP TEACHING

Week 10	GROUP TEACHNG COMPONENT (Concept Development and Problem Solving

Notes to teacher:

- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. 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.)
- The written work provided must include practice in using the variety of techniques indicated in the Assessment Standards e.g. number lines, doubling and halving, etc.
- Although this is probable the last week of the term, you need to keep learners meaningfully occupied while you are working with a group.

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

Independent Work.

Fill in the missing numbers.

a	b	2a+2b
6	9	30(12+18)
25	21	
30		80
	15	130

2. Spider diagrams

3. Number strips and a die – add, subtract, multiply and divide.

Working with the group

GROUP 1

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

- Put 140 structured objects (grouped e.g. 10 beds on a string) in the middle of the group and give learners a moment to look at them, then cover them up. Ask learners to estimate and write down how many more objects will be needed to make 200. Count the structured objects, and let learners say how close their estimate is.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Monday you will ask 1 addition and 1 subtraction type word problem and on Wednesday you will ask 2 multiplication type word problems. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes.

GROUP 2

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

- Put 150 structured objects (grouped e.g. 10 beds on a string) in the middle of the group and give learners a moment to look at them, then cover them up. Ask learners to estimate and write down how many more objects will be needed to make 200. Count the structured objects, and let learners say how close their estimate is.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 1 000. Let each learner tell the group how s/he solved the problem. On Tuesday you will ask 1 addition and 1 subtraction type word problem and on Thursday you will ask 2 multiplication type word problems. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes.

GROUP 3

*This group works with the teacher **every day** for 25 minutes*

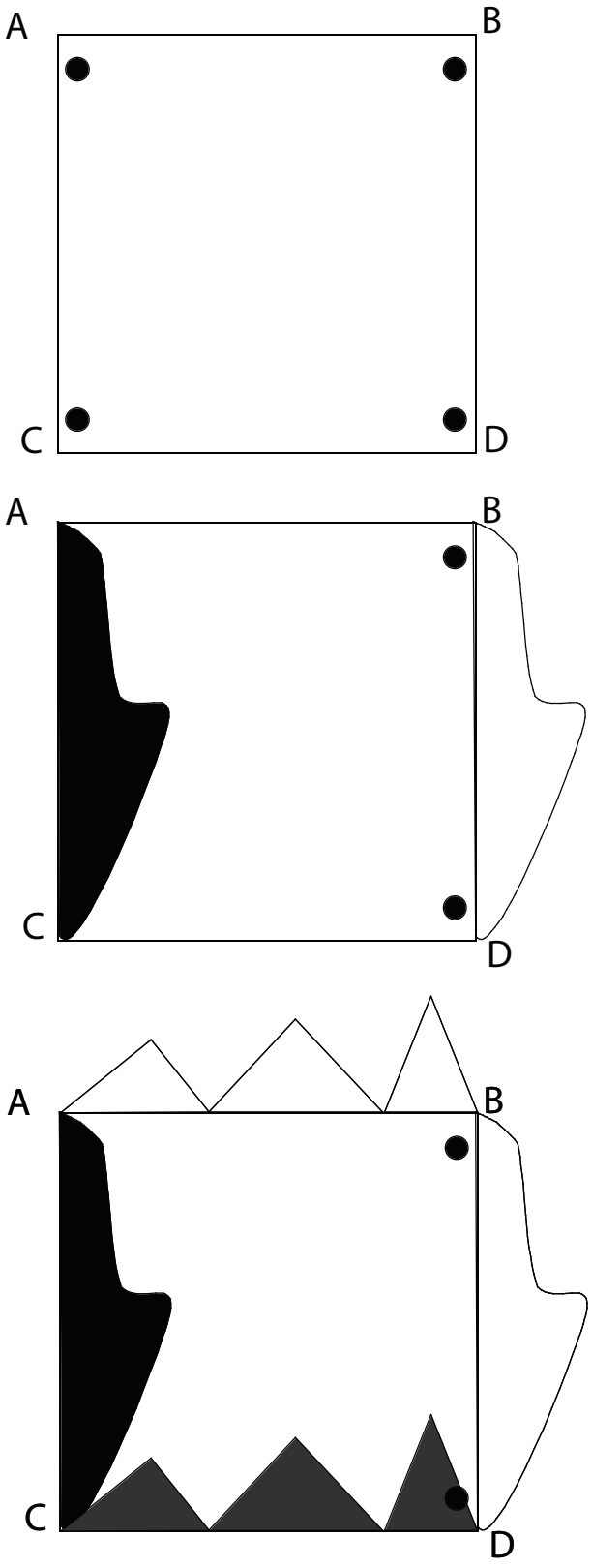
- Put 160 structured objects (grouped e.g. 10 beds on a string) in the middle of the group and give learners a moment to look at them, then cover them up. Ask learners to estimate and write down how many more objects will be needed to make 200. Count the structured objects, and let learners say how close their estimate is.
- Make sure each learner has access to paper, writing tools and a number square. Ask them two different word problems which they solve by talking about them, writing numbers, etc. Use the number range to 750. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday you will ask 1 addition and 1 subtraction type word problem and on Wednesday and Thursday you will ask 2 multiplication type word problems. It is important that learners are given the opportunity to reflect on their thinking as well as to verbalise their thought processes.

Assessment	**Formal:** No formal, recorded Assessment. **Informal:** Unrecorded assessment of learners' oral responses and ability to solve problems.

Annexures

Annexure 1 : Tesselating shapes (Week 3)

Annexure 2: Number bond cards for game


A
B
C
D
A
B
C
D
A
B
C
D

Annexure 2

200+200	20+20
200+300	20+30
200+400	20+40
200+500	20+50
200+600	20+60
200+700	20+70
200+800	20+80
20+90	30+80

Make other cards following this pattern. Here are some examples to get you started.

100+200	10+20
300+200	30+20
600+200	60+20
900-200	90-20
800-200	80-20
500-400	50-40
700+300	70+30
600-300	60-30

Notes:

Notes: