WEEK 4

WEEK 4 LEARNING OUTCOMES AND ASSESSMENT STANDARDS	Date Completed
LO 1: NUMBERS, OPERATIONS & RELATIONSHIPS	
AS 1: Counts to at least 100 everyday objects reliably.	
AS 2: Counts forwards and backwards 2.1 ones from any number between 1 – 200 **(FAT 2)** 2.2 tens from any multiple of 10 between 0 – 200 **(FAT 2)** 2.3 fives from any multiple of 5 between 0 – 200 **(FAT 2)** 2.4 twos from any multiple of 2 between 0 – 200 **(FAT 2)**	 2.1 2.2 2.3 2.4
AS 3: Knows and reads number symbols from 1 to at least 100 and writes number names from 1 to at least 100 **(FAT 2)**	
AS 4: Orders, describes and compares the following numbers: 4.1 Whole numbers to at least 2-digit numbers 4.2 Common fractions including halves and quarters (½, ¼)	 4.1 4.2
AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers **(FAT 2)**	
AS 6: Solves money problems involving totals and change in rands and cents. **(FAT 2)**	
AS 7: Solves, explains solutions to practical problems that include equal sharing and grouping and that lead to solutions that also include unitary fractions (e.g. ¼) **(FAT 2)**	
AS 8: Can perform calculations, using appropriate symbols, to solve problems involving: 8.1 Addition and subtraction of whole numbers with at least 2 digits **(FAT 2)** 8.2 Multiplication of whole 1-digit numbers by 1-digit numbers with solutions to at least 50 8.3 Estimation.	 8.1 8.2 8.3
AS 9: Performs mental calculations involving: 9.1 Addition and subtraction for numbers to at least 20 **(FAT 2)** 9.2 Multiplication of whole numbers with solutions to at least 20 **(FAT 2)**	 9.1 9.2
AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers **(FAT 2)** 10.2 Doubling and halving **(FAT 2)** 10.3 Using concrete apparatus 10.4 Number lines	 10.1 10.2 10.3 10.4
AS 11: Explains own solutions to problems	
AS 12: Checks the solution given to problems by peers	
LO 2: PATTERNS, FUNCTIONS & ALGEBRA	
AS 2: Copies and extends simple number sequences to at least 200 **(FAT 2)**	
AS 3: Creates own patterns	
AS 4: Describes observed patterns	
LO 3: SPACE AND SHAPE	
AS 1: Recognizes, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures including: Boxes (prisms) and balls (spheres), cylinders; triangles and rectangles, circles	
AS 4: Recognises symmetry in two-dimensional shapes and three-dimensional objects.	
AS 5: Recognises 3-D objects from different positions	
AS 6: Positions self within the classroom or 3D objects in relation to each other	
LO 4: MEASUREMENT	
AS 1: Reads analogue and digital clock time in hours and minutes **(FAT 2)**	
AS 2: Names in order the days of the week and the months of the year	
AS 6: Estimates, measures, compares and orders 3D objects using non standard measures: Mass (bricks, sand bags), capacity (spoons, cups), length (hand spans, footsteps)	
LO 5: DATA HANDLING	
AS 1: Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher	
AS 2: Sorts physical objects according to one attribute chosen by the teacher	
AS 3: Gives reasons for collections being grouped in particular way	
AS 4: Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations	
AS 5: Describes own or peer's collection of objects, explains how it was sorted and answers questions about it	

WEEK 4

LO 1: NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 1

- Learners count physical objects using one-to one correspondence in the number range 0 100
- Count out beads, sticks, beans, stones, blocks to at least 100
- Give a number of objects to the learners, eg. 100 beans that were counted out by the teacher beforehand. They count it out and see whether they get the same answer

AS 2.1

- Learners count forwards and backwards in ones in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line, eg. 176, 177, 178, …, …, … 168, 169, 170, …, …, …
- Learners count in 1's from any given number. Begin at 153, count on to 200 and then back to 147.
- Each learner receives a number grid from 101 – 200. They are given a number and they count on or backwards from their number in 1's.
- Two learners work together. Each learner has his/her own spinner. The first learner spins and calls out the number that his/her spinner has landed on. The second learner now spins and calls out his/her number. They count from the first spinner's number to the last (forwards and backwards), in ones.

FAT 2: Written – Rubric
Learners count forwards and backwards in ones from a given number on a worksheet in the number range 0 - 200

AS 2.2

- Learners count forwards and backwards in tens in the number range 0 – 200. The learners may use counters, an abacus, number grid or a number line, eg. 100, 110, 120, …, …, …, … 180, 170, 160, …, …, …
- Let the learners count using a number grid. Find the number 110. Count on in 10's. Stop at 200. Count backwards in 10's, start at 200 to 90. eg

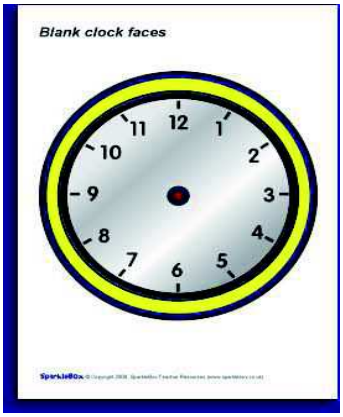
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142`	143	144	145	146	147	148	149	150

- Each learner in the group receives a piece of string, with multiples of 10 on flashcards in the number range 0 – 200. The learners peg the cards onto the string with pegs, by counting in 10's. The learner can now turn the string around and see that the reverse of counting forwards, is counting backwards.

FAT 2: Written – Rubric
Learners count forwards and backwards in tens from a given number in the number range 0 - 200

AS 2.3

- Learners count forwards and backwards in fives in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line eg. 125, 130, 135, 140,…, …, …, … 145, 140, 135, …, …, …,
- Learners receive cards with analogue clocks on it. Each learner receives a different amount of cards. The learners must now count who has the highest number, eg. 2 cards = 120, starting on the 12 and finishing on the 12 again



FAT 2: Written response – Rubric
Learners count forwards and backwards in fives from a given multiple of 5 on a worksheet in the number range 0 - 200

AS 2.4

- Learners count forwards and backwards in two's in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line, eg. 168, 170, 172, …, …, … 170, 168, 166, …, ..., …
- Learners play in a group of 4. Each learner receives a pack of cards with multiples of 2 on in the number range 0 – 200. The learner who has the number 2 will start the game. The next card to be put down, will be the 4. The learners pack the cards out, in the correct order. The first learner whose cards have all been put down, is the winner. The game can also be played by starting with the 200 card and counting backwards.

FAT 2: Written response – Rubric
Learners count forwards and backwards in two's from a given multiple of two on a worksheet in the number range 0 – 200.

AS 3

- Learners read any number symbol in the number range 1 – 150. The learners read the symbols on number cards, a number grid or a number line, e.g. 98 121
- Learners learn the number names and symbols while counting from a number grid or abacus in the number range 1 – 100.. The teacher says, " Find 100, 98," etc
- Which number comes before 32? Write down the number name. Which numbers come between 47 and 44. Write down the number names.
- Two players play together. One holds a card with a number written on it. Each numbers is next to a punched hole in the card. At the back of the card, the number names are written, corresponding with the numbers on the front. The learner who has the side with the numbers facing him/her, asks the questions. He/she says, " Put your pencil in the hole next to number 58. The 2nd learner pushes the pencil into the hole where the number name fifty-eight is. If correct, it will correspond with the number on the other side.

FRONT	BACK
o 25	o Twenty-five
o 34	o Thirty-four

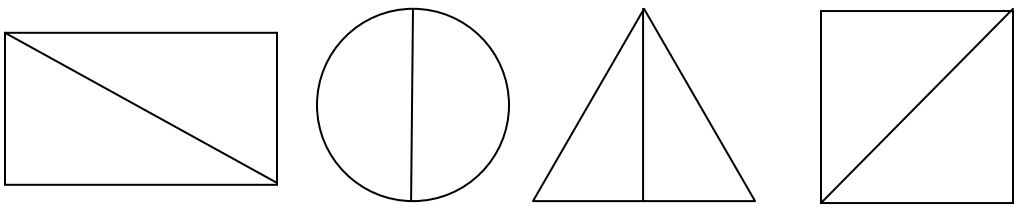
FAT 2: Practical in small groups – Rubric
The teacher shows 6 – 8 numbers in the number range 1 – 200. The learners read the number symbols.

AS 4.1

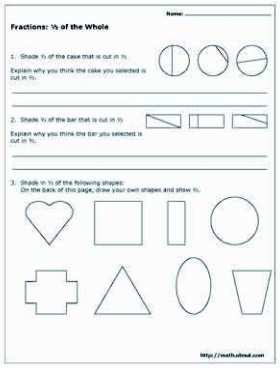
- Every learner in the class is given a random number in the number range 0 – 99. The teacher chooses six random numbers to come to the front of the class, eg. 24, 67, 54, 73, 90, 38. These learners sequence themselves from the smallest number to the biggest number. Given clues based on a number already in position, eg. "double 24 join the line". The learner with 48 comes forward and takes his place. 5 more than John come (John is holding 54 – the learner holding 59 now comes forward – 3 less than 67, half of Bonganii's number, ……. The learner holding 45 joins the line.
- Copy a colouring picture. Tippex the numbers out and put in your own numbers. The learners has to finish the picture, by sequencing the numbers and joining the dots, eg. Show which number is the starting number and which number is the finishing number. Now carry on, eg. 56, 60, 64, 68, 72, …….

AS 4.2

- Common fractions including halves and quarters
- Draw shapes on sheets of paper. Hand them out to the groups and let the learners draw lines to divide these shapes into equal parts. (halves)



- Draw the shapes again. Now draw lines on these shapes to show un-equal parts. Hand out to the groups for discussion.


Name: _____

Fractions: ½ of the Whole

1. Shade ½ of the cake that is cut in ½.

Explain why you think the cake you selected is cut in ½.

_____

_____

2. Shade ½ of the bar that is cut in ½.

Explain why you think the bar you selected is cut in ½.

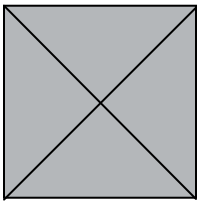
_____

_____

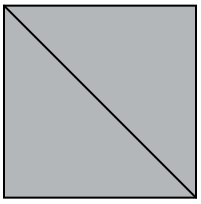
3. Shade in ½ of the following shapes:
On the back of this page, draw your own shapes and show ½.

http://math.about.com

- Let the learners discuss the difference between an equal and an unequal part. Ask them to prove that the shapes are equal. How do they attempt to prove it?
- Give learners pictures of circles and squares which has been divided into halves and quarters. Learners cut out the shapes and then halve or quarter them according to lines drawn in on the shapes. Learners must now prove that the four triangles in picture 1 are equal and that the two triangles in picture two are equal.



picture 1



picture

AS 5

- Learners identify the place value of a given digit in a number in the number range 0 -99. Learners may use flard cards, eg. In 9<u>2</u> the 9 is 90 or 9 tens. In 9<u>2</u> the 2 is 2 or 2 ones.
- Ask the learners to pack out the following numbers with flard cards:
  Number 63….. now change it to 43
  Number 97….. now change it to 92
  Number 77….. now change it to 22
  Number 78 …. now add 2 (the learners add the 2 to the 78 to show that it can make 80), plus 4, minus 10
  Game: (whole class or small group activity)
  Show me the number: Each learner needs a set of flard cards. Ask the learners to pack out the flard cards on the carpet or desk in front of them. Ask the learners to hold up/pack out the various numbers, eg. 68, 57
  60 8 50 7
- Learners play the guessing game. The first learners chooses a number and builds it with the flard cards without the other learners seeing which number he/she has. The learner then says, " I have a number, it comes between 60 and 90. (68). The learners must now guess by asking questions like: " Is it bigger than 69 (no), is it less than 65 (no), does it come between 65 and 68 (yes), is it less than 67 (no), etc. The first learner to get to the correct number checks the flard card number and then chooses his/her number to start the next game.

FAT 2: Practical in small groups – Rating scale
Learners use flard cards to unpack numbers given by the teacher. They identify which numbers are tens and which are units (ones).

AS 6

- Learners solve money problems in the number range 0 – 99 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20, 50c. Learners may use play or real money, eg. Learners pack out a given amount such as R12,25 R57,65
- Learners calculate addition and subtraction sums: R56 – R42 + R38 = ___
- Fill in the missing rands to make, eg. R75
  R20 + R20 + R20 + ___ + ___ = R75.00
  R50 + R10 + ___ + ___ = R75
  R20 + R20 + R10 + ___ + ___ + ___ = R75
- Challenge the learners to make up amounts with the least possible number of coins, eg. 20c R4, etc. Now make up 20c with 4 coins, make up R4 with 8 coins, etc.
- Learners get a worksheet where they have to work out how much change they should get
  - Learners need to show their calculations

What do you want to buy?	You have…	Your change should be ...
 R1,20	 R5,00	
 R4,39	 R10,00	
 R3,81	 R5,00	

- The Grade 2 class sells cupcakes at R2 per cupcake. Complete this table to assist them with larger orders

	1	2	6	11	14	20
Cupcake	R2	R4				

- Sihle has R2. Her mother gives her R3 and 30c. How much money does she have now?
  Sammy had R54. She bought toys for R35. How much money does she have left?
  Peter saved his money for a whole month. In week 1 he saved R11. In week 2 he save R8. In week 3 he save R5 and in week 4 he saved R30. How much money did he save in the month?
  Learners must show their calculations.

FAT 2: Practical in small group / Written – Rubric
The teacher shows the learners a poster with pictures of different items and the price of the item. Using real or play money the learners pack out the exact amount needed to pay for a specific item, eg. Pack out the exact amount needed to buy sugar that costs R19,70. The teacher tells the learners to choose 2 items to purchase. Using real or play money the learners pack out the exact amount for each of the 2 items, eg. R59,85 and R29,10. The learners calculate the total amount for the 2 chosen items. HINT: The learners write their calculations in their class workbooks, on slates or white boards. The teacher asks word problems in the number range 0 – 99. The learners may use play money, drawings or calculations to solve the problems, eg. At the sale the price of a shirt is reduced from R99 to R44. How much cheaper is it? HINT: The learners do their calculations in their class workbooks, on slates or white boards.

AS 7

- Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that also include unitary fractions (1/2 , ¼) in the number range 0 – 99.
- One car has 4 wheels. How many wheels do 6 cars have? (draw)
- I have 56 sweets. I want to share it between myself and my 3 friends. How many sweets will each of us get?
- Learners solve problems by sharing and grouping. Remainders can be a ½ or a ¼ and answers must be drawn or learners may work out the answer by using concrete apparatus.
- There are 25 viennas in a packet. 4 children have to share it. How many viennas will each child get?

FAT 2: Practical in small groups / Written – Rubric
The teacher asks word problems in the number range 0 – 99. Learners use concrete apparatus, drawings or calculations to solve their problems, e.g. A cake is cut into 20 pieces. How many pieces will 8 learners get? One loaf of bread has 15 slices. How many slices of bread will there be in 3 loaves of bread? HINT: The learners do their drawings or calculations in their class workbooks, on slates or white boards

AS 8.1

- Learners perform addition and subtraction with adding or subtracting a whole ten to/from any number in the number range 0 – 99. Learners may use a number square or a number line, eg 72 + 10 55 – 20
- Learners need to understand the addition concept and the related vocabulary (more, add, sum, count on, total, altogether)
  55 + 34 =
  50 + 30 + 5 + 4
  50 + 30 = 80
  5 + 4 = 9
  80 + 9 = 89 0r
  80 + ……. (count on - 81, 82, 83, 84, 85, 86, 87, 88, 89)
- Learners copy and solve number sentences that the teacher has written on the boards, using the technique of breaking down and building up of numbers, eg.
  73 – 46 = □
  Method 1:73 – 40 ➔33 – 3 – 3➔ 27
  Method 2: 70 - 40➔30 -6➔24+3➔27
- Building on prior knowledge of small number combinations (strategies), learners now apply this knowledge to their "tens", e.g. If 2 + 1 = 3, what will 20 + 10 equal? (30) what will 22 + 12 make? (34) Why?
- Learners explain own solutions to problems
- Mommy has 85 plants in the garden. The dog eats 23 of the plants. How many are left? (62 – draw)

FAT 2: Written – rubric
Learners write the answers to addition and subtraction sums with 2-digit numbers in the number range 0 – 99, eg. 71 – 44, 96 – 57, 43 + 20 + 16, 76 – 20 + 13

AS 8.2

- Multiplication of whole 1-digit by 1-digit numbers with solutions to at least 50.

  - 3 groups of 4 = ____
  - 3 x 4 = ___ (count in 4's, three times)
- Solve this problem:
  Kim is making kites to sell at Market Day. Lizzie is making the ribbons for the kites. If each kite has 6 ribbons, how many ribbons must Lizzie make for 3/6/9/10/15 kites?

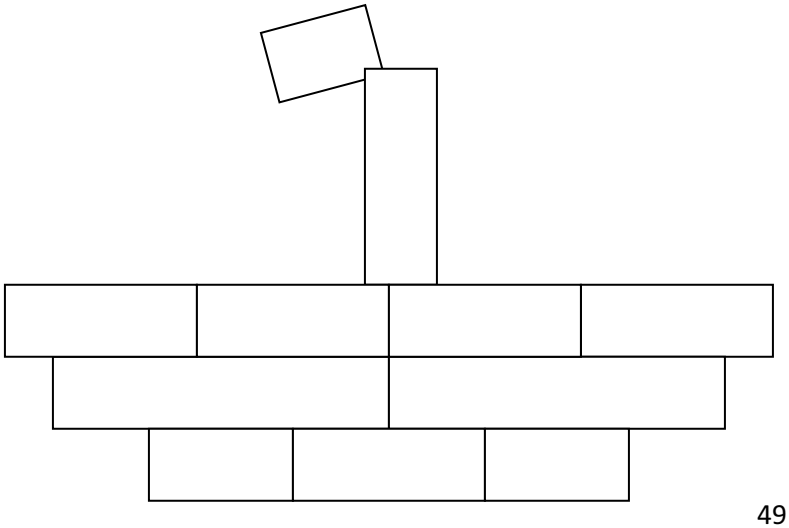
Number of kites	1	2	3	6	9	10	15
Number of ribbons	6	12					

- The learners sit in groups of four, but work in pairs. They solve word problems, draw their different ways of solving the problem and write a number sentence to determine the answer. They compare their answers and their ways of solving the problems with the other partner.

AS 8.3

- Learners estimate the answer to addition, subtraction and multiplications problems. Learners compare the calculates answer. Estimation should be used by the learners continuously throughout all the LO's.
- Learners make "boats" using the number rods. They may use 5 rods, but not more than 10. The boat must lie flat and any colour rod, except white may be used. The learners now estimate how many white (1) rods are needed to cover (rebuild) the shape of their boat. Add the coloured rods together, to see how many white rods are needed to cover the picture of the boat.

Use Cuisenaire (number) rods



AS 9.1

- Learners perform mental calculations involving addition and subtraction in the number range 0 – 20.
- Teachers use flashcards with the number symbols to represent the number combinations, eg. 14 + 3 – 2= __ 18 – 3 – 5 = __ Addition and subtraction of single-digit numbers in the number range 0 – 20 with more than one operation.
- Learners explore number 19.
  They describe number 19 in as many ways as they can eg.
  It stands between 18 and 20
  It consists of two 9's +1
  It stands to the left of 20 on a number grid/line
  It is two more than 16
- They group 17 counters and each time record the groupings eg.
  17 = 1 ten and 7 ones
  = 5 groups of three and 2 loose counters
  = 8 groups of two and 1 one
- They work in pairs. They explore combinations of 17 with two and three components and write them down, eg.

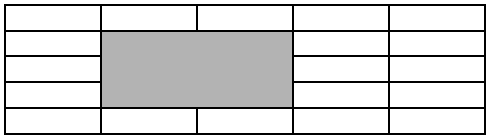
14 + 3 = 17	7 + 7 + 3 = 17	5 + 8 + 4 = 17
3 + 14 = 17	3 + 7 + 7 = 17	8 + 5 + 4 = 17
10 + 4 + 3 = 17	10 + 7 = 17	4 + 8 + 5 = 17
4 + 10 + 3 = 17	7 + 3 + 7 = 17	5 + 4 + 8 = 17 etc

- Play a game – each learner receives 3 cards. The teacher starts by saying: I want a number that is two more than 14. The learner with the 16 will put the16 on the mat. The learner will then say – I want a number that comes before 16. The learner with16 will put the 16 down and ask the next question. The first learner without cards, is the winner.
- Learners sit with a 200 block in front of them. The numbers have been tippexed out. The teacher says: Colour the number 24 blue. Now add 4 to that number and colour it yellow. Now double that number and colour it purple. Take 40 away from that number and colour it green. Take half of that number away and colour it pink. The teacher now asks the learners to exchange their counting frames and they check each others answers – 24, 28, 48, 8, 4
- Learners work in groups of 2. The first player chooses any number rod except for white and challenges the second player to make a matching 2-car train. This means that if the learner picked yellow, the second player must find a green and a red which will make up the same number as the yellow. The player who matches the challenge rod, takes the challenge rod and the train rods and then picks the next challenge rod. The winner will be the learner who picks a challenge rod that cannot be matched by a 2-car train, eg. 7 = 5 + 2 5 = 3 + 2. If no 2 rods are left, the challenge rod cannot be matched, and the learner that packed the rod, is the winner

FAT 2 Written – Rating scale
Mental maths: Addition and subtraction to 20. The teacher asks 20 sums. Learners write the answers

AS 9.2

- Learners perform mental calculations with multiplication with answers to at least 20. The teacher uses flash cards with number symbols to represent the multiplication calculations.
  eg. 5 x 3 = __; 2 x 8 = __
- Learners play snap. x and repetitive addition sums are written on cards. The learners play the game by turning over the cards. If both cards have the same answer, the learners must call out Snap. The first learner to do this, takes all the cards on the heap.
- Give the learners an empty grid. Allow the learners to copy a shape on the grid, eg. rectangle, square Now ask questions like 3 + 3+ 3 = ……. The learners pick up a 9 number rod and places it on the number grid, trying to cover the shape The following question can be 3 x 4 = …..Learners find number rods that make up 12 and build on to the shape. As soon as all the blocks on the shape have been covered, the game is over and the winners will be the 2 learners who covered their shape template first.



FAT 2 Written – Rating scale
Mental maths: Multiplication of whole numbers with answers to at least 20. The teacher asks 10 sums. Learners write the answers

AS 10.1

- Learners break down and build up numbers in the number range 0-99 and may use flard cards, a number grid and a number line. Eg. (89 = 70 + 10 + 9 or 89 = 80 + 1 + 3 + 5)
- Learners build up numbers in the number range 0 – 89. Learners may use counters, drawings, number grid or a number line. Eg. (50 + 30 + 5 + 2 = 87)

- Workcard: building up numbers. Use only 50, 20, 10, 5, 2 and 1 to make your number below. Make 2 different sums for each number. You may use the same number more than once
  Eg. 47 = 20 + 10 + 10 + 5 + 2 and
  20 + 20 + 5 + 2
  52 = _____
  67 = _____
  19 = _____
  34 = _____

- A learner picks up a card with a number in the number range 1 – 99 on it. (97) He/she now throws a dice with multiple of tens on it.. The number on the dice is the starting number for breaking down the number that was on the initial card. (60). The learner now has to break down the tens by using the multiple on the dice first and then by adding the other tens, eg. 60 + 30. The learner now throws a dice with ones on it. The number that the dice lands on is the first number of breaking down the ones (3). The learner now has to break down the ones by using the multiple on the dice first and the by adding the other ones, eg. 3 + 4. The learner then writes his/her sum down 97 = 60 + 30 + 3 + 4.

FAT 2: Written - Rubric
The teacher gives each learner a number between 1 - 99. Each learner build up the number in 5 different ways.
HINT: The learners write their sums in their class workbooks, on slates or white boards

AS 10.2

- Learners double numbers with answers in the number range 0 - 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards, eg. double 26; double 37.

Number	Double	x 2
36	72	72
49		
27		

- Learners halve numbers without a remainder (even numbers) in the number range 0 - 99.

Number	Halve	÷ 2
96	72	72
84		
72		

- Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. eg. halve 86
- Solve this problem: Andisiwe throws 76 balls into the net and Lucy throws half that number. How many balls does Lucy get into the net?
- Learners halve numbers with a remainder (odd numbers) in the number range 0 - 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. halve 67 halve 43 Break numbers down, e.g. 60 + 7 Half of 60 = 30, half of 7 = 3 ½ 30 + 3 ½ = 33 ½
- Solve this problem: 40 bottles of lemonade are shared among 9 people. Each person receives _____ bottles? How many are left? Learners show their calculations by drawing on paper or in their mat books.

FAT 2: Practical in small groups / Written – Rubric
The learners double numbers with answers in the number range 1 – 99. The learners may use counters, drawings or the number line. HINT: The learners do their drawings or calculations in their class workbooks, on slates or white boards.

AS 10.3
Learners use concrete apparatus when counting, building up, breaking down, doubling and halving numbers.

AS 10.4
Integrate with all number work

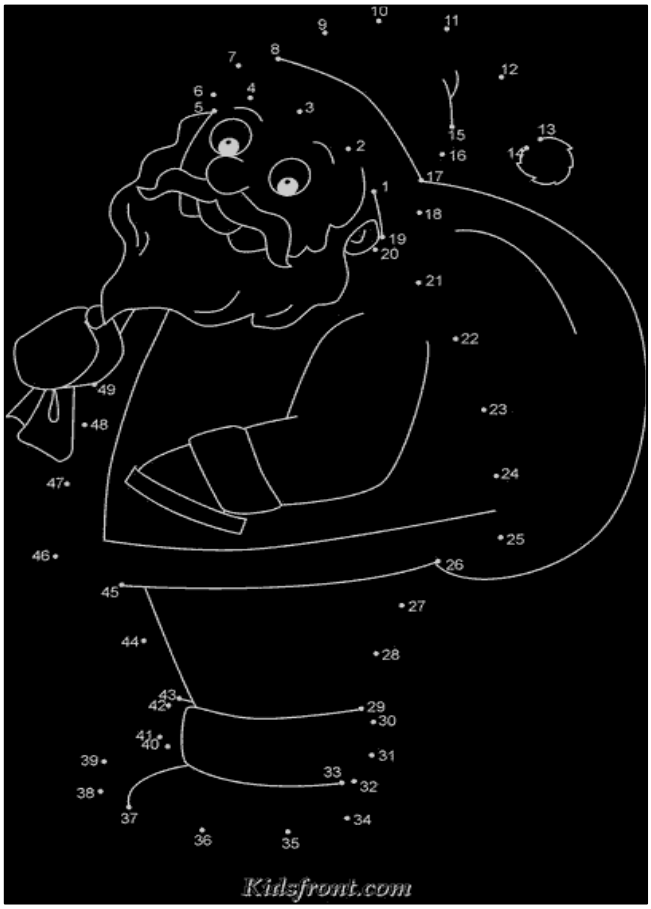
AS 11
Learners explain solution to problems in the number range 0 – 99.

AS 12
Learners check each other's solutions to problems

LO 2: PATTERNS FUNCTIONS AND ALGEBRA

AS 2

- Copies and extends simple number sequences to at least 200
- Creates own pattern.
- Give learners a worksheet which they have to complete e.g. 105 107 109 …. …. …..
  105 110 111 116 121 122 … …
- Learners complete a picture by joining the dots in the correct order



FAT 2: Practical in small groups/Written - Rubric Learners copy and complete a number pattern in the number range 0 – 200 on a worksheet

AS 3

- Creates own number patterns to at least 200. Learners may use a number grid or a number line.
- Creates own patterns. Explain it to a friend, eg 99, 102, 105, 107, …., …., …., 120 (adding on 3);
  120, 115, 110, 105, ….., ….(counting backwards in 5's)
- Learners use number rods and pack out their own patterns eg. red, blue, yellow, red, blue, yellow, etc. Each colour represents a number

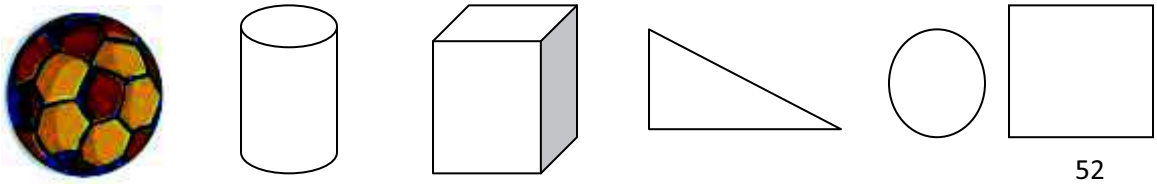
AS 4

- Learners describe a given/own pattern eg. 27, 37, 47, 57 (I am counting in 10's) 21 25 29 34 (I am counting in 4's) 99 108 117 126 135 (I am counting in 9's)

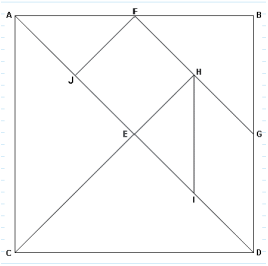
LO 3: SPACE AND SHAPE

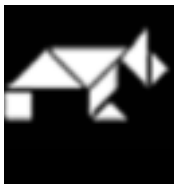
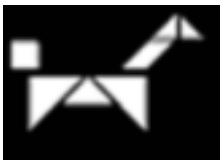
AS 1

- Recognizes, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures including: Boxes (prisms) and balls (spheres), cylinders; triangles and rectangles, circles

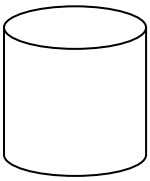
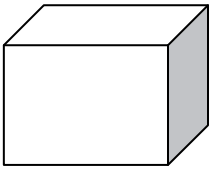


- Learners receive a template of a tangram. Cut the pieces out and try to build the following:
  A Square, by only using 2 shapes
  A rectangle by using 3 shapes
  A diamond by using 2 shapes
  A square using all 7 shapes
  A square without using any triangles
  If the learner can do all of these, ask them to build (copy) the following shape

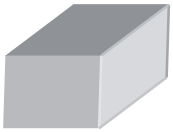


AS 4
- Learners recognise symmetry in 3-D objects, eg. boxes, balls, cylinders

AS 5
- Learners recognise and describe 3-D objects from different positions, eg from the top, from the side, from the bottom

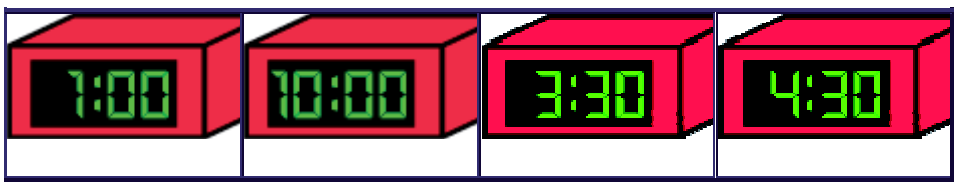



AS 6
- Learners position themselves and use vocabulary to explain position of self in comparison with other 3-D objects, eg. on, above, behind, in front of, under, next to, in between

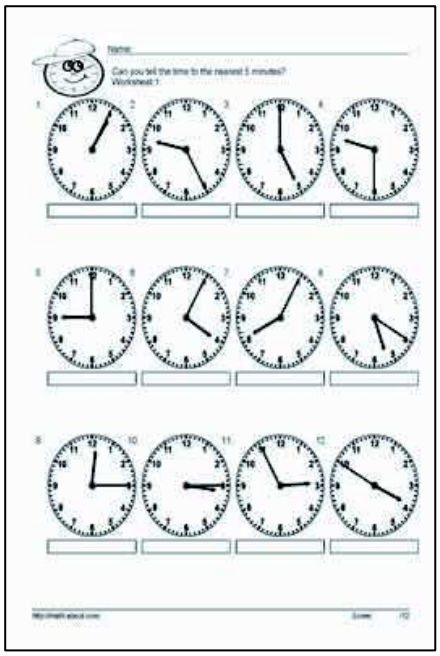

LO 4: MEASUREMENT

AS 1
- Reads and writes analogue and digital clock time in terms of hours and minute
- Learners have real or play analogue and digital clocks, or pictures of clocks. They read the time on the analogue clock and find the same time on the digital clock. Learners can make their own clocks by using a paper plate and two rectangular pieces of cardboard for the hands. The digital clocks can be made by writing the numbers on cardboard, and hanging, or pegging it on to a wire hanger with pegs. The numbers can be changed and pegged onto the hanger again.
- Learner gets a worksheet with analogue clocks Each analogue clock will have 3 or 4 digital clocks with time on. One of these will represent the same time as the analogue clock. Learner must choose the correct time and join the two clocks

What is the time?



- Learner gets a worksheet with analogue clocks on it. Read the time and write it down below the clock.
- Learners play time bingo. Each learner gets a card with analogue clocks on with different times (hours, half hours and minutes). The teacher has a set of cards with digital time on it. She calls out the time on the card. The first learner to say I have it, puts the card on top of the clock with the corresponding time. The first learner to cover his/her whole sheet, it the winner



FAT 2: Practical in small groups – Rating scale
The teacher gives the learners a sheet on which pictures of clocks displaying digital and analogue time are drawn. The learners read the time as shown on the clocks

AS 2

- Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar.
- Tell story about Sipho and his Grandfather (see attached worksheet). Ask questions about the story, complete a worksheet on what he has to do every day.
- Complete a worksheet on months of the year and days of the month. Answer questions about Sipho's story.
- Complete a worksheet on the different days of the week, hours, digital clocks and analogue clocks. (Sipho's story)

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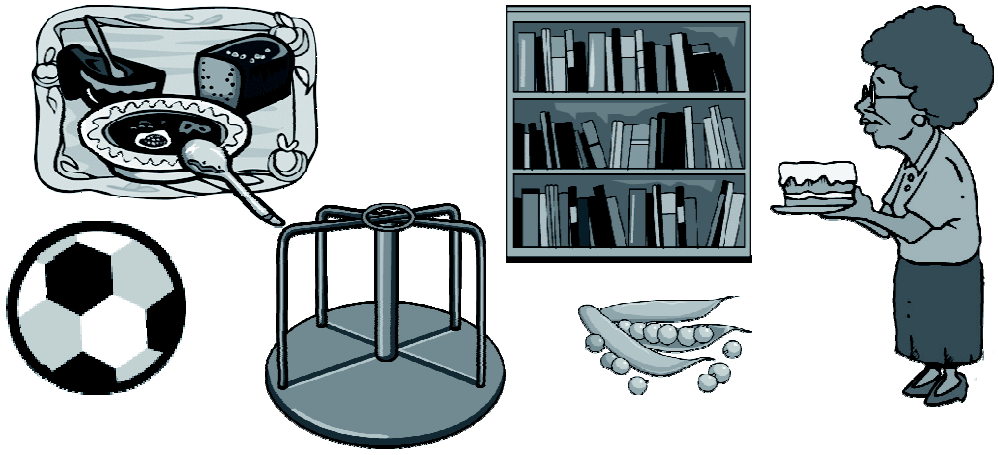
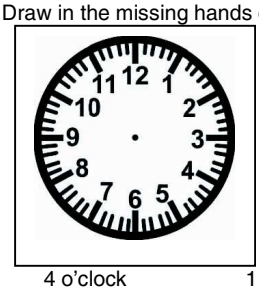
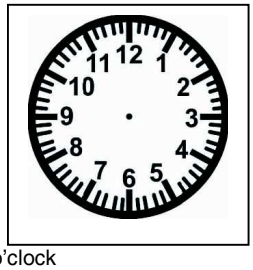


F _ _ _ _ _ is the day before Saturday.	The month of May comes after _ _ _ _ _.
S _ _ _ _ _ is the season when there are blossoms on the trees.	We wake up in the n _ _ _ _ _ _.
I go to sleep at _ _ _ _ _.	There are _ _ _ _ _ _ _ _ _ _ hours in a day.
Draw in the missing hands on the clock  4 o'clock  11 o'clock	Write the time in words. - - - o'clock - - - - - o'clock

AS 6

- Learners measure and compare the mass of different objects from heaviest to lightest, lightest to heaviest.
- Learners estimate the mass of their lunch boxes by comparing it to the mass of a bottle top. Is it heavier, lighter.
- How many bottle tops will weigh the same as the lunch box. Use a balancing scale to determine who was correct or close to the correct answer.

LO 5: DATA HANDLING

AS 1

- Learners collect data in the classroom and school environment according to one attribute
- Learners answer questions about the collections they have made

AS 2

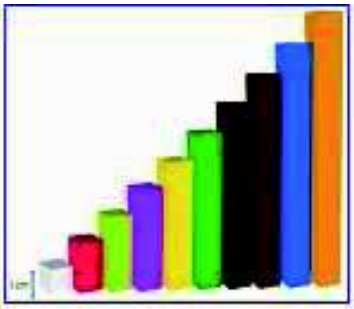
- Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects, eg circles, rectangles, squares and triangles.

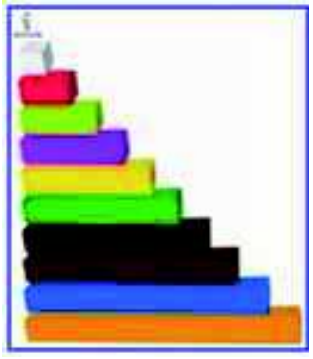
AS 3

- Learners give reasons for grouping collection in a particular way.

AS 4

- Learners draw dots or construct pictographs to show correspondence between collected data and representation. The pictograph can be done horizontally or vertically





AS 5

- Learners describe, explain and answer questions about the graphs

RESOURCES:

Counters (beads, sticks, beans, stones, blocks,), abacus, number grid, number line, empty number grid, paper, scissors, ruler, flash cards with numbers/symbols, flash cards with number names, practical activity sheet, 100 number block, worksheets, cards with numbers, flard cards, real or play money, mat books, pencils, crayons, flash cards with bonds, flash cards with mental mahts + and - ,flash cards with repetitive addition, flash cards with x, flash card with ½ / half on it, cardboard circle, flash card with ¼ / quarter on it, calendar, birthday chart, calendar, analogue clocks, digital clocks, 2D shapes and 3D objects, measuring equipment - mass

YESTERDAY, TODAY AND TOMORROW (Story)

It was a sunny Friday afternoon; Sipho and his grandfather were sitting in the cool shade of the tree outside his house. Umkhulu, as Sipho calls him, was a wise old man, who had many years behind him and lots of experience, was always very interested in what Sipho was learning at school.

On that sunny afternoon he asked "Sipho, what did learn at school this week?" Sipho replied: "You know Umkhulu, I can't even remember what I did at school today. How do you think I can remember what I did yesterday?" This answer did not surprise Umkhulu much, he had noticed that Sipho spent very little time doing any homework and so he said, "Sipho, maybe if you spent more time doing your homework you would be able to remember what you did in school during the week." Sipho replied, pulling a face, "Umkhulu, I hate doing my homework. It does not even matter if I don't do my homework. I am never going to be able to do what I want to do when I am bigger, so why should I even try. It would be better for me to spend the afternoons and weekends playing soccer with my friends." Umkhulu was very worried when he heard Sipho's answer and just as Sipho was about to get up and go he said he needed to tell Sipho a very important story.

"Many years ago," Umkhulu began, "when I was a young boy, I lived with my parents in a small village. My family was very poor and my father was a very sick man. One day, after there had been no rain for many seasons, my mother told me that I needed to go and find work in the city. I left my family and travelled, many days, to the mines in the city. I found a job as miner and I worked very hard. Every day, as I went underground I felt very sad. I remembered the fun I used to have at home and what it actually felt like to have the sun on my face. You see Sipho," he said, "In the past, when I was working, I was underground all day and never used to see the sun, but I knew that I had to keep working because my family needed me too. One day in September, I remember it very clearly, I decided that even though I could not change my situation right then, if I worked very hard maybe, just maybe, when I had a family of my own I would be able to give them a better life than I had had myself. And so for many months and years I worked on the mines, I sent any extra money to my mother but I also saved a little bit every month so that I could be a good provider for my own family. I eventually got a promotion and I met your Gogo. We started our own family and with the little bit of money that I had saved I managed to send your Dad to school. It was not like the school you go to but it was still school. Now look at your Dad today. Does he have to work on the mines like I did? No Sipho, he does not. But he, like me, is working very hard so that you can one day you can have a better life than he did." Umkhulu closed his eyes and smiled to himself.

Sipho was stunned he had never thought about his life like that before. At present he saw school and homework as a bore. He had never before heard the story about his grandfather's past. "Umkhulu" Sipho said "You really had to work hard to give my Dad a good future." Thinking about this he dosed off to sleep. While he was asleep he dreamed of his future. He dreamed of himself getting good marks at school and even going to University. He saw his graduation day with his father smiling proudly. He saw himself starting his own business and he could see himself living in a beautiful house and owning a fancy car. He saw his children going to very good schools. He even dreamed of taking his whole family, getting onto an aeroplane, and going on a wonderful family holiday. Sipho woke up feeling refreshed and excited. He had never looked at his future in such a way before. He decided that from that day forward he was going to work hard to give himself and his family a great future.

He looked at his Umkhulu sleeping peacefully under the tree and silently promised to work just as hard as his grandfather had in the past and as hard as his dad works at present. From that day forward Sipho never complained about going to school or doing his homework in the afternoons. In fact whenever he had the chance he would do extra work just to be sure he was giving himself a better chance.

As Sipho grew up he often used to think about that sunny Friday afternoon in the cool shade of his favourite tree and every time he did he said a silent thank you to his wonderful Umkhulu for showing him just how important it is to always work hard. Sipho realised then that sometimes it is the lessons you learn from the past that can make your future so full of opportunities

Note to Educator:

These questions could be asked verbally or as a written test. Please adapt the questions to suite your learners' ability levels.

Question 1:
Where were Sipho and his grandfather sitting?
Question 2:
What did Umkhulu ask Sipho?
Question 3:
Sipho loved doing homework. True or False?
Question 4:
When Umkhulu was a little boy did he live in a big town or a small village?
Question 5:
Umkhulu went to the big city to look for work. True or False?
Question 6:
What work did Umkhulu do when he was a young man?
Question 7:
Why did he have to go underground?
Question 8:
List two things Sipho dreamed about?
Question 9:

Draw a picture of something that you dream of having when you are older.

Question 10:

Find a compound word in the following sentence.

“Each day that I went underground I was very sad.”

REFLECTIONS:

BARRIERS:

WEEK 5

WEEK 5 LEARNING OUTCOMES AND ASSESSMENT STANDARDS	Date completed
LO 1: NUMBERS, OPERATIONS & RELATIONSHIPS	
AS 1: Counts to at least 100 everyday objects reliably.	
AS 2: Counts forwards and backwards 2.1 ones from any number between 1 - 200 2.2 tens from any multiple of 10 between 0 - 200 2.3 fives from any multiple of 5 between 0 - 200 2.4 twos from any multiple of 2 between 0 – 200	 2.1 2.2 2.3 2.4
AS 3: Knows and reads number symbols from 1 to at least 100 and writes number names from 1 to at least 100.	
AS 4: Orders, describes and compares the following numbers: 4.1 Whole numbers to at least 2-digit numbers 4.2 Common fractions including halves and quarters (1/2, ¼)	 4.1 4.2
AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers	
AS 8: Can perform calculations, using appropriate symbols, to solve problems involving: 8.1 Addition and subtraction of whole numbers with at least 2 digits 8.2 Multiplication of whole 1-digit numbers by 1-digit numbers with solutions to at least 50 8.3 Estimation.	 8.1 8.2 8.3
AS 9: Performs mental calculations involving: 9.1 Addition and subtraction for numbers to at least 20 9.2 Multiplication of whole numbers with solutions to at least 20	 9.1 9.2
AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers 10.2 Doubling and halving 10.3 Using concrete apparatus 10.4 Number lines	 10.1 10.2 10.3 10.4
AS 11: Explains own solutions to problems	
AS 12: Checks the solution given to problems by peers	
LO 2: PATTERNS, FUNCTIONS & ALGEBRA	
AS 2: Copies and extends simple number sequences to at least 200	
AS 3: Creates own patterns	
AS 4: Describes observed patterns	
LO 4: MEASUREMENT	
AS 1: Reads and writes analogue and digital clock time in terms of hours and minutes	
AS 2: Names in order the days of the week and the months of the year	
AS 3: Calculates elapsed time in: 3.1 hours and minutes using clocks 3.2 days, weeks and months using calendars	 3.1 3.2
AS 4: Sequences events according to days, weeks, months and years	
AS 6: Estimates, measures, compares and orders 3D objects using non standard measures: Mass (bricks, sand bags), capacity (spoons, cups), length (hand spans, footsteps).	
LO 5: DATA HANDLING	
AS 1: Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher	
AS 2: Sorts physical objects according to one attribute chosen by the teacher	
AS 3: Gives reasons for collections being grouped in particular way	
AS 4: Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations	
AS 5: Describes own or peer's collection of objects, explains how it was sorted and answers questions about it	

WEEK 5

Note to Teachers: The Annual National Assessment Test has to be written between the 2nd and the 6th of November 2009 (Week 5). This Test must be included as the Written Component of the third Formal Assessment Task (FAT 3). Therefore teachers only need to add the Oral/Practical component of FAT 3. The Oral/Practical component of FAT 3 will be done in Week 6.

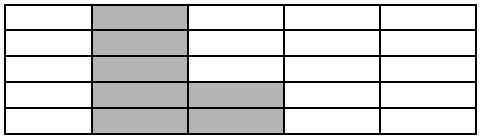
LO 1: NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 1

- Learners count physical objects using one-to-one correspondence in the number range 0 – 100
- Count out beads, sticks, beans, stones, blocks to at least 100.
- Give a number of objects to 2 learners, e.g. 91 beans that were counted out by the teacher beforehand. Both learners receive the same amount of beans. They count it out and see whether they get the same answer

AS 2.1

- Learners count forwards and backwards in ones in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g. 183, 184, 185, …. …., 180, 181, 182, … …,
- Learners count in 1's from any given number. Begin at 173, count on to 190. Begin at 180, count back to 159.
- The learner outlines the first letter of his/her name on a 1-centimeter grid paper. Cover the letter with white number rods (nr 1 rod) . Estimate first and then count in one's to see how many rods were used to cover the letter of the learner's name.



AS 2.2

- Learners count forwards and backwards in tens in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g. 90, 100, 110,… …, 190, 180, 170,… ….
- Let the learners count using an empty number grid. Find the number 90. Count on in 10's. Stop at 190. Count back in 10's, start at 200 to 80.
- Give each learner a money bag with 10c coins in it. Let the learners count the coins, in ten's to see who has the most.

AS 2.3

- Learners count forwards and backwards in fives in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g. 115, 120, 125, … … 140, 135, 130, …. ….
- Learners count in 5's on an empty number grid. Ask the learners to find the empty block where 25 should be. Colour the block. Now count in 5's writing the numbers in the empty blocks.

AS 2.4

- Learners count forwards and backwards in two's in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g. 128, 130, 132, … … 140, 138, 136, … ….
- Give each learner in a group of 2 a set of cards with +2 or – 2 written on the cards. The teacher gives the first number to start with. The learners count on in two's if their cards say +2, or count backwards in two's if their cards say -2, eg. 180 182 184 186 184 186 188 190 188 186 184 186 188 190 192 194 196 194 196 198 198 196, etc

AS 3

- Learners read any number symbol in the number range 1 – 200. The learners read the symbols on number cards, a number grid or a number line. E.g. 79 ; 131
- Learners learn the number names and symbols while counting from a number grid or abacus. Teacher says: Find the number that is 2 more than 168. Start counting and say the numbers out loud. Stop when you get to 200. Now start at the number which is 10 less than 200. Count backwards and say the number out loud.
- Learners write any number name in the number range 0 - 100 . E.g. 44 forty-four / 99 ninety-nine. A game can be played where the teacher divides the group in 2. She calls one learner of each group to the board and ask them to write the number name of the number that is 10 less than 90. Both learners now write eighty on the board.
- Use a number of cardboard fish with a paper clip for the mouth. Place a number or number name under each fish on the mat. Use a line with a magnet on and "catch" a fish. Read and write the number name or the number on the

board. If correct, the learner has caught the fish and may keep it. The winner will be the learner who has caught the most fish.

