

**PROVINCIAL NUMERACY WEEKLY TARGETS
SECOND TERM
GRADE 2**

INTRODUCTION

The Provincial Numeracy Learner Attainment Targets documents were developed in 2008 by a Provincial Task Team for Grades R – 3. The attainment targets have been developed using the NCS Learning Outcomes and Assessment Standards from the Mathematics Learning Area. These targets indicate the expected level of achievement of learners at the end of each term. The attainment targets have a similar meaning to the 'milestones' in the Foundations for Learning Assessment Framework. The milestones have been infused into the Numeracy Learner Attainment Targets.

In the **Provincial Numeracy Weekly Attainment Targets** the attainment targets for the second term are further broken down into weekly targets. **Teachers should use these weekly targets in conjunction with the Provincial Numeracy Learner Attainment Targets.** The Formal Assessment Tasks referred to as **FAT 1, 2 and 3** are clearly described in Section 3 of the Grade 2 Provincial Numeracy Learner Attainment Targets with the Methods, Forms and Tools for assessment.

The weekly attainment targets have been developed using:

- The Numeracy Learner Attainment Targets as a starting point.
- The NCS Learning Outcomes and Assessment Standards.
- Government Gazette 30880 of 14 March 2008, which outlines the Foundations for Learning Campaign, details the minimum expectations for the teaching of Literacy and Numeracy as well as providing timetabling and resourcing suggestions.
- Foundations for Learning: Foundation Phase Numeracy Lesson Plans.

The weekly attainment targets are intended to assist teachers to pace their teaching, give them guidance when planning their assessment tasks and provide suggestions to enrich teaching practice. If you follow these lessons systematically you will cover the curriculum and reach the milestones for Grade 2.

They are not intended to be prescriptive and teachers are not expected to abandon good practice in order to blindly follow the plans.

The weekly attainment targets provide:

- Weekly targets with recommended number ranges for the second term.
- The NCS Learning Outcomes and Assessment Standards from the Mathematics Learning Area.
- A series of activities for the different components of Numeracy.
- Exemplars of the Formal Assessment Tasks for the second term. These Tasks are indicated as **FAT 1, 2 and 3**.
- Integration within and across other Learning Areas.
- Resources that will be useful to the teacher.
- A template for Reflection and Barriers to Learning.
- An overview of counting activities for the term.

The Provincial Weekly Attainment Targets in conjunction with the Provincial Learner Attainment Targets can therefore be used as clearly defined Lesson Plans although the format is different to the one most teachers are used to. It is recommended that the teacher breaks down the targets for each week into daily steps. However the plans are not prescriptive and allow you to use your own way of presenting the lesson. The **Examples of Activities for Assessment Standards** at the back of the document are rich in practical ideas drawn from best practice and as such can enrich implementation in the classroom.

ADAPTING THE WEEKLY TARGETS

Learners progress at different rates and learn in different ways, and you, as the class teacher, are best able to pace teaching and learning to the needs of the learners. Teachers are free to introduce their own sequence and adapt the number ranges where necessary.

MENTAL MATHS

The Government Gazette No 30880 prescribes that Mental Maths activities should be done daily. Teachers should build Mental Maths activities into their daily Numeracy lessons. You will find learners at different levels of number sense in your class. The Mental Maths activities should meet the needs of all the learners.

RESOURCES

The Government Gazette No 30880 gives a list of recommended resources for Numeracy which schools should endeavour to provide. In addition to exercise books, Learner's books, Workbooks and basic stationery which most schools already provide, the following are highlighted as being especially important for Grade 2:

Counters, number squares/grids, number dice, small individual abacus, small white boards/chalk boards, shapes, coloured sticks, beads and threads.

DAILY TEACHER ACTIVITIES DURING NUMERACY TIME

		Minutes
1.	Count with the whole class according to their level <ul style="list-style-type: none"> • count using a number square • count on the number line • count forwards and backwards • count forwards and backwards from a given number to a given number • count in multiples • odd and even numbers, etc. 	5
2.	Oral mental maths and number sense problems <ul style="list-style-type: none"> • flash cards with + and – combinations • games such as ‘I have’ ‘Who has’? • simple oral word problems • doubling and halving etc. 	10
3.	Giving instructions and hand out books	5
4.	Work with group according to their level <ul style="list-style-type: none"> • Concept development (10 minutes) <ul style="list-style-type: none"> - data handling - estimation (measurement) - sequencing - 2D and 3D - adding, subtracting, multiplying dividing, etc. • Problem solving and investigation (15 minutes) <ul style="list-style-type: none"> - Pose problem based on concepts being developed - Allow learners to find own solution to problem - Feedback from learners as to how they solved the problem - Discussion on different methods, answers, thinking etc. - Group is given work to do at their desks 	25 x 2 (2 Groups per day)
5.	Supervision of learners doing independent tasks	10 x 2
	Total	90

NB. Work with 2 groups every day. While you are working with the groups, the other groups are working independently at their desks. The work they do must be consolidation of concepts already learnt. This independent work needs to be varied.

Government Gazette 30880 of 14 March 2008

Counting

The Government Gazette No 30880 prescribes that counting activities should be done daily. The following table provides an example of counting activities for the second term. Teachers are free to introduce their own sequence and adapt the number ranges where necessary.

COUNTING ACTIVITIES

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10 & 11
	Count with the whole class according to their level: Daily rote counting to 150									
	Counts out objects to 34	Counts out objects to 40	Counts out objects to 50				Counts out objects to 50			Counts out objects to 50
	Counts forwards and backwards in 1s starting at any number in the range 0-110		Counts forwards and backwards in 1s starting at any number in the range 0-120		Counts forwards and backwards in 1s starting at any number in the range 0-130		Counts forwards and backwards in 1s starting at any number in the range 0-140		Counts forwards and backwards in 1s starting at any number in the range 0-150	
	Counts forwards and backwards in 10s from any multiple of 10 in the range 0-100	Counts forwards and backwards in 10s from any multiple of 10 in the range 0-120		Counts forwards and backwards in 10s from any multiple of 10 in the range 0-130		Counts forwards and backwards in 10s from any multiple of 10 in the range 0-140		Counts forwards and backwards in 10s from any multiple of 10 in the range 0-150		
	Counts forwards and backwards in 5s from any multiple of 5 in the range 0-60		Counts forwards and backwards in 5s from any multiple of 5 in the range 0-70		Counts forwards and backwards in 5s from any multiple of 5 in the range 0-80		Counts forwards and backwards in 5s from any multiple of 5 in the range 0-90		Counts forwards and backwards in 5s from any multiple of 5 in the range 0-100	
	Counts forwards and backwards in 2s from any multiple of 2 in the range 0-60		Counts forwards and backwards in 2s from any multiple of 2 in the range 0-70		Counts forwards and backwards in 2s from any multiple of 2 in the range 0-80		Counts forwards and backwards in 2s from any multiple of 2 in the range 0-90		Counts forwards and backwards in 2s from any multiple of 2 in the range 0-100	
			Orders numbers 1 st to 34 th		Orders numbers 1 st to 40 th				Orders numbers 1 st to 50 th	

WEEKLY ATTAINMENT TARGETS AS PER LEARNING OUTCOME AND ASSESSMENT STANDARD

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 1: Counts to at least 100 everyday objects reliably	0 – 34 Learners count physical objects using one-to-one correspondence in the number range 0 – 34.	0 – 40 Learners count physical objects using one-to-one correspondence in the number range 0 – 40.	0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.	0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.	0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.	<p>LO 1 AS 2: Counts forwards and backwards in:</p> <p>2.1 1s from any number between 1-200</p> <p>2.2 10s from any multiple of 10 between 0-200</p> <p>2.3 5s from any multiple of 5 between 0-200</p> <p>2.4 2s from any multiple of 2 between 0-200</p> <p>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</p> <p>LO 2 AS 2: Copies and extends simple number sequences to at least 200</p>
AS 2.1: Counts forwards and backwards in ones from any number between 1 - 200	0 – 110 Learners count forwards and backwards in ones in the number range 0 – 110. The learners may use	0 – 110 Learners count forwards and backwards in ones in the number range 0 – 110. The learners may use	0 – 120 Learners count forwards and backwards in ones in the number range 0 – 120. The learners may use	0 – 120 Learners count forwards and backwards in ones in the number range 0 – 120. The learners may use	0 – 130 Learners count forwards and backwards in ones in the number range 0 – 130. The learners may use	<p>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</p> <p>LO 2 AS 2: Copies and</p>

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	counters, an abacus, number grid or number line. <i>Note: Daily rote counting and daily rational counting forwards and backwards, starting and ending at any number</i>	counters, an abacus, number grid or number line. <i>Note: Daily rote counting and daily rational counting forwards and backwards, starting and ending at any number</i>	counters, an abacus, number grid or number line. FAT 1 METHOD Teacher FORM Oral/Practical response Written responses TOOLS Rubric	counters, an abacus, number grid or number line.	counters, an abacus, number grid or number line.	extends simple number sequences to at least 200
AS 2.2: Counts forwards and backwards in tens from any multiple of 10 between 0 - 200	0 – 100 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 100. The learners may use counters, an abacus, number grid or number line.	0 – 120 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 120. The learners may use counters, an abacus, number grid or number line.	0 – 120 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 120. The learners may use counters, an abacus, number grid or number line. FAT 1 METHOD Teacher FORM Oral/Practical Response TOOL Rubric	0 – 130 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 130. The learners may use counters, an abacus, number grid or number line.	0 – 130 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 130. The learners may use counters, an abacus, number grid or number line.	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 LO 2 AS 2: Copies and extends simple number sequences to at least 200
AS 2.3: Counts forwards and backwards in	0 – 60 Learners count forwards and	0 – 60 Learners count forwards and	0 – 70 Learners count forwards and	0 – 70 Learners count forwards and	0 – 80 Learners count forwards and	LO 1 AS 3: Knows and reads number symbols from 1 to at least 200

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
fives from any multiple of 5 between 0 - 200	backwards from a given number in multiples of 5s in the number range 0 – 60. The learners may use counters, an abacus, number grid or number line.	backwards from a given number in multiples of 5s in the number range 0 – 60. The learners may use counters, an abacus, number grid or number line.	backwards from a given number in multiples of 5s in the number range 0 – 70. The learners may use counters, an abacus, number grid or number line. FAT 1 METHOD Teacher FORM Oral/Practical Response TOOL Rubric	backwards from a given number in multiples of 5s in the number range 0 – 70. The learners may use counters, an abacus, number grid or number line.	backwards from a given number in multiples of 5s in the number range 0 – 80. The learners may use counters, an abacus, number grid or number line.	and writes number names from 1 to at least 100 LO 2 AS 2: Copies and extends simple number sequences to at least 200
AS 2.4: Counts forwards and backwards in twos from any multiple of 2 between 0 - 200	0 – 60 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 60. The learners may use counters, an abacus, number grid or number line.	0 – 60 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 60. The learners may use counters, an abacus, number grid or number line.	0 – 70 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 70. The learners may use counters, an abacus, number grid or number line. FAT 1 METHOD Teacher FORM Oral/Practical Response	0 – 70 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 70. The learners may use counters, an abacus, number grid or number line.	0 – 80 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 80. The learners may use counters, an abacus, number grid or number line.	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 LO 2 AS 2: Copies and extends simple number sequences to at least 200

