WEEK 7

WEEK 7 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 ($\frac{1}{2}$, $\frac{1}{4}$)
	4.1
	4.2

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 (e.g. $\frac{1}{4}$)	

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 3: SPACE AND SHAPE	
AS 1: Recognises, identifies and names 2D shapes and 3D objects in the environment and in pictures including: boxes (prisms), balls (spheres), cylinders, triangles, squares and retangles, circles	
AS 5: Recognises 3D objects from different positions	
AS 6: Positions self within the classroom or 3D objects in relation to each other	
AS 7: Describes positional relationships (alone and/or as a member of a group or team) between 3-D objects or self and a peer	
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 6: Estimates, measures, compares and orders 3D objects using non standard measures: Mass (bricks, sand bags), capacity (spoons, cups), length (hand spans, footsteps)	

LO 1: NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 1

Learners count physical objects using one-to-one correspondence in the number range 0 – 100

e.g. clap your hands 42 times, click your fingers 31 times and then stamp your feet 27 times. Learners continue counting from the clapping to the stamping.
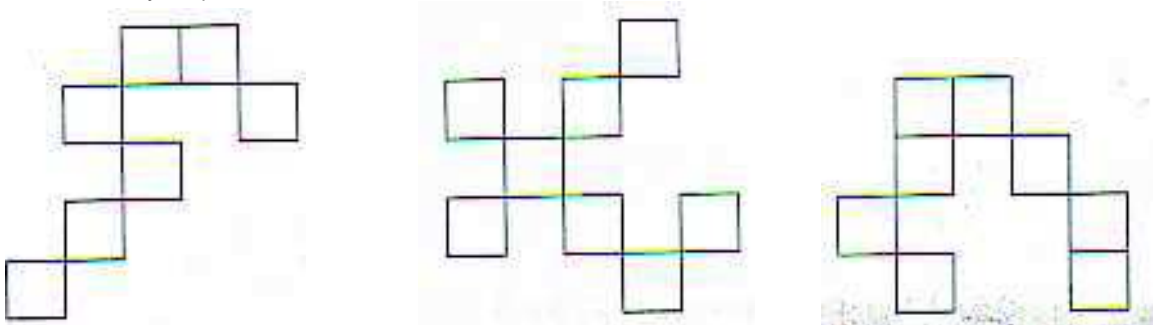
AS 2.1

- 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. 169, 170, 171…. …., 192, 191; 190; … …,
  Learners count in 1's from any given number. Begin at 154, count on to 189. Begin at 190, count back to 157.

Game: This game is played in pairs. Each learner starts out with 200 points. Learners take turns to roll two dice and count back that number from their points. Learner A continues rolling the dice and counting back the resulting number from his/her remaining points until a "1" appears on any dice rolled. That learner's turn ends and the next player takes a turn, rolls the dice, and counts back the number from his/her last number. When a player has lost all his/her points, s/he is out of the game. The last learner still in the game wins.

- Activity:
  The learners work in pairs. Each learner is given a blank copy of one of the examples shown. They write one number in one of the squares on each of the shapes, then swap with a friend and s/he fills in the missing numbers on the sheet they receive. Then they swap back to check.

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. 190, 180, 170, … …,
  Extension: 208, 209, 210, …, …,
- Let the learners count using a 200 number grid. The teacher asks the following questions
  e.g. Show me number 140. Count on in 10's. Stop at 200. Count back in 10's and stop at 110.
- The Trader's Game. (Integrate with AS 6 – money)
  Make a game board on A4 paper or cardboard.

| Trader's Game.		
R10	R1	10c

- - One learner is the banker. The banker controls the money and checks the exchanges.
- - The rest of the players take turns to throw the dice.
- - The number that the dice lands on shows how many 10c pieces the banker must give that player.
- - The player puts the 10c pieces in the last column on the board.

- Learners continue to take turns.
- After each turn they add their 10c coins.
- When a player gets more than ten 10c pieces, they must exchange these for a R1 coin.
- When they have more than ten R1 coins, they exchange them for a R10 note.
- Depending on the amount of playing time available, the winner can be the first one to make R10, R20 or R100.


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. 125, 130, 135, … …
        195, 190, 185, …. ….
- Teacher checks that learners are counting efficiently in multiples of five.
  In pairs, each learner receives a card (as above) and the learners take turns to count the groups of balloons. They check one another to see if they counting forwards and backwards in 5's correctly.
- Teacher asks questions like: If 1 bunch of balloons contains 5, how many bunches/5's in 20/35 etc.
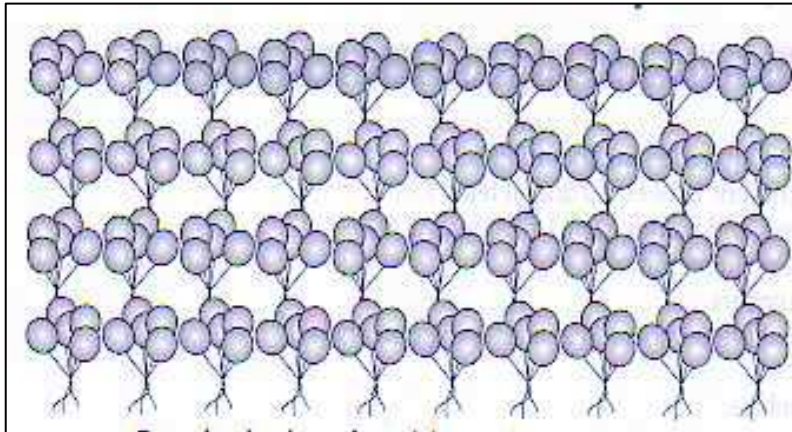
- Worksheet: Learners complete a table:

Bunches of balloons	Calculations	Total of balloons
2	5 + 5	10
5		
		40
		65
18		

AS 2.4
- Learners count forwards and backwards in twos in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line.
  e.g. 116, 118, 120, … …
        146, 144, 142, … ….
- Let the learners count using their fingers, an abacus or a number grid. Show me…. Or on which finger would I find number 122.
  Count on in 2's. Stop at 186. Count back in 2's. Start at 164 to 136.
  Learners discuss the rules they applied to their counting in 2's.
- The teacher can reinforce the work above with challenges like these:
  Peer Activity.

Learner A starts at zero and counts in twos up to 200. Learner B circles all the numbers that Learner A says.
0   2   5   8   15   24   29   31   34   35   72   81   96   102   104   116   125   144   147   156   160   164   177   183   188   192   199
Explain to your friend why you circled these numbers.
Make up some numbers of your own.
Ask your friend to circle the numbers that Learner B says when s/he counts in twos.

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. 43   101
- Teacher places number cards in a pile face down on the carpet. The learners each have a turn to turn one over. The teacher asks questions: e.g.
  - what is the number after one 139?
  - what is the number before ___?
  - what is the number that is one/two/five/ten more than ___?
  - what is the number that is two/four/ten less than ___? etc
  Repeat using pairs of numbers:
  - Now the learners turn over two cards.
  - The teacher asks: Which numbers are between e.g. 83 and 96?
- Learners write any number name in the number range 1 - 100
  e.g. 49 forty-nine; 94 ninety-four
- Use a number of skittles (plastic bottles). Place a number or number name under each skittle. Roll the ball and read and write all the numbers on the skittles that were rolled over. The numbers can also be added together and the person with the highest number wins.
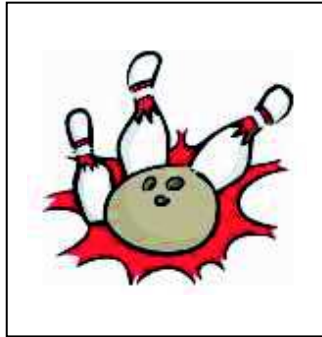
AS 4.1
- Work in the number range 0 – 99. Scatter number cards face down on the carpet or table. Teacher asks learners to turn over three cards. She says:
  - Tell me your numbers
  - Show me the largest number. Sequence the numbers from biggest to smallest.
  - Repeat with different sets of three cards, sometimes asking for the smallest number and then sequencing from the smallest to the biggest.
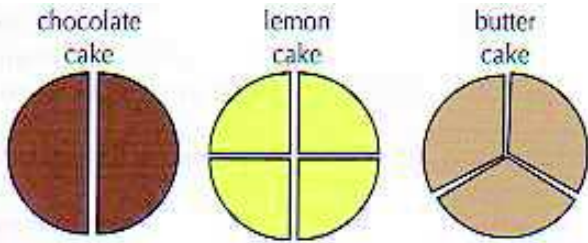 - Learners can combine their cards with a partner and then repeat the process.

AS 4.2
- Learners order and describe ½ and a ¼ in ascending order (smallest to biggest) or descending order (biggest to smallest). Learners may use concrete objects, pictures or a number line.

chocolate cake   lemon cake   butter cake

Which cake is cut into halves? ... Which cake is cut into thirds? ... Which cake is cut into quarters?

You love all cake so you want the biggest piece. Which cake will you choose a slice from?... the chocolate cake, the lemon cake or the butter cake? Why do you say so?

Ask guiding questions until learners can explain their choice.

To make halves, we cut the cake into 2 equal pieces, like the chocolate cake. To make thirds, we cut the cake into 3 equal pieces, like the butter cake. To make quarters, we cut the cake into 4 equal pieces, like the lemon cake. I can see that the more pieces we cut the cake into the smaller each piece is. I choose a slice of chocolate cake... It's biggest...It's cut in half. That's only two pieces.

half   quarter   third

Activity: Learners sequence the fractions ½, ¼ and a ⅓ from biggest to smallest.

- Problem Solving.
  Mrs Brill has 52 eggs. She packs these eggs into boxes of 8. How many boxes can she fill with these eggs. Will she have any eggs over?
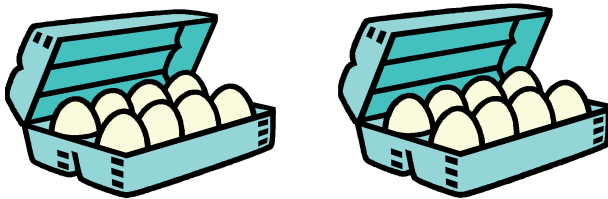
AS 5
- Learners identify the place value of a given digit in a number in the number range 0 – 99.
- Learners may use flard cards.
  e.g. 16 (10 or 1 ten)   81   1 or 1 one
- ask them to pack out the following numbers with the flard cards:
  - number 61, now change it to 68 and then to 58;
  - number 78 and to change it to 87;
  - number 55, then say: plus 4 (the learners change the 55 to show the answer 59), then tell them to plus 5, minus 20, etc.
- 200 Jigsaw - Whole class activity.
  - The teacher gives each learner a copy of the following grid.
  - The learners cut the grids according to the different shading.
  - They mix up the cut up pieces and then try and put them back together.
  - They ask a friend to check to see if their number grid is correct again.

| 100 | 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	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179
180	181	182	183	184	185	186	187	188	189
190	191	192	193	194	195	196	197	198	199
200	201	202	203	204	205	206	207	208	209

- Variation: The learners can cut up their own grid differently and give it to a friend.
   The teacher may ask: What if….you arrange your numbers differently on a blank grid? e.g. start by putting your numbers in the middle of the grid or the bottom right hand corner etc
- *It is important that learners experience the numbers 1- 100 in arrangements other then traditionally seen on the 100 grid. In this way, it is the sequence with which they become familiar, not just the layout of the numbers.*

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.
- Learners pack out a given amount such as R14,85. The learners check each other's methods used in making this amount of money.
- Learners calculate addition and subtraction sums: R64 + R27 – R35 = ☐


- Small group activity:
  - Teacher uses shopping flyers.
  - Learners pack out play or real money to buy a specific item on the shopping flyer.
  - Learners calculate how much money they must pay for two or more of the items.
  - Learners calculate the change.
     HINT: Learners draw or write their calculations in their mat books, on slates or white boards
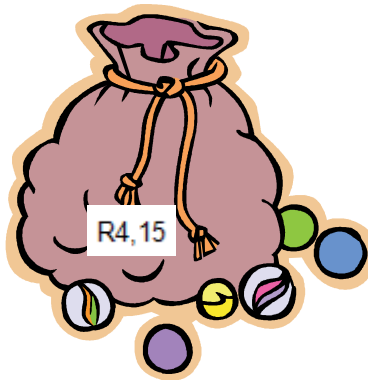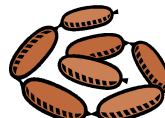

- Granny gave me R95,00 to spend on groceries and I returned with R23,40 change. How much did I spend on her groceries?
- You have R25 pocket money. You buy a spinning top for R7.75 and a bag of marbles for R4.15. You spend the rest of your money on sweets. What was the cost of the sweets?

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)
- Fraction game:
   Resources: a dice with one of the following fraction symbols on each of three faces: ¼, ½
  - Play in teams of 2 players
  - Give each team a copy of this game board.
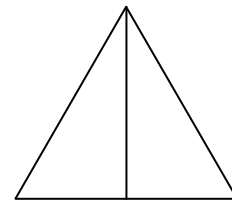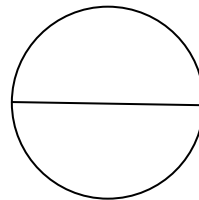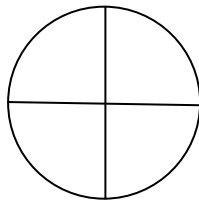
  - One learner throws the dice. The other learner colours in a part to show the fraction.
  - They may not colour parts of more than one shape on any single turn.
  - The winner is the first group to colour in all five shapes completely.
- Word problem:
  - Three friends want to share thirteen sausages equally. How must they do this?
  - Ensure that the learners draw their answers and explain their answers to their peers.

AS 8.1

- Learners perform addition and subtraction with 2-digit numbers in the number range 0 – 99. Learners may use a number square or a number line.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15		17	18	19	20
21	22	23					28	29	30
31	32	33					38	39	40
41	42	43					48	49	50
51	52	53					58	59	60
61	62	63				67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110

- Game: Clouds, Ink Blots and Paint Splashes. (Integrates with LO 2: Patterns: AS 2 & 4)
  Aim: To work out what numbers are hidden.
  Whole Class Activity. The teacher asks: What numbers are hidden? How do you know? Can you be sure? What else could the numbers be? What rules/patterns are you using? What was the key to unlocking the hidden numbers?
- Learners solve the following number sentence: 56 + 38 = ___
  Learners expand the numbers:
  50 + 6 + 30 + 8
  50 + 30 ➔ 80 + 8 ➔ 88 + 2 ➔ 90 + 4 ➔94   OR
  50 + 30 ➔80 + 8 + 88 + 6 ➔94 (count on 89, 90, 91, 92, 93, 94)
- Solve the following: 74 – 43 =
  74 – 40 → 34 – 3 → 31   OR
  70 – 40 → 30 – 3 → 27 + 4 → 31   OR
  43 + 7 → 50 + 20 → 70 + 4 → 74
  ***Learners share their different calculations with their peers.
- Word problems:
  - Lumkile has 53 crayons and Jack has 36. How many more crayons does Lumkile have than Jack?
  - There are 76 sweets in a packet. David and his friends eat 35 of the sweets. How many sweets are left?
  - Jackson is 15 years old and Abbi is 9 years old. When Jackson was aged 7, how old was Abbi then?

AS 8.2

- Multiplication of whole 1-digit by 1-digit numbers with solutions to at least 99.
- Small group activity.
  - The teacher gives each learner a card with e.g. 6 dogs on it.
  - The learners count all the dogs on all the cards eg. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20...
  - The teacher asks the following questions:

  - How many dogs on 1 card?   They count.
  - How many dogs on 2 cards? They count their own and the card next to them.
  - How many dogs on 4 cards? They count or double their answer?
  - How many dogs on 8/12/9 cards etc.?
  - How many ears/legs will 6 dogs have?
- Solve this problem:
  - There are 8 boxes of crayons with 12 crayons in each box. How many crayons are there altogether?
  - Jack has 24 crayons. Thembi has 3 times as many crayons as Jack. How many crayons does Thembi have?

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
- Game: For 2 players.
  Resources: 100 grid, dice, counters/markers
  - Learners take turns to throw two counters on to the grid.
  - Both players *estimate* the total of the two numbers covered by the counters.

- They share their methods of *estimation*.
- Calculate the answers together and compare *estimates* to see who was the nearest.
- Rounding off:
  - Rounding off is a very important skill involved in estimation.
  - e.g. when adding 56 and 32, an estimate of the sum may be made by rounding off the numbers to the nearest 10: i.e.
    56 → 60   32 → 30
  - Then by adding together the 60 and the 30, they get an approximate answer of 90, which is very close to the precise answer of 88.
  - If the answer on checking differs greatly from the estimation then it is likely that something has gone wrong!
  - Multiplying the numbers will no doubt prove more difficult, but the same things apply.
- Different learners are likely to have different methods of calculation. These should be encouraged and shared. In this way learners develop a better understanding of numbers and how they can be worked with. It is also likely to result in learners developing more sophisticated methods, taking over those they understand from their friends.

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. 19 – 5 + 2= __   16 – 4 + 5 = __   Addition and subtraction of single-digit numbers in the number range 0 – 20 with more than one operation.
- Game: 2 players
  Resources: 2 sets of cards from 0 to 12, two dice

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Set 1

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Set 2

- The learners play in pairs.
- Each arranges a set of cards, in number order, face up on the table.
- They throw the dice in turn, add the scores and turn the card with matching total, face down.
- The winner is the first to have all their cards face down.
  This game is varied by finding the difference between the scores
- Addition snap.
  - This game is played in pairs.
  - Each pair is given two sets of digit cards from 0 – 10.
  - Each person takes one set, shuffles them and places them face down on the table.
  - Each person turns their top card over simultaneously.
  - The numbers on the cards are then added together.
  - The first person to say the correct answer and explain to their partner why it is correct wins the two cards.
  - Play continues until all the cards have been played.
  - The player with the most cards wins.
  - Players can also explain the subtraction concept e.g. if 3 and 6 make 9 then 9 – 3 = 6 etc.
  - The teacher makes the learners aware of patterns from adding 1-digit numbers.
    e.g. if 6 + 2 = 8, then 16 + 2 = 18 and 26 + 2 = 28, etc.
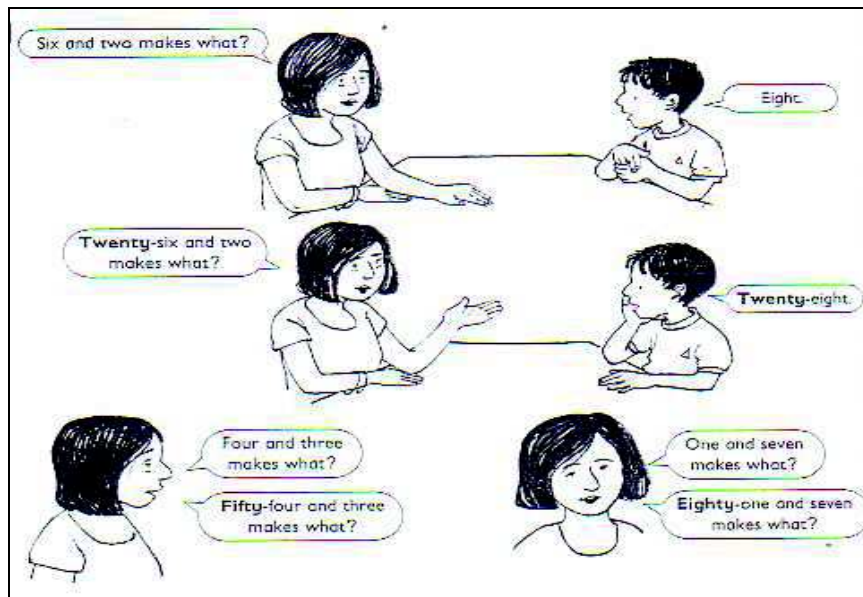
AS 9.2
- Learners perform mental calculations with multiplication with answers to at least 20. The teacher uses flash cards with number symbols to represent the multiplication calculations.
  e.g. $4 \times 5 =$ __ $1 \times 8 =$ __ $7 \times 2 =$__

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. $89 = 70 + 10 + 9$ or $89 = 80 + 1 + 3 + 5$
- Learners build up numbers in the number range 0 – 99. Learners may use counters, drawings, *number* grid or a number line.
  e.g. $50 +$ ___ $+ 5 +$ ___ $= 87$)

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.

Addition doubles

Explain the activity to the child.

To find your score, double the number marked with a counter.

What is thirteen and thirteen?

Write your answer.

11	15	13
45		35
14	25	12

- 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 86/92/74 etc.
- 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 59/17/31 etc.

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

AS 10.4
- Number line: - 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 in the number range 0 – 99

LO 2: PATTERNS, FUNCTIONS AND ALGEBRA
AS 2
- Copies and extends simple number sequences to at least 200
- Number puzzle activity:
  - The learners work in pairs.
  - Each learner receives a section of the 200-chart which he/she uses to make a number chart puzzle.
  - One learner cuts up his/her chart into rows, the other into columns.
  - They shuffle their pieces and build the charts up again.
  - They shuffle them again and build each other's charts.

221	222	223	224	225	226	227	228	229	230

231	232	233	234	235	236	237	238	239	240

241	242	243	244	245	246	247	248	249	250

251	252	253	254	255	256	257	258	259	260

Learner A cuts up a section of the 200-chart into rows.

221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260

Learner B cuts up the same section of the 200-chart into columns.

- Give learners a worksheet which they have to complete

AS 3
- Creates own patterns. Explain it to a friend
    eg.   96 100 104 111 …. …. …. ….. (adding on 4)
        115 110 105 ….. ….(counting back in 5's)
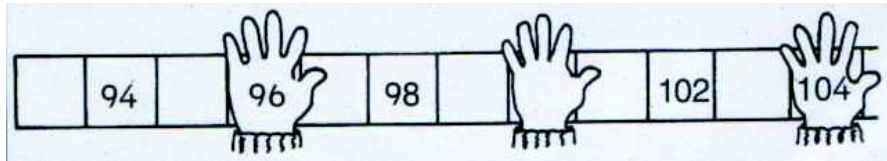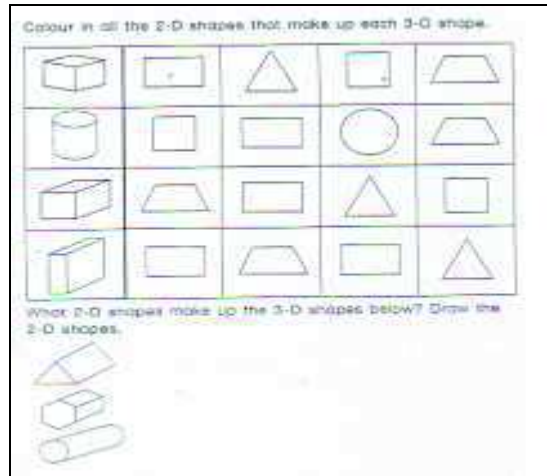

AS 4
- Learners describe a given/own pattern e.g.

LO 3: SPACE AND SHAPE

AS 1
- Learners recognise, identify and name 2-D shapes and 3-D objects in the classroom and in pictures
    -    3-D objects: boxes, balls, cylinders;
    -    2-D shapes: triangles, squares, rectangles, circle.

   -   Example of worksheet:

- Teacher asks questions to revise the recognition and identification of 3-D objects in the classroom.

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

- In the classroom, the learners name an object which is above the door, behind the desk, between the window and the sink etc.
- Making nets:
  - The teacher asks the learners to bring different packages and boxes of varying shapes and sizes to school e.g. cylinders prisms, pyramids, cubes and cuboids, scissors, card and glue or sticky tape.
  - Each learner chooses a container that is an interesting shape.
  - Making the minimum number of cuts in the container, they must lay it flat on the table/floor and draw around it (make " the net")
  - How many different "nets" can they make?
  - They should then repeat this with containers of other shapes.
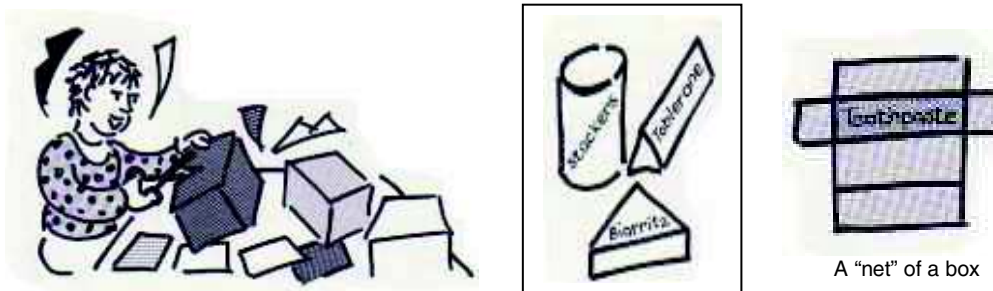
A "net" of a box

AS 6
- Learners position themselves and use vocabulary to explain position of self in comparison with other 3-D objects. e.g. on, above, behind, in front of, under, next to, in between
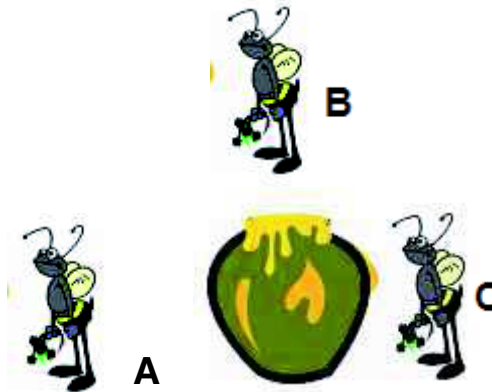
- Worksheet: Learners identify the positions of the bees and circle the correct word.
  - e.g. Bee A is in front of, under, next to or above the honey pot?
    Bee C is under, between, to the right or on the honey pot?
    Bee B is behind, in front, between or above the honey pot?

LO 4: MEASUREMENT
AS1
- Reads and writes analogue and digital clock time in terms of hours and minutes
- On the board, draw an analogue clock showing 3:55
  - Ask the learners to say the time shown. Ask them to write down what time it will be in:
    1. 10 minutes' time
    2. 45 minutes' time
    3. Reads and writes analogue and digital clock time in terms of hours and minutes 30 minutes' time
    4. 15 minutes' time
    5. 50 minutes' time
  - Ask the learners to write down what time it was:
    1. 5 minutes ago
    2. 20 minutes ago
    3. 45 minutes ago
    4. 30 minutes ago
    5. 10 minutes ago
  - Variations: Change the starting time. Give a digital time rather than an analogue time.

AS 2
- Names in order the days of the week and the months of the year. (Integrate with 3.2)
- Teacher has a quiz:
  - How many days in a week?
  - How many weeks in a month?
  - What is the first school day in the week?
  - On which days does daddy play golf?

- How many months in a year?
- In what month are we now?
- What is the third month of the year?
- In which month does the Soccer World Cup begin?
- In which month does the season Spring start?

AS 3.1
- Learners calculate elapsed time in: hours and minutes using clocks
- Learners calculate elapsed time in hours and minutes.
  - Learners may use model clocks
  - e.g. How many hours and minutes from 15 minutes past 10 to 25 minutes past 11?
  - How many minutes from 10:15 to 11:25?

AS 3.2
- Days, weeks and month using calendars. (Integrate with AS 2)

AS 6
- Learners measure and compare the length, mass and capacity of different objects.
  - Learners arrange the objects from the longest to shortest, shortest to longest, heaviest to lightest, lightest to heaviest and most to least or least to most.
- Game: Scavenger Hunt
  - Scavenger hunts are fun. They can take place inside or outside, can easily link to other mathematics outcomes by adding criteria that have to do with number, patterns or shapes.
  - As an extension, you can also use standard units of measurement.
  - The questions can focus on length, mass or capacity.
  - *Direct measurement*: find something the same length as a straw, the same mass as a tennis ball, or as heavy as the board duster.
  - *Greater than and less than*: find something longer than a new pencil and shorter than your space case; heavier than your glue stick but lighter than a pair of scissors; or that holds more than a mug but less than a large plastic milk container.
  - *Non-standard units*: find something that is 6 paper clips long, the same mass as 3 dice, or something that holds three scoops.
  - Extension: Standard units: find something that is 1m long; something with a mass of 3g, or something that holds 500 ml.
  - While the learners are looking and measuring, you'll have the opportunity to observe their understanding of measurement and give guidance where appropriate.

RESOURCES:

Counters (beads, sticks, beans, stones, blocks,), abacus, number grid, number line, empty number grid, paper, scissors, flash cards with numbers/symbols, flash cards with number names, practical activity sheet, 100 number block, worksheets, cards with numbers, skittles or plastic cooldrink bottles/tins, ball, string, pegs, dice, flard cards, real or play money, mat books, pencils, crayons, flash cards with bonds, flash cards with mental maths + 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), flash card with ½ / half on it, cardboard circle, flash card with ¼ / quarter on it, 2D shapes (triangles, squares, rectangles, circles), 3D objects (boxes, balls, cylinders, spheres), calendar, analogue clocks, digital clocks, In/Out machine, straws, tennis ball, paper clips, scoops, mug, large plastic milk container, glue stick,space case, calendars, different packages and boxes of varying shapes and sizes, number chart puzzles, two sets of digit cards (0 – 10), die labeled ¼, ¼, ½, ½, ¾, ¾, 200 Jigsaw number grid,
_____

REFLECTIONS:

BARRIERS

WEEK 8

WEEK 8	Date completed
LEARNING OUTCOMES AND ASSESSMENT STANDARDS	
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	
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
   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 3: SPACE AND SHAPE	
AS 1: Recognises, identifies and names 2D shapes and 3D objects in the environment and in pictures including: boxes (prisms), balls (spheres), cylinders, triangles, squares and retangles, circles	
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 5: Identifies important dates on calendars including dates of:
   Religious festivals
   Historical events	

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 1: NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 1

- Learners count physical objects using one-to-one correspondence in the number range 0 – 100
- Game: Spin and Show
  Learners use a toy top to "spin" a number and then represent it by counting out beans and then representing it on the "ten frame".
  Place the top in the center of the hundreds board and spin. Wait for it to stop and then read the number. Create that number by counting out the beans and placing them on the ten frame. Put 10 beans in each square.
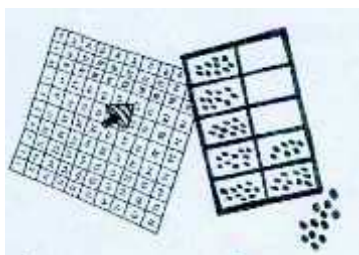
AS 2.1

- 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. 169, 170, 171…. ….,
  192, 191; 190; … …,
- Game: The Golden number

  > **Game: The Golden Number**.
  > The learners play this game in pairs. Each pair needs a set of number cards from e.g. 142 to 164. Shuffle the cards and place them face down in a pile on the table. Give the learners a number that you want them to count to e.g. the golden number is 155. Learner A turns over the top card and counts in ones from his/her number that is shown on the digit card to 155. Learner B checks Learner A's counting. Once learner A has reached the golden number, learner B turns over the top card and starts counting in 1's from his/her number while Learner A checks that the counting is correct.

- Activity:
  The learners work in pairs. Each learner is given a blank copy of one of the examples shown. They write one number in one of the squares on each of the shapes, then swap with a friend and s/he fills in the missing numbers on the sheet they receive. Then they swap back to check.
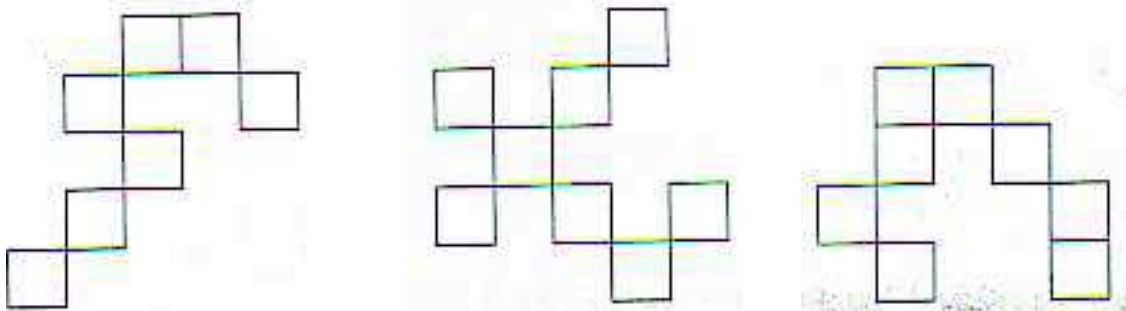
AS 2.2

- Learners count forwards and backwards from a given number in tens from any multiple of 10 in the number range 0 – 200. The learners may use counters, an abacus, number grid or number line.
  eg. 190, 180, 170, … …,
   Extension: 208, 209, 210, …, ...
- Let the learners count using a 200 number grid. The teacher asks the following questions
  eg. Show me number 120. Count on in 10's. Stop at 200. Count back in 10's and stop at 140.

- Game: The traders game. (Integrate with AS 6 – money)
  Make game board on A4 paper or cardboard.
  One learner is the banker. The banker controls the money
  and checks the exchanges.
  The rest of the players take turns to throw the dice.
  The number that the dice lands on shows how many 10c pieces
  the banker must give that player.
  The player puts the 10c pieces in the last column on the board.
  Learners continue to take turns. After each turn they add their 10c coins.

Trader's Game.		
R10	R1	10c

  When a
  player gets more than ten 10c pieces, they must exchange these for a R1 coin. When they have more than ten R1 coins,
  they exchange them for a R10 note. Depending on the amount of playing time available, the winner can be the first one to
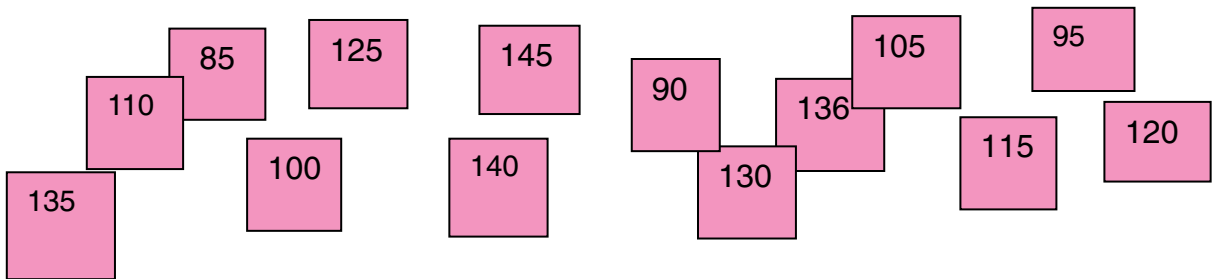 make R10, R20 or R100.

AS 2.3
- Learners count forwards and backwards from a given number in fives in the number range 0 – 200. The learners may use
  counters, an abacus, number grid or number line.
  eg. 125, 130, 135, … …
   195, 190, 185, …. ….
- Each learner receives a tiny packet containing cards with the multiples of 5. They sort these cards into the correct order.
 Their peers check that they have counted in fives correctly.

AS 2.4
- Learners count forwards and backwards from a given number in two's in the number range 0 – 200. The learners may use
  counters, an abacus, number grid or number line.
  e.g. 132, 134, 136, … …
  156, 154, 152, … ….
- Let the learners count using their fingers, an abacus or a number grid.
  - Ask them if they count in 2's using their fingers, on which finger would they find number 144.
  - Let the learners count back in 2's on the number grid e.g. start at 174 and stop at 116.
  - Learners discuss the rules they applied to their counting in 2's.
- Finger Card Activity:

The teacher gives each learner a card that looks like the
example.
  - The learners count the fingers in 2's.
  - The teacher asks:How many fingers in 1 rectangle?
  - How many fingers in 2 rectangles?
  - How many fingers in 4/5/8 rectangles?
  - If there were 132 fingers, how many rectangles would
    there be?
  - If there were 198 fingers, how many rectangles would
    there be?
  - The learners need to explain the methods they used to
    get to their answers.
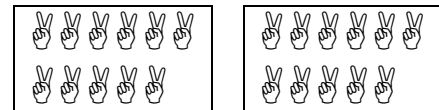
- The teacher can reinforce counting in 2's using challenges like these:
   Peer Activity.

Learner A starts at zero and counts in twos up to 200. Learner B circles all the numbers that Learner A
says.
0   2   5   8   15   24   29   31   34   35   72   81   96   102   104   116   125   144   147
156   160   164   177   183   188   192   199
Explain to your friend why you circled these numbers.
Make up some numbers of your own.
Ask your friend to circle the numbers that Learner B says when he/she counts in twos.

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. 43   101
- Teacher places number cards in a pile face down on the carpet. The learners each have a turn to turn one over. The teacher asks questions: e.g.
  - What is the number after your number?
  - What is the number before your number?
  - What is the number one/two/five/ten more than your number?
  - What is the number two/four/ten less than your number? etc.
  Repeat using pairs of numbers:
  - Now the learners turn over two cards. The teacher asks:
  - What numbers are between e.g. 83 and 96?
- Learners write any number name in the number range 1 - 100
  e.g. 49 forty-nine;   94 ninety-four
- Using a 100-grid, the teacher says: "Find 117 on the grid and place a counter over the number.":

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	🔴	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
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210

- Which number comes before 117?
- Which number comes after 117?
- What number is 1 more than 117?
- What number is l less than 117?
- What number is 10 greater than 117?
- What number is 10 less than 117?
- 117 is in between which two numbers?
- What are the next 5 consecutive numbers after 117?
- What number is half of 117?

AS 4.1
- Orders, describes and compares whole numbers to at least 2-digit numbers.
- Work in the number range 0 – 99
- Practical activity:
  - Cut up the numbers on a number grid 1 – 100.
  - Place these in a bag or box.
  - Learners take five numbers each.
  - These are placed vertically in ascending or descending order.
  - Learners can count on or back in 1's, 2's, 5's or 10's from these numbers.
  - They can add or subtract a given number from each number.
  - The possibilities are endless and should be based on the ability of the learners.
- Written activity.
  - Their numbers can be pasted vertically into their workbook in sequence, either from the biggest to the smallest or visa versa.
  - They can add e.g. 15 more to each number, subtract 9, write the number names next to each number, write down the number before/after etc.

Numbers in ascending order	Number name	15 more	9 less	+ 30	before	after
62	sixty-two	77	53	92	61	63
68						
79						
85						
87						

AS 4.2
- Learners order and describe ½ and a ¼ in ascending order (smallest to biggest) or descending order (biggest to smallest).
- Learners may use concrete objects, pictures or a number line.
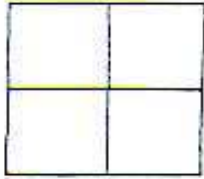- Activity: Learners sequence the fractions from biggest to smallest
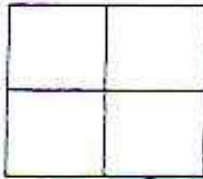
Colour the correct fraction of each shape.

$\frac{1}{4}$　　　　$\frac{2}{4}$　　　　$\frac{3}{4}$　　　　whole

- Problem Solving.
  - Lindiwe took a whole apple from the kitchen table. At breakfast, she ate three quarters of it. How big was her piece to eat at breaktime?
  - Draw the pieces.

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. 4̲6 (40 or 4 tens) ;   7̲3   ⌊3̲⌋ or ⌊3̲⌋ ones
- Ask the learners to pack out the following numbers with their flard cards:
  - number 61, now change it to 68 and then to 58;
  - number 78 and to change it to 87;
  - number 55, then say: plus 4 (the learners change the 55 to show the answer 59), then tell them to plus 5, minus 20, etc
- 200 Jigsaw - Whole class activity.
  - The teacher gives each learner a copy of the following grid.
  - The learners cut the grids according to the different shading.
  - They mix up the cut up pieces and then try and put them back together.
  - They ask a friend to check to see if their number grid is correct again.

100	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	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179
180	181	182	183	184	185	186	187	188	189
190	191	192	193	194	195	196	197	198	199
200	201	202	203	204	205	206	207	208	209

- Variation:
  - The learners can cut up their own grid differently and give it to a friend.
  - The teacher may ask: What if….you arrange your numbers differently on a blank grid? eg. start putting your numbers in the middle of the grid or the bottom right hand corner…etc
- *It is important that learners experience the numbers 1- 100 in arrangements other then traditionally seen on the 100 grid. In this way, it is the sequence with which they become familiar, not just the layout of the numbers.*

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.
  - Learners pack out a given amount such as R12,35.
  - The learners check the methods used in making this amount of
  - Learners calculate addition and subtraction sums: R97 – R58 + R32 = ☐

96

- Example of a worksheet.

Father Christmas lives at the North Pole. He travels very far to deliver all the presents. His 4 reindeer's quickly become hungry. They eat leaves, vegetables and fruit. Work out how much the reindeer's food will cost Father Christmas.
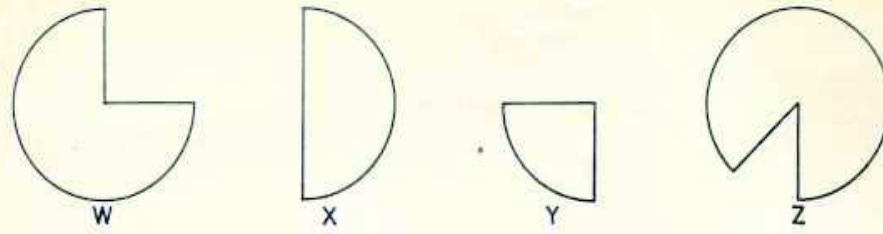
Food type	Price for 1	Need	Cost:
Leaves	18c	4	_____c
Bananas	25c	4	R_____
carrots	R2	4	R_____
apples	R1,10	4	R_____
lettuce	R1,50	4	R_____
tamatoes	45c	4	R_____

- Small group activity:
  - Teacher uses shopping flyers.
  - Learners pack out play or real money to buy a specific item on the shopping flyer.
  - Learners calculate how much money they must pay for two or more of the items.
  - Learners calculate the change.
  - HINT: Learners draw or write their calculations in their mat books, 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 (e.g. ¼)
- Fraction worksheet

W   X   Y   Z

1. Put these four parts of a circle in order of size.
   Start with the smallest. (You need only write down the letters below the drawings.)

2. Write these fractions in order of size, starting with the smallest.

   $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{4}$

AS 8.1
- Learners perform addition and subtraction with 2-digit numbers in the number range 0 – 99. Learners may use a number square or a number line.
- Learners solve the following number sentence: 27 + 59 = __
    - Learners expand the numbers:
    - 20 + 7 + 50 + 9
    - 50 + 20 = 70 + 9 = 79 + 1 = 80+ 6 = 86   or
    - 50 + 20 = 70 + 9 = 79 + 6 (count on 80, 81, 82, 83, 84, 85, 86)
- Solve the following: 94 – 46 = __
    - 94 – 40 → 54 – 4 → 50 - 2 → 48   or
    - 94 – 40 → 54 – 6 →(count back) 53, 52, 51, 50, 49, →48 or
    - 90 – 40 → 50 – 6 → 44 + 4 → 48   or
    - 46 + 4 → 50 + 40 → 90 + 4 → 94
    ***Learners share their different calculations with their peers.