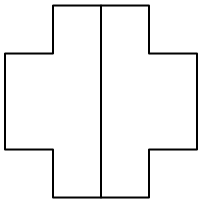
- Play snap. Each group of 2 gets a set of cards with numbers and number names to 100. The cards are shuffled and the learners turn the cards over one by one. If two cards say the same – (eighty 80), the learners must shout out "Snap". The first learner to shout out "Snap" will get the pack of cards.

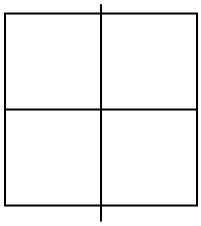
AS 4.1

- Work in the number range 0 – 99. Give each learner 6 different cards. The learners must order the cards from the smallest to the biggest number, or the biggest to the smallest number, on the mat. The cards are now the steps to the throne of the king. Place a cardboard crown on a learner's chair. This is the king's throne. The learner walks from one "step" to the next, answering questions about the numbers like – what comes before, after, between, what is 10 more, 5 less, etc. Which is the biggest 89 or 98, which is the smallest 83 or 38?
- Use an old puzzle with 48 pieces. On the back of each piece, put a number in the number range 0 - 99. The learners put all the pieces upside down and build the puzzle according to numbers in ascending or descending order. Each learner gets a few puzzle pieces. Learner 1 will put down 56, then learner 2 will put down 77, then leaner 3 will put down 79, etc. Once finished, the puzzle is built and the learners can admire the picture

AS 4.2

- Learners order and describe ½ and ¼ in ascending order (smallest to biggest) or descending order (biggest to smallest). Learners may use concrete objects, pictures or a number line.
- Order the following fractions from the smallest to the biggest: ½ ¼ 2/4 Give the learners an apple, vienna or a picture of a circle, square, cross or diamond to cut in halves and quarters. Remember to use only one object or picture at a time, as half a vienna is not the same size as half an apple. The learners must order the fractions.

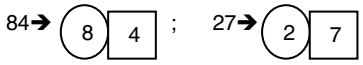




- Let the learners cut out a big square. Fold the square in half and colour the one half red (write ½ on it). Now fold the square in quarters and colour both the remaining quarters blue (Write ¼ on it). Discuss the name of each fraction, as well as how to write it. Now cut the square in half (red piece) and then the two quarters (two blue pieces).
- Learners can now sequence the fractions from the smallest to the biggest, or the biggest to the smallest. Make sure that the learners understand that 2/4 is the same as ½ .
- Cut a strip of liquorice into 4 quarters. Cut the 2nd strip into 2 halves. Now give the learners a full strip as well. Let the learners order it from the biggest (whole), to the smallest (1/4) and then from the smallest to the biggest.

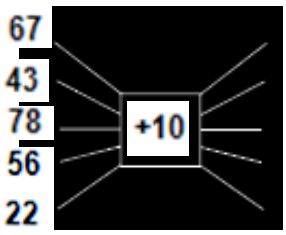
AS 5

- Learners identify the place value of a given digit in a number in the number range 0 – 99. Learners may use flard cards. Eg. (91 90 or 9 tens) (92 ___ or ____ ones)
- Ask the learners to pack out the following numbers with the flard cards:
  e.g. 83; 77; 69
  Ask the question: "How many tens in each number and how many ones in each number?"
- Use the above number and ask the following:
  Change 83 to a bigger number by only changing the ten. Change 77 to a smaller number by only changing the ones. Make 69 bigger by changing the tens and the ones. What will happen if I add 2 tens to 77? (the ten will become bigger etc)
- Learners complete a worksheet with numbers on, by circling the tens and putting a square around the ones,
  e.g. 84: a circle around the 80 and a square/rectangle around the 4



AS 8.1

- Learners perform addition and subtraction with adding or subtracting a whole ten to/from any number in the number range 0 – 99. Learners may use a number square or a number line. E.g. 87 + 10 ; 75– 10
  58 + 5 = 58 + 2 + __
- Use a flow diagram where the initial number has been filled in. Add ten to each number.

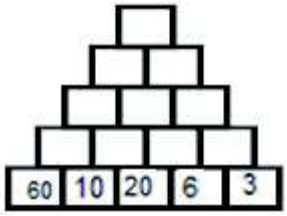


- Add down and across. Then add the totals you calculated. The sum across should equal the sum down.

37	22	
35	2	

28	8	
21	37	

- Learners complete the pyramids:



AS 8.2

- Learners count forwards and backwards in multiples of 3,4,6,7,8 and 9 in the number range 0 – 50 (in preparation for multiplication
- Multiplication of whole 1-digit by 1-digit numbers with solutions to at least 50
- The learners listen to the problem that the teacher poses and suggest ways of solving eg. If 5 learners put up 2 fingers, how many fingers will they have put up together?

2 + 2 + 2 + 2 + 2 = 10 or 5 x 2 = 10

AS 8.3

- Learners estimate the answer to addition, subtraction and multiplication problems.
- Learners compare the calculated answer.
- Estimation should be used by the learners continuously throughout all the LO's

AS 9.1

- Learners perform mental calculations involving addition and subtraction in the number range 0 – 20. Teachers use flashcards with the number symbols to represent the number combinations. Eg. 14 + 3 – 2= __
  17 – 7 = __ Addition and subtraction of single-digit numbers in the number range 0 – 20 with more than one operation.
- Do the same type of activity with minus only
- Show the learners an envelope and tell them that inside is the number 10. You want to know what number must be added to give you the number you point to on the number chard, eg. if you point to 15, the learners must say 5. Learners now write the sum in their books and the answer as the number name: 10 + 5 = fifteen
- Put 5 hoops in the class. In each hoop, put down a number not larger than 20. The learner throws a beanbag into one of the hoops and must than make up a sum with the answer of the number in the hoop, eg. 16 + 4 = 20. The learner can also throw a die and then add the other number to make up the number in the hoop, such as, die = 13 hoop = 20 sum will be 13 + 7 = 20.
- Two learners play together. Place dominoes upside down on the mat. The first learner turns the first domino over and add the 2 numbers together (6 + 0 = 6) The 2nd learner turns the nuext domino over and add it to the sum of the first domino (6 + 4 + 2 = 12). The first player now turns the next domino over and add his/her two numbers to the previous number (12 + 2 + 2 = 16), etc.

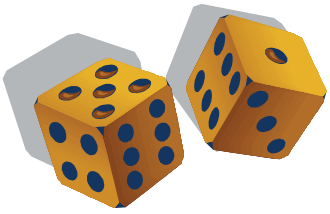
AS 9.2

- Learners perform mental calculations with multiplication with answers to at least 20. The teacher uses flash cards with number symbols to represent the multiplication calculations. E.g. 5 x 3 = __ 2 x 8 = __
- Learners complete the following multiplication table:

X2	7	4	1	3	5	6	8	2	0
	14								

- Learners work in pairs. They count out 50 counters. They then group them in 5's and write the repeated addition for the groups of counters, e.g. 5 + 5 + 5+ 5+ 5 + 5+ 5+ 5+ 5+ 5 = 50. What is the shorter way of writing it? 10 X 5 = 50 Repeat this, by counting to 20 and then grouping them in 2's.Learners work in pairs.

- The first learner throws a die. The second learner multiplies the number on the die by 2. The learner carries on multiplying, until he/she gets it incorrect and then the learners swop places e.g. learner 1 throws a 4, learner 2 says 4 x 2 = 8. This carries on until the first learner makes a mistake

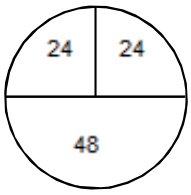


AS 10.1

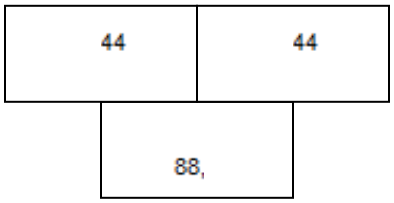
- Learners break down and build up numbers in the number range 0-99 and may use a number grid and a number line. E.g. (99 =80 + 10 + 9 or 99 = 90 + 1 + 3 + 5)
- Learners build up numbers in the number range 0 – 99. Learners may use counters, drawings, number grid or a number line. E.g. (60 + __ + 5 + 2 = 97; 30 + __ = 100; 25 + ___ = 100)
- Allow the learners to choose their own lucky number between 10 and 99. Write the numbers down and then answer questions like: Break down the numbers into tens and ones 46 = 40 + 6 23 = 64 =
- The teacher has two bags with number cards. The one bag has tens and the other has ones. Learners take one number from each bag and have to put the numbers together to build a new number.
  e.g. the learner takes number 80 from the "tens bag" and number 6 from the "ones bag". 80 + 6 = 86.
- The teacher has a bag with 2-digit number cards inside, e.g. 47; 93; 71, etc. The learner takes a number from the bag and uses flard cards to break the number up in tens and ones. Ask the learners: "How many tens in your number" and "How many ones in your number?"

AS 10.2

- Learners double numbers with answers in the number range 0 - 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. E.g. double 46, double 39. The learners write the number in the top two quarters, e.g double 24, they will write 24 in each quarter and the answer, 48 in the bottom half.



- Learners halve numbers without a remainder (even numbers) in the number range 0 - 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. E.g. halve 92 . Write the number in the bottom rectangle and then the half of the number in both of the top rectangles. You can add another row of 4 rectangles on top of the two, and halve again, e.g. 88, 44 / 44, 22 / 22



- Learners halve numbers with a remainder (odd numbers) in the number range 0 -99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. halve 67 halve 83
- Learners work in pairs. Each pair with a pile of counters. They take turns to count out any number between 1 and 50 and the partner has to double the number. The pair must record the numbers, eg double 12 is 24. Repeat the activity, but now work with 100 counters, halving the number and then recording it, eg half of 30 is 15.

AS 10.3

- Learners use concrete apparatus when counting, building up, breaking down, doubling and halving numbers.

AS 10.4

- Integrate with all number work

AS 11

- Learners explain solution to problems in the number range 0 – 99.

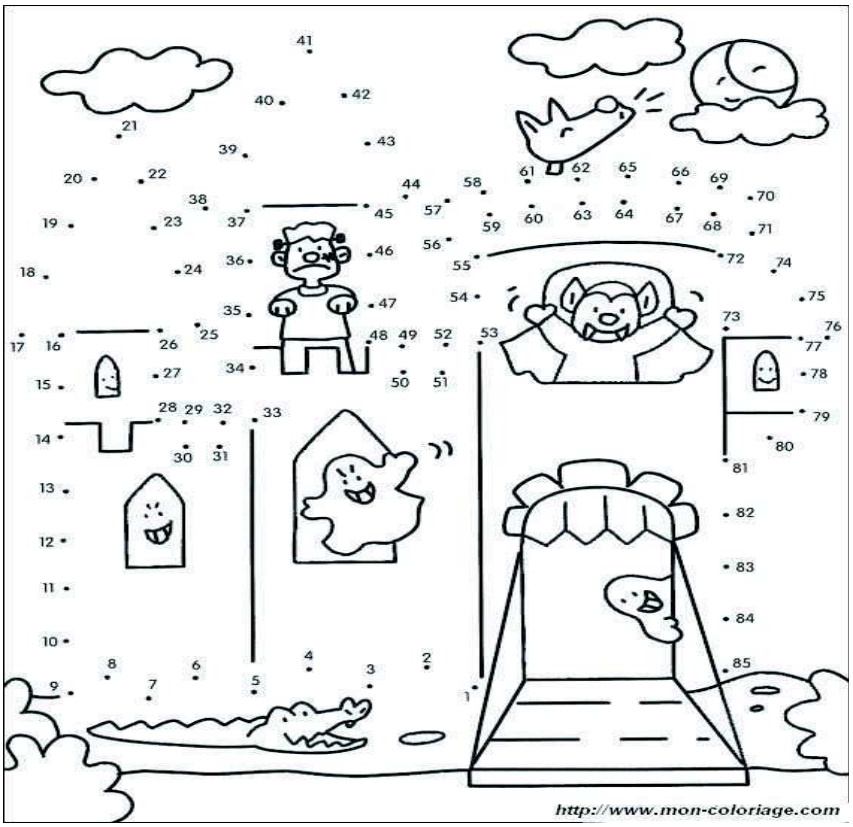
AS 12

- Learners check each other's solutions to problems

LO 2: PATTERNS FUNCTIONS AND ALGEBRA

AS 2

- Copies and extends simple number sequences to at least 200. Learners may use an abacus, number grid or a number line.
- Extend the number sequences. Then answer the questions. 68; 66; 64; 62; ____; ____; ____; _____
- Add the digits in each of the numbers together. What do you notice? 85; 80; 75; 70 ____; ____; ____; ____
  What is repeated? _____
  What else do you notice? _____
- Complete a picture by joining the dots in the correct order



AS 3

- Creates own patterns. Learners create their own number patterns in the number range 0 – 200. Learners may use a number grid or a number line.
- Creates own patterns. Explain it to a friend e.g.
  99, 103, 107, 111, …. …. …. ….. (adding on 4)
  115, 110, 105, ….. ….(counting backwards in 5's)
- Learner takes 5 numbers out of a feely bag and try to make a new number pattern. If there is a number that really does not belong, the learner may swop the number for another one from the feely bag. The other learners must try to determine how the pattern was created eg 101, 100, 99, 97 96, 95, 94 ……. Pattern is : less 1,less 1, less 1, less 2 and then repeat it
- Learners spin a spinner 5 times and use the numbers to try and make up a number pattern.