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
			TOOL Rubric			
AS 3: Knows and reads number symbols from 1 to at least 200 and writes number names from 1 to at least 100	0-60 Learners read any number symbol in the number range 1 – 60. The learners read the symbols on number cards, a number grid or a number line. e.g. Learners write number names of whole tens in the number range 1 - 60. e.g. 40 forty	0-60 Learners read any number symbol in the number range 1 – 60. The learners read the symbols on number cards, a number grid or a number line. e.g. Learners write number names of whole tens in the number range 1 - 60. e.g. 40 forty	0-70 Learners read any number symbol in the number range 1 – 70. The learners read the symbols on number cards, a number grid or a number line. e.g. Learners write number names of whole tens in the number range 1 - 70. e.g. 70 seventy	0-70 Learners read any number symbol in the number range 1 – 70. The learners read the symbols on number cards, a number grid or a number line. e.g. Learners write number names of whole tens in the number range 1 - 70. e.g. 70 seventy	0-80 Learners read any number symbol in the number range 1 – 80. The learners read the symbols on number cards, a number grid or a number line. e.g. Learners write number names of whole tens in the number range 1 - 80. e.g. 80 eighty	LO 1 AS 1: Counts to at least 100 everyday objects reliably LO 1 AS 2: Counts forwards and backwards in: 2.1 1s from any number between 1-200 2.2 10s from any multiple of 10 between 0-200 2.3 5s from any multiple of 5 between 0-200 2.4 2s from any multiple of 2 between 0-200 LO 2 AS 2: Copies and extends simple number sequences to at least 200 Integration across HL LO 3 READING AND VIEWING AS 4 Reads aloud with expression using appropriate stress pausing and intonation.
AS 4: Orders, describes and compares the following	0-34 Learners order whole numbers in an ascending and	0-40 Learners order whole numbers in an ascending and	0-50 Learners order whole numbers in an ascending and	0-50 Learners order whole numbers in an ascending and	0-50 Learners order whole numbers in an ascending and	LO 1 AS 1: Counts to at least 100 everyday objects reliably

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
<p>numbers:</p> <p>4.1 Whole numbers to at least 2-digit numbers</p>	<p>descending order. Learners may use number line and numbers grid</p> <p>Learners describe the position of numbers 0 – 34 using before, after, between. Learners may use a number line or a number grid.</p>	<p>descending order. Learners may use number line and numbers grid</p> <p>Learners describe the position of numbers 0 – 40 using before, after, between. Learners may use a number line or a number grid.</p>	<p>descending order. Learners may use number line and numbers grid</p> <p>Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid.</p> <p>FAT 1 METHOD Teacher FORM Oral/Practical TOOL Rubric</p>	<p>descending order. Learners may use number line and numbers grid</p> <p>Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid.</p>	<p>descending order. Learners may use number line and numbers grid</p> <p>Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid.</p>	<p>LO 1 AS 2: Counts forwards and backwards in:</p> <p>2.1 1s from any number between 1-200</p> <p>2.2 10s from any multiple of 10 between 0-200</p> <p>2.3 5s from any multiple of 5 between 0-200</p> <p>2.4 2s from any multiple of 2 between 0-200</p> <p>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</p> <p>LO 2 AS 2: Copies and extends simple number sequences to at least 200</p>
<p>AS 4: Orders, describes and compares the following numbers:</p> <p>4.2 Common fractions including halves and quarters ($\frac{1}{2}$, $\frac{1}{4}$)</p>				<p>Learners compare and describe a $\frac{1}{2}$ with a whole. Learners may use concrete objects, pictures or a number line. e.g. Which is bigger $\frac{1}{2}$ or a whole?</p>	<p>Learners compare and describe a $\frac{1}{2}$ with a whole. Learners may use concrete objects, pictures or a number line. e.g. Which is bigger $\frac{1}{2}$ or a whole?</p>	<p>LO 1 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. $\frac{1}{4}$)</p>

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
				Which is smaller $\frac{1}{2}$ or a whole?	Which is smaller $\frac{1}{2}$ or a whole?	
AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers	0-34 Learners identify place value of a given digit in a number range 0-34. Learners may use flash cards	0-34 Learners identify place value of a given digit in a number range 0-34. Learners may use flash cards	0-34 Learners identify place value of a given digit in a number range 0-34. Learners may use flash cards	0-40 Learners identify place value of a given digit in a number range 0-40. Learners may use flash cards	0-50 Learners identify place value of a given digit in a number range 0-50. Learners may use flash cards	LO 1 AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers
AS 6: Solves money problems involving totals and change in rand's and cents.		0 - 50 Learners solve money problems in the number range 0 – 50 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20c or 50c. Learners may use play or real money.		0 - 74 Learners solve money problems in the number range 0 – 74 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20c or 50c. Learners may use play or real money.	0 - 99 Learners solve money problems in the number range 0 – 99 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20c or 50c. Learners may use play or real money. Learners calculate addition and subtraction sums: R40 + R12 = □ R60 – R40 = □ Learners solve word problems.	Integration across EMS LO 1 ECONOMIC CYCLE AS 3 Reads and identifies prices from different types of price tags and labels. AS 4 Calculates change after buying simple goods and services.
AS 7: Solves and explains solutions to practical problems that involve equal		0 – 50 Learners solve and explain practical problems involving equal		0 – 74 Learners solve and explain practical problems involving equal	0 – 99 Learners solve and explain practical problems involving equal	LO 1 AS 4: Orders, describes and compares the following numbers: 4.1 Whole numbers to

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
sharing and grouping and that lead to solutions that also include unitary fractions (e.g. $\frac{1}{4}$)		sharing and grouping where the remainder is a fraction ($\frac{1}{2}$) in the number range 0 – 50. Learners may use concrete apparatus or drawings.		sharing and grouping where the remainder is a fraction ($\frac{1}{2}$) in the number range 0 – 74. Learners may use concrete apparatus or drawings.	sharing and grouping where the remainder is a fraction ($\frac{1}{2}$) in the number range 0 – 99. Learners may use concrete apparatus or drawings.	at least 2-digit numbers 4.2 Common fractions including halves and quarters ($\frac{1}{2}$, $\frac{1}{4}$)
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	0 – 60 Learners perform addition and subtraction with whole tens in the number range 0–60. Learners may use a number square or a number line Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-60. Learners may use a number square or a number line	0 – 60 Learners perform addition and subtraction with whole tens in the number range 0–60. Learners may use a number square or a number line Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-60. Learners may use a number square or a number line	0 – 70 Learners perform addition and subtraction with whole tens in the number range 0-70. Learners may use a number square or a number line Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-70. Learners may use a number square or a number line FAT 1 METHOD	0 – 70 Learners perform addition and subtraction with whole tens in the number range 0–70. Learners may use a number square or a number line Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-70. Learners may use a number square or a number line	0 – 80 Learners perform addition and subtraction with whole tens in the number range 0–80. Learners may use a number square or a number line Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-80. Learners may use a number square or a number line	LO 1 AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20 LO 1 AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers; 10.3 using concrete apparatus 10.4 number-lines

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
			Teacher FORM Written TOOL Rubric			
AS 8: 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.			Learners write number sentences for problems that involve repeated addition leading to multiplication using multiples of 2 and 5. Learners can pack out objects and/or draw a picture before they write the number sentence	Learners write number sentences for problems that involve repeated addition leading to multiplication using multiples of 2 and 5. Learners can pack out objects and/or draw a picture before they write the number sentence	Learners calculate the multiplication of 1-digit numbers with 1-digit numbers in the number range 0 – 30. Learners may use counters, drawings or a number grid.	LO 1 AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers LO 1 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. LO 1 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
AS 8 : Can perform calculations, using appropriate symbols, to solve problems	Learners estimate the answer to addition, subtraction, multiplication and division problems. Learners compare the calculated answer to the estimated answer. Estimation should be used by the learners continuously throughout all the LO's.					

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
involving: 8.3 estimation.						
AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20	0-11 Learners perform mental calculations with addition and subtraction with the answers to 11. Teachers use flash cards with the number symbols to represent the number combinations.	0-11 Learners perform mental calculations with addition and subtraction with the answers to 11. Teachers use flash cards with the number symbols to represent the number combinations.	0-12 Learners perform mental calculations with addition and subtraction with the answers to 12. Teachers use flash cards with the number symbols to represent the number combinations e.g. $7 + 6 = \square$ $14 - 2 = \square$ $8 + 4 = \square$ $12 - 5 = \square$ Addition and subtraction of single-digit numbers in the number range 0-15 with more than one operation FAT 1 METHODS Teacher FORM Oral/Practical TOOL Rating scale	0-12 Learners perform mental calculations with addition and subtraction with the answers to 12. Teachers use flash cards with the number symbols to represent the number combinations.	0-13 Learners perform mental calculations with addition and subtraction with the answers to 13. Teachers use flash cards with the number symbols to represent the number combinations.	LO 1 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; 8.3 estimation LO 1 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

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers;	0-34 Learners break down and build up numbers in the number range 0-34 and may use a number grid and a number line	0-40 Learners break down and build up numbers in the number range 0-40 and may use a number grid and a number line	0-40 Learners break down and build up numbers in the number range 0-40 and may use a number grid and a number line FAT 1 METHODS Teacher FORM Oral/Practical Written TOOL Rubric	0-50 Learners break down and build up numbers in the number range 0-50 and may use a number grid and a number line	0-50 Learners break down and build up numbers in the number range 0-50 and may use a number grid and a number line	LO 1 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; 8.3 estimation LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20 LO 1 AS 11: Explains own solutions to problems.
AS 10: Uses the following techniques: 10.2 doubling and halving;		1 - 34 Learners double numbers with answers in the number range 1 – 34. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 14 double 17 Learners halve	1 - 40 Learners double numbers with answers in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 19 double 17 Learners halve	1 - 40 Learners double numbers with answers in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 19 double 17 Learners halve	1 - 50 Learners double numbers with answers in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 24 double 21 Learners halve	LO 1 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 by 1-digit numbers with solutions to at least 50. 8.3 estimation

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
		<p>numbers without a remainder (even numbers) in the number range 1 – 34. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 24 Halve 32</p> <p>Learners halve numbers with a remainder (odd numbers) in the number range 1 – 34. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 27 Halve 19</p>	<p>numbers without a remainder (even numbers) in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 38 Halve 26</p> <p>Learners halve numbers with a remainder (odd numbers) in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 37 Halve 29</p>	<p>numbers without a remainder (even numbers) in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 38 Halve 26</p> <p>Learners halve numbers with a remainder (odd numbers) in the number range 1 – 40. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 37 Halve 29</p>	<p>numbers without a remainder (even numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 48 Halve 26</p> <p>Learners halve numbers with a remainder (odd numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards.</p> <p>e.g. Halve 47 Halve 39</p>	AS 11: Explains own solutions to problems.
AS 10: Uses the following techniques: 10.3 using concrete apparatus	Integrate with all number work					
AS 10: Uses the	Integrate with all number work					

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
following techniques: 10.4 number lines						
AS 11: Explains own solutions to problems.	Learners explain own solutions to problems					LO 1 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 by 1-digit numbers with solutions to at least 50. 8.3 estimation LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20 LO 1 AS 10: Uses the following techniques: 10.1 building up and breaking down numbers; 10.2 doubling and halving.
AS 12: Checks the solution given to problems by peers	Learners check each other's solution to problems					

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 2: PATTERNS, FUNCTIONS AND ALGEBRA						
AS 1: Copies and extends simple patterns using physical objects and drawings	Learners copy and extend a specific pattern. Learners may use buttons, beans, shapes or drawings. e.g. ▲▶▼□ 	Learners copy and extend a specific pattern. Learners may use buttons, beans, shapes or drawings. e.g. ▲▶▼□ 	Learners copy and extend a specific pattern. Learners may use buttons, beans, shapes or drawings. e.g. ▲▶▼□ 			LO 2 AS 3: Creates own patterns. LO 2 AS 4: Describes observed patterns. Integration across ARTS & CULTURE LO 1 VISUAL ARTS AS 2: Identifies and uses patterns in the immediate environment, using various materials in organized sequences and in combination.
AS 2: Copies and extends simple number sequences to at least 200	0-60 Learners copy and extend simple number sequences in the number range 0-60 and may use number lines and number grid.	0-60 Learners copy and extend simple number sequences in the number range 0-60 and may use number lines and number grid	0-70 Learners copy and extend simple number sequences in the number range 0-70 and may use number lines and number grid FAT 1 METHODS Teacher FORM Written TOOL Rubric	0-70 Learners copy and extend simple number sequences in the number range 0-70 and may use number lines and number grid	0-80 Learners copy and extend simple number sequences in the number range 0-80 and may use number lines and number grid	LO 1 NUMBERS, OPERATION AND RELATIONSHIPS AS 2: Counts forwards and backwards in: 2.1 ones from any number between 0 – 200 2.2 10s from any multiple of 10 between 0 and 200; 2.3 5s from any multiple of 5 between 0 and 200; 2.4 2s from any multiple of 2 between 0 and 200. AS 3 Knows and reads number symbols from 1 to at least 200 and

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 2: PATTERNS, FUNCTIONS AND ALGEBRA						
						<p>write number names from 1 to at least 100.</p> <p>LO 1 AS 4: Orders, describes and compares the following numbers:</p> <p>4.1 Whole numbers to at least 2-digit numbers</p> <p>4.2 Common fractions including halves and quarters ($\frac{1}{2}$, $\frac{1}{4}$)</p>

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 3: SPACE AND SHAPE (GEOMETRY)						
<p>AS 1:Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures including:</p> <ul style="list-style-type: none"> • Boxes (prisms), balls (spheres) and cylinders • Triangles, squares and rectangles • Circles 	<p>Learners recognise, identify and name 2D-shapes and 3D -objects in the environment and in pictures. e.g. 3D objects: boxes, balls, cylinders 2D-shapes: triangles, squares, rectangles, circles</p>	<p>Learners recognise, identify and name 2D-shapes and 3D -objects in the environment and in pictures. e.g. 3D objects: boxes, balls, cylinders 2D-shapes: triangles, squares, rectangles, circles</p>	<p>Learners recognise, identify and name 2D-shapes and 3D -objects in the environment and in pictures. e.g. 3D objects: boxes, balls, cylinders 2D-shapes: triangles, squares, rectangles, circles</p> <p>FAT 1 METHODS Teacher FORM Written TOOL Rating scale</p>			<p>AS 2: Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to:</p> <ul style="list-style-type: none"> • size • objects that roll or slide • Shapes that have straight or round edges. <p>Integration across ARTS AND CULTURE LO 1 VISUAL ARTS AS 1: Explores the immediate environment using the elementary functions of line, shape, colour and contrast in 2-D and 3-D work.</p>
<p>AS 2: Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to:</p> <ul style="list-style-type: none"> • size • objects that roll or slide 	<p>Learners sort, describe and compares 3-D objects (boxes, balls and cylinders) according to objects that roll and objects that slide. Learners sort, describe and</p>	<p>Learners sort, describe and compares 3-D objects (boxes, balls and cylinders) according to objects that roll and objects that slide. Learners sort, describe and</p>		<p>Learners sort, describe and compares 3-D objects (boxes, balls and cylinders) according to objects that roll and objects that slide. Learners sort, describe and</p>	<p>Learners sort, describe and compares 3-D objects (boxes, balls and cylinders) according to objects that roll and objects that slide. Learners sort, describe and</p>	<p>AS 1:Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures including:</p> <ul style="list-style-type: none"> • Boxes (prisms), balls (spheres) and cylinders • Triangles, squares and rectangles • Circles

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 3: SPACE AND SHAPE (GEOMETRY)						
<ul style="list-style-type: none"> Shapes that have straight or round edges. 	compare 3-D objects according to size. e.g. bigger than smaller than Learners sort, describe and compare 3-D objects according to objects with straight or round edges. e.g. Which objects can slide? Which objects can roll?	compare 3-D objects according to size. e.g. bigger than smaller than Learners sort, describe and compare 3-D objects according to objects with straight or round edges. e.g. Which objects can slide? Which objects can roll?		compare 3-D objects according to size. e.g. bigger than smaller than Learners sort, describe and compare 3-D objects according to objects with straight or round edges. e.g. Which objects can slide? Which objects can roll?	compare 3-D objects according to size. e.g. bigger than smaller than Learners sort, describe and compare 3-D objects according to objects with straight or round edges. e.g. Which objects can slide? Which objects can roll?	LO 5 AS 2: Sorts orders and organize own and supplied data by one or more attributes for a particular reason. Integration across ARTS AND CULTURE LO 1 DANCE AS 2: Recognises and explores opposites found in the immediate environment (e.g. makes large and small shapes, high and low shapes with the body). HOME LANGUAGE LO 5 Thinking and reasoning AS: Uses language to develop concepts; demonstrates developing knowledge of concepts such as quantity, size, shape, direction, colour, speed, time, age, sequence
AS 3: Observes and creates two-dimensional shapes and three-dimensional objects using concrete				Learners observe and build models with any re-usable waste material. e.g. toy, container to keep pencils, etc.		LO 3 AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 3: SPACE AND SHAPE (GEOMETRY)						
materials (e.g. building blocks, construction sets and cut-out two-dimensional shapes)						pictures including: <ul style="list-style-type: none"> • Boxes (prisms), balls (spheres) and cylinders • Triangles, squares and rectangles • Circles
AS 4: Recognises symmetry in two-dimensional shapes and three-dimensional objects.	Learners recognise symmetry in 2-D shapes. Learners draw the identical left or right image of a 2-D shape.	Learners recognise symmetry in 2-D shapes. Learners draw the identical left or right image of a 2-D shape.	Learners recognise symmetry in 2-D shapes. Learners draw the identical left or right image of a 2-D shape. FAT 1 METHODS Teacher FORM Oral/Practical Written TOOL Rubric			LO 3 AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures including: <ul style="list-style-type: none"> • Boxes (prisms), balls (spheres) and cylinders • Triangles, squares and rectangles • Circles

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
AS 1: Reads and writes analogue and digital clock time in terms of hours and minutes	Learners read time in hours on a daily basis. Learners may use model clocks.	Learners read time in hours on a daily basis. Learners may use model clocks.	Learners read time in hours and minutes on a daily basis. Learners may use model clocks.	Learners read time in hours and minutes on a daily basis. Learners may use model clocks.	Learners read time in hours and minutes on a daily basis. Learners may use model clocks.	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
AS 2: Names in order the days of the week and the months of the year.		Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar.		Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar.	Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar.	LO 4 AS 4: Sequences events according to days, weeks, months and years.
AS 3: Calculates elapsed time in: 3.1 hours and minutes using clocks AS 3: Calculates elapsed time in: 3.2 days, weeks and months using calendars.		Learners calculate elapsed time in weeks. Learners may use a calendar. e.g. How many weeks from this Monday to the next Monday? How many weeks from the first Tuesday of the month to the first Tuesday of the next month?		Learners calculate elapsed time in minutes. Learners may use model clocks. e.g. How many minutes from 10 o'clock to 10 minutes past 10? How many minutes from 3 o'clock to 20 past 3? Learners calculate elapsed time in weeks. Learners may use a calendar.	Learners calculate elapsed time in minutes. Learners may use model clocks. e.g. How many minutes from 10 o'clock to 10 minutes past 10? How many minutes from 3 o'clock to 20 past 3? Learners calculate elapsed time in weeks. Learners may use a calendar.	LO 4 AS 1: Reads and writes analogue and digital clock time in terms of hours and minutes LO 4 AS 2: Names in order the days of the week and the months of the year. LO 4 AS 4: Sequences events according to days, weeks, months and years.

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
				e.g. How many weeks from this Monday to the next Monday? How many weeks from the first Tuesday of the month to the first Tuesday of the next month?	e.g. How many weeks from this Monday to the next Monday? How many weeks from the first Tuesday of the month to the first Tuesday of the next month?	
AS 4: Sequences events according to days, weeks, months and years.		Learners sequence events according to months. e.g. Fill in birthdays on a calendar.	Learners sequence events according to days and weeks. e.g. Fill in sport times, computer classes and music times on a calendar..	Learners sequence events according to days and weeks. e.g. Fill in sport times, computer classes and music times on a calendar..	Learners sequence events according to days and weeks. e.g. Fill in sport times, computer classes and music times on a calendar..	LO 4 AS 2: Names in order the days of the week and the months of the year. LO 4 AS 3: Calculates elapsed time in: 3.1 hours and minutes using clocks 3.2 days, weeks and months using calendars.
AS 6: Estimates, measures, compares and orders three-dimensional objects using non-standard measures: • mass (e.g. bricks, sand bags) • capacity (e.g. spoons, cups)				Mass Learners estimate and measure mass of different objects. Learners use sand bags, blocks etc. e.g. How many blocks do I have to put on this side of the scale to weigh the	Mass Learners estimate and measure mass of different objects. Learners use sand bags, blocks etc. e.g. How many blocks do I have to put on this side of the scale to weigh the	Integration across ENGLISH HL LO 5 AS 1 Using language to develop concepts: Understands and uses the conceptual language of different learning areas necessary at this level and in preparation for the next level.

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
length (e.g. hand spans, footsteps)				<p>same as the book on the other side?</p> <p>Learners compare the mass of different objects and order the objects from heaviest to lightest and lightest to heaviest</p>	<p>same as the book on the other side?</p> <p>Learners compare the mass of different objects and order the objects from heaviest to lightest and lightest to heaviest</p>	

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 5: DATA HANDLING						
AS 1: Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher (e.g. "How many learners are there in each classroom?")		Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red counters? How many white counters?		Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red counters? How many white counters?	Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red counters? How many white counters?	LO 5 AS 5: Describes own or a peer's collection of objects, explains how it was sorted, and answers questions about it. Integration across FAL LO 5 THINKING AND REASONING AS 3 Collects and records information in different ways. Carries out a simple survey e.g. How many learners come to school by taxi, bus, car, and bicycle or on foot?
AS 2: Sorts physical objects according to one attribute chosen by the teacher.		Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. - length(long and short sticks), - size (big and small) - colour		Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. - length(long and short sticks), - size (big and small) - colour	Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. - length(long and short sticks), - size (big and small) - colour	LO 3 AS 2: Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to: <ul style="list-style-type: none"> • size • objects that roll or slide • Shapes that have straight or round edges. LO 5 AS 3: Gives

WEEK	1	2	3	4	5	Integration within and across
LEARNING OUTCOME 5: DATA HANDLING						
						reasons for collections being grouped in particular ways.
AS3: Gives reasons for collections being grouped in particular ways.		Learners give reasons for grouping collection in a particular way. e.g. warm and cold foodstuffs, kitchen utensils, etc.,		Learners give reasons for grouping collection in a particular way. e.g. warm and cold foodstuffs, kitchen utensils, etc.,	Learners give reasons for grouping collection in a particular way. e.g. warm and cold foodstuffs, kitchen utensils, etc.,	LO 5 AS 2: Sorts physical objects according to one attribute chosen by the teacher.

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 1: Counts to at least 100 everyday objects reliably		0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.	0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.		0 – 50 Learners count physical objects using one-to-one correspondence in the number range 0 – 50.	LO 1 AS 2: Counts forwards and backwards in: 2.1 1s from any number between 1-200 2.2 10s from any multiple of 10 between 0-200 2.3 5s from any multiple of 5 between 0-200 2.4 2s from any multiple of 2 between 0-200 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 LO 2 AS 2: Copies and extends simple number sequences to at least 200
AS 2.1: Counts forwards and backwards in ones from any number between 1 - 200	0 – 130 Learners count forwards and backwards in ones in the number range 0 – 130. The learners may use counters, an abacus, number	0 – 140 Learners count forwards and backwards in ones in the number range 0 – 140. The learners may use counters, an abacus, number	0 – 140 Learners count forwards and backwards in ones in the number range 0 – 140. The learners may use counters, an abacus, number	0 – 150 Learners count forwards and backwards in ones in the number range 0 – 150. The learners may use counters, an abacus, number	0 – 150 Learners count forwards and backwards in ones in the number range 0 – 150. The learners may use counters, an abacus, number	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 LO 2 AS 2: Copies and extends simple number sequences to at least

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	grid or number line. FAT 2 METHODS Teacher FORM Oral/Practical TOOL Rubric	grid or number line.	grid or number line.	grid or number line. FAT 3 METHODS Teacher FORM Written TOOL Rubric	grid or number line.	200
AS 2.2: Counts forwards and backwards in tens from any multiple of 10 between 0 - 200	0 – 140 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 140. The learners may use counters, an abacus, number grid or number line. FAT 2 METHODS Teacher FORM Oral/Practical TOOL Rubric	0 – 140 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 140. The learners may use counters, an abacus, number grid or number line.	0 – 150 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line.	0 – 150 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line. FAT 3 METHODS Teacher FORM Written TOOL Rubric	0 – 150 Learners count forwards and backwards from a given number in multiples of 10s in the number range 0 – 150. The learners may use counters, an abacus, number grid or number line.	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 LO 2 AS 2: Copies and extends simple number sequences to at least 200
AS 2.3: Counts forwards and backwards in fives from any multiple of 5 between 0 - 200	0 – 80 Learners count forwards and backwards from a given number in multiples of 5s in the number range 0 – 80. The learners may use	0 – 90 Learners count forwards and backwards from a given number in multiples of 5s in the number range 0 – 90. The learners may use	0 – 90 Learners count forwards and backwards from a given number in multiples of 5s in the number range 0 – 90. The learners may use	0 – 100 Learners count forwards and backwards from a given number in multiples of 5s in the number range 0 – 100. The learners may use	0 – 100 Learners count forwards and backwards from a given number in multiples of 5s in the number range 0 – 100. The learners may use	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 LO 2 AS 2: Copies and extends simple number

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	counters, an abacus, number grid or number line. FAT 2 METHODS Teacher FORM Oral/Practical Written TOOL Rubric	counters, an abacus, number grid or number line.	counters, an abacus, number grid or number line.	counters, an abacus, number grid or number line. FAT 3 METHODS Teacher FORM Written TOOL Rubric	counters, an abacus, number grid or number line.	sequences to at least 200
AS 2.4: Counts forwards and backwards in twos from any multiple of 2 between 0 - 200	0 – 80 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 80. The learners may use counters, an abacus, number grid or number line. FAT 2 METHODS Teacher FORM Oral/Practical Written TOOL Rubric	0 – 90 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 90. The learners may use counters, an abacus, number grid or number line.	0 – 90 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 90. The learners may use counters, an abacus, number grid or number line.	0 – 100 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 100. The learners may use counters, an abacus, number grid or number line. FAT 3 METHODS Teacher FORM Written TOOL Rubric	0 – 100 Learners count forwards and backwards from a given number in multiples of 2s in the number range 0 – 100. The learners may use counters, an abacus, number grid or number line.	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 LO 2 AS 2: Copies and extends simple number sequences to at least 200

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 3: Knows and reads number symbols from 1 to at least 200 and writes number names from 1 to at least 100	<p>1– 80 Learners read any number symbol in the number range 1 – 80. The learners read the symbols on number cards, a number grid or a number line.</p> <p>FAT 2 METHOD Teacher FORM Oral/Practical response TOOLS Rubric</p> <p>Learners write number names of whole tens in the number range 1 - 80.</p>	<p>1– 90 Learners read any number symbol in the number range 1 – 90. The learners read the symbols on number cards, a number grid or a number line.</p> <p>Learners write number names of whole tens in the number range 1 - 90.</p>	<p>1– 90 Learners read any number symbol in the number range 1 – 90. The learners read the symbols on number cards, a number grid or a number line.</p> <p>Learners write number names of whole tens in the number range 1 - 90.</p>	<p>1– 100 Learners read any number symbol in the number range 1 – 100. The learners read the symbols on number cards, a number grid or a number line.</p> <p>Learners write number names of whole tens in the number range 1 - 100.</p> <p>FAT 3 METHOD Teacher FORM Written response TOOLS Rubric</p>	<p>1– 100 Learners read any number symbol in the number range 1 – 100. The learners read the symbols on number cards, a number grid or a number line.</p> <p>Learners write number names of whole tens in the number range 1 - 100.</p>	<p>LO 1 AS 1: Counts to at least 100 everyday objects reliably</p> <p>LO 1 AS 2: Counts forwards and backwards in: 2.1 1s from any number between 1-200 2.2 10s from any multiple of 10 between 0-200 2.3 5s from any multiple of 5 between 0-200 2.4 2s from any multiple of 2 between 0-200</p> <p>LO 2 AS 2: Copies and extends simple number sequences to at least 200</p> <p>Integration across HL LO 3 READING AND VIEWING AS 4 Reads aloud with expression using appropriate stress pausing and intonation</p>
AS 4: Orders,		0-50	0-50	0-50	Consolidation	LO 1 AS 1: Counts to

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
describes and compares the following numbers: 4.1 Whole numbers to at least 2- digit numbers		Learners order whole numbers in an ascending and descending order. Learners may use number line and numbers grid Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid.	Learners order whole numbers in an ascending and descending order. Learners may use number line and numbers grid Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid.	Learners order whole numbers in an ascending and descending order. Learners may use number line and numbers grid Learners describe the position of numbers 0 – 50 using before, after, between. Learners may use a number line or a number grid. FAT 3 METHOD Teacher FORM Written Response TOOL Rubric	and intervention	at least 100 everyday objects reliably LO 1 AS 2: Counts forwards and backwards in: 2.1 1s from any number between 1-200 2.2 10s from any multiple of 10 between 0-200 2.3 5s from any multiple of 5 between 0-200 2.4 2s from any multiple of 2 between 0-200 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 LO 2 AS 2: Copies and extends simple number sequences to at least 200
AS 4: Orders, describes and compares the following numbers 4.2 common		Learners compare and describe a $\frac{1}{2}$ with a whole. Learners may use concrete objects, pictures or a	Learners compare and describe a $\frac{1}{2}$ with a whole. Learners may use concrete objects, pictures or a			LO 1 AS 7: Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
fractions including halves and quarters		number line. e.g. Which is bigger $\frac{1}{2}$ or a whole? Which is smaller $\frac{1}{2}$ or a whole?	number line. e.g. Which is bigger $\frac{1}{2}$ or a whole? Which is smaller $\frac{1}{2}$ or a whole?			also include unitary fractions (e.g. $\frac{1}{4}$)
AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers	0 -50 Learners identify the place value of a given digit in a number in the number range 0 – 50. Learners may use flard cards. FAT 2 METHOD Teacher FORM Oral/Practical TOOL Rating scale	0 -50 Learners identify the place value of a given digit in a number in the number range 0 – 50. Learners may use flard cards.	0 -50 Learners identify the place value of a given digit in a number in the number range 0 – 50. Learners may use flard cards.	0 -50 Learners identify the place value of a given digit in a number in the number range 0 – 50. Learners may use flard cards. FAT 3 METHOD Teacher FORM Written TOOL Rating scale		LO 1 AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers
AS 6: Solves money problems involving totals and change in rand's and cents,	0 - 99 Learners solve money problems in the number range 0 – 99 using R1, R2, R5, R10, R20, R50, 5c, 10c, 20c or 50c. Learners may use play or real money. Learners calculate addition and subtraction sums:					Integration across EMS LO 1 ECONOMIC CYCLE AS 3 Reads and identifies prices from different types of price tags and labels. AS 4 Calculates change after buying simple goods and services.

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	<p>$R40 + R12 = \square$ $R60 - R40 = \square$</p> <p>Learners solve word problems.</p> <p>FAT 2 METHOD Teacher FORM Oral/Practical Response Written Response TOOL Rubric</p>					
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.	<p>0 – 99 Learners solve and explain practical problems involving equal sharing and grouping where the remainder is a fraction ($\frac{1}{2}$) in the number range 0 – 99. Learners may use concrete apparatus or drawings.</p> <p>FAT 2 METHOD Teacher FORM Oral/Practical Response Written Response TOOL Rubric</p>					AS 4: Orders, describes and compares the following numbers: 4.2 Common fractions including halves and quarters ($\frac{1}{2}$, $\frac{1}{4}$)

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
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	<p>0 – 80 Learners perform addition and subtraction with whole tens in the number range 0–80. Learners may use a number square or a number line</p> <p>Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-80. Learners may use a number square or a number line e.g. 50 + 13 60 - 15 FAT 2 METHOD Teacher FORM Written TOOL Rubric</p>	<p>0 – 90 Learners perform addition and subtraction with whole tens in the number range 0–90. Learners may use a number square or a number line</p> <p>Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-90. Learners may use a number square or a number line e.g. 50 + 13 60 - 15</p> <p>Learners solve word problems.</p>	<p>0 – 90 Learners perform addition and subtraction with whole tens in the number range 0–90. Learners may use a number square or a number line</p> <p>Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-90. Learners may use a number square or a number line e.g. 70 + 13 90 – 15</p> <p>Learners solve word problems.</p>	<p>0 – 99 Learners perform addition and subtraction with whole tens in the number range 0–99. Learners may use a number square or a number line</p> <p>Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-99. Learners may use a number square or a number line e.g. 80 + 13 90 - 15</p> <p>Learners solve word problems. FAT 3 METHOD Teacher FORM Oral/Practical Written TOOL Rubric</p>	<p>0 – 99 Learners perform addition and subtraction with whole tens in the number range 0–99. Learners may use a number square or a number line</p> <p>Learners perform addition and subtraction with adding to or subtracting from a whole 10 to/from any number in the number range 0-99. Learners may use a number square or a number line e.g. 80 + 13 90 - 15</p> <p>Learners solve word problems.</p>	<p>LO 1 AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers</p> <p>LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20</p> <p>LO 1 AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers; 10.3 using concrete apparatus 10.4 number-lines</p>

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 8: 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.		Learners calculate the multiplication of 1-digit numbers with 1-digit numbers in the number range 0 – 40. Learners may use counters, drawings or a number grid. Learners solve word problems.	Learners calculate the multiplication of 1-digit numbers with 1-digit numbers in the number range 0 – 40. Learners may use counters, drawings or a number grid. Learners solve word problems.	Learners calculate the multiplication of 1-digit numbers with 1-digit numbers in the number range 0 – 40. Learners may use counters, drawings or a number grid. Learners solve word problems. FAT 3 METHOD Teacher FORM Oral/Practical Written TOOL Rubric	Learners calculate the multiplication of 1-digit numbers with 1-digit numbers in the number range 0 – 40. Learners may use counters, drawings or a number grid.	LO 1 AS 5: Recognizes the place value of digits whole numbers to at least 2-digit numbers LO 1 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. LO 1 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
AS 8: Can perform calculations, using appropriate symbols, to solve problems involving: 8.3 estimation.	Learners estimate the answer to addition, subtraction and multiplication problems. Learners compare the calculated answer to the estimated answer. Estimation should be used by the learners continuously throughout all the LO's.					
AS 9: Performs mental calculations	0-13 Learners perform mental	0-14 Learners perform mental	0-14 Learners perform mental	0-15 Learners perform mental	0-15 Learners perform mental	LO 1 AS 8: Can perform calculations, using appropriate

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
involving: 9.1 addition and subtraction for numbers to at least 20	calculations with addition and subtraction with the answers to 13. Teachers use flash cards with the number symbols to represent the number combinations. FAT 2 METHODS Teacher FORM Written response TOOL Rating scale	calculations with addition and subtraction with the answers to 14. Teachers use flash cards with the number symbols to represent the number combinations.	calculations with addition and subtraction with the answers to 14. Teachers use flash cards with the number symbols to represent the number combinations.	calculations with addition and subtraction with the answers to 15. Teachers use flash cards with the number symbols to represent the number combinations. FAT 3 METHODS Teacher FORM Written response TOOL Rating scale	calculations with addition and subtraction with the answers to 15. Teachers use flash cards with the number symbols to represent the number combinations.	symbols, to solve problems involving: 8.1 Addition and subtraction of whole numbers with at least 2 digits; 8.3 estimation LO 1 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
AS 10: Uses the following techniques: 10.1 Building up and breaking down numbers;	1 - 50 Learners break down numbers in the number range 1 – 50. Learners may use counters, drawings, number grid or a number line. e.g. $44 = 35 + 5 + 4$ $44 = 20 + 20 + 4$ $45 = \square + \square + \square$ $45 = \square + \square + \square$ $+ \square + \square$ Learners build up	Learners break down and build up numbers in the number range 1 – 50. Learners may use counters, drawings, number grid or a number line.	Learners break down and build up numbers in the number range 1 – 50. Learners may use counters, drawings, number grid or a number line.		Learners break down and build up numbers in the number range 1 – 50. Learners may use counters, drawings, number grid or a number line.	LO 1 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; 8.3 estimation LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20 LO 1 AS 11: Explains

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	numbers in the number range 1 – 50. Learners may use counters, drawings, number grid or a number line FAT 2 METHODS Teacher FORM Written TOOL Rubric					own solutions to problems
AS 10: Uses the following techniques: 10.2 doubling and halving;	1 - 50 Learners double numbers with answers in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 24 double 21 Learners halve numbers without a remainder (even numbers) in the number range 1 – 50. Learners may use concrete	1 - 50 Learners double numbers with answers in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 24 double 21 Learners halve numbers without a remainder (even numbers) in the number range 1 – 50. Learners may use concrete	1 - 50 Learners double numbers with answers in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 24 double 21 Learners halve numbers without a remainder (even numbers) in the number range 1 – 50. Learners may use concrete	1 - 50 Learners double numbers with answers in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. double 24 double 21 Learners halve numbers without a remainder (even numbers) in the number range 1 – 50. Learners may use concrete	Intervention and consolidation	LO 1 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 by 1-digit numbers with solutions to at least 50. 8.3 estimation AS 11: Explains own solutions to problems

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
	apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 48 Halve 26 Learners halve numbers with a remainder (odd numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 47 Halve 39 FAT 2 METHOD Teacher FORM Oral/Practical Written TOOL Rubric	apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 48 Halve 26 Learners halve numbers with a remainder (odd numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 47 Halve 39	apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 48 Halve 26 Learners halve numbers with a remainder (odd numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 47 Halve 39	apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 48 Halve 26 Learners halve numbers with a remainder (odd numbers) in the number range 1 – 50. Learners may use concrete apparatus, drawings, number lines, number grid, abacus or flard cards. e.g. Halve 47 Halve 39 FAT 3 METHOD Teacher FORM Oral/Practical Written TOOL Rubric		
AS 10: Uses the following techniques: 10.3 concrete apparatus	Learners use concrete apparatus when counting, building up, breaking down, doubling and halving numbers.					

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
AS 10: Uses the following techniques: 10.4 number-lines	Integrate with all number work					
AS 11: Explains own solutions to problems.	Learners explain own solutions to problems					LO 1 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 by 1-digit numbers with solutions to at least 50. 8.3 estimation LO 1 AS 9: Performs mental calculations involving: 9.1 addition and subtraction for numbers to at least 20 LO 1 AS 10: Uses the following techniques: 10.1 building up and breaking down numbers; 10.2 doubling and halving.
AS 12: Checks the solution given to problems by	Learners check each other's solution to problems					

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 1: NUMBERS, OPERATIONS AND RELATIONSHIPS						
peers						

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 2: PATTERNS, FUNCTIONS AND ALGEBRA						
AS 2: Copies and extends simple number sequences to at least 200	0-80 Learners copy and extend simple number sequences in the number range 0-80 and may use number lines and number grid FAT 2 METHODS Teacher FORM Written TOOL Rubric	0-90 Learners copy and extend simple number sequences in the number range 0-90 and may use number lines and number grid	0-90 Learners copy and extend simple number sequences in the number range 0-90 and may use number lines and number grid	0-100 Learners copy and extend simple number sequences in the number range 0-100 and may use number lines and number grid FAT 3 METHODS Teacher FORM Written TOOL Rubric	0-100 Learners copy and extend simple number sequences in the number range 0-100 and may use number lines and number grid	LO 1 NUMBERS, OPERATION AND RELATIONSHIPS AS 2: Counts forwards and backwards in: 2.1 ones from any number between 0 – 200 2.2 10s from any multiple of 10 between 0 and 200; 2.3 5s from any multiple of 5 between 0 and 200; 2.4 2s from any multiple of 2 between 0 and 200. AS 3 Knows and reads number symbols from 1 to at least 200 and write number names from 1 to at least 100. LO 1 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 ($\frac{1}{2}$, $\frac{1}{4}$)
AS 3: Creates own patterns	Learners draw own patterns.	Learners draw own patterns.	Learners draw own patterns.	Learners draw own patterns.		LO 2 AS 1: Copies and extends simple

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 2: PATTERNS, FUNCTIONS AND ALGEBRA						
	<p>e.g. □○□□□□□□ ★ ★ ★ ★ </p> <p>Learners create their own number patterns in the number range 0 - 80. Learners may use a number grid or a number line.</p>	<p>e.g. □○□□□□□□ ★ ★ ★ ★ </p> <p>Learners create their own number patterns in the number range 0 - 90. Learners may use a number grid or a number line.</p>	<p>e.g. □○□□□□□□ ★ ★ ★ ★ </p> <p>Learners create their own number patterns in the number range 0 - 90. Learners may use a number grid or a number line.</p>	<p>e.g. □○□□□□□□ ★ ★ ★ ★ </p> <p>Learners create their own number patterns in the number range 0 - 100. Learners may use a number grid or a number line.</p> <p>FAT 3 METHODS Teacher FORM Written TOOL Rubric</p>		<p>patterns using physical objects and drawings</p> <p>Integration across ARTS & CULTURE LO 1 MUSIC AS 1 Demonstrates fundamental pulse and echoes rhythms from the immediate environment using body percussion, instrumental percussion and movement.</p>
AS 4: Describes observed patterns		<p>Learners describe a given/own pattern. e.g. objects drawings numbers 1, 11, 21, 31, 41, 51</p>	<p>Learners describe a given/own pattern. e.g. objects drawings numbers 1, 11, 21, 31, 41, 51</p>	<p>Learners describe a given/own pattern. e.g. objects drawings numbers 1, 11, 21, 31, 41, 51</p> <p>FAT 3 METHODS Teacher FORM Oral/Practical TOOL Rubric</p>		<p>LO 2 AS 1: Copies and extends simple patterns using physical objects and drawings. LO 2 AS 2: Copies and extends simple number sequences to at least 200 LO 2 AS 3: Creates own patterns</p> <p>Integration across ARTS & CULTURE LO 1 VISUAL ARTS AS 1: Identifies and uses patterns in the immediate</p>

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 2: PATTERNS, FUNCTIONS AND ALGEBRA						
						environment, using various materials in organized sequences and in combination. LO 4 VISUAL ARTS AS 1 Explores, experiences and creatively communicates patterns and textures found in the immediate and built environment
AS 5: Identifies, describes and copies geometric patterns in natural and cultural artefacts of different cultures and times					Learners identify, describe and copy geometrical shapes on the school grounds. e.g. building, windows, gate, fence, etc.	Integration across ARTS & CULTURE LO 1 VISUAL ARTS AS 1: Explores the immediate environment using the elementary functions of line, shape, colour and contrast in 2-D and 3-D work. LO 2 AS 4.1 Discusses and offers opinions on own and others' artworks, artefacts and crafts found in the immediate environment.

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 3: SPACE AND SHAPE (GEOMETRY)						
<p>AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including:</p> <ul style="list-style-type: none"> boxes (prisms), balls (spheres) and cylinders triangles, squares and rectangles circles 		<p>Learners recognise, identify and name 2D-shapes and 3D-objects in the environment and in pictures.</p> <p>e.g.</p> <p>3D objects: boxes, balls, cylinders</p> <p>2D-shapes: triangles, squares, rectangles, circles</p>	<p>Learners recognise, identify and name 2D-shapes and 3D-objects in the environment and in pictures.</p> <p>e.g.</p> <p>3D objects: boxes, balls, cylinders</p> <p>2D-shapes: triangles, squares, rectangles, circles</p>			<p>AS 2: Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to:</p> <ul style="list-style-type: none"> size objects that roll or slide Shapes that have straight or round edges. <p>Integration across ARTS AND CULTURE LO 1 VISUAL ARTS AS 1: Explores the immediate environment using the elementary functions of line, shape, colour and contrast in 2-D and 3-D work</p>
<p>AS 7: Describes positional relationships (alone and/or as a member of a group or team) between three-dimensional objects or self and a peer</p>		<p>Learners describe their position in relationship with a 3D-object.</p> <p>e.g.</p> <p>in front, inside, on top, behind, on the right side, on the left side</p>	<p>Learners describe their position in relationship with a 3D-object.</p> <p>e.g.</p> <p>in front, inside, on top, behind, on the right side, on the left side</p>	<p>Learners describe their position in relationship with a 3D-object.</p> <p>e.g.</p> <p>in front, inside, on top, behind, on the right side, on the left side</p>	<p>Learners describe their position in relationship with a 3D-object.</p> <p>e.g.</p> <p>in front, inside, on top, behind, on the right side, on the left side</p>	<p>LO 3 AS 5: Recognises three-dimensional objects from different positions.</p> <p>LO 3 AS 6: Positions self within the classroom or three-dimensional objects in relation to each other.</p> <p>Integration across LIFE ORIENTATION LO 4 AS 3: Performs</p>

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 3: SPACE AND SHAPE (GEOMETRY)						
						expressive movements or patterns rhythmically, using various stimuli. LO 4 AS 4: Participates in structural activities using equipment.

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
AS 1: Reads analogue and digital clock time in terms of hours and minutes	Learners read analogue clock time in hours and minutes. Learners may use model clocks. FAT 2 METHODS Teacher FORM Oral/Practical TOOL Rating scale	Learners read time in hours and minutes on a daily basis. Learners may use model clocks.				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
AS 2: Names in order the days of the week and the months of the year.		Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar. e.g. Which day comes before Monday? Which month comes after March? Which day is between Thursday and Saturday?	Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar. e.g. Which day comes before Monday? Which month comes after March? Which day is between Thursday and Saturday?		Learners answer questions about the order of days of the week and the months of the year. Learners may use a calendar. e.g. Which day comes before Monday? Which month comes after March? Which day is between Thursday and Saturday?	LO 4 AS 4: Sequences events according to days, weeks, months and years.
AS 3: Calculates elapsed time in: 3.1 hours and minutes using					Learners calculate elapsed time in minutes. Learners may use	AS 1: Reads analogue and digital clock time in terms of hours and minutes

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
clocks					model clocks. e.g. How many minutes from 10 o'clock to 10 minutes past 10? How many minutes from 3 o'clock to 20 past 3?	AS 2: Names in order the days of the week and the months of the year. AS 4: Sequences events according to days, weeks, months and years.
AS 6: Estimates, measures, compares and orders three-dimensional objects using non-standard measures: • mass (e.g. bricks, sand bags) • capacity (e.g. spoons, cups) length (e.g. hand spans, footsteps)	<p>Mass</p> <p>Learners estimate and measure mass of different objects. Learners use sand bags, blocks etc. e.g. How many blocks do I have to put on this side of the scale to weigh the same as the book on the other side?</p> <p>Learners compare the mass of different objects and order the objects from heaviest to lightest and lightest to heaviest</p> <p>FAT 2</p>					<p>Integration across</p> <p>ENGLISH HL LO 5 AS 1 Using language to develop concepts: Understands and uses the conceptual language of different learning areas necessary at this level and in preparation for the next level.</p>

WEEK	6	7	8	9	10 & 11	Integration within and across
LEARNING OUTCOME 4: MEASUREMENT						
	METHODS Teacher FORM Oral/Practical Written TOOL Rubric					

WEEK	6	7	8	9	10 & 11	Integration within and across
LO 5: DATA HANDLING						
AS 1: Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher (e.g. "How many learners are there in each classroom?")		Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red blocks? How many white blocks?	Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red blocks? How many white blocks?	Learners collect data in the classroom and school environment according to one attribute. Learners answer questions about the collections. e.g. How many red blocks? How many white blocks? FAT 3 METHODS Teacher FORM Oral/Practical TOOL Rubric		LO 5 AS 5: Describes own or a peer's collection of objects, explains how it was sorted, and answers questions about it. Integration across FAL LO 5 THINKING AND REASONING AS 3 Collects and records information in different ways. Carries out a simple survey e.g. How many learners come to school by taxi, bus, car, and bicycle or on foot?
AS 2: Sorts physical objects according to one attribute chosen by the teacher.		Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. blocks of different colours	Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. blocks of different colours	Learners sort physical objects according to one attribute. Learners may use pictures or drawings to represent the real objects. e.g. blocks of different colours		LO 5 AS3: Gives reasons for collections being grouped in particular ways. LO 3 SPACE AND SHAPE AS 2 Describes sort and compares 2-D shape and 3-D objects in pictures and the environment.