Magic Square:
Learners enjoy working with Magic Squares. Learners receive or can draw their own grids consisting of 3X3 blocks. They fill in numbers and add them up. See example.
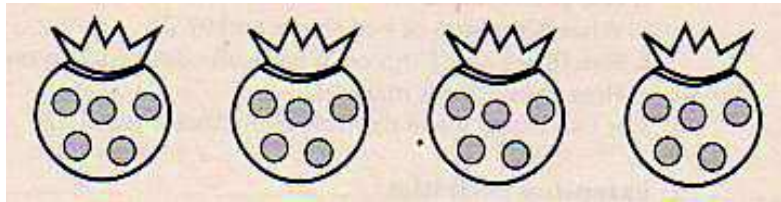

AS 8.2
- multiplication of whole 1-digit by 1-digit numbers with solutions to at least 99
- Small group activity.
  Each learner is given a card with the following illustration on. The teacher asks the following questions:
  How many marbles in one bag? How many marbles in 3 bags? 2 bags? 4 bags? They discuss their different answers and explain how they got their answers.

- Written activity.

Number of bags.	Marbles in each bag	How many marbles altogether?
4	5	
7	5	
8	5	
5	5	
12	5	

- Solve this problem:
    - If each jersey needs four buttons, how many jerseys could you complete with 23 buttons?
    - 32 buttons will be enough for ____ jerseys.
    - You will need ____ buttons for 11 jerseys.
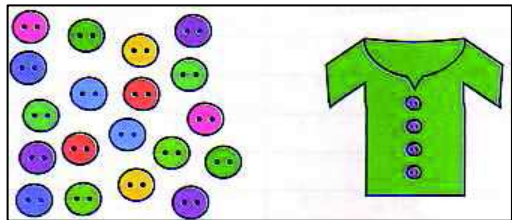
AS 11
- Learners explain their solutions to above "button problem".

AS 12
- Learners check each other's solutions to above "button problem".

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
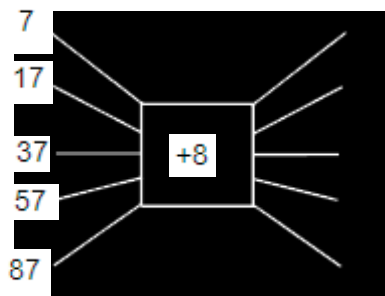
- Game: For 2 players.
  Resources: 100 grid, dice, counters/markers
  - Take it in turns to throw two counters on to the grid.
  - Both players *estimate* the total of the two numbers (65 and 89) covered by the counters.
  - They share their methods of *estimation*.
  - Calculate the answers together and compare *estimates* to see who was the nearest.

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	◯	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	◯	90
91	92	93	94	95	96	97	98	99	100

- Rounding off is a very important skill involved in estimation
  - e.g. when adding 65 and 89, an estimate of the sum may be made by rounding off the numbers to the nearest 10:
    i.e. 65 → 70   89 → 90
  - Then by adding together the 70 and the 90, they get an approximate answer of 160, which is very close to the precise answer of 154.
  - If the answer on checking differs greatly from the estimation then it is likely that something has gone wrong!
  - Multiplying the numbers will no doubt prove more difficult, but the same things apply.
  - Different learners are likely to have different methods of calculation.
  - These should be encouraged and shared. In this way learners develop a better understanding of numbers and how they can be worked with.
  - It is also likely to result in learners developing more sophisticated methods, taking over those they understand from their friends.
  - Extension: Play the game on a grid with numbers above 100.

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. 19 – 5 + 2= __   16 – 4 + 5 = __   Addition and subtraction of single-digit numbers in the number range 0 – 20 with more than one operation.
- Mental Maths Game:
  Resources: 2 sets of cards 0 to 12, two dice
  - The learners play in pairs.
  - Each arranges a set of cards, in number order, face up on the table.
  - They throw the dice in turn, add the scores and turn the card with matching total face down.
  - The winner is the first to have all their cards face down.
  - *This game is varied by finding the difference between the scores*
- Game: Addition snap.
  - This game is played in pairs.
  - Each pair is given two sets of digit cards (0 – 10).
  - Each person takes one set, shuffles them and places them face down on the table.
  - Each person turns their top card over simultaneously.
  - The numbers on the cards are then added together.
  - The first person to say the correct answer and explain to their partner why it is correct wins the two cards.
  - Play continues until all the cards have been played.
  - The player with the most cards wins.
  - Players can also explain the subtraction concept eg. if 3 and 6 make 9 then 9 – 3 = 6 etc
- The teacher makes the learners aware of patterns from adding 1-digit numbers.
  eg. if 5 + 4 = 9, then 15 + 4 = 19, and 25 + 4 = 29 and 55 + 4 = 59

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. 4 x 5 = __   1 x 8 = __   7 x 2 =__

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. eg. (89 = 70 + 10 + 9   89 = 80 + 1 + 3 + 5)
  Learners build up numbers in the number range 0 – 99. Learners may use counters, drawings, *number* grid or a number line.
- Learners break down and build up numbers in the number range 0-99 and may use a number grid and a number line.
  eg. 79 = 60 + 10 + 9 or   79 = 70 + 1 + 3 + 5   Learners build up numbers in the number range 0 – 99. Learners may use counters, drawings, number grid or a number line.
  eg. 50 + 20 + 5 + 2 = 77
- Learners do a worksheet as follow:
  - You can break down 67 as…
  - 67 = 60 + 7 or
  - 67 = 10 + 10 + 10 + 10 + 10 + 10 + 5 + 1 + 1
  - 67 = 20 + 20+ 20 + 4 +2 +1
  - 67 = 50 + 10 + 7
  - 67 = 30 x 2 = 60 + 5 + 2
  - 67 = 20 X 3 = 60 + 3 + 3 + 1

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.

- 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 card.   e.g. halve 68
- 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 79; halve 35

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

AS 10.4
- Number line: - Integrate with all number work
- Game: Two players
  - Each pair needs a number line (from e.g. 155 to 180) and two counters (different colours), one for each person.
  - The learners take turns to throw a die and move their counter the correct number of spaces.
  - You can ask the learners to estimate what number they will land on before moving their counter.
  - They should explain their estimation to their peer.
  - The first learner to get to e.g. 180 wins the game.

LO 2: PATTERNS, FUNCTIONS AND ALGEBRA

AS 2
- Copies and extends simple number sequences to at least 200
- Give learners a worksheet which they have to complete

AS 3
- Creates own patterns. Explain it to a friend
  - e.g. 96 100 104 111 …. …. …. ….. (adding on 4)
    - 115 110 105 ….. ….(counting back in 5's)

AS 4
- Learners describe a given/own pattern
- Game: Clouds, Ink Blots and Paint Splashes.
  - - Aim: To work out what numbers are hidden.
  - - Whole Class Activity.
  - - The teacher asks: What numbers are hidden?
  - - How do you know?
  - - Can you be sure?
  - - What else could the numbers be?
  - - What rules/patterns are you using?
  - - What was the key to unlocking the hidden numbers?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22			26	27	28	29	30	
31			36	37	38	39	40		
4				47	48	49	50		
				57	58	59	60		
				67	68	69	70		
71			77	78	79	80			
81			86	87	88	89	90		
91	92		95	96	97	98	99	100	
101	102	103	104	105	106	107	108	109	110

- Peer Activity:
  - - Each learner receives an example of the above diagram.
  - - Ask them to look carefully at the numbers hidden behind the blob.
  - - Discuss with them any number patterns they can see/know that will help them identify the hidden numbers.
  - - When they have found several interesting patterns, ask them to describe the pattern to a friend.

LO 3: SPACE AND SHAPE

AS 1

- Learners recognise, identify and name 2D-shapes and 3D -objects in the classroom and in pictures.
    - 3D objects: boxes, balls, cylinders
    - 2D-shapes: triangles, squares, rectangles, circle.
- Tangram puzzles: Individual Activity.
    - Learners receive a copy of a tangram.
    - They cut the pieces out and make the shapes/pictures below.
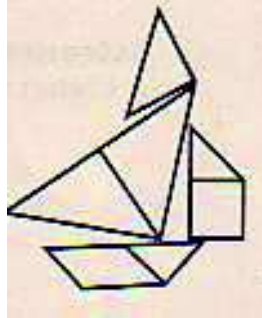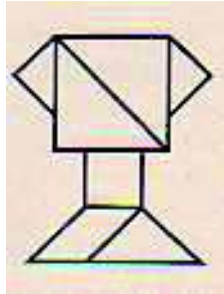
- Candle activity:
    - Mom made candles for Christmas.
    - Write down the name of the shape next to the correct letter
    - Choose from the following: **pyramid; ball; cylinder; prism**
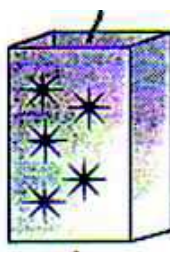
AS 5

- Learners recognise and describe 3D objects from different positionse.g. from the top, from the side, from the bottom.
- Candle activity: Look at the two candles and draw what you see from the top in each case.

AS 6
- Positions self within the classroom or 3D objects in relation to each other.

- Teacher has a series of pictures which she puts on the board. The learners answer questions:-
  - Look at the picture of the dog.
  - Where is it lying?
  - In front, above or next to its kennel?
  - The bee is flying below, on the left or above the flower?
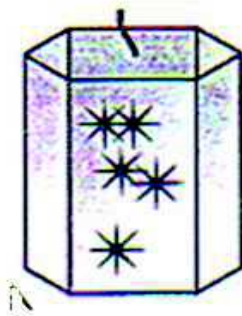 - The girl is standing in front, next to or behind the flower bush?
  - The young lady is standing to the left, in front or on top of the Christmas tree?

RESOURCES:

Counters (beads, sticks, beans, stones, blocks,), abacus, number grid, number line, number grids, paper, scissors, flash cards with numbers/symbols, flash cards with number names, practical activity sheets, 1- 110 number block, worksheets, cards with numbers, dice, flard cards, real or play money, mat books, pencils, crayons, flash cards with bonds, flash cards with mental maths + 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), flash card with ½ / half on it, cardboard circle, flash card with ¼ / quarter on it, 2D shapes (triangles, squares, rectangles, circles), 3D objects (boxes, balls, cylinders, spheres), number chart puzzles, two sets of digit cards (0 – 10), die labeled ¼, ¼, ½, ½, ¾, ¾, 200 Jigsaw number grid, tangram template, magic square grid, doubling grid, cards with multiples of 5, cards to play "The Golden Number", Trader's board

_____

REFLECTIONS:

BARRIERS:

WEEK 9

WEEK 9 **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	
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 (e.g. 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
   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 3: SPACE AND SHAPE	
AS 1: Recognises, identifies and names 2D shapes and 3D objects in the environment and in pictures including: boxes (prisms), balls (spheres), cylinders, triangles, squares and retangles, circles	
AS 4: Recognises symmetry in 2D shapes and 3d objects	
AS 5: Recognises 3D objects from different positions	
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 5: Identifies important dates on calendars including dates of:
   Religious festivals
   Historical events	

AS 6: Estimates, measures, compares and orders 3D objects using non standard measures: Mass (bricks, sand bags), capacity (spoons, cups), length (hand spans, footsteps).	