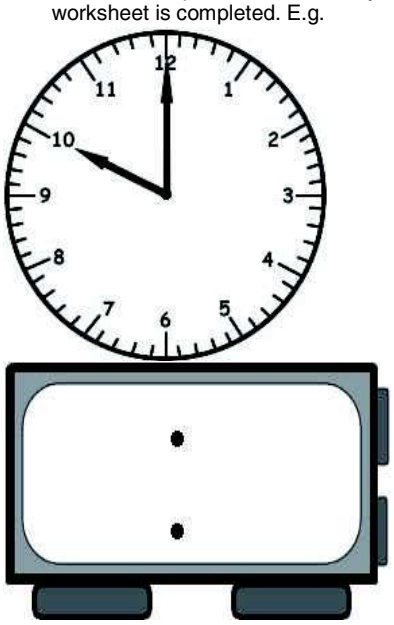
AS 4

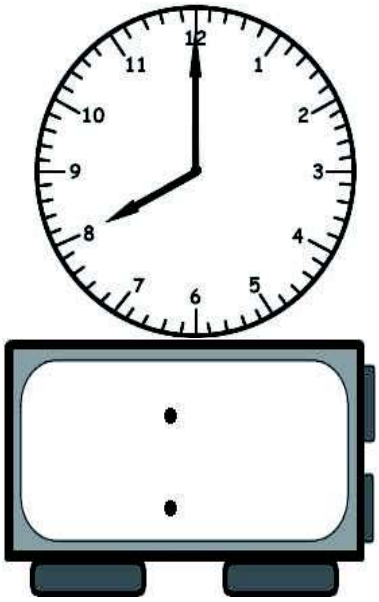
- Learners describe a given/own pattern E.g. Learners create their own patterns and then discuss it with the group.
- Learners can make their own pattern verbally, by saying: mee,maa,moo,mo,mee,maa,moo,mo……, or physically: sit, stand, clap, stamp, cit, stand, clap, stand,…… and then with concrete apparatus: blue, red, green, green, blue, red, green, green,……., or cube, cylinder, ball, cylinder, cube, cylinder, ball, cylinder,….. and then with numbers. Describe own patterns.

LO 4: MEASUREMENT

AS 1

- Reads and writes analogue and digital clock time in terms of hours and minutes
- Learners complete a worksheet by filling in the correct time. Use a model clock to do it physically before the worksheet is completed. E.g.





_____ _____

JANUARY							FEBRUARY							MARCH							APRIL						
S		4	11	18	25		S	1	8	15	22			S	1	8	15	22	29		S		5	12	19	26	
M		5	12	19	26		M	2	9	16	23			M	2	9	16	23	30		M		6	13	20	27	
T		6	13	20	27		T	3	10	17	24			T	3	10	17	24	31		T		7	14	21	28	
W		7	14	21	28		W	4	11	18	25			W	4	11	18	25			W	1	8	15	22	29	
T	1	8	15	22	29		T	5	12	19	26			T	5	12	19	26			T	2	9	16	23	30	
F	2	9	16	23	30		F	6	13	20	27			F	6	13	20	27			F	3	10	17	24		
S	3	10	17	24	31		S	7	14	21	28			S	7	14	21	28			S	4	11	18	25		

MAY								JUNE							JULY							AUGUST						
S		3	10	17	24	31		S		7	14	21	28		S		5	12	19	26		S		2	9	16	23	30
M		4	11	18	25			M	1	8	15	22	29		M		6	13	20	27		M		3	10	17	24	31
T		5	12	19	26			T	2	9	16	23	30		T		7	14	21	28		T		4	11	18	25	
W		6	13	20	27			W	3	10	17	24			W	1	8	15	22	29		W		5	12	19	26	
T		7	14	21	28			T	4	11	18	25			T	2	9	16	23	30		T		6	13	20	27	
F	1	8	15	22	29			F	5	12	19	26			F	3	10	17	24	31		F		7	14	21	28	
S	2	9	16	23	30			S	6	13	20	27			S	4	11	18	25			S	1	8	15	22	29	

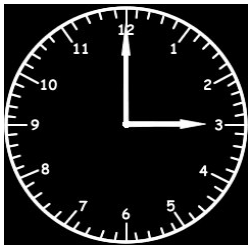
SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S		6	13	20	27		S		4	11	18	25		S	1	8	15	22	29		S		6	13	20	27	
M		7	14	21	28		M		5	12	19	26		M	2	9	16	23	30		M		7	14	21	28	
T	1	8	15	22	29		T		6	13	20	27		T	3	10	17	24			T	1	8	15	22	29	
W	2	9	16	23	30		W		7	14	21	28		W	4	11	18	25			W	2	9	16	23	30	
T	3	10	17	24			T	1	8	15	22	29		T	5	12	19	26			T	3	10	17	24	31	
F	4	11	18	25			F	2	9	16	23	30		F	6	13	20	27			F	4	11	18	25		
S	5	12	19	26			S	3	10	17	24	31		S	7	14	21	28			S	5	12	19	26		

- Look at the above calendar and answer the following questions
  - How many Mondays are there in September?
  - Sipho's birthday is on the 5th of August. What day is that? (Previous week's story).
  - If Sipho visited Gogo every Saturday except on the 3rd of October, how many times would he visit Gogo in one year?
  - How often did he play soccer for his school during May and June if he played on Saturday's?
  - What day is the 6th of April?
  - There are 31 days in July. How many days are left in July if you subtract all the Saturdays and Sundays?

AS 3.1

- Calculate elapsed time in: hours and minutes using clocks

- Learners answer the following questions and show or fill in on a worksheet: : How many minutes is it from 5 o'clock to twenty past five? How many minutes is it from 3o'clock to ten past three? How many minutes is it from 11'clock to twenty to twelve?



Josh started cooking at _____ He ate at _____
How much time elapsed from the time that he started cooking until he ate his food? _____

AS 3.2

- Calculates elapsed time in: days, weeks and months using calendar.
- Give the learners a calendar of December. Answer the following questions: How many days in December? Circle the number with red. On which day does December start? Circle the day with blue. What is the date of the last Sunday in August? Circle it with yellow. If Christmas is on the 25th of December, what day will it be? Circle the day with orange.

Calendar for December 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AS 4

- Learners sequence events according to years, e.g. Fill in years of birth on a timeline.
- Learners bring photos of themselves at birth, one year, two years, three years, four years, five years, six years and seven years. Make a timeline with the year in which the child was born and then glue the birth photo next to it as follows:

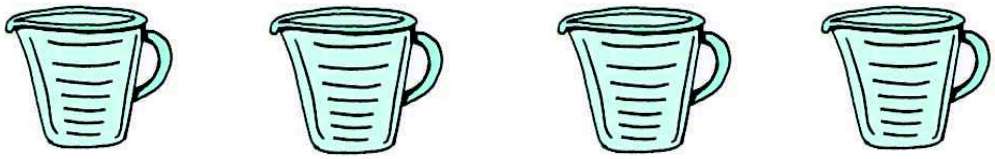
  2001 Birth photo
  2002 1st birthday photo
  2003 2nd birthday photo
  2004 3rd birthday photo
  2005 4th birthday photo
  2006 5th birthday photo
  2007 Gr R photo
  2008 Gr 1 photo
  2009 Gr 2 photo

  Bind content together in a little "This is Me" book.

AS 6

- Learners estimate and measure the capacity of different containers. Learners can use cups, spoons, mugs. Eg. How many spoons/cups do I use to fill up a 2L bottle?
- Learners compare the capacity of containers and order the objects from the most to the least and the least to the most.

- Fill 4 jugs with different levels of water.
  Ask the following:
  - Which jug has the most water in it?
  - Which jug has the least water in it?
  - Pour out the water and measure in a measuring cup and see whose estimation was the closest.



- Show the learners a teaspoon and a 250ml measuring cup.
  - Let them estimate how many teaspoons of water will fill the measuring cup.
  - Each child draws the spoons (estimated number).
  - Now measure by filling the cup with water, spoon by spoon.
  - The learners draw the spoons (actual number) and then work out how many spoons did they estimate too little or too much.

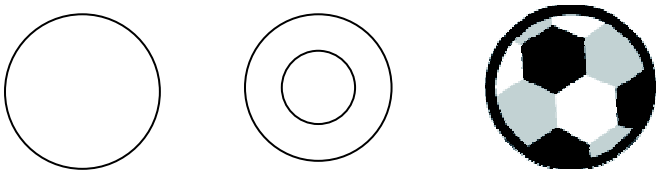
LO 5: DATA HANDLING

AS 1

- Learners collect data in the classroom and school environment according to one attribute, e.g. book, table, ruler, pencil, lunch box, pencil bag (all rectangles)
- Learners answer questions about the collections they have made, e.g. why did you put these items together, what do you see in each of these items, etc

AS 2

- Learners sort physical objects according to one attribute Learners may use pictures or drawings to represent the real objects, e.g. circles, rectangles, squares and triangles



AS 3

- Learners give reasons for grouping collection in a particular way

AS 4

- Learners draw dots or construct pictographs to show correspondence between collected data and representation. The pictograph can be done horizontally or vertically

*	(1 red circle)	* *	(2 white circles)
* * *	(3 blue circle)	* * *	(3 black circles)
* * * * *	(5 green circle)	* * * * * *	(6 yellow circles)

0				
0	0	0		
0	0	0	0	0

AS 5

- Learners describe, explain and answer questions about the graphs

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RESOURCES:

Counters (beads, sticks, beans, stones, blocks,), abacus, number grid, number line, 150 square jigsaw, empty number grid, cardboard, scissors, fish template, paper clip, fishing line/fishing rod, magnet, crown, chair as throne, flash cards with numbers/symbols, flash cards with number names, practical activity sheet, 100 number block, worksheets, cards with numbers, 36-piece puzzle, flard cards, mat books, pencils, crayons, flash cards with bonds, flash cards with mental mahts + and - ,flash cards with repetitive addition, flash cards with x, set of cards with sums and set of cards with the answer to the sums (snap cards, calendar, analogue clocks, container for measuring capacity (cups, spoons, mugs, jugs, 2L bottles, teaspoon, 250ml cup)

REFLECTIONS:

BARRIERS:

\WEEK 6

WEEK 6 LEARNING OUTCOMES AND ASSESSMENT STANDARDS	Date completed
LO 1: NUMBERS, OPERATIONS & RELATIONSHIPS	
AS 1: Counts to at least 100 everyday objects reliably.	
AS 2: Counts forwards and backwards 2.1 ones from any number between 1 – 200 2.2 tens from any multiple of 10 between 0 – 200 2.3 fives from any multiple of 5 between 0 – 200 2.4 twos from any multiple of 2 between 0 – 200	 2.1 2.2 2.3 2.4
AS 3: Knows and reads number symbols from 1 to at least 100 and writes number names from 1 to at least 100 **(FAT 3)**	
AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers	
AS 6: Solves money problems involving totals and change in rand's and cents	
AS 7: Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that also include unitary fractions (eg ¼)	
AS 8: Can perform calculations, using appropriate symbols, to solve problems involving: 8.1 Addition and subtraction of whole numbers with at least 2 digits **(FAT 3)** 8.2 Multiplication of whole 1-digit numbers by 1-digit numbers with solutions to at least 50 **(FAT 3)** 8.3 Estimation.	 8.1 8.2 8.3
AS 9: Performs mental calculations involving: 9.1 Addition and subtraction for numbers to at least 20 9.2 Multiplication of whole numbers with solutions to at least 20	 9.1 9.2
AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers 10.2 Doubling and halving **(FAT 3)** 10.3 Using concrete apparatus 10.4 Number lines	 10.1 10.2 10.3 10.4
AS 11: Explains own solutions to problems	
AS 12: Checks the solution given to problems by peers	
LO 2: PATTERNS, FUNCTIONS & ALGEBRA	
AS 2: Copies and extends simple number sequences to at least 200	
AS 3: Creates own patterns	
AS 4: Describes observed patterns **(FAT 3)**	
LO 4: MEASUREMENT	
AS 2: Names in order the days of the week and the months of the year	
AS 6: Estimates, measures, compares and orders 3D objects using non standard measures: Mass (bricks, sand bags), capacity (spoons, cups), length (hand spans, footsteps).**(FAT 3)**	
LO 5: DATA HANDLING	
AS 1: Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher **(FAT 3)**	
AS 2: Sorts physical objects according to one attribute chosen by the teacher **(FAT 3)**	
AS 3: Gives reasons for collections being grouped in particular way	
AS 4: Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations	
AS 5: Describes own or peer's collection of objects, explains how it was sorted and answers questions about it	

WEEK 6

LO 1: NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 1

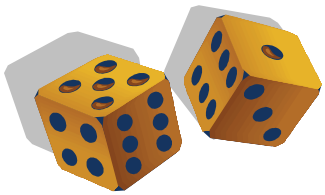
- Learners count physical objects using one-to-one correspondence in the number range 0 – 100
- Count out beads, sticks, beans, stones, blocks to at least 100.
- Give a number of objects to a learner, e.g. 99 beans that were counted out by the teacher beforehand. The learner counts it out and compares the answer.

AS 2.1

- Learners count forwards and backwards in ones in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g.
- 198, 199, 200, …., ….
- 197, 198, 199, … ….
- Learners count in 1's from any given number. Begin at 161, count on to 200. Begin at 200, count back to 176.
- Each learner in the group receives 20 cards with numbers on. The learners pack their cards out and order it from the smallest to the biggest. They work in pairs of 2 and try and build up the number chart from eg.160 to 200, by packing out their numbers on the chart, in the correct order, as quickly as possible. The first group to finish is the winner.

AS 2.2

- Learners count forwards and backwards in tens in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line. E.g. 100, 110, 120,… …, ; 200, 190, 180,… ….
- Make a dice with multiples of 10 on it, or prestik multiples of 10 onto an old dice. Each learner receives a bingo card with multiples of 10 on it. The first child rolls the dice. They have to start with 10. As soon as the learner has rolled a 10, he/she can start, by covering the 10 on the bingo card with a bottle top. The learner must now roll a 20 to be able to cover the 20. The numbers must be covered in the correct order. The first learner to cover the bingo card is the winner. To be able to use more numbers (count further), let the learners roll 2 die and cover 2 numbers (still in the correct order).



10	20	30	40	50
60	70	80	90	100
110	120	130	140	150
160	170	180	190	200

AS 2.3

- Learners count forwards and backwards in fives in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line. E.g. 135, 140, 145, … …; 160, 155, 150, …. ….
- Each learner gets a set of numbers (multiples of 5). They must pack the numbers out in the correct order as quickly as possible. The first one to finish correctly is the winner. Also do this with counting backwards.

AS 2.4

- Learners count forwards and backwards in twos in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line. E.g. 138, 140, 142, … …; 150, 148, 146, … ….
- Let the learners use a tape measure and count in 2's. Tell them, put your finger on 78cm and count on in 2's. Now count backwards, starting at 150cm, and end at 98cm
- Give each learner a number of 2c coins. Give each learner a card with a number on (multiple of 2), e.g. 124. The learners must now count on from that number, by using the 2c coins.
- Give the learners a number card with a number on, eg. 100, as well as 50 2c pieces. They now have 200 in front of them(number on card + the 50 2c pieces). Count backwards in 2's by taking a 2c piece away and putting it behind their backs, eg. 200,198, 196, ……

AS 3

- Learners read any number symbol in the number range 1 – 200. The learners read the symbols on number cards, a number grid or a number line. E.g. 101 169
- Learners play the fishing game. They catch a fish, read the symbol and write it in their mat books. Write the number name to match.
- Learners write any number name in the number range 0 - 100 . E.g. 100; 98; etc. Pack out 10 skittles (empty 500ml plastic cooldrink bottles works well). Place a number in the number range 0 – 100 under each skittle. The learner rolls the ball and all the numbers of the skittles that have fallen over must now be written down and next to it their number names. Do it in the mat books.

AS 5

- Learners identify the place value of a given digit in a number in the number range 0 – 99. Learners may use flard cards. E.g. (92 is 90 or 9 tens) (92 is ☐ or ☐ ones)

- Ask them to pack out the following numbers with flard cards:
  - number 86. Now change it to 68;
  - number 99. Now change it to 4
  - number 78, then say plus 2 (the learners add the 2 to the 78 to show that it can make 80), plus 4, minus 10, etc

AS 6

- Learners solve money problems in the number range 0 – 99 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20c, 50c. Learners may use play or real money. E.g. Learners pack out a given amount such as R6,30 R23,95.
  Learners calculate addition and subtraction sums: R51 + R22 – R17 = ☐
- Learners count out the required amount of money (coins and notes): Each learner in the group gets a chance to give an instruction e.g. Count out R4,30 and use as few coins as you can.
  (Answer: R2; R2 ; 20c; 10c)
- Learner gets a worksheet and real or play money to complete the worksheet:

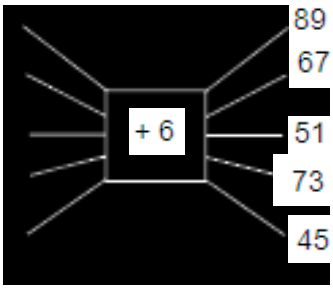
I have…..	My item costs…..	My change…..
R10	R7	
R34	R22	
R48	R37	
R89	R32	

AS 7

- Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that also include unitary fractions (e.g. ¼)
- Tell a story about a child who had a birthday. Choose one child to be the birthday boy/girl. Mommy bought him/her a cake (have a picture of a round cake, or the real cake, which he wanted to share with his/her friend. Choose a friend from the group and cut the picture/cake in half. Discuss: "What part will the birthday boy/girl get and what part will the friend get. Before they could eat it, 2 more friends arrived. They now have to cut the cake into 2 more pieces (quarters). Discuss again. Before they could eat it, 4 more friends arrived. They now have to share the cake amongst 8 learners. What fraction will each child get? Discuss.
- Word problem: Share 5 marshmallows amongst 4 children. Remind them that they must share equally. There is one marshmallow over. What do we do? Use a pair of scissors and cut it in 4 equal pieces. Learners discover that they all have 1 and 1 part of the 4 pieces of the 5th marshmallow. Each learner has 1 ¼ .
- Word Problem: Share 24 "fizzers" equally amongst 4 children; Share 25 "fizzers" equally amongst 4 children; Now share 26 "fizzers" equally amongst 4 children. Let learners work in pairs. Learners explain their solutions to each other.

AS 8.1

- Learners perform addition and subtraction with adding or subtracting with 2-digit numbers in the number range 0 – 99. Learners may use a number square or a number line.
  e.g. ____ + 36 = 69; 89 – 42 = ____
- The teacher asks word problems involving addition and subtraction with 2-digit numbers in the number range 0 – 99. Learners solve problems by using counters, drawings or calculations.
  There are 88 learners who take the bus to school. If 23 are absent today, how many learners are on the bus?
  There are 78 cars parked in the car park. If 21 drive off and another 32 arrive, how many cars are there now in the car park?
- Use a flow diagram where the answer has been filled in. The learners have to fill in the input number:



- Learners put their hands in a feely bag and take out two 2-digit numbers. They add the 2 numbers by using flard cards and then by writing it in their mat books. The same can be done for subtraction. Learners can also make their own story sum about the 2 numbers.

FAT 3: Practical in small groups – Rubric
The teacher asks word problems involving addition and subtraction with 2-digit numbers in the number range 0 – 99. The learners solve the problems using counters, drawings or calculations, e.g. in the car park there are 78 cars. 34 drive off and another 15 cars arrive. How many cars are parked in the car park? HINT: The learners do their drawing in their class workbooks, or slates or white boards.

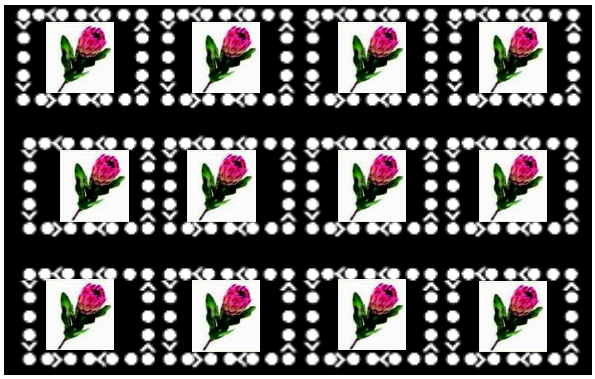
AS 8.2

- Learners count forward on a counting block or number grid, in multiples of 3,4,6,7,8 and 9 in the number range 0 – 50, as preparation for multiplication. Learners can colour the multiples of the given number and discuss the number patterns on the number block.
- Learners calculate the multiplication of 1-digit by 1-digit numbers with solutions to at least 50. Learners may use counters, drawing or number grid. E.g. 6x6 = ___; 4 x 7 = ___
- Give each group in the class a plan of a flower garden. Discuss what they see. Ask them to discuss or calculate the number of flowers in the garden.

In 1 row there are 4 flowers

In 2 rows there are 8 flowers

In 3 rows there are12 flowers



  - Learners now write down: 4 + 4 + 4 = 12 or 3 x 4 = 12.
  - Now they can solve other problems using the above as a guideline.
  - e.g. In 5 rows there are ____ flowers. In 11 rows there are _____ flowers. In 20 rows there are _____ flowers.
- Solve this problem:
  There are 7 marbles in a bag. How many marbles will there be in 5/10/15 bags?
- Learners receive 2 spinners with numbers 0 – 5 on the one and 1- 10 on the other. They spin both spinners and do the multiplication sum, eg. 4 x 9 = 36.
- Learners receive a card with multiplication sums on the one side and the answers on the back of the card. Next to each sum, there is a punched hole. The learner who asks the questions must have the sums facing him. The learner who must answer, will have the answers facing him. The first learner asks the question, the second learner pushes his pencil in the hole where the correct answer is. It should match the question on the other side.

FAT 3: Practical in small groups – Rubric
The teacher asks word problems in the number range 0 – 50. The learners solve the problems by using counters, drawings or calculations, e.g. there are 9 sweets in a packet. How many sweets are there in 5 packets? HINT: The learners do their drawings or calculations in their class workbooks, on slates or white boards.

AS 8.3

- Learners estimate the answer to addition, subtraction and multiplication problems. Learners compare the calculated answer. Estimation should be used by the learners continuously throughout all the LO's
- Give learners a square with numbers on, that has been cut out from the 200 counting block, e.g.