WEEK	6	7	8	9	10 & 11	Integration within and across
LO 5: DATA HANDLING						
				FAT 3 METHODS Teacher FORM Oral/Practical TOOL Rubric		
AS3: Gives reasons for collections being grouped in particular ways.		Learners give reasons for grouping collection in a particular way. e.g blocks				LO 5 AS 2: Sorts physical objects according to one attribute chosen by the teacher.
AS4: Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations.			Learners draw pictures or construct pictographs to show correspondence between collected data and representation. The pictograph can be done vertically.	Learners draw pictures or construct pictographs to show correspondence between collected data and representation. The pictograph can be done vertically. FAT 3 METHODS Teacher FORM Written TOOL Rubric		Integration across ENGLISH HL LO 5 AS 4: Processes information: <ul style="list-style-type: none"> • picks out selected information from a text and processes it; • organizes information in simple graphical forms such as a chart, timetable, etc.
AS5: Describes own or a peer's collection of			Learners describe, explain and answer	Learners describe, explain and answer		LO 5 AS 1: Collects data (alone and/or as a member of a group or

WEEK	6	7	8	9	10 & 11	Integration within and across
LO 5: DATA HANDLING						
objects, explains how it was sorted, and answers questions about it.			questions about the graph.	questions about the graph. FAT 3 METHODS Teacher FORM Written TOOL Rubric		team) in the classroom and school environment to answer questions posed by the teacher (e.g. "How many learners are there in each classroom?")

REFLECTION:

WEEK 1	
WEEK 2	
WEEK 3	
WEEK 4	
WEEK 5	
WEEK 6	
WEEK 7	
WEEK 8	
WEEK 9	
WEEK 10 & 11	

BARRIERS TO LEARNING:

WEEK 1	
WEEK 2	
WEEK 3	

WEEK 4	
WEEK 5	
WEEK 6	
WEEK 7	
WEEK 8	
WEEK 9	
WEEK 10 & 11	

RESOURCES:

WEEK 1	
WEEK 2	
WEEK 3	
WEEK 4	
WEEK 5	
WEEK 6	
WEEK 7	
WEEK 8	
WEEK 9	
WEEK 10 & 11	

Examples of activities for Assessment Standards

Note: Refer to the Weekly Attainment Targets for recommended weekly number ranges.

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

Activity 1

AS 1 Counts to at least 100 everyday objects reliably

The learners must be able to estimate quantities, to count, to compare their estimations and counted numbers and to write down the numbers.

- Count out beads, sticks, blocks to at least 50
- Give a number of objects to the learners, e.g. 43 sticks that were counted out by the teacher beforehand. They count it out and see whether they get the same answer.
- Count larger quantities of counters out in 10s, 5s and 2s.

Activity 2

AS 2 Counts forwards and backwards in:

2.1 1s from any number between 1-200

2.2 10s from any multiple of 10 between 0-200

2.3 5s from any multiple of 5 between 0-200

2.4 2s from any multiple of 2 between 0-200

- Count on and back in 1s from any given number to another given number.
- Let the learners count on number blocks with numerals on.
- Let the learners count on blank number blocks.
- Use the number blocks when counting in 10s, 5s and 2s. Let the learners point to the numbers while counting.
- Start at 65 and count on to 80. How many have you counted on?
- Count back from 73 to 61. How many have you counted back?
- Do the same with counting on and back in 2s, 5s and 10s.
- The teacher says, " We count in 5s. I am 70 – who are you?" (pointing to a learner). Do the same with 2s and 10s.
- Complete sequences like the following:
107, 108, 109, ..., ..., ..., ..., ..., 115
60, 70, 80, ..., ..., ..., ..., ..., 150
95, 90, 85, ..., ..., ..., ..., ..., 55
- Mark the numbers on a 100-block in red that are multiples of 2. (2; 4; 6; 8;)
Mark the numbers on a 100-block in green that are multiples of 5. (5; 10; 15; 20;)
Mark the numbers on a 100-block in blue that are multiples of 10. How many multiples are there? Which multiple will be next? (10; 20; 30;)

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

- Count on number lines that are marked in 2s, 5s and 10s. e.g.

60__62__64__66__68__70__72__74 →

Activity 3

AS 3 Knows, reads and writes number symbols from 1 to at least 200 and writes number names from 1 to at least 100.

- Learn the number names and symbols while counting- let the learners point to the numbers on the 100-block or write the counting numbers down.
- Use flard cards to illustrate place value:

1 0 0 2 0 4

Pack the card with 20 on top of the card with 100 to cover the two noughts of the hundred and the card with the 4 on top of the card with the 20 to cover the 0 of the 20.

→

1	2	4
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 These cards are used for building up numbers and breaking down numbers.

- Flash number cards and let the learners say the names of the numbers that are flashed.
- Ask the learners, e.g. to find the number 74 on the 100-block, a measuring tape or as a page number in a book.
- Point to e.g. 40 on the 100-block and ask learners to find the corresponding number name on a chart and the other way round.

Activity 4

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

Describe whole numbers to at least 2-digit numbers:




- use flard cards, break the numbers up and describe it e.g. $48 = 40 + 8$;
- which number can I build with 30 and 7?
- which cards do I need to build 42?
- how many tens and ones(units) does 29 have?
- which number has 3 tens and 8 ones(units)?

Describe common fractions including halves and quarters:

- how much is half of 12 sweets?
- the teacher colours in one half of a block and ask learners which part of the block is coloured in; 

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

- the teacher colours in one quarter of a block and ask learners which part of the block is coloured in; 
- what is half of the collection of flowers? 
- what is half of the number of blocks? 
- what is half of 1, 3, 5 and 7?
- divide a square piece of paper in halves and then in quarters. In how many parts must I divide the paper to have halves and to have quarters?



Activity 5

AS 4 Orders, describes and compares the following numbers:

4.3 Whole numbers to at least 2- digit numbers

4.4 Common fractions including halves and quarters

Order whole numbers to at least 2-digit numbers:

- use vocabulary like: first, last, between, in front of, behind, next, half-way between;
- ask questions like: what comes before/after/between/three places before/two places after, etc. Learners can use a number block or a number line;
- fill in the missing numbers:
..., 45, ..., 47, ..., 49, etc.
- give each learner a few number cards to shuffle. They put it in order from the least to the most and the most to the least.
- the teacher packs out number cards, e.g. 36 to 48, but she puts two cards in the wrong place – the learners must say which two cards are in the wrong place;
- point to the number on the number block which is 12 places after 30;
- which month is the third month of the year, the last month of the year, the seventh month of the year, etc.
- which day comes before Thursday?
- in which position is the fourth  in the string? 
- here is page 43 of the book, where is page 31?
- write down all the even multiples of 5 **between** 0 and 50.
- which number is halfway between 9 and 13; 14 and 20; etc. 9 ••• 13; 14 ••••• 20

Order common fractions including halves and quarters:

- put fractions in order on the number line:

0 $\frac{1}{2}$ 1 $1\frac{1}{2}$ 2 $2\frac{1}{2}$ 3 $3\frac{1}{2}$ • $4\frac{1}{2}$ • • →

- let the learners pack number cards (also with fractions on) on the number line.

Activity 6

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

AS 4 Orders, describes and compares the following numbers:

4.5 Whole numbers to at least 2-digit numbers

4.6 Common fractions including halves and quarters

Compare whole numbers to at least 2-digit numbers:

- use the vocabulary: the same number, is equal to, more/less than, bigger/smaller than, most/least, smallest biggest or largest;
- use the = sign for equality;
- what is the difference between 47 and 37, between 39 and 28, etc.;
- how many tens does 38 and 41 each have;
- which number is the least/most 29 or 39, why;
- how can I make 27 equal to 39, and 48 to 38;
- which number is 40 more than 6, which number is 10 less than 49, etc.;

Compare common fractions including halves and quarters:

- which is the biggest/smallest part: half an apple or a quarter of the same apple, half a sandwich or a quarter of the same sandwich and why;
- what is the smallest/biggest number: half of 4 or a quarter of 4, half of 8 or a quarter of 8;

Note: To find a quarter of a number, the learners must halve twice.

Activity 7

AS 5 Recognises the place value of digits in whole numbers to at least 2-digit numbers.

Use flard cards (see Activity 3 above):

- write a number, e.g. 48 on the board and let the learners build it with their flard cards, and say what they have done. Ask them how many tens and how many ones(units) in 48;
- ask them to build the number that has 3 tens and 7 ones.
- ask them to pack the following numbers with the flard cards:
 - number 49, break it up again and say $49 = 40 + 9$
 - number 28 and to change it to 38;
 - number 47 and to change it to 49;
 - number 46, then say plus 3 (the learners change the 46 to show the answer), plus 5, minus 10, etc.;

Without flard cards:

- show cards with 2-digit numbers on it to the learners and let them say what the value of each of the digits in the number is, eg. 43 - the value of the 4 is 40 and the value of the 3 is 3;
- let them show number cards or write numbers where the 3 is equal to 30 and the 2 is equal to 2, etc.;
- show them a 2-digit number and ask them to show or write a number which has 2 tens more, then one which has 3 tens more, etc.;
- let them find the page number with 4 tens and 5 ones in a book, etc.

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

Activity 8

AS 6: *Solves money problems involving total and change in rands & cents.*

Let the learners work with real or play money:

Learners pack out a given amount such as 35c, R35;

Activity 9

AS 6: *Solves money problems involving total and change in rands & cents.*

Let the learners work with real or play money:

- Change in cents: I owe 12 cent and I pay with a 20c coin. How much change do I get?
Soso has 50c and buys 2 sweets at 10c each. How much change is he left with?
- Change in rands: I owe R9,00 and I pay with a R20 note. How much change do I get?
- Change in rands and cents: I owe R2,15. I pay R2,20. How much change do I get?
- Learners explains own solutions to problems and check solutions given by peers.
- Word sums that include unitary fractions, e.g. I have 20c and give James half of my money. How much money do I give James?
I have 40c and I lose a quarter of my money. How much money do I have left?

Activity 10

AS 6: *Solves money problems involving total and change in rands & cents*

Learners calculate addition and subtraction sums: e.g. $R20 + R13$, $R50 - R20$, etc.

The learners write their calculations in their class workbooks, on slates or white boards.

Activity 11

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. $\frac{1}{4}$)*

- Let the learners use counters or make drawings.
 - divide multiples of 2 into groups of 2, e.g. divide 10 counters into groups of 2;
 - ask the learners how many groups of 2 does 10 have;
 - if 10 has 5 groups of 2, how many groups of 2 will 12 counters have;
- Concentrate on doubles, e.g.
 - if four has 2 groups of 2, how many groups of 2 will 8 have?
 - Do the same with multiples of 3, 4, 5 and 10 (do not divide larger numbers than 20 in groups).
- Divide 6 biscuits equally between 2 children and then amongst 3 children. How many does each child get? Let the learners make drawings if they need to.
- Divide 5 biscuits equally between 2 children. All the biscuits must be shared (to get a $\frac{1}{2}$). How much will each child get? Do the same with 3,

TEACHING & LEARNING ACTIVITIES**LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS**

7 and 9 biscuits.

- Divide 5 biscuits equally among 4 children and 9 biscuits among 4 children to get a remainder of one which can be divided further into 4 equal parts of which one part will be equal to $\frac{1}{4}$.

Activity 12 (AS 8.1; AS 9.1)

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

- Revise addition and subtraction of single-digit numbers up to 15. Give learners a few sums written on a chart, worksheet etc. to complete. They are allowed to use counters to complete their work. Learners should know the combinations up to 15 by heart by the end of term 2. See Numeracy LAT Pacesetter for suggested weekly number ranges. Start with 0-11 in week 1.
- This activity can be varied by using the placeholder e.g. $3 + \square = 11$, $11 - \square = 7$, $11 = 8 + \square$
- You can also give them number sentences which they must balance e.g. $6 + 5 = 8 + \square$,
 $7 + 3 = 11 - \square$
- Give learners *activities* with more and less e.g.

Make 3 more	Make 3 less
8	11
6	9
5	5
7	8

Activity 13

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

Addition of whole numbers with at least 2 digits

- Understand the addition concept and related vocabulary: (more, add, sum, total, altogether)
 - let the learners take 4 counters and ask them to make it 2 *more*;
 - let the learners take 5 counters and *add* 6 counters;
 - let the learners take a group of 5 counters and a group of 7 counters and find the *sum* of the counters;
 - take 3 counters and 6 counters and find the *total* of the two sets of counters;
 - take three groups of counters and see how many counters there are *altogether*;

Activity 14

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

TEACHING & LEARNING ACTIVITIES

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- Use “breaking up of numbers” strategies e.g. $35 + 9 = \square$; $35 + 5 + 4$
- React to oral and written questions such as:
 - how much is 27 and 10;
 - add 30 to 40;
 - 4 plus 18
 - what is the sum/total of 15 and 10 and 2;
 - how much is 9 and 7 and 4 altogether;
 - which three numbers if put together give the sum of 12; (e.g. $5 + 5 + 2$; $4 + 4 + 4$)
 - I think of a number. If I add 3 I will get 11. Which number am I thinking of? $\square + 3 = 11$

Activity 15

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

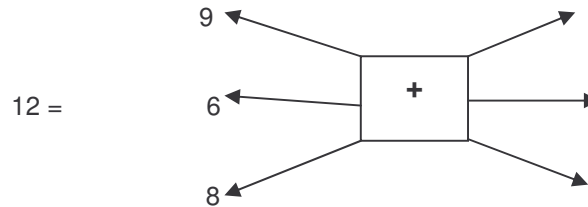
8.1 Addition & subtraction of whole numbers with at least 2-digits;

- Practice the number combinations up to 15 and know them off by heart by the end of the second term;

Number combinations of 11:

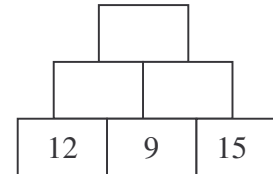
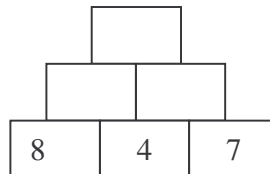
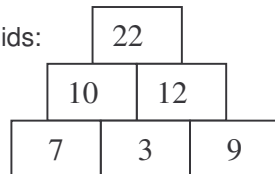
11	8		7		5	2	4		6
		1		3					9

- Complete flow diagrams:



- Learners add 2-digit numbers. They do their calculations in their workbooks. They can use “breaking up strategies” e.g. $23 + 39 \rightarrow 20 + 30 \rightarrow 50 + 3 \rightarrow 53 + 9 = 62$ or $23 + 39 \rightarrow 23 + 30 \rightarrow 53 + 9 = 62$

- Complete pyramids:



TEACHING & LEARNING ACTIVITIES

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Activity 16

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

Word problems:

- There are 28 apples in the one heap and 35 apples in the other heap. How many apples are there in the two heaps together?
- John has 19 red marbles in a bag and 17 blue marbles in another bag. What is the total number of marbles in the two bags?
- Mother buys 4 bags of apples. Each bag contains 5 apples. How many apples did she buy? (Repeated addition)

Learners explain their own solutions to problems.

Activity 17

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

Subtraction of whole numbers with at least 2 digits:

Understand the subtraction concept and the related vocabulary: (left; less; difference)

- let the learners take 7 counters and ask them to take away 5 counters and to say *how many are left over*;
- pack out 2 groups of counters – one group has 7 and the other 9 – *how many* has the one group *less* than the other group;
- Pack out 12 red counters and 8 green counters – what is the *difference* between the two groups;
- *how many more* is the one group than the other;
- pick up 5 counters – *how many more do I need to make it equal to 8*.

Activity 18

AS 8 Can perform calculations, using appropriate symbols to solve problems involving:

8.1 Addition & subtraction of whole numbers with at least 2-digits;

Subtraction of whole numbers with at least 2 digits:

React to oral and written questions e.g.

- how much is $37 - 10$;
 - take away 20 from 54;
 - 18 minus 7;
 - what is the difference between 15 and 21;
 - how many have I taken away from 12 to have 8 left?
 - I think of a number. If I take away 10 I will have 14 left – which number am I thinking about? $\square - 10 = 14$
- Practice the subtraction combinations up to 15 on a daily basis and know them off by heart by the end of the second term.

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LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

Activity 19

AS 8 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;

8.3 Estimation.

Multiplication

- Use the 100-block and mark the multiples of 4 on the block by putting counters on the numbers;
- Repeat with multiples of 2, 3 and 5. Learners must observe a pattern.
- Pack groups of 5 counters as follows:
ooooo
ooooo
ooooo
I see three times five: $5 + 5 + 5 \rightarrow 3 \times 5$
- The counting frame/abacus can be used the same way;

Estimation

Let the learners estimate the answer before they start calculating and it afterwards compare it with the estimated answer.

Activity 20

AS 9: Perform mental calculation involving:

9.1 Addition and subtraction with numbers to at least 20.

Mental Calculations

- Learners perform mental calculations with addition and subtraction. The answer must be in the number range from 0-15.
- Teachers use flash cards with the number symbols to represent the number combinations: e.g.
 - $3 + 12$
 - $15 - 4$
 - $13 - 8$
 - $7 + 3$
 - $8 - 6 + 2$

Activity 21

AS 10: Uses the following techniques:

10.1 Building up & breaking down numbers;

10.3 Using concrete apparatus (e.g. counters);

10.4 Number lines

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

- Learners break down numbers in tens and ones.
Learners may use a number grid or a number line.

e.g.

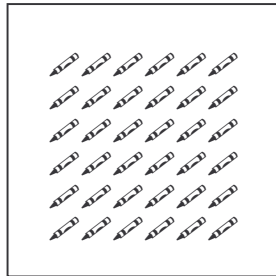
- $49 = 40 + 9$
- $35 = \dots + \dots$
- $14 = \dots + \dots$

- Learners build up numbers.
Learners may use a number grid or a number line.

e.g.

- $30 + 3 = 33$
- $\dots + \dots = 45$
- $\dots + \dots = 19$
-

- Ask learners to complete the following activity:



How many tens?

How many ones?

How many in total?

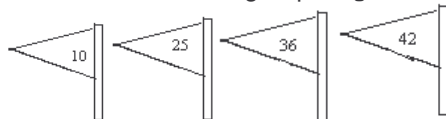
Activity 22

AS 10; Uses the following techniques:

10.1 Building up & breaking down numbers;

Breaking down numbers

Divide the class into groups – give each group a number to break up into three different ways.



TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

e.g. $18 = 10+8$
 $6+6+6$
 $10+2+2+2+2$

Activity 23

AS 10; Uses the following techniques:

10.1 Building up & breaking down numbers;

10.2 doubling and halving;

Doubling and halving

- The teacher revises doubling and halving of numbers 1-9 and whole tens to 50
- Learners double numbers with answers in the number range 1-50
- Learners halve numbers in the number range 1-50
- It is suggested that learners start by breaking up the numbers in tens and ones and then double/halve the 2 numbers separately. Finally the learners add the 2 doubled/ halved numbers together.
- Learners may use flard cards, a number grid or a number line.

e.g.

- double 29
- double 17
- halve 48
- halve 39

$19 = 10 + 9$
double: $20 + 18 \rightarrow 38$

Activity 24

AS 10; Uses the following techniques:

10.2 doubling and halving;

10.3 Using concrete apparatus (e.g. counters);

Doubling and halving

- Show learners patterns where doubling is used, such as this one:



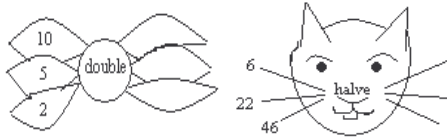
- And patterns that use halving such as this one:



TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

- Ask them to explain to you why the first pattern is a doubling pattern and the second one is a halving pattern.
- Ask learners to complete the following exercises:



Activity 25

AS 10; Uses the following techniques:

10.2 doubling and halving;

10.3 Using concrete apparatus (e.g. counters);



- How many ears do 9 teddy bears have?
- How many ears do 18 teddy bears have?
- How many fingers do 6 teddy bears have?
- How many fingers do 12 teddy bears have?
- How many legs do 2 spiders have?
- How many legs do 4 spiders have?

Activity 26

AS 10; Uses the following techniques:

10.2 doubling and halving;

10.3 Using concrete apparatus (e.g. counters);

Doubling

- Give learners a table of doubling of numbers like this example. Some learners will need to use counters or drawings to work out their answers. Let them work on the 2s first. They should realize that they are counting in 2s across, or that they are doubling each number. When they get to the 4s, they should realize that this is double the amount of 2s. For example, $2 \times 3 = 6$; double 6 is 12, so $4 \times 3 = 12$. Encourage learners to make use of doubling. The activity is not intended to get learners to work with multiplication tables for 4 at this stage, but rather to allow learners to identify number patterns.

TEACHING & LEARNING ACTIVITIES**LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS**

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

Activity 27**AS 10: Uses the following techniques:****10.2 doubling and halving;****10.3 Using concrete apparatus (e.g. counters);**

- Learners count in 4's and complete a copy of the following number grid:

1	2	3		5	6	7		9	10
11		13	14	15		17	18	19	
21	22	23		25	26	27		29	30
31		33	34	35		37	38	39	
41	42	43		45	46	47		49	50

- Ask learners to colour the multiples of 4 in green. (4; 8; 12;)
- Ask learners to describe the pattern.
- Learners do the following in their workbooks:
 - How many legs do 4 dogs have;
 - How many legs do 8 dogs have;
 - How many legs do 16 dogs have; (Encourage learners to make use of doubling)
 - I count 12 legs. How many dogs are there?
 - I count 24 legs. How many dogs are there?
 - I count 48 legs. how many dogs are there?
 - 3 cars have _____ wheels;
 - 6 cars have _____ wheels;
 - 12 cars have _____ wheels;

Activity 28**AS 10: Uses the following techniques:****10.4 Number lines**Number line

Use different types of number lines for different types of numbers, e.g.

TEACHING & LEARNING ACTIVITIES

LO 1 NUMBERS, OPERATIONS AND RELATIONSHIPS

0__3__6__9__12__15__→

FORMAL ASSESSMENT TASKS

Refer to Section 3 of the GR 2 Numeracy Learner Attainment document


TEACHING AND LEARNING ACTIVITIES

LO 2 PATTERNS, FUNCTIONS AND ALGEBRA

Activity 1

AS 1: Copies and extends simple patterns using physical objects and drawings

Simple patterns

- Use physical objects, e.g. different kinds of counters, seeds, beans, scissors, crayons, beads, etc. to pack patterns that the learners can copy, e.g. 
- learners extend the pattern that the teacher packed out.
- Learners identify patterns on wrapping paper, interesting fabrics, wall paper, mats, plates, pictures of knitting and crochet patterns, etc.
- Learners copy the patterns in their books and extend them.
- Let the learners look at the patterns presented to them and then describe them..

Activity 2

AS 2: Copies and extends simple number sequences to at least 200

Number sequences

Start with counting numbers:

- Use the 100-block and let learners observe the pattern in the 1st and 2nd row: The last digit in each column is the same e.g. **3** and **13**. Ask the learners why.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

- Count in 2s:

2 4 6 8 10
12 14 16 18 20

- Use number combinations, e.g.

$1 + 2 = 3$ $21 + 2 = 23$
 $2 + 2 = 4$ $22 + 2 = 24$
 $3 + 2 = 5$ $23 + 2 = 25$ etc.

$5 - 2 = 3$ $15 - 2 = 13$
 $9 - 3 = 6$ $29 - 3 = 26$
 $10 - 6 = 4$ $50 - 6 = 44$

Activity 3

AS 2: Copies and extends simple number sequences to at least 200

TEACHING AND LEARNING ACTIVITIES

LO 2 PATTERNS, FUNCTIONS AND ALGEBRA

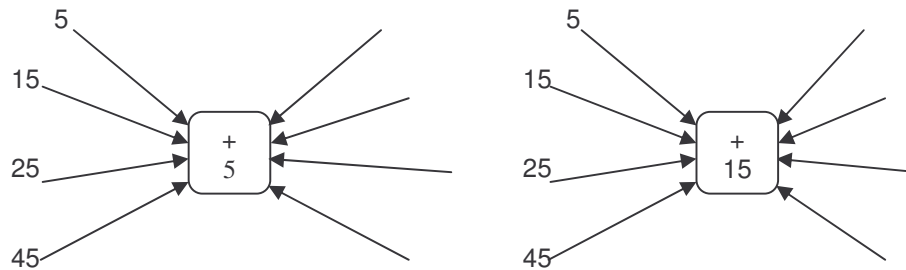
- Learners copy and extend simple number sequences in the range 0-100.
- Learners may use number lines and number grids
 - e. g.
 - 5; 10; 15 - ; - ; - ; - ; - ;
 - 48 ; 46 ; 44, - ; - ; - ; - ;
 - 21, 24, 27, - ; - ; - ; -

Activity 4

AS 2: Copies and extends simple number sequences to at least 200

Number patterns

- By completing the flow diagrams below children could recognize the pattern “whenever we add 5 to a number ending in 5 we complete the 10”; When we “add 15 to a number ending in 5 - it’s like adding the 5 to complete the 10, and then add another 10”.



- Ask learners to copy the following tables into their exercise books. They must identify the pattern and complete the tables:

Number of boys	1	2	3	4	5	6	7	8
Number of eyes	2	4						

Number of children	1	2	3	4	5	6	7	8
Number of fingers	10	20						

TEACHING AND LEARNING ACTIVITIES**LO 2 PATTERNS, FUNCTIONS AND ALGEBRA**

Number of cows	1	2	3	4	5	6	7	8
Number of legs	4	8						

Number of feet	1	2	3	4	5	6	7
Number of toes	5						

- This activity is not intended to get learners to work with multiplication tables at this stage, but rather to allow learners to identify number patterns.

Activity 5**AS3: Creates own patterns**Creates own patterns

- Learners pack out their own pattern using physical objects, draw it in their work books and extend it.
- Learners create their own patterns using drawings.
- Learners create their own number patterns in the number range 0-100. Learners may use number lines and number grids.
e.g.
 - 12, 14, 16, 18, 20
 - 21, 23, 25, 27, 29, 31

Activity 6**AS 4: Describes observed patterns**

- The teacher presents patterns to the learners and asks them to describe the patterns.

Activity 7:**AS 5: Identifies, describes and copies geometric patterns in natural and cultural artefacts of different cultures and times**

- Let the learners look for patterns in old magazines.
- Let the learners look for patterns in leaflets(advertisements) of tiled floors, carpets, plates, carpets, etc.
-

FORMAL ASSESSMENT TASKS

Refer to Section 3 of the GR 2 Numeracy Learner Attainment document

TEACHING AND LEARNING ACTIVITIES

LO 3 SPACE AND SHAPE

Activity 1

AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including:

- **boxes (prisms), balls (spheres) and cylinders**
- **triangles, squares and rectangles**
- **circles**

Boxes, balls and cylinders

- Put empty containers like boxes of different sizes, balls of different sizes and different cylinders (like toilet rolls, kitchen paper rolls, pritt sticks, etc) in a big box. Let the children sort it into the different categories. Make labels like “boxes”, “balls”, and “cylinders” and make sure that the learners understand the meaning of each label.

The learners take turns to take an object out of the box, describe it according to its sides, corners and edges and decide whether it belongs in one of the sorting boxes. They must motivate their decision.

Activity 2

AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including:

- **boxes (prisms), balls (spheres) and cylinders**
- **triangles, squares and rectangles**
- **circles**

- Point to pictures with the shape of a box, a ball and a cylinder in a picture. Ask learners to name the shape of the objects.
- Learners match the shape with the corresponding name:



triangle diamond oval circle star rectangle rhombus square

- Let the learners recognize the triangles, rectangles, squares and circles in pictures.
- The teacher points to different 3-D objects in the classroom while the learners say which shape it reminds them of.
- Who am I? The teacher describes a 2-D shape according to sides and corners and the learners guess what shape it is.

TEACHING AND LEARNING ACTIVITIES

LO 3 SPACE AND SHAPE

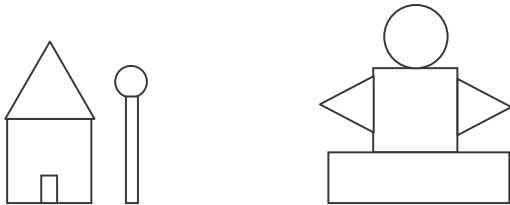
Activity 3

AS 1: Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including:

- **boxes (prisms), balls (spheres) and cylinders**
- **triangles, squares and rectangles**
- **circles**

- Let the learners cut out shapes from a sheet of paper with circles, rectangles, triangles and squares. Ask the learners to pack out a picture in their workbooks.

e.g



Activity 4

AS 2: Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to:

- **size**
- **objects that roll or slide**
- **Shapes that have straight or round edges.**

Size:

- Classify triangles, circles, rectangles and square as big or small. Use the appropriate vocabulary like bigger than/smaller than.
- Give a paper with pictures of 2-D shapes (in different sizes) on it to the learners. Let them colour the in, e.g. the big triangles with red and the big triangles with blue. Use different colours for different shapes.

Activity 5

AS 3: Observes and creates two-dimensional shapes and three-dimensional objects using concrete materials (e.g. building blocks, construction sets and cut-out two-dimensional shapes)

- The teacher draws a diagram on the board comprised of triangles, circles, squares and rectangles. Ask the learners to build it with their shapes.

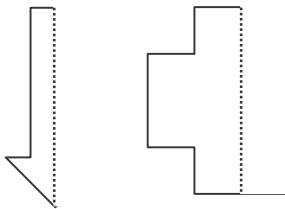
TEACHING AND LEARNING ACTIVITIES

LO 3 SPACE AND SHAPE

Activity 6

AS 4: *Recognises symmetry in two-dimensional shapes and three-dimensional objects*

- Give each child a thin strip of cardboard. Learners work in pairs. They put the strip down the middle of their partner's face. Learners describe what they see on both sides of the strip. e.g. an eye on both sides.
- Let learners put the strip across their partner's face. Learners describe what they see above and below the strip.
- Give the learners a white piece of paper and ask them to do the following:
 - fold it in half;
 - open it, and
 - put a drop of paint on the right-hand side of the fold;
 - close it and rub it over the top half of the page;
 - open it and discover a 'picture' with a definite middle-line.
- Let the learners page through magazines and see whether they can identify the middle-line in pictures.
- Learners colour in a picture of a butterfly so that both sides look the same.
- Let learners draw the left- or right hand side of simple shapes.



Activity 7

AS 7: *Describes positional relationships (alone and/or as a member of a group or team) between three-dimensional objects or self and a peer.*

- Let the learners sit in small groups in the classroom. Put a big box with lots of print on it in the middle of the class on a table. Let the learners look at it from where they are sitting and describe what they see according to its shape and the print on it. The learners will experience that each group sees different things.
- Ask the learners to describe where their groups are in relation to the teacher's table, the door, the blackboard, etc. e.g. in front of, behind, next to, back, far away, near to, etc.

FORMAL ASSESSMENT TASKS

Refer to Section 3 of the GR 2 Numeracy Learner Attainment document

TEACHING AND LEARNING ACTIVITIES

LO 4 MEASUREMENT

Activity 1

AS 1: Reads analogue and digital clock time in hours and minutes.

- Make clocks with loose hands out of cardboard – each learner should have his/her own clock.
- Let learners set the time on the clocks as asked
- The teacher sets a time and the learners say what time it is.
- The learners draw time in hours on blank clock faces.

Activity 2

AS 2: Names in order the days of the week and the months of the year.

- Let the learners recite the names of the days and the months in a rhythmical way and make up songs with it.
- Ask questions:
 - which day comes after/before Tuesday;
 - If Sunday is the first day which day is the fifth day;
 - what is the name of the seventh/eighth month;
 - which days together make a weekend;
 - in which month does the school start every year;
 - In which month is Christmas, etc

Activity 3

AS 3: Calculates elapsed time in:

3.1 hours and minutes using clocks

3.2 days, weeks and months using calendars.

Hours and minutes using clocks:

- Give the learners handmade clocks with loose hands to solve word problems like the following:
 - The school starts at 8 o'clock in the morning. I go home at 1 o'clock. How long am I in the school?
 - I get up at 7 o'clock in the morning. I take 20 minutes to get dressed. At what time am I finished?

Days, weeks and months using calendars:

- Give the learners everyday problems to solve, e.g.:
 - My grandparents visited us from Monday to Saturday. For how many days did they visit us?
 - It is June. Peter moved to Butterworth in January. For how many months have they been living in Butterworth?

Activity 4

AS 4: Sequences events according to days, weeks, months and years.

TEACHING AND LEARNING ACTIVITIES

LO 4 MEASUREMENT

- Keep a class diary according to interesting events that happened during the week. The diary is read by the end of the week or month.
- General examples to discuss:
 - the months that forms seasons;
 - the months of the school term;
 - the public holidays during the term.
- Always keep a calendar at hand to refer to.

Activity 5

AS 6: *Estimates, measures, compares and orders three-dimensional objects using non-standard measures:*

- ***mass (e.g. bricks, sand bags)***
- ***capacity (e.g. spoons, cups)***
- ***length (e.g. hand spans, footsteps)***

Mass

- Let the learners first estimate the mass of objects e.g. a bucket of water, a table, a pot plant, a chair, a suitcase with books by comparing it with the mass of a brick.
 - Hold the brick to feel its mass and then, e.g. the chair. Let a group of learners do this and then decide which is the heavier object.
 - Let the other groups do the same with a bucket of water, a suitcase etc.
 - The teacher gives the groups of learners the correct answer and they objects from heaviest to lightest.

FORMAL ASSESSMENT TASKS

Refer to Section 3 of the GR 2 Numeracy Learner Attainment document

TEACHING AND LEARNING ACTIVITIES

LO 5 DATA HANDLING

Activity 1

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 (e.g. "How many learners are there in each classroom?")

- Use practical examples like:
 - how many girls in the class have long hair and how many have short hair;
 - how many boys are taller than Mandla;

Activity 2

AS 2: Sorts physical objects according to one attribute chosen by the teacher.

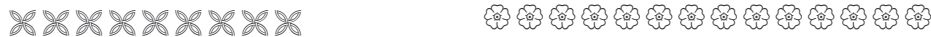
- The attributes that are referred to can be amongst others the following:
 - size;
 - colour;
 - textures (smooth or rough);
 - expensive/cheap objects/
 - heavy/light objects;
 - long/short objects;

Activity 3

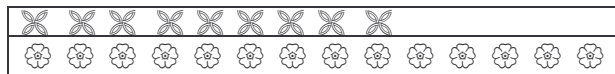
AS 4: Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations.

Examples of pictographs:

- Give the learners pictures of 2 different flowers
- Ask the learners to sort the pictures of the flowers.



- Now it is drawn by using 1-1 correspondence:



- Learners can draw the pictures in their workbooks.

TEACHING AND LEARNING ACTIVITIES
LO 5 DATA HANDLING
FORMAL ASSESSMENT TASKS Refer to Section 3 of the GR 2 Numeracy Learner Attainment document

REFERENCES

- The Numeracy Learner Attainment Targets - Grade 2
- Government Gazette 30880 of 14 March 2008, which outlines the Foundations for Learning Campaign
- Foundations for Learning: Foundation Phase Numeracy Lesson Plans Grade 2
- Examples of activities and notes for Assessment Standards of the Western Cape Education Department