WEEK 9

Instructions and worksheets attached

The 2nd last week of the term is only for enjoyment, fun and consolidation. While revising, celebrate an early Christmas, by having a Christmas tree in the class. Learners wrap boxes with different coloured Christmas paper, prior to the last week. The teacher has already put instructions inside the boxes (copy the instructions on this sheet, cut into strips, fold and put into the boxes) and numbers on the outside of the boxes. Each child gets a chance to pick a box, open it and read the instructions to the group. The class/group now plays the game (according to instruction inside the box) and the winner/winners (who finishes first by taking all their boxes from the tree and answering the questions correctly) each get a marie biscuit / jelly beans as reward.

Day 1
Instructions:

Write the colour of your team, as well as the names of your team members on your sheet of paper. Check the time on the clock, write it down on your sheet of paper and start.
Open box 1 according to your team's colour.

1. Count how many boxes there are on the tree. Write down the number and number name on your team's sheet of paper. Open the biggest box, in your team's colour, on the tree.

2. The box contains a number of beans, eg. 57 Count the beans and then check if the number is the same as the number in the bottom of the box. If it is the same, collect a jelly bean as reward and write the number on your sheet. Now open the box with number 26 on it.

3. Count in ones, forward and backward by starting on the number that is inside the box (186) and by ending on the number that is last (200) in the box. As you count, write the numbers on a sheet of paper. As soon as you have finished, find the box with number name sixty-nine on it.

4. Finish a colouring-in picture (get it from your teacher) by joining the dots. Work as a group and finish the picture and then colour it in. Now find a box with double 5 (ten) on it.

5. Take the numbers in the box and glue them on to your sheet of paper, starting from the smallest number to the biggest number. Now write their number names below them on your sheet of paper. Look for a box that has a number on that is 10 more than 80 – (90).

6. There are a few numbers in your box. Find the number that is 2 more than 16 and glue it on your sheet of paper. Find the number that is 10 less than 200 and glue it on your sheet of paper. Find the number that is 5 more than 65. Glue this number on to your page. Find a number that comes between 149 and 151 and glue it on you paper. Now find a box with halve of 48 on it.

7. There are loose numbers in the box. Find the numbers, with the double of the numbers and glue it on to your sheet of paper. Now find the box with a number that is 5 more than 75 (80).

8. Break 69 down in 5 different ways. Write all 5 ways on you sheet of paper. Find the box on the tree that has a number that comes between 76 and 78 (77).

9. Which number am I? 40 + 40 + 2+ 1 =? Write the answer on your sheet of paper. 30 + 20 + 4 + 0 =? Write the answer on your sheet of paper. Now find the last box on the tree.

10. Write the answers to the following 5 sums on you sheet. 4x2=? 3x2=? 5x3=? 2x5=? 6x3=?

Check the time on the watch, write it on your sheet, tidy up and sit in your group. Your teacher will now check your sheet for correctness.

Box 2   57 beans   57

Box 3   186   200

Box 4   Colouring in picture
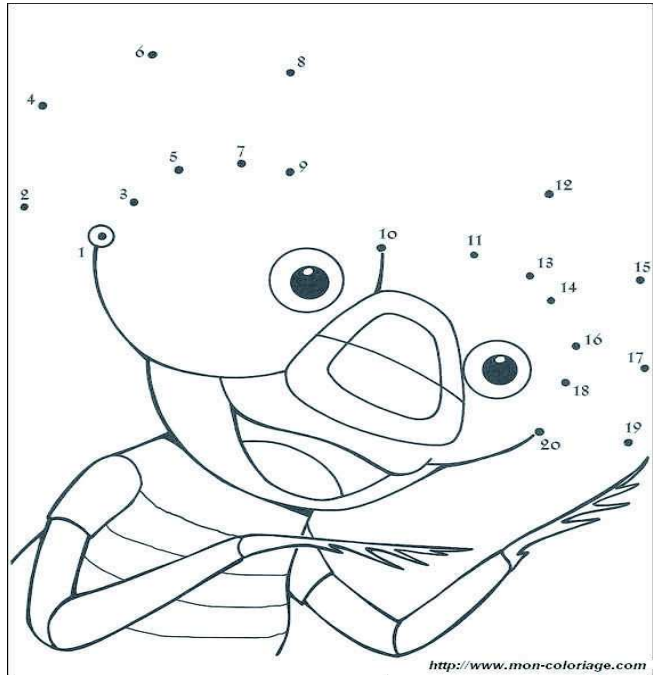

http://www.mon-coloriage.com

Box 5   22   48   99   56   121   84 65
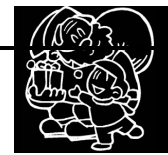
Box 6   18   190   70   150

Box 7   6   20   8   24   16   40   12   48

Day 2
Instructions: (use the same boxes as the previous day)

Write the colour of your team, as well as the names of your team members on your sheet of paper. Check the time on the clock, write it down on your sheet of paper and start.
Open box 1 according to your team's colour.

1. Father Christmas has hidden some presents. To get the first present, start on the first number in your box and count in tens to 200. Write each number down on your sheet of paper. Let your teacher check your work and give you your first present (jelly baby) Find the box with number seventy-seven on it.

2. Calculate the answers to the following sums, 34 + 22 =, 21 + 14 + 11 =, 76 − 34 =, 23 + 44 − 16 =. Write the sums, with their answers on your sheet of paper. You may use any your flard cards, abacus or counting frame to work out the answer. The group must work together. Now find the box with the number that is 5 less than 85 (80).

3. There are loose numbers in your box. Glue the number, with its halve, onto your sheet . Make sure that you glue the halve next to the number. Find a box with a number that is double 24 (48).

4. Get a worksheet from your teacher with number patterns on it. Read it carefully and then complete the patterns. Once you have finished, call your teacher to check it for your special reward (marie biscuit) Find the box with a number on that is the same as 9 tens (90).

5. There are loose numbers in your box. Sequence the numbers from the smallest to the biggest and glue them on to your sheet of paper. Now look for the box that is 2 more than 8(10).

6. There is a special number in your box, number 48. Glue the number on your sheet of paper and write the story of this number. Try to write 5 different "things" about the number, such as 48 comes before …….., it is 10 more than……., it is double ………, it has …. tens and …… ones, it can be broken down like…………………….. Look for the box with the number that is 1 less than 70 (69)

7. Use your number rods to work out how many white blocks you will need to cover the picture. Your teacher will give it to you. Write the answer on your sheet. Look for the box with double 13 on it (26).

8. Use your colour number rods and build a design on one side of the line (your teacher will give you the page). Now build a symmetrical design on the other side of the line. Call your teacher to come and check your work. There is a reward for you if you are correct. (jelly beans) You have 2 boxes left. Find the biggest box.
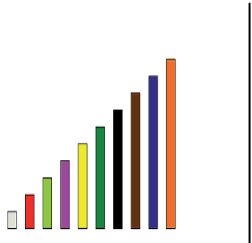
9. Work out what the halves of each of these numbers are and write it on your sheet of paper. You may use drawings to work out your answers. Half of 6, halve of 28, half of 66, half of 82, half of 47. You have come to the end. Take the last box off the tree.

10. If you can work out this sum, you can all get a special treat. Remember, we must all work together. Glue your story sum on to your sheet of paper. Read carefully before you start.
Father Christmas has 99 presents on his sleigh. He hands 27 out at the children's home and then 12 at the next house. How many presents are left on his sleigh?

Check the time on the watch, write it on your sheet, tidy up and sit in your group. Your teacher will now check your sheet for correctness.

Box 1

60

Box 3

30 40 10 16 12 6

8 5 20 12

Box 4

Worksheet # 1   Name

Count by 1 from 1 to 100

	2		4					
								19
21					27			
			34					39
								69
		83						
			94					

http://math.about.com

Box 5

7 83 92 134 34 29
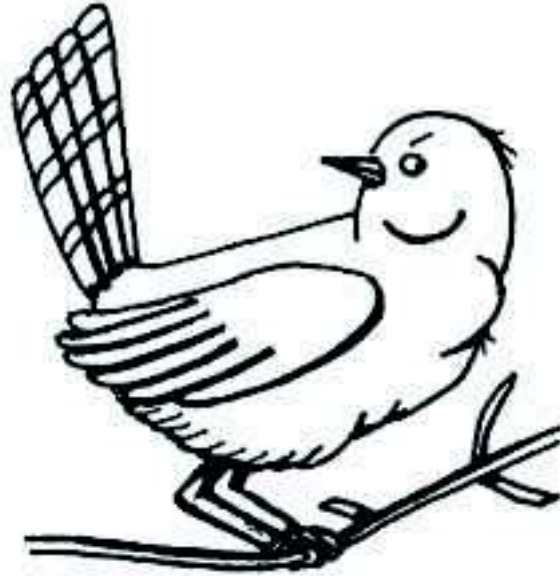
Box 6

48

Box 7

Box 8   Draw a straight line on an A4 piece of paper – top to bottom. Learners build picture on left of the line and then the symmetrical picture on the other side of the line.

Box 10.

Father Christmas has 99 presents on his sleigh. He hands 27 out at the children's home and then12 at the next house. How many presents are left on his sleigh?

Day 3
Instructions: (use the same boxes as the previous day)

Write the colour of your team, as well as the names of your team members on your sheet of paper. Check the time on the clock, write it down on your sheet of paper and start.

Father Christmas has brought some gifts for us, but we have to earn them. Work in your same groups of the past two days. Write the answers down to the questions in your boxes on the tree. Open box 1 according to your team's colour.

1. Look at the template called a tangram, that your teacher has given you and then answer the questions on your sheet.
    1. Name all the different shapes that you can see in the tangram and write it down on your sheet of paper.
    2. Cut up the template and build 2 squares by using some of your shapes. Call your teacher to check if you are correct and collect a jelly bean for your effort.
    3. Can you use some of the shapes to build a rectangle? Is there another way of building a rectangle? Call your teacher to show her what you have done. Collect another reward.
    4. Can you use all your pieces to build a rectangle? Glue it onto your sheet of paper.
    5. Show your teacher and then find the biggest box on the tree.

2. You will find matches in your box. Ask your teacher for the instruction page.
     Each one in the group must help to build the shapes
     Call your teacher to check if you are correct. If you are correct, you will be rewarded with a marie bisuit. Now take the box with 80 on it.

3. You can now play a bingo game. Ask your teacher for the bingo time cards and play the bingo game.
     Each learner gets a time card and reads it to the group.
     The learner who has the answer to the question that was read, reads the answer card and then his question.
     He can now put his card down. See if the whole group can answer the questions correctly.
     Now find the box on the tree with 90 on

4. Get the worksheet with the 100's 10's and 1's game on it. As a group, try to complete the worksheet.
     This is a brainteaser – let us see who can really think!
     Now pick the last box off the tree.

5. Solve the following sum and you may collect your treat for today.
     Mommy buys a toy car for R5,50, a doll for R10,50, a puzzle for R15, a book for R9 and a card for R1.
     She pays with a R50 note. How much change must she get?
     Show your drawings or calculations on your sheet of paper.

     Dad buys a cooldrink for R7,50, a packet of chips for R3,00 a chocolate for R2,50 and ice cream for R5 for the Christmas party. He pays with R20. How much change will he get?
     Show your drawing or calculations on your sheet of paper.

     There are 5 Christmas trees in the shop. There are 2 presents around each tree. How many presents are there around the 5 trees?
     Show your drawings or calculations on your sheet of paper.

   Check the time on the watch, write it on your sheet, tidy up and sit in your group. Your teacher will now check your sheet for correctness.

Box 1
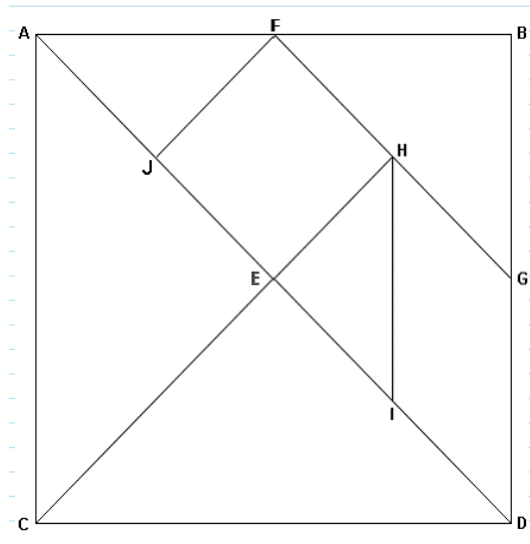
Box 2

Pick up 17 matchsticks and build a rectangle, which consists of 6 squares. You must use all 17 the matchsticks.

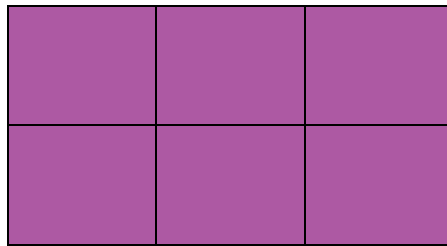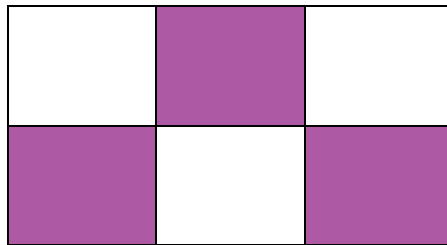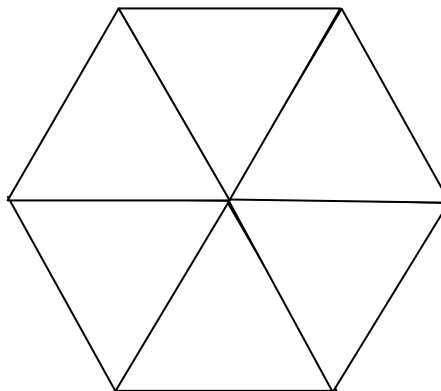Take only 5 matchsticks away – do not move the other matches. You must now have 3 squares left in front of you. Now glue this shape to your paper.

\

Now pick up 12 matchsticks and build a hexagon, consisting of 6 triangles. Call your teacher before you glue the matches to the paper
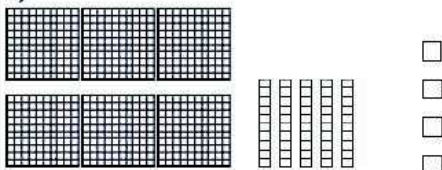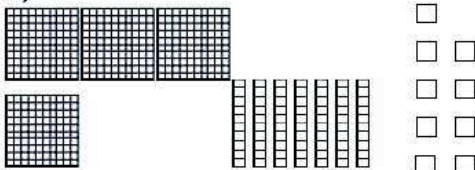
Box 3

I have 2 O'Clock Who has the big hand at 12 and the small hand at 3? Facts to 20--A	I have 3 O'Clock Who has the big hand at 6 and the small hand at 3? Facts to 20--A
I have 3:30 Who has the big hand at 12 and the small hand at 4? Facts to 20--C	I have 4 O'Clock Who has the big hand at 6 and the small hand at 11? Facts to 20--C
I have 11:30 Who has the big hand at 12 and the small hand at 12? Facts to 20--C	I have 12 O'Clock Who has the big hand at 6 and the small hand at 5? Facts to 20--C
I have 5:30 Who has the big hand at 6 and the small hand at 1? Facts to 20--C	I have 1:30 Who has the big hand at 6 and the small hand at 7? Facts to 20--C
I have 7:30 Who has the big hand at 12 and the small hand at 11? Facts to 20--C	I have 11 O'Clock Who has the big hand at 6 and the small hand at 2? Facts to 20--C

Box 4

Hundreds, Tens, and Ones

Fill in the blanks to show how many <u>hundreds</u>, <u>tens</u>, and <u>ones</u> there are.
Find the secret number.

1)

_____ hundreds _____ tens _____ ones

The secret number is [ ]

2)

_____ hundreds _____ tens _____ ones

The secret number is [ ]

113

Day 4
Instructions:

It is Christmas and we always need to bake at Christmas time. Today we are going to bake
Read the following instructions very carefully.

Cupcake recipe:

I need the following baking utensils:
- a mixing bowl
- a measuring jug
- a measuring cup
- a teaspoon
- an egg beater
- a spoon
- a muffin pan

I need the following ingredients:
- sugar
- salt
- self raising flour
- milk powder
- oil
- eggs
- margarine paper for greasing
- food colouring
- icing sugar
- hot water
- knife

Method:
- heat the oven to 180 degrees (let your teacher help you)
- mix 1 ½ cup of sugar, 1 teaspoon of salt and 1 kilogram of self raising flour together with a spoon in the mixing bowl
- beat 1 cup of powder milk with a ½ cup of oil, 3 eggs and 1 litre of water in the measuring jug, with an egg beater
- pour the milk and egg mixture on to the sugar and flour fixture and mix with your spoon
- grease the muffin pan with margarine paper
- spoon the mixture into the muffin pans
- bake until golden brown
- allow to cool
- mix a cup of icing sugar with hot water and a teaspoon of food until it is smooth and thick
- ice the cupcakes when they are cool.
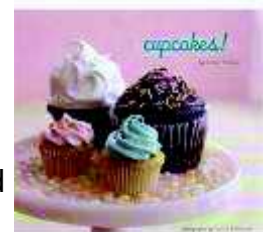
Remember to clean up and pack away while your cup cakes are in the oven.
Enjoy!

Day 5
Instructions:

Today each child will work on his / her own to create a Christmas card for Mommy and Daddy. Each child receives an instruction sheet. Follow the instruction sheet carefully.

Instructions

1.   Choose a piece of coloured cardboard. Measure with your ruler.
        The card must be 20cm wide and 10 cm long. Draw a straight line
        of 20cm from left to right on the cardboard. Now draw a straight line of
        10 cm down, now 20cm from right to left and last 10m from bottom to
        top.

2.   Cut the cardboard on the line and then fold it in half.
3.   Make sure that the fold of your card is on your left hand side.
4.   Fetch a piece of white paper from your teacher (8cm x 8cm)
5.   Fold the paper in half and cut shapes out on the fold, e.g. half circles,
        half a rectangle, half a square.
6.   Now cut shapes out along the edge of the paper.
7.   Open out your paper and see what beautiful pattern you have
        created.
8.   Glue your symmetrical white paper patterns on to your coloured
        card.
 9.   Write a special Christmas message in your best handwriting to
        Mommy and Daddy.

        Happy Christmas!

Rubrics
and
Recording Sheet

RUBRICS FOR FORMAL ASSESSMENT TASKS Grade 2 Term 4				
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 2.1 Counts forwards and backwards in ones from any number between 0 and 200	Unable to count forwards and backwards in ones from 1 to 200.	Counts forwards and backwards in ones from 1 to 200 on the number line or number grid. Makes errors and relies on support/prompting from the teacher.	Counts forwards and backwards accurately in ones from 1 to 200 on the number line and number grid. Makes a careless mistake, but self-corrects it.	Counts forwards and backwards in ones from 1 to 200 accurately and confidently.
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 2.2 Counts forwards and backwards in tens from any multiple of 10 between 0 and 200	Unable to count forwards and backwards in tens from any multiple of ten between 0 - 200.	Counts forwards and backwards in tens from any multiple of ten between 0 - 200 on the number line or number grid. Makes errors and relies on support/ prompting from the teacher.	Counts forwards and backwards in tens from any multiple of ten accurately between 0 - 200 on the number line and number grid. Makes a careless mistake, but self-corrects it.	Counts forwards and backwards in tens from any multiple of ten between 0 - 200 accurately and confidently.
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 2.3 Counts forwards and backwards in fives from any multiple of 5 between 0 and 200	Unable to count forwards and backwards in fives from any multiple of five between 0 - 200.	Counts forwards and backwards in five from any multiple of five between 0 - 200 on the number line or number grid. Makes errors and relies on support from the teacher.	Counts forwards and backwards in five from any multiple of five accurately between 0 - 200 on the number line and number grid. Makes a careless mistake, but self-corrects it.	Counts forwards and backwards in five from any multiple of five between 0 - 200 accurately and confidently.
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 2.4 Counts forwards and backwards in two from any multiple of 2 between 0 and 200	Unable to count forwards and backwards in two from any multiple of two between 0 - 200.	Counts forwards and backwards in two from any multiple of two between 0 - 200 on the number line or number grid. Makes errors and relies on support from the teacher.	Counts forwards and backwards in two from any multiple of two accurately between 0 - 200 on the number line and number grid. Makes a careless mistake, but self-corrects it.	Counts forwards and backwards in two from any multiple of two between 0 - 200 accurately and confidently.
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 3 Knows and reads number symbols from 1 to at least 200 and writes number names from 1 to at least 100. **Number symbols**	Unable to recognize and read the number symbols in the number range 1 - 200.	Recognises and reads some of the number symbols 1 to 200. Relies on assistance from the teacher.	Recognises and reads most of the number symbols 1 to 200. Makes a careless mistake, but self-corrects it.	Recognises and reads the number symbols 1 to 200 accurately and confidently.
Assessment Standard	**1**	**2**	**3**	**4**
LO 1 AS 3 Knows and reads number symbols from 1 to at least 200 and writes number names from 1 to at least 100. **Number names**	Unable to write the number names in the number range 1 - 100.	Writes some of the number names 1 to 100. Relies on assistance from the teacher.	Writes most of the number names 1 to 100. Makes a careless mistake, but self-corrects it.	Writes the number names 1 to 100 accurately and confidently.

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Assessment Standard	1	2	3	4
LO 1 AS 4.1 Orders, describes and compares whole numbers to at least two-digit numbers	Unable to order numbers 0 to 99 from biggest to smallest and smallest to biggest. Unable to describe and compare numbers using one more than, one less than, two more than, two less than, before, between and after.	Orders some numbers 0 to 99 from biggest to smallest and smallest to biggest. Describe and compare some of the numbers 0 to 99 using one more than, one less than, two more than, two less than, before, between and after.	Orders most numbers 0 to 99 from biggest to smallest and smallest to biggest. Describe and compare most of the numbers 0 to 99 using one more than, one less than, two more than, two less than, before, between and after. Makes a careless mistake, but self-corrects it.	Orders numbers 0 to 99 from biggest to smallest and smallest to biggest accurately and with ease. Describe and compare numbers 0 to 99 accurately and with ease using one more than, one less than, two more than, two less than, before, between and after.

Assessment Standard	1	2	3	4
LO 1 AS 5 Recognises place value of digits in whole numbers to at least 2-digit numbers	Unable to recognise the place value of numbers 0 to 99. One correct	Recognises some of the place values in numbers 0 to 99. Any 2-4 correct	Recognises most of the place values in numbers 0 to 99. Any 5-7 correct	Recognises the place values in numbers 0 to 99 accurately and with ease. All 8 correct

Assessment Standard	1	2	3	4
LO 1 AS 6 Solves money problems involving totals and change in rands and cents.	Unable to pack out some of the given amounts. Unable to do some addition and subtraction calculations with money. Sometimes confuses addition and subtraction. Unable to write some of the numbers sentences and to calculate some of the answers to the money word problems.	Able to pack out some of the given amounts. Relies on assistance from the teacher or peers. Able to do some addition and subtraction calculations with money. Sometimes confuses addition and subtraction. Writes some of the numbers sentences and calculates some of the answers to the money word problems. Relies on concrete apparatus and assistance from the teacher.	Able to pack out most of the given amounts. Sometimes make careless mistakes but self-corrects it. Able to do most of the addition and subtraction calculations with money. Writes most of the numbers sentences and calculates most of the answers to the money word problems. Relies on concrete apparatus.	Able to pack out all the given amounts accurately and with ease. Able to do all the addition and subtraction calculations with money. Seldom relies on concrete apparatus. Writes the numbers sentences and calculates the answers to the money word problems accurately and with ease. Seldom relies on concrete apparatus.

Assessment Standard	1	2	3	4
LO1 AS 7 Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that include unitary fractions.	Unable to draw or use concrete apparatus to solve the word problem. Needs support from the teacher. (Range 0 – 99)	Relies on concrete apparatus and assistance from the teacher to solve the word problems. (Range 0 – 99)	Use drawings to solve the word problem. Seldom use concrete apparatus. Makes careless mistakes. (Range 0 – 99)	Use drawings or numbers sentences to solve the word problem accurately and with ease. (Range 0 – 99)

Assessment Standard	1	2	3	4
LO1 AS 8.1 Can perform calculations, using appropriate symbols to solve problems involving addition and subtraction of whole numbers with at least 2 digits. (0-99)	Unable to calculate the answers to the number sentences. Unable to write a number sentence and calculate the answers to the word problems.	Able to calculate some of the answers to the number sentences correctly. Relies on concrete apparatus, the number line and the number grid. Writes some of the numbers sentences and calculates some of the answers to the word problems. Relies on concrete apparatus and assistance from the teacher.	Able to calculate most of the answers to the number sentences correctly. Relies on concrete apparatus, the number line and the number grid. Writes most of the numbers sentences and calculates most of the answers to the word problems. Relies on concrete apparatus. Makes a careless mistake, but self-corrects it.	Able to calculate all the answers to the number sentences correctly and with ease. Seldom relies on concrete apparatus, the number line and the number grid. Writes the numbers sentences and calculates the answers to the word problems accurately and with ease. Seldom relies on concrete apparatus.

Assessment Standard	1	2	3	4
LO1 AS 8.2 Can perform calculations, using appropriate symbols to solve problems involving 8.2 multiplication of whole 1-digit by 1-digit numbers with solutions to at least 50.	Unable to calculate the answers to word problems involving multiplication.	Able to calculates some of the answers to the word problems involving multiplication. Relies on concrete apparatus and assistance from the teacher.	Able to calculate most of the answers to the word problems correctly. Relies on concrete apparatus, the number line and the number grid. Makes a careless mistake, but self-corrects it.	Able to calculate all the answers to the word problems correctly and with ease. Seldom relies on concrete apparatus, the number line and the number grid.

Assessment Standard	1	2	3	4
LO1 AS 9.1 Perform mental calculations involving addition and subtraction for numbers to at least 20.	Any 12 correct	Any 13 - 15 correct	Any 16 - 18 correct	Any 19- 20 correct

Assessment Standard	1	2	3	4
LO1 AS 9.2 Performs mental calculations involving multiplication of whole numbers with solutions to at least 20	Any 2 correct	Any 3 - 5 correct	Any 6 - 8 correct	All 10 correct

Assessment Standard	1	2	3	4
LO1 AS 10.1 Uses the following techniques: building up and breaking down numbers	Unable to break down numbers to 99. Needs assistance from the teacher. Unable to write a number sentence.	Can break down numbers to 99 using limited combinations. Relies on concrete apparatus. Needs support from the teacher to write the number sentences.	Can break down numbers to 99 using a variety of combinations. Seldom relies on concrete apparatus. Writes most of the number sentences correctly.	Can break down numbers to 99 using all the combinations accurately. Writes all the number sentences accurately.

Assessment Standard	1	2	3	4
LO1 AS 10.2 Uses the following techniques: doubling and halving	Unable to double and halve numbers with answers in the range 1 to 99.	Uses concrete apparatus e.g. counters/abacus to double and halve numbers with answer in the range 1 to 99 with some accuracy. Relies on support from the teacher.	Uses drawings to double and halve numbers with answers in the range 1 - 99 with reasonable accuracy. Seldom relies on concrete apparatus e.g. the number line.	Doubles and halves numbers with answers in the range 1 to 99 accurately. Seldom relies on drawings to calculate the answers.

Assessment Standard	1	2	3	4
LO 2 AS 2 Copies and extends simple number sequences to at least 200.	Unable to create own number patterns in the number range 0 - 200.	Can copy, but find it difficult to determine and complete the number pattern in the number range 0 - 200.	Can copy, determine and complete the number pattern in the number range 0 - 200. Sometimes make careless errors.	Can copy, determine and complete the number pattern accurately and with ease in the number range 0 - 200.

Assessment Standard	1	2	3	4
LO 2 AS 3 Creates own patterns.	Unable to create own number patterns in the number range 0 - 200.	Find it difficult to create own number patterns in the number range 0 - 200.	Can create own number patterns in the number range 0 - 200. Sometimes make careless errors.	Can create own number pattern accurately and with ease in the number range 0 - 200.

Assessment Standard	1	2	3	4
LO2 AS 4 Describes observed patterns.	Unable to describe number patterns in the number range 0 - 200.	Find it difficult to describe number patterns in the number range 0 - 200.	Can describe number patterns in the number range 0 - 200. Sometimes make careless errors.	Can describe number patterns in the number range 0 - 200. Sometimes make careless errors.

Assessment Standard	1	2	3	4
LO 3 AS 1 Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including: triangles, squares, rectangles and circles.	None correct	Any 1 correct	Any 2 correct	All 3 correct

Assessment Standard	1	2	3	4
LO 3 AS 4: Recognises symmetry in two-dimensional shapes and three-dimensional objects	Learners are unable to show/determine the line of symmetry in 3-D objects.	Learners are able to show/determine the line of symmetry in some 3-D objects. Needs prompting from the teacher.	Learners can show/determine the line of symmetry in 3-D objects. Make a careless mistake, but self-corrects it.	Learners can show/determine the line of symmetry in 3-D objects with ease.

Assessment Standard	1	2	3	4
LO 4 AS 1 Reads analogue and digital clock time in hours and minutes	Reads only 1 hour on the analogue clock correctly.	Reads 2 hours on the analogue clock correctly.	Reads 3 - 4 hours on the analogue clock correctly.	Reads all 5 hours on the analogue clock correctly.

Assessment Standard	1	2	3	4
LO 4 AS 6 Estimates, measures, compares and orders 3-D objects using non-standards measures: length *Oral/Practical*	Unable to estimate and measure the length of the different body parts. Unable to answer questions about their findings.	Able to estimate but finds it difficult to measure the length of the different body parts. Able to answer some of the questions about their findings.	Able to estimate and measure the length of most of the different body parts. Able to answer most of the questions about their findings.	Able to estimate and measure the length of all the different body parts. Able to answer all the questions about their findings with confidence.

Assessment Standard	1	2	3	4
LO 4 AS 6 Estimates, measures, compares and orders 3-D objects using non-standards measures: length *(Written)*	Unable to measure the length of the different pencils. Unable to answer questions about their measurement.	Able to measure some of the pencils. Able to answer some of the questions about their measurement.	Able to measure the length of most of the pencils. Able to answer most of the questions about their measurement.	Able to measure the length of all the pencils. . Able to answer all the questions about their findings with confidence.

Assessment Standard	1	2	3	4
LO 5 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. **LO 5 AS 2** Sorts physical objects according to one attribute chosen for a reason	Unable to collect and sort information.	Collects information but needs support from the teacher to sort the information according to the months of the year.	Collects and sorts information according to the months of the year. Makes a careless mistake, but self-corrects it.	Collects and sorts information according to the months of the year accurately and with ease.
LO 5 AS 4 Draws pictures and construct pictographs that have a 1 - 1 correspondence between own data and representations.	Unable to construct a pictograph to show the number of birthdays in a month.	Needs support from the teacher to construct a pictograph to show the number of birthdays in a month.	Able to construct a pictograph to show the number of birthdays in a month. Makes some errors.	Able to construct a pictograph to show the number of birthdays in a month accurately.
LO 5 AS 5 Describes own or peer's collections of objects explains how it was sorted, and answers questions about it.	Unable to interpret the pictographs to answer the questions.	Able to answer some of the questions correctly. Needs support from the teacher.	Able to answer most of the questions correctly,	Able to answer all the questions accurately and with ease.

PROVINCE OF THE EASTERN CAPE
DEPARTMENT OF EDUCATION
NUMERACY RECORDING SHEET FOR FORMAL ASSESSMENT TASKS

YEAR	_____
NAME OF SCHOOL	_____
CLASS TEACHER	_____
GRADE	2
TERM	4

NAME	FAT's	LO 1 Numbers, Operations & Relationships																LO 2 Patterns, Functions & Algebra			LO 3 Space Shape			LO 4 Mea-surement			LO 5 Data Handling			ANNUAL NATIONAL TEST	Total for FAT	FINAL CODE	COMMENTS
		AS 2.1	AS 2.2	AS 2.3	AS 2.4	AS 3	AS 4.1	AS 5	AS 6	AS 7	AS 8.1	AS 8.2	AS 9.1	AS 9.2	AS 10.1	AS 10.2	CODE	AS 2	AS 4	CODE	AS 1	AS 4	CODE	AS 1	AS 6	CODE	AS 1	AS 2	CODE				
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