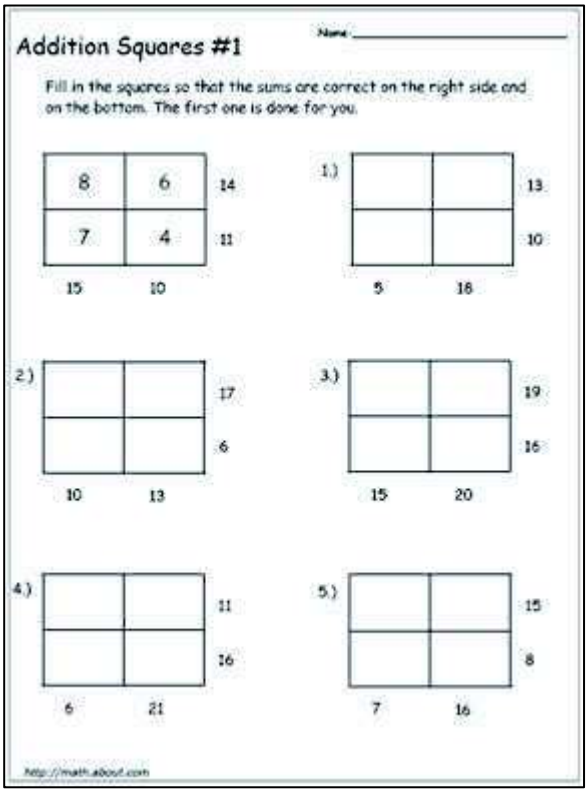
17	18	19
27	28	29
37	38	39

  - Learners add the top left number to the bottom right number, and the top right number to the bottom left number.
  - Learners compare the estimated answers with the actual answer. E.g. 17 + 39 = 56 19 + 37 = 56

AS 9.1

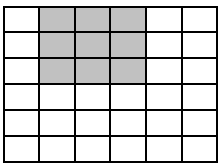
- Learners perform mental calculations involving addition and subtraction in the number range 0 – 20
  Teachers use flashcards with the number symbols to represent the number combinations. E.g. 14 + 4 – 3 = __
- Addition and subtraction of single- digit numbers in the number range 0 – 20 with more than one operation. Do the same type of activity with minus and plus only

- Learners do a worksheet with 20 sums on (+ and -). Learners only fill in the answers.
  E.g. 14 + 2 – 5 = …….. 15 + 5 – 4 = …….. 4 + ……. = 18 ……. + 9 = 11
- Learners play snap with the questions to the sums on some cards and the answers on the other.
  If the question and the answer matches, they call out snap and take the cards that is on the pile.
- Learners complete a worksheet. Find numbers that will make up the total at the end and the bottom of each addition square



AS 9.2

- Learners perform mental calculations with multiplication with answers to at least 20. The teacher uses flash cards with number symbols to represent the multiplication calculations. E.g. 5 x 3 = __ 2 x 9 = __
- Learners pack out the number rods – 5 rods that is 4 long. They first read the repetitive addition sum and then say what the multiplication sum will be – eg. 4 + 4+ 4+ 4 + 4 = 20. 5 x 4 = 20.
- Draw a shape on an empty block grid, e.g. a 3 x 3 square. Cover the square with the number rods, using 3 rods and work out the multiplication sum, eg. 3x3 = 9 3 + 3 + 3 = 9



AS 10.1

- Learners break down and build up numbers in the number range 0-99 and may use a number grid and a number line. Learners build up numbers in the number range 0 – 99. Learners may use counters, drawings, number grid, flard cards or a number line.
  E.g. Build 67 using 4 numbers: ___ + ___ + ___ + ___ = 67 or 30 + ___ + _____ = 67. Learners write the sums down in the mat books.
- Ask learners to look at the numbers on the mat and find two numbers (tens and ones) that will make the following:

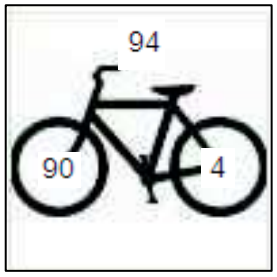
46
97
24

90	5	9	
2	40	7	20
4	10	6	70
8	80	1	60

Learners build the numbers and write it in their mat books e.g. 40 + 6 = 46 or 46 = 40 + 6
Now learners use the numbers that were left over and build their own, new numbers. They write it down.

- Learners break down numbers in the number range 0 – 99. Learners may use counters, drawings, number grid or a number line. E.g. (65 = 60 + 5 or 65 = 40 + 20 + 4 + 1)

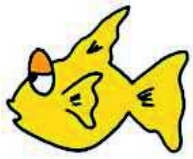
- Look at the numbers above the bicycles. Break the numbers down in tens and ones and write it in the wheels of the bicycles. E.g. 94 = 90 + 4



AS 10.2
- Learners double numbers with answers in the number range 0 – 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. E.g. double 43; double 37.
- Learners use flard cards to build a number, and then double the number, e.g.

Number	Break up	Double	Answer
46	40 + 6	80 + 12	92
37			
29			

- Learners play with dominoes. They have to add the two numbers (dots) on the dominoes together. When they get to a double number they have to double – i.e. Double 6 is12.
- Learners halve numbers without a remainder (even numbers) in the number range 0 - 99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. E.g. halve 92.
- Place numberscards with even numbers in the number range 0 – 99 in a circle on the mat. The teacher plays or sings a song while the learners move clockwise in the circle. When the music stops, the learners must halve the number that they are standing next to. Repeat exercise a few times. Ask a learner to give you an even number. Ask another learner to halve the number. The rest of the group writes down the answer and checks whether the learner's answer was correct.
- Learners halve numbers with a remainder (odd numbers) in the number range 0 -99. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. halve 67 halve 83
- Play the fishing game with odd numbers – the learner catches a fish, halves the number and writes it down. If correct, he/she may keep the fish. The learner who "caught" the most fish will be the winner.



FAT 3: Practical in small groups – Rubric
The learners halve numbers in the number range 0 – 99. The learners may use counters, drawings or the number line. HINT: The learners do their drawings or calculations in their class workbooks, on slates or white boards.

AS 10.3
- Learners use concrete apparatus when counting, building up, breaking down, doubling and halving numbers.

AS 10.4
- Integrate with all number work

AS 11
- Learners explain solution to problems in the number range 0 – 99.

AS 12
- Learners check each other's solutions to problems

LO 2: PATTERNS FUNCTIONS AND ALGEBRA

AS 2
- Copies and extends simple number sequences to at least 200. Learners may use an abacus, number grid or a number line.
- The learners work in pairs. Each learner receives 10 cards with numbers on. The first learner starts with the number that has a dot on, e.g. 26. They now add 4. If the second learner has the card with 30, he/she places it next to the 26. If not, he/she misses his/her chance. The next learner now checks to see if he/she has the number 30 and puts it down. The first learner to finish packing out all his/her cards will be declared the winner.
- Play a pattern game in groups. Each group receives an A4 piece of paper and a dice. Give the groups the starting number, ie 18. The first learner throws the dice and whatever number it lands on, is the addend (number to be added), for example: 18 + 3 = 21. The learner writes the sum on the paper. The paper is then passed to the next learner who adds on 3 and writes the new total (train sum), 18 + 3 = 21 + 3 = 24. This continues around the group.

When each learner has had a turn, a new learner decides the starting number and rolls the dice to find which number must be added on.

- Learners receive a pack of cards, pegs and a piece of string. The first number is given to them by the Teacher, as well as the addend, eg. start on 133 and add 7 each time. The learners work 2-2 in a pair. They peg 133 on the line, then find 140 and carry on as fast as possible. The first group to finish will be the winners.

AS 3

- Creates own patterns. Learners create their own number patterns in the number range 0 – 200. Learners may use a number grid or a number line.
- Creates own patterns in mat book. Explain it to a friend
  e.g 99, 104, 109, 114 …. …. …. ….. (adding on 5)
  140, 135, 130, 125 ….. …. (counting backwards in 5's)
  157, 164, 171, 178, 185 … ….. (adding on 7)

AS 4

- Learners describe a given/own pattern. Let learners create their own patterns and then discuss it with the group.
  e.g. 17, 27, 37, 47
  123, 127, 131, 135
- Learners make up own pattern –
  - orally: moo, maa, mee, mo, moo, maa, mee,mo
  - physically: sit, stand, clap, turn, sit, stand, clap, turn
  - with shapes: box, ball, ball, cylinder, box, ball, ball, cylinder

FAT 3: Practical in small groups – Rubric Learners describe their own or a given number pattern.

LO 4: MEASUREMENT

AS 2

- Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar. Answer questions like: How many months in a year? Which is the first month? Which month comes before September? Which is the 10th month?. How many days in a week? How many days in a working week? How many days in a school week?

AS 6

- Learners estimate and measure the length, mass and capacity of different objects. Learners can use string, rulers, tins, blocks cups. spoons, mugs. e.g.
  - "How many spoons/cups do I use to fill up a 2L bottle"?
  - "How many rulers will I need to measure the length of my table?
  - "How many blocks will weigh the same as my lunch box?"

- Learners bring containers to school – different sizes and shapes, such as a mug, a bottle, a tin, a jug. Learners compare the capacity of these containers and order the objects from the most to the least and the least to the most.
- Fill 4 jugs with different levels of water. Ask the following:
  - Which jug has the most water in it?
  - Which jug has the least water in it?
  - Use a measuring cup and measure the water. Learners compare whose estimations were the closest.

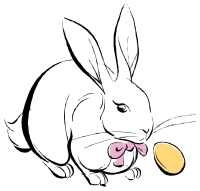
- Show the learners a 250ml measuring cup and a 2L Coke bottle. Let them estimate how many cups of water will fill the 2L bottle. Each child draws the cups (estimated number). Now measure by filling the bottle with water, cup by cup. The learners draw the cups (actual number) and then work out how many cups did they estimate too little or too much.

FAT 3: Practical in small groups – Rubric
Learners estimate and measure how many cups/bowls/bottles fill a 1L jug. Learners estimate and measure the mass of a pencil case, a shoe, a book. Learners estimate and measure the length of 3 friends of different height.

LO 5: DATA HANDLING

AS 1

- Learners collect data in the classroom and school environment according to one attribute
  eg: They collect all the pictures of farm animals and sort them according to one attribute (4 legs/big ears/ use to the farmer / colour /size)



FAT 3: Practical in small groups – Rubric
Learners draw a picture of their favourite farm animal. Learners collect the pictures of the farm animals and answer questions about their collections

AS 2

- Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects.
- They look in magazines and cut out all the pictures of animals
- Learners use plastic play farm animals to sort

FAT 3: Practical in small groups – Rubric
Learners sort the pictures into groups.

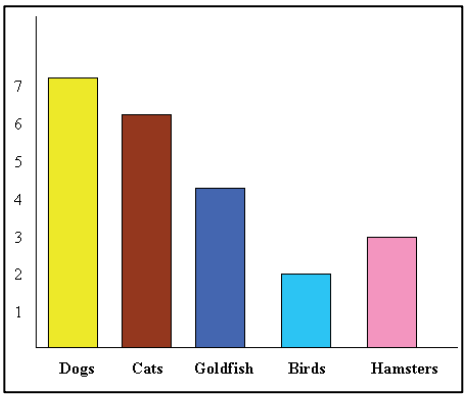
AS 3

- Learners give reasons for grouping collection in a particular way.

AS 4

- Learners draw dots or construct pictographs or bar graphs to show correspondence between collected data and representation. The pictograph can be done horizontally or vertically

✓✓	2 birds	✓✓✓✓✓✓	6 cats
✓✓✓	3 hamsters	✓✓✓✓✓✓✓	7 dogs
✓✓✓✓	4 goldfish		



AS 5

- Learners describe, explain and answer questions about the graphs

RESOURCES:

Counters (beads, sticks, beans, stones, blocks,), abacus, number grid, number line, 150 square jigsaw, empty number grid, cardboard, scissors, fish template, paper clip, fishing line/fishing rod, magnet, flash cards with numbers/symbols, flash cards with number names, practical activity sheet, 100 number block, worksheets, cards with numbers,, flard cards, mat books, pencils, crayons, flash cards with bonds, flash cards with mental mahts + and - ,flash cards with repetitive addition, flash cards with x, set of cards with sums and set of cards with the answer to the sums (snap cards, calendar, analogue clocks, container for measuring capacity (cups, spoons, mugs, jugs, 2L bottles, teaspoon, 250ml cup), dice, number rods, skittles, money, cake, pizza, marshmallows, feely bag, number squares, pegs, line, magazines, plastic farm animals

REFLECTIONS:

BARRIERS: