3.5.3 Clarification of Grade 3 content
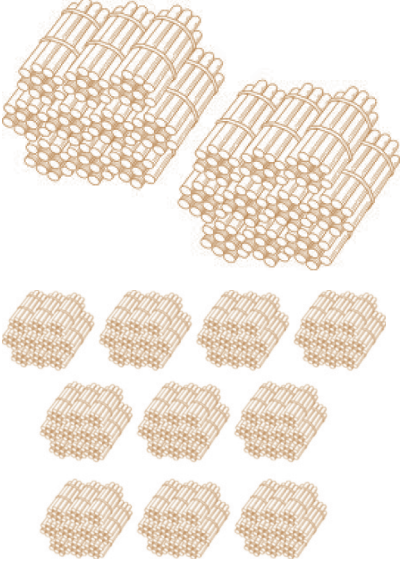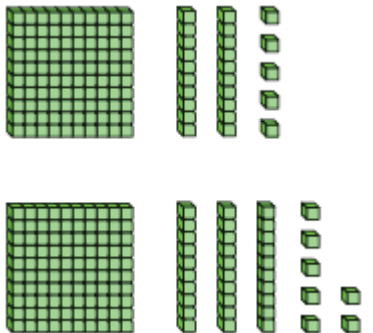
GRADE 3 TERM 1
1. NUMBERS, OPERATIONS AND RELATIONSHIPS

Grade 3 learners will now consolidate what they learnt in Grade and use these skills to work with numbers between and

Learners in grade will now

- read and write numbers in symbols and words to

- continue to identify and position numbers;

- use their knowledge of place value to locate the hundreds, tens and ones and to explain their relationship;

- partition three-digit numbers. they will use their knowledge of place value to compare and order numbers and should give reasons for their choice;

- continue counting forwards and backwards, now in intervals of and they will now begin recognising the relationships between counting in s and s;

- know to count large collections of objects by grouping. They now to count systematically, accurately and can give a method on how to check the result;

- add and subtract numbers mentally to ;

- solve different kinds of problems and will learn how to organise their written responses in a systematic way;

- choose the correct operation when doing problem-solving in contexts;

- can record their calculations using the plus (), minus () and equals () sign. They can explain their answers and describe their methods;

- work with formal ways to record addition and subtraction calculations, for example they will break up one or two numbers to add and subtract; and

- will be able to choose from a range of strategies to solve the problem. For example to subtract: the learner will know to subtract by counting on or back.

- The curriculum expects that the Grade learners work far less with concrete apparatus to represent addition and subtraction. By the end of the year learners should be able to add and subtract using pencil and paper methods.

- The learner entering Grade should be able to understand the value of numbers and break up the numbers in order to calculate. The learner has begun to understand as ones and as tens and ones. The learner does not need concrete apparatus to help this understanding. In Grade 3 learners will continually need opportunities to practise breaking up numbers in order to understand the value of numbers and to use this knowledge in order to break up numbers to add and subtract.

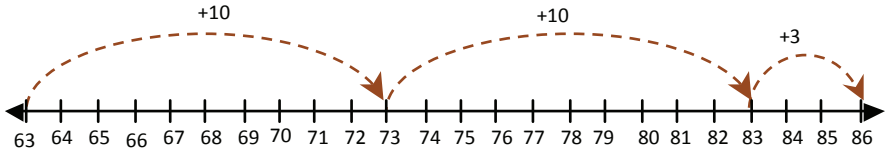| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.1 Count objects	**Counting concrete Objects** Estimate and count reliably to at least objects. The strategy of grouping is encouraged.	• Group to at least objects to estimate and count reliably • Give a reasonable estimate of a number of objects that can be checked by counting	During Grade learners continue to count out everyday objects. The number range will increase to by the end of the year. This means that careful consideration needs to be given to the kind of apparatus used: • Dienes blocks • Place value cards During the first term learners practise and consolidate counting objects to The focus is on grouping the objects. Learners should have a strong sense that it is better, more efficient and quicker to count in groups of tens, twenties, fifties and hundreds than in ones. They start counting in hundreds, forwards and backwards during the first term. To support the rote counting, learners can organise the objects in groups of 100s. Example: Each group shows a hundred. 	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.1 **Count objects**	**Counting concrete Objects** Estimate and count reliably to at least objects. The strategy of grouping is encouraged.	• Group to at least objects to estimate and count reliably • Give a reasonable estimate of a number of objects that can be checked by counting	During this term and for the rest of the year learners need to be made aware of how the counting of objects will help in calculations. **Example:** Counting objects by breaking up objects into groups of ten, 20s, 50s or even hundreds will allow learners to break up numbers when adding or subtracting. To add 362 + 527, learners can break up the number into place value parts. i.e. 362 + 527 = (300 + 60 + 2) + (500 + 20 + 7). Learners can count the hundreds together because they have done so when counting objects grouped in hundreds. Learners then count the tens (they have done so since Grade 1) and then the ones. Learners need to understand why they are spending their time counting objects. The links need to be made explicit. During this term learners can represent numbers using the Dienes blocks or base ten blocks. Learners used these apparatus in Grade 2. Learners should be able to complete the following statement: The value of these base blocks are_____ Learners can use the place value cards to show the value of each digit. The focus of these kinds of activities is not only on counting objects. At the same time learners are: • understanding the value of a digit; • breaking down and building up numbers; and • reading number symbols.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.2 **Count forwards and backwards**	Count forwards and backwards in: • the intervals specified in grade 2 with increased number ranges from any given number • in 20s, 25s, 50s,100s to at least 1 000	Count forwards and backwards in: • the intervals specified in Grade 2 with increased number ranges • 100s to at least 500	**What is different from Grade 2?** Learners count in 100s for the first time. They do this to 500. Learners need supporting base ten apparatus such as: • Counting beads • Dienes blocks • Number lines • Number grids The skip counting needs to be linked to the times tables. Counting in 4s will help learners when they say: • 1 four is 4 • 2 fours are 8 • 3 fours are 12 The skip counting also supports understanding multiplication and will help learners when they complete number sequences.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.3 **Number symbols and number names**	**Recognise, identify and read numbers** • Recognise, identify and read number symbols 0 - 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 1 000 • Write number names to 0 - 1 000	**Recognise, identify and read numbers** • Recognise, identify and read number symbols 0 - 500 • Write number symbols 0 - 500 • Recognise, identify and reads number names 0 - 250 • Write number names 0 - 500	**What is different from Grade 2?** During this term learners recognise, read and write number symbols to . They read number names to and write number names to The reading and writing number symbols is also practised when: • counting objects; • counting forwards and backwards; • completing number sequences; and • ordering and comparing numbers. Care should be taken to say numbers correctly; one needs to say 323 as "three hundred and twenty-three", NOT as "323". When writing three-digit numbers, the numbers between 100 and 110; 200 and 210; 300 and 310, 400 and 410, the digit in the tens position is zero. Some learners find it difficult to write these numbers in symbols when they are given the number in words. For example, it may be difficult for some learners to write 'three hundred and four' in symbols. They might write 3004. Place value cards are particularly useful for helping learners to understand how to represent these numbers correctly. Learners should also be given plenty of practice writing these numbers.	
1.4 **Describe, compare and order numbers**	**Describe, compare and order numbers to 999** • **Describe and compare** whole numbers up to 999 using smaller than, greater than, more than, less than and is equal to • **Describe and order** whole numbers up to 999 from smallest to greatest, and greatest to smallest **Use ordinal numbers to show order, place or position** Use, read and write ordinal numbers, including abbreviated form up to 31.	**Describe, compare and order numbers to 99** • **Describe and compare** whole numbers up to 99 using smaller than, greater than, more than, less than and is equal to • **Describe and order** whole numbers up to 99 from smallest to greatest, and greatest to smallest **Use ordinal numbers to show order, place or position** Use, read and write ordinal numbers, including abbreviated form up to 31.	**What is different from Grade 2?** During this term learners consolidate ordering and comparing numbers to and should be able to give reasons for why one number is bigger than another. Allow learners to use a number line, number track, number grids or even their knowledge of breaking up numbers into tens and ones to illustrate their understanding. When ordering numbers learners must be able to say why a number is bigger than another using the value of the digits to explain themselves. Example: is smaller than because: I know that and, and and . Also is three bundles of ten and is five bundles of ten. There are more bundles of ten in 50 than 30. For working with ordinal numbers the calendar is ideal because it allows the learner to talk about the 23rd or the 31st day of the month. Learners need to practise reading and writing the abbreviated form.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.5 Place value	**Recognise the place value of three-digit numbers to 999**
	
	 • Recognise what each digit represents
	
	 • Decompose three-digit numbers up to 999 into multiples of 100, multiple of ten and ones
	
	 • Identify and state the value of each digit
		Recognise the place value of numbers to 99
		
		 • Recognise what each digit represents
		
		 • Decompose two-digit numbers up to 99 into multiples of ten and ones
		
		 • Identify and state the value of each digit
			What is different from Grade 2?
			
			 This term is about consolidating the place value understanding from Grade 2. Learners continue to do similar type activities as in Grade 2, Term 4:
			
			 Decompose two-digit numbers into multiples of tens and ones
			
			 Learners can decompose numbers into:
			
			 • Multiples of tens and ones e.g. 73 = 70 + 3 (place value cards are useful to do this)
			
			 Building up two-digit numbers from their place value parts
			
			 Example:
			
			 Write the number:
			
			 a) 6 tens and 3 ones _____
			
			 b) 2 tens and 5 ones _____
			
			 c) 12 tens and 8 ones _____
			
			 d) 18 tens and 4 ones _____
			
			 Use apparatus to show the partitioning of numbers:
			
			 • **Abacus**
			
			  a) Show 4 tens and 5 ones using the abacus.
			
			  b) Show 7 tens and 6 ones using the abacus.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.5 Place value	**Recognise the place value of three-digit numbers to 999** • Recognise what each digit represents • Decompose three-digit numbers up to 999 into multiples of 100, multiple of tens and ones • Identify and state the value of each digit	**Recognise the place value of numbers to 99** • Recognise what each digit represents • Decompose two-digit numbers up to 99 into multiples of tens and ones • Identify and state the value of each digit	• Place value cards Learners also use place value cards to show the parts of a number. Example: **The following type of questions can be asked:** · Say what the digit 8 in 28 represents? And the 2? · Say which number is equivalent or the same as: a) 6 tens b) Nine tens and three ones c) Five tens and nine ones	d)
SOLVE PROBLEMS IN CONTEXT				
1.6 Problem-solving techniques	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when solving problems: • building up and breaking down numbers • doubling and halving • number lines	**What is different from Grade 2?** Learners are expected to solve the word problems using the following techniques: • Building up or breaking down numbers • Doubling and halving • Number lines Drawing up to 99 objects individually becomes inefficient and should be discouraged. Encourage the inclusion of number symbols in their recordings, including in picture representations. Learners can also be encouraged to write number sentences. Allow learners to choose the technique most comfortable for them. The number range and the type of problem will also determine the technique that is used. However, if learners are using techniques that are not efficient then they need to be guided to use more efficient methods. **Building up and breaking down** This is one of the most important techniques in the Foundation Phase. Using this technique allows learners to split (decompose) and recombine numbers to help make calculations easier. They will largely be using this technique in the Intermediate Phase as well. **Doubling and halving** This technique is quite sophisticated and requires a strong number sense. Learners who are able to choose this as a technique are quite flexible in the strategies they use. Knowing how to double will allow learners to use the strategy of near doubles.	

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1.6 **Problem-solving techniques**	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when solving problems: • building up and breaking down numbers • doubling and halving • number lines	Example: Word problem: On one day at the clinic 45 children were given flu vaccinations. The next day 46 children were vaccinated. How many children were vaccinated altogether? The problem could be solved by using doubling. A learner might say double 45 plus 1 or double 46 minus 1. **Number lines** Using number lines in order to help them calculate will give learners a way to record their thinking and to keep track of it. It also allows learners to have a recording image that they can use to explain how they solved the problem. Learners have been using number lines since Grade 1. Learners should be able to construct blank number lines on which they put the starting number and then determine how to get from one to the other. **Example** of how learners can use the number line: 23 children went on an excursion today. There are still 63children at school. How many children were there to begin with? +10 +10 +3 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86	
1.7 **Addition and subtraction**	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 999.	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 99.	**Examples of problems that can be done this term** In this term, learners consolidate work done in Grade 2. See notes on problem-solving types in Grade 2, Section 2.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.8 **Repeated addition leading to multiplication**	Solve word problems in context and explain own solution to problems using multiplication with answers up to 99.	Solve number problems in context and explain own solution to problems involving multiplication with answers up to 50.	**Examples of problems that can be done this term** • A builder needs to lay 6 rows of paving bricks, with 8 bricks in each row. How many bricks will he need? • Marlene has 4 bags of sweets. Each bag contains 6 sweets. How many sweets are there altogether? • Mom wants to bake 12 cakes. If each cake needs 2 eggs, how many eggs must Mom buy? • If each learner reads 3 books during July, how many books would a class of 20 read? **Problem type: Array** • A vegetable garden has 12 rows of plants. Each row has 7 plants. How many plants are there in the garden? • A vegetable garden has 12 rows of plants. Every row has the same number of plants. If there are a total of 48 plants, how many plants are in each row? • A vegetable garden has 48 plants that are planted in rows. There are 7 plants in each row. How many rows are there? **Using doubling to solve problems** • Justin is 8 years old. • His older brother is twice as old as Justin. • His father is four times as old as Justin. • His grandfather is twice as old as his father. • What are each of their ages? • Shepi's book is 48 pages long. He is on page 26; has he read more than half the book? In Grade 3 learners are expected to recognise a multiplication word sum. Learners should be encouraged to use numbers even with pictures, rather than only using apparatus or pictures on their own.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.9 **Grouping and sharing leading to division**	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 200 with answers that may include remainders	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that may include remainders.	During this term the division sign is introduced. It is important that learners understand the following concepts of division before the sign is used: Problems that involve sharing are often about: • sharing equally; and • how much each one gets. Problems that involve sharing is often about: • How many groups can be made? **Examples of problems that can be done this term** • If learners and teachers are going to the concert and people can fit into a mini-bus, how many times must the minibus drive up and down, before all the learners are at the concert? • Mongezi packs out counters into rows. How many counters in a row? • 35 girls want to play netball. How many teams of girls will there be? • Estimate first: • Will it be more or less than 10? • Will it be more or less than 20? • Marlene buys 44 sweets. She divides them equally into 4 packets to sell. How many sweets are there in a bag? • Marlene buys 48 sweets. She wants to divide them into bags with six sweets each. How many bags does she need?	

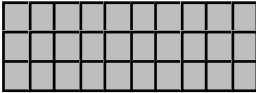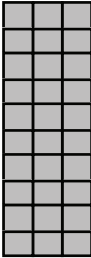| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.10 Fractions	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. 1/2,1/4,3/4,2/5. etc.	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. 1/2,1/4,3/4, etc.	In Grade 2 learners were introduced to fractions and: • shared and grouped things equally; • named fraction parts; • identified fractions in different contexts; • wrote fraction names as 1 third, 1 fifth; • found fractions of whole objects; and • found fractions of a collection of objects. **What is different from Grade 2?** During this term, learners continue to work with unitary fractions such as 1 half, 1 third, 1 quarter, 1 fifth. Learners are also introduced to non-unitary fractions e.g. 3 quarters or 2 thirds. Learners are not required to use the terms *unitary* and *non-unitary*. **Examples of problems that can be done this term** • Sharing, leading to fractions Share 8 chocolate bars among 3 friends so that they all get the same amount of chocolate bar and there is nothing left over. • Fraction of a collection a) Find 1 quarter of 16 sweets. b) 8 sweets are which fraction of 24 sweets? c) Grandmother gives Kiki R12. Kiki wants to save a third of the money. How much money must she save? d) This problem type must only be posed after learners have solved four or five problems of the "sharing, leading to fractions" type and know the names of fractional pieces. **Writing fractions** Learners are not required to write the fraction symbol. Learners have learned how to label fraction parts as 1 fifth, 3 quarters or 3 sixths. This helps them firstly to understand that the fraction names describe how many equal parts the whole has been divided into, for example, halves, thirds, quarters, etc and secondly how many of those parts are being considered, e.g. 2 thirds. **Representing fractions word problems** • Learners must draw their answers to prove that they understand the problem. • Expect that some learners may draw the fraction correctly but misname the fraction part. Assist these learners to name fractions parts correctly (see notes relating to naming fractions under context-free calculations) • Learners must name the parts that have been shared by writing them as 2 thirds.	.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.11 Money	• Recognise and identify the South African coins and bank notes • Solve money problems involving totals and change in rand or cents. • Convert between rand and cents	• Recognise and identify the South African coins and bank notes • Solve money problems involving totals and change in Rand or cents.	During this term learners continue to solve money problems. **Example:** • Grade 3 learners need R759 for the class camp. They have collected R250. How much more money do they need? • Write 325c as rands and cents. • How many different ways can you make R400 using only bank notes? How do you know whether you have all the solutions? • Travis has a 50c piece and four 20c pieces. Toffees cost R1,20. How much change will he get? • If a school tracksuit costs R150, what will 2 tracksuits cost? **Buying and selling problems** **Example** • Pedro's granny gave him R5. Which 3 sweets can he buy? Choc chuckle R2,70; gums R1,80; sour worms R1,40; peach treats R1,60; magic mints R2,20; toffee R1,20. • Damon bought three books for R80 each, how much change will he get from R300? • Packets of 5 mints cost 44c each. Mr King needs 88 mints. How many packets should he buy? What will he pay?	

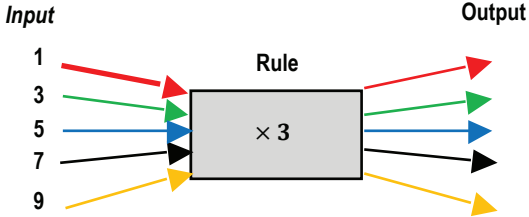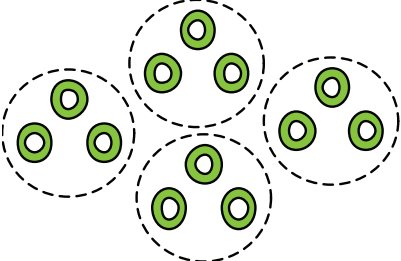| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
CONTEXT-FREE CALCULATIONS				
1.12 **Techniques** **(methods or strategies)**	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines	These techniques will be used in both problem-solving and in context-free calculations. **Building up and breaking down** This is one of the most important techniques in the Foundation Phase. Using this technique allows learners to split (decompose) and recombine numbers to help make calculations easier. They will largely be using this technique in the Intermediate Phase as well. It is important that learners apply known knowledge when breaking up numbers e.g. • breaking up using place value; • breaking up using multiples of 10; and • breaking up into number pairs. **Number lines** Learners will continue to use and construct their own number lines in order to calculate. It is most likely that the number line will be used more in addition or subtraction calculations. **Addition and subtraction.** Learners should be constructing their own number lines and breaking up the numbers in manageable parts. **Example:** 45 + 27 The number line should start at 45 and learners can create 2 jumps of 10 and then one jump showing 7. **Multiplication** Number lines should continue to be used to support repeated addition. Equal jumps are recorded on the number line and supporting sentences can be recorded as well.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Add up to 99 • Subtract from 99 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 20	During this term learners practise and consolidate the work done in Grade 2. If learners: • work only with loose counters; • draw images of 1s only; and • count all in 1s when working with totals that are more than 30, it slows them down, but also increases their chances of making calculation errors. This makes it important for them to develop more efficient strategies. Building up and breaking down numbers becomes one of the important strategies that learners will use during this term. Possible methods to show addition and subtraction calculations. **Breaking down a number into smaller parts to make a calculation easier** Learners might break down the number in ways that are manageable for them. This means that they will do it in different ways. **Using knowledge of place value to break down numbers into tens and ones** • Adding two-digit numbers by breaking up both numbers 43 + 36 = □ 43 + 36 = (40 + 3) + (30 + 6) = (40 + 30) + (3 + 6) = 70 + 9 = 79 • Adding by breaking up one number 43 + 36 = □ 43 + (30 + 6) 43 + 30 → 73 + 6 = 79 • Breaking up into groups of ten 43 + 36 = □ 43 + (10 + 10 + 10 + 6) 43 + 10→ 53 + 10→ 63 + 10→ 73 + 6 = 79	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Add up to 99 • Subtract from 99 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 20	**Subtraction** • Subtracting by breaking up both numbers $87 - 56 = □$ $87 - 56 = (80 + 7) - (50 + 6)$ $\quad = (80 - 50) + (7 - 6)$ $\quad = 30 + 1$ $\quad = 31$ • Subtracting by breaking up one number $87 - 56 = □$ $87 - (50 + 6)$ $87 - 50 \rightarrow 37 - 6 = 1$ Expect that some learners might break up the number in different ways to make easier for them to calculate: • Breaking up into multiples of 10 $87 - 56 = □$ $87 - (20 + 20 + 10 + 6)$ $87 - 20 \rightarrow 67 - 20 \rightarrow 47 - 10 \rightarrow 37 - 6 \rightarrow 31$ **Using and applying previous knowledge as techniques** • Using halving to break down a number $69 + 12$ $69 + (6 + 6)$ $69 + 6 \rightarrow 75 + 6 = 81$ • Count on and count back $78 - 69 = □$ Counting up in ones from 69 is an appropriate strategy because the numbers are close to one another. • Identify near doubles $34 + 35$ explaining that it is double 34 plus 1 or double 35 minus 1. $34 + 34 + 1$	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Add up to 99 • Subtract from 99 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 20	Learners might record their strategies using the arrow notation to keep track of their calculations 34 + (30 + 4) + 1 34 + 30 → 64 + 4 → 68 + 1 → 69 • Change a number to a multiple of ten and then subtract or add ones **Count up or down to the nearest 10** 58 + 19 = □ Here learners need to say to themselves that they have two options. Change 58 or 19 to the nearest multiple of 10. The choice is theirs. The sum can be written as: 58 + 19 = 58 + 20 − 1 58 + 20 → 78 − 1 = 77 Some learners might break down 20 into 2 groups of 10 to calculate accurately. **Practise bonds to 20** Bonds to 20 should be done using a variety of supporting images. **Developing and practising addition and subtraction skills** Learners need to practise certain kinds of addition and subtraction skills. • Add or subtract single digits from any two-digit number without crossing the tens: Example: a) 65 + 4 b) 89 − 3 • Add a single digit to a multiple of 10 Example: a) 70 + 5 b) 90 + 3 • Subtract a single digit from a multiple of 10 Example: a) 80 − 6 b) 50 − 3	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Add up to 99 • Subtract from 99 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 20	• Add or subtract 10 to and from any two-digit number Example: a) 56 + 10 b) 68 + 10 c) 79 – 10 d) 57 – 10 • Add or subtract a pair of multiples of 10 without crossing 100 a) 40 + 30 b) 80 – 50 **Checking results of calculations** Judging reasonableness of solutions Learners should be trained to judge the reasonableness of solutions. One way to do this is to estimate their answers before calculating. When adding two numbers that are close to each other, e.g. 45 and 46, learners can use doubling as a way of estimating their answers. Checking solutions Learners should know that they can • Check an addition calculation by subtracting. Example: If 36 + 18 = 54; then 54– 18 = 36 • Check a subtraction calculation by adding Example 84– 48 = 36, then 36 + 48 = 84 Using the inverse operation to check solutions is one reason for teaching addition and subtraction together.	

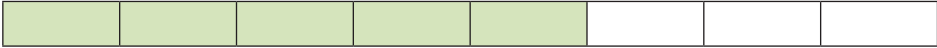| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by to a total of 99 • Use appropriate symbols (x, =, □)	• Multiply numbers 1 to 10 by • Use appropriate symbols (x, =, □)	In Grade 2 learners multiplied numbers 1 to 10 by 1, 2, 5, 3 and 4 up to 50. They were introduced to the sign and used it in number sentences. Learners in Grade 3 should continue to practise and use the language of multiplication in practical situations; double, twice, multiply, multiplied by, lots of, groups of, times, three times as much. The language should also be used when doing multiplication calculations. During this term learners will be multiplying in threes for the first time. Learners entering Grade 3 should be able to represent repeated addition using the multiplication sign. Learners are able to describe multiplication in different ways. They understand that 3 lots of 6 or 3 groups of 6 can be written as 6 + 6 + 6. There is also an understanding that 3 times 6 can be written as 3 × 6. This knowledge continues to be developed in Grade 3. Learners will continue to use concrete apparatus, arrays and number lines to understand and represent multiplication From Grade 3 learners need to be aware that multiplication can be done in any order. Example: Learners should be able to understand and write the following: 3 × 10 = □ 10 × 3 = □ 30 = 10 × □ 30 = 3 × □ The above statements should be supported by using frequent images that allow learners to see that 3 × 10 and 10 × 3 give the same answer. Example: **and**	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
			By the end of the term learners should be able to begin to understand that multiplication can be done in any order. This concept should continue to be practised throughout the year. Learners can also use flow diagrams to record multiplication facts. Example: 	
1.15 **Division**	• Divide numbers to by • Use appropriate symbols (÷,=, □)	• Divide numbers to by • Use appropriate symbols (÷,=, □)	The division sign is introduced in Grade 3. For two years the concepts of sharing and grouping have been practised and now it is time to link these two concepts. The division symbol can be introduced when learners are doing word problems. The introduction of the symbol can be supported through the images below as well. It is important to use familiar images. **Example** 12 grouped into 3s give 4 groups 12 grouped into 4s gives 3 groups $4 \times 3 = 12$ $3 \times 4 = 12$ 12 shared between 4 gives 3 each 12 shared between 3 gives 4 each **12 ÷ 3 = 4 means:** 12 grouped into 3 gives 4 groups, and 12 shared between 3 gives 4 each.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.16 **Mental mathematics**	**Number Concept: Range 999** • Order a given set of selected numbers • Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of from to • Multiplication and division facts for the: • two times table up to • ten times table up to **Calculation Strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number Concept: Range 200** • Order a given set of selected numbers Range 200 • Compare numbers to 200 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Recall addition and subtraction facts to • Add or subtract multiples of from to **Mental strategies** Use calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction	Calculating strategies, number concept, knowledge and known number facts are developed through problem-solving and calculations. These are practised during the mental mathematics time. This helps learners to become familiar with them and to be able to use them with ease when calculating and solving problems in context. During this term learners continue to develop their ability to work flexibly with numbers. The mental strategies that learners develop will help with written calculations and will help learners to make estimates. Examples of questions that can be asked: Number concept: Number names and symbols Hold up a card or write down a number name. Choose a learner to write the matching numeral. **More or less** What is • 1 less than 200 • 1 more than 199 • 2 more than 102 • 2 less than 105 • 3 more than 77 • 3 less than 51 • 4 more than 68 • 4 less than 167 • 5 more than 129 • 5 less than 185 • 10 more than 90 • 10 less 160 What is the 5th letter of the alphabet? What is the 9th month of the year?	.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.16 Mental mathematics	**Number Concept: Range 999** • Order a given set of selected numbers • Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of from to • Multiplication and division facts for the: • two times table up to • ten times table up to **Calculation Strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number Concept: Range 200** • Order a given set of selected numbers Range 200 • Compare numbers to 200 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Recall addition and subtraction facts to • Add or subtract multiples of from to **Mental strategies** Use calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction	**Ordering and comparing** Which is more: or ? Give me a number between 1 and **Rapidly recall** Addition and subtraction facts: • Know by heart all addition and subtraction number bonds to 20 Example a) _____ + $\triangle$ = 20 b) _____ + $\triangle$ = 16 Add and subtract fact for all numbers up to and including 20 Examples a) 1 + 11 = 12 b) 18 – 4 = 14 c) 11 + 1 = 12 d) 18 – 14 = 4 e) 2 + 10 = 12 f) 18 – 5 = 13 g) 10 + 2 = 12 h) 18 – 13 = 5 i) 3 + 9 = 12 j) 18 – 6 = 12 k) 9 + 3 = 12 l) 18 – 12 = 6 Quickly recall addition doubles to . This should include corresponding subtraction facts. Examples**:** a) 1 + 1 = 2 b) 6 + 6 = 12 c) 2 + 2 = 4 d) 7 + 7 = 14 e) 3 + 3 = 6 f) 8 + 8 = 16 g) 4 + 4 = 8 h) 9 + 9 = 18 i) 5 + 5 = 10 j) 10 + 10 = 20 **Examples:** Show me the number to add to ... to make(writing down or using the place value or Flard cards). a) 8 b) 2 c) 9 d) 15 e) 3	.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.16 **Mental mathematics**	**Number Concept: Range 999** • Order a given set of selected numbers • Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of from to • Multiplication and division facts for the: • two times table up to • ten times table up to **Calculation Strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number Concept: Range 200** • Order a given set of selected numbers Range 200 • Compare numbers to 200 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Recall addition and subtraction facts to • Add or subtract multiples of from to **Mental strategies** Use calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction	**Examples:** Show me the number left when … Is taken away from (writing down or using the place value or Flard cards). a) 5 b) 18 c) 0 d) 14 e) 7 Add or subtract multiples of 10 from 100 **Examples:** a) Say how many steps must be taken on a number line to get from 30 to 100 or from 100 to 50. b) Find pairs of cards to make 100. c) Put numbers in the boxes to make 100 $\square + 70 = 100$ $20 + \square = 100$ $100 - \square = 90$ $100 - 40 = \square$ **Calculation strategies:** Use calculation strategies to add and subtract efficiently. Add several numbers by using strategies such as: • Look for pairs of numbers that make 10 and use these first $2 + 7 + 8$ 2 + 8 make 10 and then add 7. Put the larger number first in order to count on or count back • Start with the greatest number $5 + 15$ Restate the number sentence: 15 + 5 and count on to 20	.

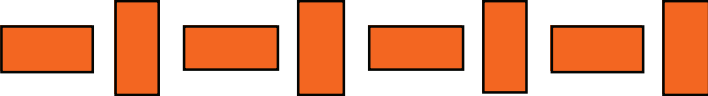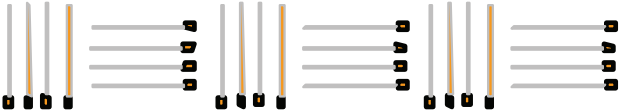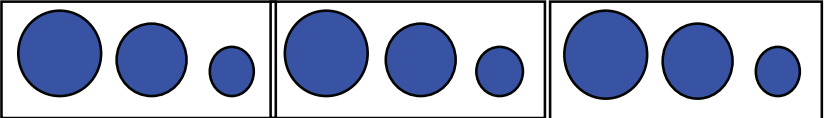| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.16 **Mental mathematics**	**Number Concept: Range 999** • Order a given set of selected numbers • Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of from to • Multiplication and division facts for the: • two times table up to • ten times table up to **Calculation Strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number Concept: Range 200** • Order a given set of selected numbers Range 200 • Compare numbers to 200 and say which is 1,2,3,4,5 and 10 more or less **Rapidly recall:** • Recall addition and subtraction facts to • Add or subtract multiples of from to **Mental strategies** Use calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction	• Change a number to 10 and then subtract or add 1 **Example:** 8 + 9 = 17 and explain that one could do 8 + 9 = 8 + 10 – 1 6 + 11 = 17 and explain that one could do 6 + 10 + 1 17 – 9 = 8 and explain that one could do 17 – 10 + 1 • Break up a number into its parts and then add Build up and break down numbers: Continue to break up numbers into 'small bits' 8 + 12 = 8+ (10+2) = 8 + 2 + 10 = 10 + 10 = 20 • Use doubling as a mental calculation strategy Identify near doubles Example: 5 + 6 = 11 explaining that it is double 5 plus 1 or double 6 minus 1 Recognise that when two numbers are close in size to each other then it is easier to find a difference by counting up, not counting back. 15 – 11 = 4 and explain that counting up from 11 to 15 gives 4 Some mental mathematics can be done without apparatus, but it is often useful to do mental mathematics with apparatus, Recommended apparatus • a number line (structured and empty) • a number grid • place value cards (flard cards) • counting beads	.

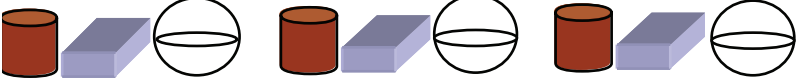| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.17 Fractions	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths, • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 2 thirds,	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths, • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 1 third	In Grade 2 learners were introduced to fractions. They: • shared and grouped things equally; • named fraction parts for unitary fractions; • identified fractions in different contexts; • wrote fraction names as 1 third, 1 fifth; • found fractions of whole objects; and • found fractions of a collection of objects. During this term learners are introduced to non-unitary fractions, e.g. 3 quarters or 2 thirds. They continue to work with unitary fractions. They are also working with eighths and sixths. Examples of questions: Into how many equal parts has each shape been divided? How many parts of each shape are shaded? What fraction of each shape is shaded? What fraction of each shape is not shaded? A. B C D Learners should be given the opportunity to colour in shapes themselves.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.17 Fractions	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths, • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 2 thirds,	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths, • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 1 third	Example**:** Colour in 2 third of this shape A. Colour in 2 quarters of this shape B Colour in 4 fifths of this shape C Colour in 6 eights of this shape D	

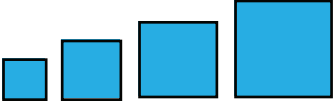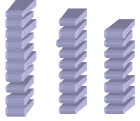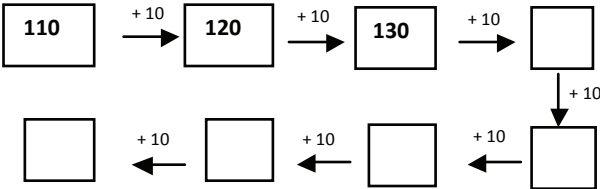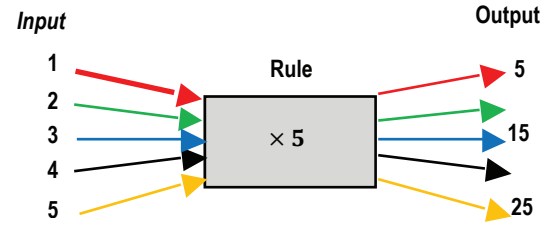| GRADE 3 TERM 1			
2. PATTERNS, FUNCTIONS AND ALGEBRA			
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 1**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
2.1 Geometric patterns	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create own patterns** Create own geometric patterns • with physical objects • by drawings lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Copy, extend and describe** • Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Range of patterns**: Simple patterns in which shapes, or groups of shapes are repeated in exactly the same way **Create own patterns** • Create own geometric patterns • with physical objects • by drawing lines, shapes or objects	In Grade 3 learners can work with patterns in which • the elements are repeated in the same way; • the size of the shapes changes in predictable ways; and • the number of shapes or objects changes in a predictable way. Patterns can be made by using one object but having the colours of the object change in a regular way, e.g. Patterns can be made by using one shape or object but having the position of the shape or object change in a regular way Example**:** a) b) Some patterns have identical groups of shapes or objects repeated, where the size of the shape in each group changes in a regular, predictable way, e.g. the size of the shape gets bigger or smaller. Example**:** The size of the shape gets bigger Example**:** The size of the shape gets smaller	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.1 **Geometric patterns**	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create own patterns** Create own geometric patterns • with physical objects • by drawings lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Copy, extend and describe** • Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Range of patterns**: Simple patterns in which shapes, or groups of shapes are repeated in exactly the same way **Create own patterns** • Create own geometric patterns • with physical objects • by drawing lines, shapes or objects	Patterns can be made by making identical groups, where each group has only one kind of object but the position of the objects in a group changes. Identical groups are repeated. Example**:** Some patterns are made from a single kind of shape, but each example of the shape increases or decreases in size Example**:** Some patterns are made from groups in which the same shapes of objects occur, but the number of each kind of shape or objects increases or decreases in a regular way. Example**:** • Copying the pattern helps learners to see the logic of how the pattern is made. • Extending the pattern helps learners to check that they have properly understood the logic of the pattern. • Describing the pattern helps learners to develop their language and speaking skills. It also helps you to see how learners have interpreted the pattern. It is usually easier for learners to talk about the pattern after they have made it. By now learners should be able to describe patterns without the aid of guiding questions. Continue to focus on developing the language they need to describe the patterns.	1 lesson

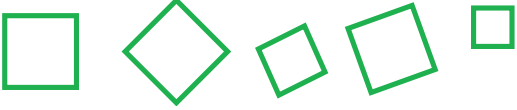| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.2 **Number patterns**	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least **Create and describe own patterns** Create own number patterns.	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 100. • Sequences should show counting forwards and backwards in: - 1s from any number between 0 and 200 - 10s from any multiple between 0 and 200 - 5s from any multiple of 5 between 0 and 200 - 2s from any multiple of 2 between 0 and 200 - 3s from any multiple of 3 between 0 and 200 - 4s from any multiple of 4 between 0 and 200 - 100s to at least 500	Number sequences can be linked with and support counting. As learners' counting skills change and develop, the kinds of number sequences learners work with can develop. Sequences should show counting forwards and backwards in: • 1s from any number between 0 and 200 • 10s from any multiple between 0 and 200 • 5s from any multiple of 5 between 0 and 200 • 2s from any multiple of 2 between 0 and 200 • 3s from any multiple of 3 between 0 and 200 • 4s from any multiple of 4 between 0 and 200 • 100s from any multiple of 100 to at least 500 Learners can point to numbers as they count. It is useful to give learners number sequences in different representations Example • A written sequence of numbers • Number lines - with only the numbers being counted shown - sections of number lines e.g. • Number grids • Number chains Learners can cover, colour, or circle numbers as they count on number lines and number grids. Learners can fill in missing numbers on number lines, number grids, in written number sequences and number chains Example 	3 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.2 **Number patterns**	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least **Create and describe own patterns** Create own number patterns.	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 100. • Sequences should show counting forwards and backwards in: - 1s from any number between 0 and 200 - 10s from any multiple between 0 and 200 - 5s from any multiple of 5 between 0 and 200 - 2s from any multiple of 2 between 0 and 200 - 3s from any multiple of 3 between 0 and 200 - 4s from any multiple of 4 between 0 and 200 - 100s to at least 500	Just as number sequences can support counting, so learners can count in groups, either objects or pictures, and rewrite these numbers into tables and flow diagrams as a way of developing and supporting multiplication. In Term 1 focus on 2s, 5s and 10s e.g. Count in 5s (table and flow diagram below)	3 lessons

Count in 5s

R5 coins	1	2	3	4	5	6	7	8	9
Total money	R5	R10	R15	R20	R25	R30	R35	R40	R45

Input

| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Rule

$\times 5$

Output

| 5 |
| 15 |
| 25 |

By the end of the term learners work with counting sequences to and from 100.

			GRADE 3 TERM 1	
			3. SPACE AND SHAPE (GEOMETRY)	
TOPICS	**CONCEPTS AND SKILLS:** **REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS:** **FOCUS FOR TERM 1**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
3.3 **2-D shapes**	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides **Draw shapes** • circles • triangles • squares • rectangles	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides	**What is different from Grade 2?** In Grade 3 learners consolidate work done on 2-D shapes in Grade 2, but do not focus on size or colour when working with shapes. This allows learners more time to focus on the new work with 3-D objects, position, orientation and views and symmetry. Most work with shapes in Grade 3 is done practically with concrete objects. All work should be consolidated through written exercises. **Recognising and naming circles, triangles, squares and rectangles** Learners should work with circles and squares of different sizes and triangles that are differently shaped. It is important that learners do not only see one example of each shape. Most commercial sets of shapes give only one example of triangles. Learners need to be able to recognise • Circles that have different sizes Example**:** • Triangles that are shaped differently and placed in different positions Example**:** • Squares of different sizes in different positions Example**:** 	2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.3 **2-D shapes**	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides **Draw shapes** • circles • triangles • squares • rectangles	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides	• Rectangles that are shaped differently, and placed in different positions Example**:** It is useful for learners to work with cut-out cardboard models of shapes. This allows learners to see different triangles, squares and rectangles placed in different positions. Learners sort shapes according to whether they have straight or round sides. Learners sort and groups shapes according to whether they are triangles, rectangles, squares or circles. Work is consolidated through written exercises.	2 lessons

GRADE 3 TERM 1				
4. MEASUREMENT				
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 1**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)

4.1 Time	**Telling the time**
	
	• Read dates on calendars
	
	• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
	
	• Tell 12-hour time in
	
	  - hours
	
	  - half hours
	
	  - quarter hours
	
	  - minutes
	
	on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
	
	Calculate length of time and passing of time
	
	Use calendars to calculate and describe lengths of time in days or weeks or months including
	
	• converting between days and weeks
	
	• converting between weeks and months
	
	Use clocks to calculate length of time in hours or half hours.
		Telling the time
		
		• Read dates on calendars
		
		• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
		
		• Tell 12-hour time in
		
		  - hours
		
		  - half hours
		
		  - quarter hours
		
		  - minutes
		
		on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
			What is different from Grade 2?
			
			Digital instruments are introduced.
			
			In Grade 2 learners read time in hours, half hours and quarter hours on analogue clocks.
			
			In Grade 3 learners work with digital instruments for the first time. They still keep to the 12-hour format and use a.m. and p.m. where necessary.
			
			Learners continue to practise talking about the duration of time and the sequencing of time.
			
			During whole class teaching time and focus group time, learners continue to talk about the day of the week, month of the year and the date of the current day, as well as days before and days to come. Learners continue to place the following on a calendar as the events arise
			
			• birthdays
			
			• religious festivals
			
			• historical events
			
			• school events
			
			• public holidays
			
			Continue to ask learners to tell the time in hours, half hours and quarter hours using analogue clocks at regular intervals on an almost daily basis. For example, learners can be asked to tell the time when school starts, at break time and at home time, or when they change from one lesson to another. Choose times where the clock shows an exact hour or half hour or quarter hour. It is useful to have a large, working clock displayed in the classroom, so that learners can refer to it. Learners can also make models of clocks. You can then ask learners to show various times and include some calculations e.g. "Show me 10 o'clock. What was the time a quarter of an hour before 10?"
			
			During independent work time learners continue do exercises related to telling the time in hours, half hours and quarter hours on analogue clocks. Learners can do calculations with weeks or days if provided with a calendar or section of a calendar, e.g. finding dates and calculating the time differences between them.
				3lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.1 Time	**Telling the time**
	
	• Read dates on calendars
	
	• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
	
	• Tell 12-hour time in
	
	  - hours
	
	  - half hours
	
	  - quarter hours
	
	  - minutes
	
	on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
	
	Calculate length of time and passing of time
	
	Use calendars to calculate and describe lengths of time in days or weeks or months including
	
	• converting between days and weeks
	
	• converting between weeks and months
	
	Use clocks to calculate length of time in hours or half hours.
		Telling the time
		
		• Read dates on calendars
		
		• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
		
		• Tell 12-hour time in
		
		  - hours
		
		  - half hours
		
		  - quarter hours
		
		  - minutes
		
		on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
			Digital time
			
			• Time is shown in digital 12 hour format on many domestic appliances e.g. cell phones, microwaves, CD and DVD-players etc. Learners may well be more familiar with this form of time than analogue clocks. Spend about 3 lessons familiarising learners with digital 12-hour time format.
			
			• Remind learners about the meanings of a.m. and p.m.
			
			• Show learners which digits refer to hours and which digits refer to minutes in digital time.
			
			• Explain that there are 60 minutes in an hour; so there are 30 minutes in a half hour and 15 minutes in a quarter of an hour. This will help learners to connect minutes with reading in hours, half hours and quarter hours on analogue clocks, which is what they did in Grade 2.
			
			• Give learners plenty of practice in reading digital time in 12 hour format.
			
			• Have a working digital clock on display in the classroom. Ask learners to give the time regularly during the day over the entire year. Let learners make model clocks, which they can use for telling the time and calculating time differences.
				3lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 Length	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison, e.g. longer, shorter, taller, and wider **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length • Estimate and measure lengths in centimetres using a ruler No conversions between metres and centimetres required		During Grade 2 it was recommended that learners focus on estimating, measuring, comparing and recording lengths, widths and heights • with informal units; and • measuring in metres using a metre stick or 1 metre lengths of string. During independent work times learners can practise these measuring skills. **Measuring length as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of length; and • measuring length in metres. Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term. Lessons focussing on measuring length will start in Term 2.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.3 **Mass**	**Informal measuring** • Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc. • Use language to talk about the comparison e.g. light, heavy, lighter, heavier **Introducing formal measuring** • Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt • Measure their own mass in kilograms using a bathroom scale No conversions between millilitres and litres required	In Grade 2 learners • measured mass informally using a measuring balance; • ordered products according to the mass stated on the package; and • read bathroom scales (both real scales and pictures of scales). During independent work times learners can practise these measuring skills. **Measuring mass as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of mass; and • measuring mass in kilograms. Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term. Lessons focussing on measuring mass will start in Term 2.		

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.4
Capacity/ Volume
	Informal measuring
	
	• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
	
	• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has a capacity of four cups
	
	Introducing formal measuring
	
	• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
	
	• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres, e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
	
	• Know that a standard cup is 250 millilitres
	
	• Know that a teaspoon is 5 millilitres
	
	No conversions between millilitres and litres required
		Informal measuring
		
		• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
		
		• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container, e.g. the bottle has the capacity of four cups
		
		Introducing formal measuring
		
		• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
		
		  - using bottles with a capacity of 1 litre, or containers whose capacity is stated in millilitres e.g. cool drink cans
		
		  - measuring jugs in which numbered calibration lines show litres, half litres and quarter litres
		
		  - measuring jugs which have numbered calibration lines for millilitres. Learners are not expected to read volumes at unnumbered calibration lines
		
		  - Measuring cups and teaspoons which indicate their capacity
		
		• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
		
		• Know that a standard cup is 250 millilitres
		
		• Know that a teaspoon is 5 millilitres
		
		No conversions between millilitres and litres required
			What is different from Grade 2?
			
			In Grade 2 learners
			
			• estimated and measured, compared, ordered and recorded the capacity of containers or the volume in containers using non-standard measures;
			
			• compared and ordered the capacity of a range of bottles and grocery items where the volume is stated on the packaging; and
			
			• used either 1 litre bottles or 1 litre jugs to estimate and measure, compare, order and record the capacity of containers or the volume in containers in litres.
			
			In Grade 3 learners are introduced to millilitres.
			
			What is capacity? What is volume?
			
			A bottle can have a 1 litre capacity, but it may not be filled to its full capacity, it could, for example, only contain a volume of one cup of water
			
			Capacity is the total amount that an object can hold (or the amount of space inside the object).
			
			Volume is the amount of space that something takes up.
			
			Sometimes learners will be measuring how much liquid (or sand or other substances) are in a container. This is measuring the volume of the substance in the container.
			
			At other times learners will be measuring how much a container can hold if it is filled to its maximum capacity.
			
			Learners should continue to measure using non-standard units of capacity
			
			Informal measurement of capacity using non-standard units of capacity
			
			Learners can learn all the principles and practises of measurement using non-standard units. Measuring with non-standard units should not be considered to be inferior to measuring with standard units.
			
			Learners should get the opportunity to measure volume/capacity using a range of objects as informal units e.g. cups (but not necessarily measuring cups), spoons (but not necessarily measuring teaspoons), bottle tops such as 2 litre milk bottle tops, small cans, small bottles etc.
				2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.4
Capacity/ Volume
	Informal measuring
	
	• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
	
	• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has a capacity of four cups
	
	Introducing formal measuring
	
	• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
	
	• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres, e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
	
	• Know that a standard cup is 250 millilitres
	
	• Know that a teaspoon is 5 millilitres
	
	No conversions between millilitres and litres required
		Informal measuring
		
		• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
		
		• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container, e.g. the bottle has the capacity of four cups
		
		Introducing formal measuring
		
		• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
		
		  - using bottles with a capacity of 1 litre, or containers whose capacity is stated in millilitres e.g. cool drink cans
		
		  - measuring jugs in which numbered calibration lines show litres, half litres and quarter litres
		
		  - measuring jugs which have numbered calibration lines for millilitres. Learners are not expected to read volumes at unnumbered calibration lines
		
		  - Measuring cups and teaspoons which indicate their capacity
		
		• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
		
		• Know that a standard cup is 250 millilitres
		
		• Know that a teaspoon is 5 millilitres
		
		No conversions between millilitres and litres required
			Measuring volume/capacity with non-standard units involves counting how times you fill and pour from the chosen unit whose volume is being measured.
			
			Learners should be taught always to state the unit e.g. there are 48 teaspoons of water in the bottle or there just less than a cup of water in the bottle.
			
			Once learners have measured with any unit a couple of times, they should estimate capacity/volume using that unit. Estimation before measuring is important, but can only be done once learners have done some measuring with that unit.
			
			Learners need to be taught that in order to compare volume or capacity, the same unit needs to be used. For example, if a glass holds 20 teaspoons of water and a cup holds 10 tablespoons of water, you cannot say that the glass holds more water.
			
			Learners need to measure with a range of informal units, so that they can
			
			• begin to understand that the smaller the unit, the more time you will need to use/fill it, e.g. the volume in a bottle could be 20 tablespoonfuls but also 1 cup;
			
			• begin to use units which are appropriate to what they are measuring, e.g. measuring a full 2 litre bottle with teaspoons is a waste of time.
			
			Introducing formal measuring
			
			• Estimate, measure, compare, order and record volumes and capacities in litres
			
			Remind learners that litres are a common standard unit of measuring capacity and volume. The abbreviated form (l) is used on most measuring jugs and commercial goods sold by volume. Check that learners remember the abbreviation for litres.
			
			Learners measure in litres using:
			
			• 1 litre containers such as cold drink bottles, milk bottles, milk cartons, juice cartons; and
			
			• measuring jugs which show 1 litre calibration lines.
			
			They estimate and then measure the capacity of a range of containers such as large yoghurt tubs, ice cream tubs, lunch boxes, large jugs, large bottles, empty paint tins, buckets etc. Items of different capacity should be chosen. Learners describe the capacity as "less than 1 litre, 2 litres, between 1 and 2 litres, 5 litres" etc.
				2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.4 Capacity/ Volume	**Informal measuring**
	• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
	• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has a capacity of four cups
	Introducing formal measuring
	• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
	• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres, e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
	• Know that a standard cup is 250 millilitres
	• Know that a teaspoon is 5 millilitres
	No conversions between millilitres and litres required
		Informal measuring
		• Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups
		• Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container, e.g. the bottle has the capacity of four cups
		Introducing formal measuring
		• Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres
		  - using bottles with a capacity of 1 litre, or containers whose capacity is stated in millilitres e.g. cool drink cans
		  - measuring jugs in which numbered calibration lines show litres, half litres and quarter litres
		  - measuring jugs which have numbered calibration lines for millilitres. Learners are not expected to read volumes at unnumbered calibration lines
		  - Measuring cups and teaspoons which indicate their capacity
		• Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil
		• Know that a standard cup is 250 millilitres
		• Know that a teaspoon is 5 millilitres
		No conversions between millilitres and litres required
			Learners compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint.
			• Estimate, measure, compare, order and record volumes and capacities in millilitres
			Talk with learners about millilitres being a common standard unit of measuring capacity and volume. Explain that millilitres are a smaller unit than litres. They should learn the word and the abbreviation, because on many commercial containers and many measuring jugs the abbreviated form of the word is used.
			Learners should compare, order and record the capacity of commercially packaged objects whose capacity is stated in millilitres, e.g. 500 ml of milk, 750 ml vinegar, 330 ml cold drink, 200 ml cold drink, 400 ml floor polish etc.
			Learners should measure regularly enough with:
			• standard measuring cups to begin to get a sense of how much 250 ml is;
			• measuring teaspoons to begin to get a sense of how much 5 ml is;
			• measuring jugs calibrated in millilitres - here the expectation is that learners only read at the numbered calibration lines - they will focus on reading unnumbered calibration lines in the Intermediate Phase.
			Following recipes, including baking, is a useful context in which learners can practise measuring.
			Learners are NOT expected
			• to know that 1 000 ml = 1 litre,
			• to do conversions between millilitres and litres, or
			• read unnumbered calibration lines on measuring jugs (this is done from Grade 4).
			Recording measurements
			Although measuring is a practical skill, learners should record their measurements at all times, including all informal and formal measurement.
			Measuring capacity/volume as a context for solving problems and calculations
			During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of
			• informal measurement of capacity/volume e.g. Gogo uses 2 cups of milk to make a pudding. If she doubles the recipe, how much milk will she need?
			• litres
			• millilitres
			Take account of the number range appropriate for the term, as well as the range of problems types.
				2 lessons

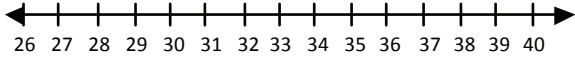| GRADE 3 TERM 1				
5. DATA HANDLING				
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

5.4 **Collect and organise data**	**Collect and organise data**
	• Collect data about the class or school to answer questions posed by the teacher
	• Organise data supplied by teacher or book
	• Organise data in
	  - lists
	  - tallies
	  - tables
		Collect and organise data
		Collect data about the class or school to answer questions posed by the teacher.
		Use tallies to record data in categories provided.
		Represent data
		Represent data in
		• Table
		• Bar graph
		Analyse and Interpret data
		Answer questions about data in bar
			What is different from Grade 2?
			• Learners organise data into lists, tallies, tables
			• Learners are introduced to bar graphs
			• Learners continue to work with pictographs - both constructing them as part of the data cycle and analysing pictographs that they are given
			The complete data cycle
			In the data handling cycle,
			• learners collect information to answer a question. In the Foundation and Intermediate Phase this question is normally provided by the teacher or text book;
			• learners sort and represent the information in ways which make it easier to analyse. The form of representation that learners in Grade 3 deal with are lists, tallies, tables, pictographs and bar graphs; and
			• learners analyse the information by answering questions posed by the teacher.
			A class bar graph
			It is recommended that Grade 3 learners work through the whole data cycle at least once in the year: Working together as a class helps learners to be involved in all the stages of the process without getting lost in the detail of any stage. Making a class bar graph allows you to focus the learners on the key aspects of data handling and to introduce learners to the key features of a bar graph
			• where and how to label the graph (graph title)
			• where and how to label the axes (axes titles)
			• how to draw the bars
			  - draw the bars the correct length to show the data
			  - make the bars the same width
			  - leave a space between bars
			  - label each bar clearly
			• how to read the graph
				3 lessons

5.5 **Represent data**	**Represent data** Represent data in • pictograph • bar graphs			
5.6 **Analyse and interpret data**	**Analyse and Interpret data** Answer questions about data presented in • pictographs • bar graphs			

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
5.6 **Analyse and interpret data**	**Analyse and Interpret data** Answer questions about data presented in • pictographs • bar graphs		Learners need to know that it is important to read the graph title first, so that they know what the data is about. They also need to read the titles of the horizontal and vertical axes. Learners do not need to know the technical terms used to describe parts of the graph, only that they must read along the "bottom" and "side" to see what the graph is about. We normally read from left to right, but when learners read graphs they need to read left to right and bottom to top. This needs to be explained to learners. They also need to practice these skills. Working through the whole data cycle can take 3 lessons. **Collect and organise data** In Grade 3 you should pose the questions that allow learners to collect data e.g. "What are our class's favourite colours?" Teachers in the phase should ensure that different topics are chosen for data collection and analysis in each of the grades. Suitable topics include favourite sports, favourite cool drinks, favourite colours, favourite pass times, favourite foods, favourite TV programmes etc. Learners can start by calling out options. Once you get an idea of the range of answers, you should set categories for learners to choose from. Let learners practise all the "non-graph" forms of representation i.e. lists, tallies and tables e.g. - list the names of each learners under the category they have chosen as favourite; - show learners how to make a tally table from the list (teaching learners how to tally can take a whole lesson); and - make a table with numbers from the tally table. Once the data is in a table, show learners how to draw the bar graph (see guidelines above). **Analyse and interpret data** Learners answer questions that you pose about the picture graph Example**:** a) "What colour is the most popular in our class?" b) "What colour is the favourite of the fewest learners in the class?" c) "Do more learners like …. or …?" d) "How many more learners prefer … than …?"	

		GRADE 3 TERM 2		
		1. NUMBERS, OPERATIONS AND RELATIONSHIPS		
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 2**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
1.1 Counting objects	**Counting concrete objects** Estimate and count reliably to at least 1000 everyday objects. The strategy of grouping is encouraged.	Group to at least 500 everyday objects to estimate and count reliably. Give a reasonable estimate of a number of objects that can be checked by counting	**What is different from Term 1?** The number range increases to 500. The increase in the number range assumes that learners can: • group objects in order to count; • count in tens to 500 and say the number names in sequence; and • match the symbol to the amount counted by writing the number or showing the number with place value cards. See notes for Term 1.	
1.2 Count forwards and backwards	Count forwards and backwards in: • 1s from any number between 0 and 1000 • 10s from any multiple between 0 and 1000 • 5s from any multiple of 5 between 0 and 1000 • 2s from any multiple of 2 between 0 and 1000 • 3s from any multiple of 3 between 0 and 1000 • 4s from any multiple of 4 between 0 and 1000 • in 20s, 25s, 50s, 100s to at least 1 000	• 1s from any number between 0 and 500 • 10s from any multiple between 0 and 500 • 5s from any multiple of 5 between 0 and 500 • 2s from any multiple of 2 between 0 and 500 • 3s from any multiple of 3 between 0 and 500 • 4s from any multiple of 4 between 0 and 500 • 50s,100s to at least 1000	**What is different from Term 1?** During this term learners start counting in 50s. The number range now increases to 1 000. During this term learners continue to apply skip counting to the multiplication tables and to number sequences. See notes for Term 1.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.3 **Number symbols and number names**	• Recognise, identify **and read numbers** • Recognise, identify and read number symbols 0 - 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 1 000 • Write number names 0 - 1 000	• Recognise, identify **and read numbers** • Recognise, identify and read number symbols 0 - 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 250 • Write number names 0 - 250	The reading and writing number symbols continues to be practised when: • counting objects; • counting forwards and backwards; • completing number sequences; and • ordering and comparing numbers. See notes for Term 1.	
1.4 **Describe, compare and order numbers**	**Order and compare numbers to 999** • Describe and compare whole numbers up to 999 using smaller than, greater than, more than, fewer than and is equal to. • Describe and order whole numbers up to 999 from smallest to greatest, and greatest to smallest . **Use ordinal numbers to show order, place or position** • Use, read and write ordinal numbers, including abbreviated form up to 31.	**Order and compare numbers to 500** • Describe and compare whole numbers up to 500 using smaller than, greater than, more than, fewer than and is equal to. • Describe and order whole numbers up to 500 from smallest to greatest, and greatest to smallest . **Use ordinal numbers to show order, place or position** • Use, read and write ordinal numbers, including abbreviated form up to 31.	During this term the number range increases from 99 to 500. Learners are now ordering three-digit numbers. To order three-digit numbers, learners need to: • say the number name; • write the number; and • recognise the value of each digit. Allow learners to use a number line, number track, number grids or even their knowledge of breaking up numbers into hundreds, tens and ones to illustrate their understanding. When ordering numbers learners must be able to say why a number is bigger than another using the value of the digits to explain themselves. Example**:** 239 is smaller than 339 because I know that and 30 and 9 and and 30 and 9. Learner should be able to explain that 300 is more than 200 by using grouped objects to show the number of 100s in each number. Learners could also locate the position of the number on the line by saying that 339 comes after 239, therefore I know it is bigger.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.5 **Place value**	**Recognise the place value of three-digit numbers to 999** • Know what each digit represents • Decompose 3 digit numbers up to 999 into multiples of 100, multiple of tens and ones • Identify and state the value of each digit	**Recognise the place value of numbers to 500** • Know what each digit represents • Decompose 3 digit numbers up to 500 into multiples of hundreds, tens and ones . • Identify and state the value of each digit	**What is different from Term 1?** During the second term learners decompose three-digit numbers for the first time. The place value system is extended to include hundreds. Learners' understanding of place value can be developed by asking questions such as, find ten more or fewer than a number. As a result of regular experiences in developing place value concepts, learners should be able to count confidently in 100s, discover patterns related to place value and build up and break down two-and three-digit numbers. During this term learners learn to say and write down the value of a digit in the number. In 452 the value of the 5 is fifty. In 325, the value of the 5 is five. It is important to link the understanding of 50 to 5 bundles of ten and 5 to five loose ones. This will help learners when ordering and comparing numbers. The place value cards (flared Cards) are equally important. Place value cards are used to break up numbers to show the value of each digit. Learners can make their own set of place value cards. An envelope can be pasted at the back of their class workbook and the cards stored in there. The cards can even be used when they are doing addition and can be one way that they use to check their answers. Use their Flard cards to demonstrate this 	c)

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.5 Place value	**Recognise the place value of three-digit numbers to 999** • Know what each digit represents • Decompose 3 digit numbers up to 999 into multiples of 100, multiple of tens and ones (HTU) • Identify and state the value of each digit	**Recognise the place value of numbers to 500** • Know what each digit represents • Decompose 3 digit numbers up to 500 into multiples of hundreds, tens and ones (HTU). • Identify and state the value of each digit	**Decompose two-digit numbers into multiples of hundreds, tens and ones** Learners can decompose numbers into: • The hundreds, tens value and ones value e.g. 273 = 200 + 70 + 3 (place value cards are useful to do this) **Building up two-digit numbers from their place value parts** Example Write the number: 1 hundred and 3 tens 2 hundred and 4 tens and 5 ones 3 hundred + 9 tens + 2 ones 4 hundred + 5 tens + 7 ones Example**:** Complete: a) 346 = 300 + □ + 6 b) 400 + 20 + 8 = □	c)

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
			SOLVE PROBLEMS IN CONTEXT	
1.6 **Problem-solving techniques**	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when solving problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Learners are continue to solve the word problems using the following techniques: • Building up or breaking down numbers • Doubling and halving • Number lines See notes for Term 1. **What is different in different from Term 1?** **Rounding off** During this term learners start rounding off numbers to the nearest 10. Rounding off is the most familiar form of estimation. If a learner is a good estimator his or her ability to round off should be flexible and well understood. Before learners can use rounding off as a technique when adding or subtracting, they need to practise the technique first. This can be done by using the number line.	
			SOLVE PROBLEMS IN CONTEXT	
1.6 **Problem-solving techniques**	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when solving problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Example: 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 Is 33 closer to 30 or 40? Is 37 closer to 30 or 40? Learners need to understand that: 35 is halfway between 30 and 40. We say that the nearest 10 to 35 is 40 because we round up when the number is halfway between two tens. See notes for Term 2.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.7
Addition and subtraction
	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 999.	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 400	**Examples of problems that can be done this term**
			Addition and subtraction problems
			• Pamela has collected 413 bottle tops. If Ken gives her 29 bottle tops, he will have the same number as Pamela.
			  - How many bottle tops will they both have?
			  - How many bottle tops did Ken have to begin with?
			• Mrs Zibi lent R80,00 to Mrs Magadla. Mrs Zibi now has R366,00 left. How much money did Mrs Zibi have in the beginning?
			• Jan read 115 pages. Nandi read 126 pages. How many more pages did Nandi read than Jan?
			• Ben has 218 marbles. He has 97 fewer marbles than Anna. How many marbles does Anna have?	

1.8 **Repeated addition leading to multiplication**	Solve word problems in context and explain own solution to problems using multiplication with answers up to 99.	Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75	**Examples of problems that can be done this term** See Term 1 for more examples and change the number range accordingly • The manager has to order tyres for 8 buses. If each bus needs six tyres and a spare, how many tyres must the manager order ? • A school pool is 10 meters long. Luvuyo swims 6 laps. How far did he swim? **Problem type: Array** • A vegetable garden has 12 rows of plants. Each row has 7 plants. How many plants are there in the garden? • A vegetable garden has 12 rows of plants. Every row has the same number of plants. If there are a total of 48 plants, how many plants are in each row? • A vegetable garden has 48 plants that are planted in rows. There are 7 plants in each row. How many rows are there? **Comparison/Ratio** • Samuel has 6 sweets. Samuel has three times as many as Moeketsi. How many sweets does Moeketsi have? • Marlene has 18 sweets. This is three times as many as Samuel has. How many sweets does Samuel have? This type of problem is introduced for the first time in Term 2. Learners may take longer to solve problems of these types.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.9 **Grouping and sharing leading to division**	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 100 with answers that may include remainders.	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 75 with answers that may include remainders.	**Examples of problems that can be done this term** How many cars are needed to transport 24 learners if four can fit into a car? There are 65 socks in a drawer. How many pairs of socks are there? **Grouping** David sells bags with ten oranges each. He has 40 oranges. How many bags can he fill? Tony has 66 sweets. Each day he eats 3 sweets. How many days can he eat sweets?	
1.10 **Sharing leading to division**	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{3}{4}, \frac{2}{5}$, etc.	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{3}{4}$, etc.	During term 1 learners were introduced to non-unitary fractions e.g. 3 quarters or 2 thirds. Sufficient opportunity should be given to know these fractions. **Examples of problems that can be done this term** a) Sharing, leading to fractions b) Share 8 chocolate bars among 3 friends so that they all get the same amount of chocolate bar and there is nothing left over c) Fraction of a collection d) Find 1 quarter of 20 sweets. e) 6 sweets are which fraction of 24 sweets f) Grandmother gives Kiki R12. Kiki wants to save a third of the money. How much money must she save? This problem type must only be posed after learners have solved four or five problems of the sharing, leading to fractions type and know the names of fractional pieces. **Writing** Learners are not required to write the fraction symbol. Learners continue to label fraction parts as 1 fifth, 3 quarters or 3 sixths. **Representing fraction word problems** Learners must draw their answers to prove that they understand the problem. Expect that some learners may draw correctly but misname the fraction part. Assist these learners to name fractions correctly (see the notes on naming fractions under context-free calculations). Learners must name the parts that have been shared by writing it as 2 thirds.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.11 Money	• Recognise and identify the South African coins and bank notes
	• Solve money problems involving totals and change in rand or cents.
	• Convert between Rand and cents
		• Recognise and identify the South African coins and bank notes
		• Solve money problems involving totals and change in rand or cents
			Examples of problems that can be done this term:
			• Value of money and making up totals e.g.
			  - Write 525c as rand and cents.
			  - In how many different ways can you make up R400 using only bank notes? How do you know whether you have all the solutions?
			  - Travis has a 50c piece and four 20c pieces. Toffees cost R1,20. How much change will he get?
			• Mandla pays R2,50 to take a taxi to school.
			  - What does it cost him to get to and from school each day?
			  - The train costs R6 for a return ticket. Which is cheaper, the train or the taxi?
			• Buying and selling problems
			  - Pedro's granny gave him R5. Which 3 sweets can he buy? Choc chuckle R2,70; gums R1,80; sour worms R1,40; peach treats R1,60; magic mints R2,20; toffee R1,20.
			  - Damon bought three books for R80 each; how much change will he get from R300?
			  - Packets of 5 mints cost 44c each. Mr King needs 88 mints. How many packets should he buy? What will he pay?
			• Three buses drive on a toll road and are charged R40 each. How much do they pay in total? (It is expected that learners will use repeated addition problems where the rand value is so large.)
				.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
			CONTEXT-FREE CALCULATIONS	
1.12 **Techniques** **(methods** **or** **strategies)**	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Learners are expected to use the following techniques when doing context free calculations: • Building up or breaking down numbers • Doubling and halving • Number lines • Rounding off in tens Allow learners to choose the technique most comfortable for them. However, if learners are using techniques that are not efficient they need to be guided to use more efficient methods. See notes for Term 1 on • building up and breaking down; • doubling and halving; and • number lines. **Rounding off in tens** See the explanation in the problem-solving section of Term 2.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 30	• Add up to • Subtract from • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	**What is different in Term 2?** During this term learners calculate with three-digit numbers for the first time. In order to calculate with three-digit numbers confidently, they should already be able to: • read and write number symbols to • order and compare numbers to at least • count in groups to ; and • count in intervals of and to . During this term learners continue to break down numbers in order to calculate. Building up and breaking down numbers remains one of the important strategies that learners will use during this term. **Possible methods to show addition and subtraction calculations.** • Breaking down a number into smaller parts to make a calculation easier Most of the strategies that learners use involve breaking down numbers. They continue to do so with three-digit numbers. • Adding by breaking down one number Adding three-digit with two-digit Example**:** $324 + 82 = □$ $324 + 82 = (300 + 20 + 4) + (80 + 2)$ $\quad = 300 + (20 + 80) + (4 + 2)$ $\quad = (300 + 100) + 6$ $\quad = 400 + 6$ $\quad = 406$ Example: Adding three-digits and three-digits Break up both numbers $323 + 136 = □$ $323 + 136 = (300 + 20 + 3) + (100 + 30 + 6)$ $\quad = (300 + 100) + (20 + 30) + (3 + 6)$ $\quad = 400 + 50 + 9$ $\quad = 459$	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, −, =, □) • Practise number bonds to 30	• Add up to • Subtract from • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Adding (by breaking down the number to be added) Learners will break down the number in ways that are manageable for them. This means that they will do it in different ways. Example: $324 + 82 = □$ $324 + (40 + 40 + 2)$ $324 + 40 \rightarrow 364 + 40 \rightarrow 404 + 2 = 406$ Example: Adding 3 digit with 3-digits $323 + 136 = □$ $323 + 136 = 323 + (100 + 30 + 6)$ $= (323 + 100) + 30 + 6$ $= (423 + 30) + 6$ $= 453 + 6$ $= 459$ Counting on 40 from 324 could be done by counting in 10s. • Subtraction • Breaking up both numbers three-digit subtract two-digit Example: $389 − 137 = □$ $389 − 137 = (300 + 80 + 9) − (100 + 30 + 7)$ $= (300 − 100) + (80 − 30) + (9 − 7)$ $= 200 + 50 + 2$ $= 252$ • Subtracting by breaking up one number Example: $389 - 137 = □$ $389 − (100 + 30 + 7)$ $389 - 100 \rightarrow 289 - 30 \rightarrow 259 - 7 = 252$ • Using halving to break down a number Example: $225 + 16 = 225 + 8 + 8$ $= (225 + 8) + 8$ $= 233 + 8$ $= 241$	

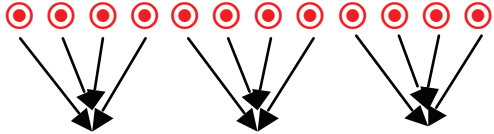| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, –, =, □) • Practise number bonds to 30	• Add up to • Subtract from • Use appropriate symbols (+, –, =, □) • Practice number bonds to 30	• Count on and counting back 305 + 298 = □ Counting up in ones from 298 is an appropriate strategy because the numbers are close to one another. • Identify near doubles Example: 145 + 146 = 191 explaining that it is double 145 plus 1 or double 146 minus 1. 145 + 145 + 1 (100 + 40 + 5) + (100 + 40 + 5) + 1 (100 + 100) + (40 + 40) + (5 + 5 + 1) 200 + 80 + 11 280 + 11 280 + 10 + 1 290 + 1 291 • Change a number to a multiple of ten and then subtract or add ones Count up or down to the nearest 10 Example: 288 + 11 288 + 10 = 298 298 – 1 = 297 Example: 188 + 19 188 + 20 = 208 208 – 1 = 207 **Developing and practising addition and subtraction skills.** Learners need to practise certain kinds of addition and subtraction skills. • Practising Bonds to 30 • Add and subtract multiples of 10	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols (+, –, =, □) • Practise number bonds to 30	• Add up to • Subtract from • Use appropriate symbols (+, –, =, □) • Practice number bonds to 30	Learners should have opportunities to do the following type calculations with numbers up to 400: Add or subtract a pair of multiples of 10, crossing 100 40 + 70 70 + 80 120 – 30 150 – 60 Add or subtract 10 to or from any two or three digit number, including crossing the 100s. Example: 65 + 10 124 + 10 326 – 10 358 – 10 Add or subtract a single digit to or from a three-digit number without crossing the tens. Example: 234 +5 475 + □ = 479 768 – 4 Add and subtract a single digit to and from a multiple of 100 Example: 200 + 4 300 + 3 300 – 6 400 – 5 Begin to add and subtract a pair of multiples of 100. 100 + 100 100 + 200 Learners should be given opportunities to practise patterns in addition and subtraction.. If I know that 1+ 1 = 2 Then What is: 10 + 10 100 + 100	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols ($+, -, =, \square$) • Practise number bonds to 30	• Add up to • Subtract from • Use appropriate symbols ($+, -, =, \square$) • Practice number bonds to 30	**Checking results of calculations** Judging reasonableness of solutions Learners should be trained to judge the reasonableness of solutions. One way to do this is to estimate their answers before calculating. When adding two numbers that are close to each other e.g. 145 and 146, learners can use doubling as a way of estimating their answers. **Checking solutions** Learners should know that they can • check an addition calculation by subtracting. Example: If 236 + 18 = 254; then 254 – 18 = 236; and • check an subtraction calculation by adding. Example 384 – 48 = 336, then 336 + 48 = 384. Using the inverse operation to check solutions is one reason for teaching addition and subtraction together.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by 2, 3, 4, 5, 10 to a total of 99 • Use appropriate symbols (x, =, □)	• Multiply 2, 4, 5, 10, 3 to a total of 50 • Use appropriate symbols (x, =, □)	During this term learners continue to: • use and understand the language of multiplication; • represent multiplication as arrays;use the appropriate symbols to interpret number sentences; • understand that repeated addition can be represented using the multiplication symbol; • practise and understand that multiplication can be done in any order (the commutative law or property); and • use the number line to show multiplication calculations and be able to explain the representation (how the jumps show repeated addition). Learners can continue to use arrays to write repeated addition and multiplication number sentences. Example**:** Write two addition and two multiplication number sentences for the array. The images used to describe multiplication can be widened. The multiplication table can be introduced**. Example:**	

×	2	3	4	5	6	7	8	9	10
1									
2									
3									
4									
5									

Chanting of the tables can be done. Learners do not have to know the tables in Grade 3. The focus is on the language, which allows a mental image for grouping.

Example**:**

• One two is two

• Two twos are four

• Three twos are six

• Four twos are eight

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by 2, 3, 4, 5, 10 to a total of 99 • Use appropriate symbols (x, =, □)	• Multiply 2, 4, 5, 10, 3 to a total of 50 • Use appropriate symbols (x, =, □)	• Five twos are ten • Six two are twelve • Seven twos are fourteen • Eight twos are sixteen • Nine twos are eighteen • Ten twos are twenty. Saying it in this manner supports the knowledge developed in repeated addition. The chanting should be supported by pointing to counting sequences or a number line. Learners can also use flow diagrams to record multiplication facts e.g. Example 	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 **Division**	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, ☐)	• Divide numbers to 50 by 2, 4, 5, 10, 4 • Use appropriate symbols (÷, =, ☐)	During the second term learners continue to practise and consolidate using the division sign. They should understand that a division number sentence could describe a situation involving grouping or sharing. **What is different from Term 1?** During this term learners should be able to write and describe corresponding division sentences: Learners should be able to record the following: $30 ÷ 6 = ☐$ and that $30 ÷ 5 = ☐$ Learners also need to develop written strategies for their division calculations. Example**:** **Repeated subtraction** In order to calculate $12 ÷ 4 = ☐$. Learners need to use their pictures showing grouping or sharing. One group of 4 One group of 4 One group of 4	
	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, ☐)	• Divide numbers to 50 by 2, 4, 5, 10, 4 • Use appropriate symbols (÷, =, ☐)	Share one group of 4 then the second group of 4 and then the third group of 4 $12 - 4 → 8 – 4 → 4 - 4 = 0$ As one group of 4 is put on one side learners can subtract the first 4 and then count how many they have left. They keep on doing this until they have subtracted everything. The emphasis in grade 3 should be on grouping rather than sharing. Doing repeated subtraction with this number range is appropriate. Learners will have to be given division number sentences to complete that allow for doing repeated subtraction. Doing repeated subtraction for $96 ÷ 3$ is not an appropriate or efficient strategy because the number range is too high. At first it might be difficult for learners to 'see' which number sentences (which number ranges) are appropriate for doing repeated subtraction.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.16 Mental mathematics	**Number concept: Range 999** • Order a given set of selected numbers. • Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or fewer **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of 10 from 0 to 100 • Multiplication and division facts for the: • two times table up to 2 x 10 • ten times table up to 10 x 10 **Calculation strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number concept: Range 500** • Order a given set of selected numbers. Range 500 • Compare numbers to 500 and say which is 1,2,3,4,5 and 10 more or fewer **Rapidly recall:** • Recall addition and subtraction facts to 20 • Add or subtract multiples of 10 from 0 to 100 **Mental strategies** Use the following calculation strategies • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction	**Number concept** Examples of questions that can be asked: **Number names and symbols** Hold up a card or write down a number name. Choose a learner to write the matching numeral. **More or fewer** What is: • 1 fewer than 500 • 1 more than 499 • 2 more than 502 • 2 fewer than 405 • 3 more than 477 • 3 fewer than 251 • 4 fewer than 185 • 10 more than 490 • 10 fewer 660 What is the 5th letter of the alphabet? What is the 9th month of the year? **Ordering and comparing** Which is more: 621 or 671? Give me a number between 154 and 159. Addition and subtraction facts: See notes for Term 1. Add or subtract multiples of 10 from 100 Say how many steps must be taken on a number line to get from 30 to 100 or from 100 to 50. Find pairs of cards to make 100 Put numbers in the boxes to make 100. □ + 70 = 100 20 + □ = 100 100 − □ = 90 100 − 40 = □ **Calculation strategies:** See notes for Term 1	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.17 **Fractions**	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths, • Recognise fractions in diagrammatic form • Begin to recognise that 2 halves or 3 thirds make one whole and that 1 half and 2 quarters are equivalent Write fractions as 1 half, 2 thirds,		During this term learners continue to: • learn the names of fraction parts; • use the names in different contexts; • identify the fraction part; • begin to understand the relative size of fractions; • find fractions of objects; and • learn about equivalent fractions. During this term learners compare fractions. • Using fraction strips or Cuisenaire rods. Example**:** These models are ideal for teaching learners to name fractions and to compare them. For example: Show a fraction wall indicating 1 whole, halves, thirds, quarters, fifths, sixths, eighths, tenths. It is best that learners work with concrete apparatus and not compare fractions using the fractions wall in pictures. Learners need to manipulate the objects by measuring them against one another. The following questions could be asked: • How many halves equal a whole? • How many quarters equal a whole? • How many quarters are there in one half? Let learners place the strips alongside each other to find the answers. • How many thirds equal a whole? • How many sixths equal a third? • How many sixths equal a half? • Which is bigger, 1 thirds or 1 half? • Which is bigger 2 thirds or 3 quarters?	

GRADE 3 TERM 2
2. PATTERNS, FUNCTIONS AND ALGEBRA

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.1 Geometric patterns	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create own patterns** Create own geometric patterns • with physical objects • by drawings lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Range of patterns**: Simple patterns in which shapes, or groups of shapes are repeated in exactly the same way Patterns in which the number or size of shapes in each stage changes in a predictable way i.e. regular increasing patterns **Create own patterns** Create own geometric patterns • with physical objects • by drawing lines, shapes or objects	Continue to give learners a similar range of patterns to Term 1, but include all new shapes and objects into the patterns as they are dealt with in Shape and Space. See patterns notes Term 1 and Space and Shape notes Term 2. Allow learners to copy first, then extend and finally describe the patterns. By now they should be able to describe patterns without the aid of guiding questions. Continue to focus on developing the language they need to describe the patterns	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.2 **Number patterns**	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 1 000. **Create own patterns** Create own number patterns.	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 150. Sequences should show counting forwards and backwards in: • 1s from any number between 0 and 500 • 10s from any multiple of 10 between 0 and 500 • 5s from any multiple of 5 between 0 and 500 • 2s from any multiple of 2 between 0 and 500 • 3s from any multiple of 3 between 0 & 500 • 4s from any multiple of 4 between 0 and 500 • 50s,100s to at least 1000	See notes for Term 1, Extend the number range and counting sequences as follows • 1s from any number between 0 and 500 • 10s from any multiple of 10 between 0 and 500 • 5s from any multiple of 5 between 0 and 500 • 2s from any multiple of 2 between 0 and 500 • 100s from any multiple of 100 to at least 1 000 • 50s from any multiple of 50 to at least 1 000 • 3s from any multiple of 3 between 0 & 500 • 4s from any multiple of 4 between 0 and 500 Use objects, pictures, tables and flow diagram to support learners' transition from skip counting and sequences to multiplication by 10, 5, 2, 4. Help learners to use patterns they know as the basis for practising and learning other patterns e.g. • sequences of 2s to lay the basis for sequences of 4s; and • sequences of 5s to lay the basis for sequences of 50s.	3 lessons

GRADE 3 TERM 2
3. SPACE AND SHAPE (GEOMTERY)

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.1 **Position, orientation and views**	**Position and views** • Match different views of the same everyday object • Name an everyday object when shown an unusual view of it • Read, interpret and draw informal maps, or top views of a collection of objects • Find objects on maps **Position and directions** • Follow directions to move around the classroom, and school • Give directions to move around the classroom and school • Follow directions from one place to another on an informal map	**Position and views** • Match different views of the same everyday object • Name an everyday object when shown an unusual view of it **Position and directions** • Follow directions to move around the classroom, and school Give directions to move around the classroom and school	**What is different from Grade 2?** • No specific focus on developing the language of position, as this was done in Grades 1 and 2 • Follow more elaborate directions i.e. to move around the school, rather than just the classroom • Give directions to places in the classroom and school • Maps and top views of collections of objects. This is the focus of Term 3 **Recommended focus for Term 2** In Term 2, it is recommended that Grade 2 work be revised, and that you add • identification of objects from a picture showing an unusual view of it; and • following directions to places outside the classroom. Begin by assessing what learners know and remember about position and orientation. **Position and directions** • Following directions This should be done through practical activities in which learners move themselves according to instructions. In Grade 3 learners can be given either verbal or written directions - to move around the classroom e.g. "come to the front of the class"; "stand next to your chair"; "jump over the dirt bin"; and - to move around the classroom or school i.e. or longer directions, "Go through the doorway, turn left, continue down the passage, cross the field, where are you now?"	2 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

3.1
 	
Position, orientation and views
	Position and views
	
	• Match different views of the same everyday object
	
	• Name an everyday object when shown an unusual view of it
	
	• Read, interpret and draw informal maps, or top views of a collection of objects
	
	• Find objects on maps
	
	Position and directions
	
	• Follow directions to move around the classroom, and school
	
	• Give directions to move around the classroom and school
	
	• Follow directions from one place to another on an informal map
		Position and views
		
		• Match different views of the same everyday object
		
		• Name an everyday object when shown an unusual view of it
		
		Position and directions
		
		• Follow directions to move around the classroom, and school
		
		Give directions to move around the classroom and school
			• Giving directions.
			
			Some learners will find it easy to give directions by modelling what they say on the directions that you have given. For other learners it helps to provide guidelines for the key elements of directions.
			
			- Say whether you continue or move in the direction you are facing or turn around.
			
			- Say whether you go straight, turn left or turn right.
			
			- Give landmarks where you need to turn e.g. when you get to the secretary's office turn left; and
			
			- Say how far to go. There are different ways to say how far to go, e.g.
			
			  o walk 30 paces or walk 10 metres;
			
			  o walk past 3 classroom, or walk until you have passed Mr Radebe's classroom; or
			
			  o walk for about 1 minute.
			
			Position and views
			
			In Grade 3 learners should be given exercises in which they can match different views (views from the top, views from the side, views from the front) of different everyday objects.
			
			This will eventually help learners to interpret drawings of geometric objects done from different perspectives.
			
			Learners should also be given exercises in which they identify an object from a picture drawn, or photograph taken from an usual view,e.g. a top view of a cow or a front view of a toothbrush.
				2 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.2 **3-D objects**	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects **Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides	**What is different from Grade 2?** • Learners no longer look at whether objects can roll or slide; they look at whether surfaces are flat or curved. • Where objects have flat surfaces learners look at whether these surfaces are squares, rectangles, triangles or circles. • Cones and pyramids are introduced (these can be a focus of Terms 3 and 4). **Recommended focus of Term 2** Learners work with the same objects as they did in Grade 2 i.e. • balls and objects shaped like balls; • cylinders and objects shaped like cylinders; and • various boxes and other objects shaped like rectangular prisms or cubes. Learners can focus on the new objects (pyramids and cones) in Terms 3 and 4. **Recognising and naming balls (spheres) and boxes (prisms) and cylinders** • Learners continue to name, sort and group objects. Learners should be given a range of objects to work with: • shaped like spheres, e.g. balls or different size, marbles, oranges etc.; • shaped like prisms, e.g. blocks, bricks, boxes of different sizes e.g. matchboxes, cereal boxes, tea boxes, toothpaste boxes; and • shaped like cylinders, including both long and narrow cylinders e.g. pieces of piping with a cylindrical shape, cardboard inner sleeves of roller towels or toilet rolls and short, wide cylinders, e.g. shoe polish tins, snuff tins etc. Learners can find objects shaped like a ball (sphere), or shaped like a box (prisms) or shaped like a cylinder when given a collection of objects. Learners can find or show objects shaped like boxes (prisms) in the classroom. e.g. "this can of tomatoes is shaped like a cylinder". During independent time learners can continue to make balls and cylinders and box shapes (prisms) from clay or play dough. **Focussing on features of 3-D objects: flat or curved surfaces, the shapes of flat surfaces** • Building single 3-D objects Learners use cut-out cardboard squares or rectangles to make a box. This focuses learners on the shape of the flat surfaces of the box. Learners then look at the flat surfaces on prisms and cylinders and describe them according to whether they are circular, square or rectangular.	3 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.2 **3-D objects**	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects **Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides	• Flat or curved surfaces Building a box (prism) helps learners to focus on the flat surfaces of objects. Learners can then look at whether all geometric objects have only flat surfaces. In Grades 1 and 2, learners separated geometric objects into those that roll and those that slide. This prepares learners to focus on whether the surfaces of objects are flat (the objects that slide) or curved (the objects that roll). Cylinders have some flat and some curved surfaces. **Written exercises** Although most of the work with 3-D objects is done practically, work must be consolidated through written exercises. The focus in Grade 3 should be on naming objects and talking about their surfaces. Learners are not expected to count or know the number of square, rectangular, triangular or circular surfaces an object has. **Language** Useful language ability to talk about 3-D objects: Surface, flat, curved, boxes, balls, cylinders	3 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.3 **2-D shapes**	**Range of Shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides **Draw shapes** • circles • triangles • squares • rectangles	No specific focus on 2-D shapes is recommended for Term 2. However, learners can consolidate what they have learned about recognising and naming 2-D shapes in Term 2, through doing written exercises during independent work time.		
3.4 **Symmetry**	**Symmetry** • Recognise and draw line of symmetry in 2-D geometrical and non=geometrical shapes • Determine line of symmetry through paper folding and reflection	**Symmetry** • Determine line of symmetry through paper folding and reflection	**What is new in Grade 3?** • Finding the line of symmetry through paper folding and reflection. Paper-folding activities that develop an understanding of symmetry include: • activities in which wet paint is placed on the page before folding it; and • activities in which paper is cut or torn on the fold line. These activities can be done both in the Mathematics lesson and the Life Skills lessons. Ask learners to predict what shape they will get once they unfold the cut paper. This helps to train their ability to visualise symmetrical shapes.	2 lessons

		GRADE 3 TERM 2		
		4. MEASUREMENT		
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.1 Time	**Telling the time**
	
	• Read dates on calendars
	
	• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
	
	• Tell 12-hour time in
	
	  - hours
	  - half hours
	  - quarter hours
	  - minutes
	
	on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
	
	Calculate length of time and passing of time
	
	Use calendars to calculate and describe lengths of time in days or weeks or months including
	
	  - converting between days and weeks
	
	  - converting between weeks and months
	
	Use clocks to calculate length of time in hours or half hours including
		Telling the time
		
		• Read dates on calendars
		
		• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
		
		• Tell 12-hour time in
		
		  - hours
		  - half hours
		  - quarter hours
		  - minutes
		
		on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
		
		Calculate length of time and passing of time
		
		Use calendars to calculate and describe lengths of time in days or weeks or months including
		
		• Use clocks to calculate length of time in hours or half hours
			Learners continue to practise talking about the duration of time and the sequencing of time.
			
			During whole class teaching time and focus group time, learners continue to talk about the day of the week, month of the year and the date of the current day, as well as days before and days to come. Learners continue to place the following on a calendar as the events arise
			
			• birthdays
			
			• religious festivals
			
			• historical events
			
			• school events
			
			• public holidays
			
			Continue to ask learners to tell the time in hours, half hours and quarter hours using analogue clocks and in hours and minutes on a digital clock at regular intervals on an almost daily basis. See notes for Term 1.
			
			Digital time
			
			Spend about 2 lessons revising the reading of time on digital clocks. See notes for Term 1.
			
			During independent work time learners continue do exercises related to telling the time
			
			• in hours, half hours and quarter hours on analogue clocks; and
			
			• in hours and minutes on a digital clock.
			
			Learners can do calculations with weeks or days if provided with a calendar or section of a calendar e.g. finding dates and calculating the time differences between them.
				2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 Length	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider. **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate and measure lengths in centimetres using a ruler. No conversions between metres and centimetres required	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, wider **Introducing formal measuring** • Estimate, measure, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length.	**What is different from Grade 2?** In Grade 2 learners • focused on informal measurement with non-standard units of length; and • were introduced to measuring in metres. In Term 2 of Grade 3 learners can continue to do informal measurement using non-standard units, and measuring in metres. In Term 3 they can begin to measure in centimetres using a ruler. **Estimating, measuring, comparing and recording lengths, heights and widths using non-standard units of length** Learners can learn all the principles and practices of measurement using non-standard units. Measuring with non-standard units should not be considered to be inferior to measuring with standard units. Measuring length with non-standard units involves counting how many of the chosen unit are the same length as the object being measured. For example, the length of the desk is 8 hand spans. Learners should measure a variety of objects using a range of objects as informal units. There are three ways to use informal units: • Pack out in a row across the object being measured a number of objects of the same length, such as matchboxes, identically shaped bottle tops or counters, new pencils etc. For example, to measure the width of a desk, new pencils can be packed out end to end across the desk. Here it is important that - all the objects are the same length. You cannot state that your book is as wide as 12 bottle tops if the bottle tops are of different sizes e.g. 2 litre milk bottle tops, plastic cool drink bottle tops, metal bottle tops etc; and - no gaps are left between the objects: they need to be packed out so that they touch each other.	2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 Length	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider. **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate and measure lengths in centimetres using a ruler. No conversions between metres and centimetres required	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, wider **Introducing formal measuring** • Estimate, measure, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length.	• Use two identical objects as the non-standard units. Place the one next to the other, and then move the first to the other side of the second. This is done when measuring with hand spans, foot lengths or paces. • Using only one object as the non-standard measure and either flipping it over or marking its end point before sliding it along. Learners should be taught always to state the unit, e.g. the book is 12 bottle tops wide, the classroom is 38 paces long. Once learners have measured with any unit a couple of times, they should estimate about how many of that unit long the object to be measured is. Estimation before measuring is important, but can only be done once learners have done some measuring with that unit. Learners need to be taught that in order to compare lengths, heights or widths the same unit needs to be used. For example, if the width of the doorway measured is 20 hand spans and the width of the desk is 8 pencil lengths, you cannot say whether the doorway is wider than the desk. Learners need to measure with a range of informal units, so that they can • begin to understand that the smaller the unit, the larger the number of times it will be used, e.g. the width of the classroom could be 20 paces but 48 foot lengths; and • begin to use units which are appropriate to what they are measuring, e.g. measuring the width of the classroom with bottle tops is a waste of time. **Estimating, measuring, comparing and recording lengths, heights and widths using metres** Learners should consolidate their understanding of the length of 1 metre, and using metre lengths for measuring. This is best done if learner measure with a 1 metre long "instrument" (such as a metre rule; a stick that is cut to 1 metre long or pieces of string that are 1 metre long). Seeing the 1 metre length helps learners to form an image of how long a metre is. It is possible to measure in metres with a trundle wheel, but the metre length is not as easily seen.	2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 Length	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider. **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate and measure lengths in centimetres using a ruler. No conversions between metres and centimetres required	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, wider **Introducing formal measuring** • Estimate, measure, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length.	Learners can find things that are exactly 1 metre long. It is useful to have everyday referents as comparisons e.g. the width of a door and height of a window are often 1 m. This helps learners to use these lengths or widths that they can see to estimate the lengths of other objects they measure. Learners should estimate before every measurement. Learners can find things that are either longer to shorter than 1 metre. Learners can measure a variety of lengths in metres. Different lengths should be compared. **Recording measurements** Although measuring is a practical skill, learners should record their measurements (with both informal units and metres) at all times. **Measuring length as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the contexts of • informal measurement of length; and • measuring lengths in metres. Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.	2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.3 Mass	**Informal measuring** • Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc • Use language to talk about the comparison e.g. light, heavy, lighter, heavier **Introducing formal measuring** • Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt • Measure their own mass in kilograms using a bathroom scale • No conversions between grams and kilograms required	**Informal measuring** • Estimate, measure, compare, order and record mass using a measuring balance and non-standard measures e.g. blocks, bricks etc • Use language to talk about the comparison e.g. light, heavy, lighter, heavier **Introducing formal measuring** • Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour or in grams, e.g. 500 grams of salt • Where bathroom scales are available, learners can measure their own mass in kilograms using a bathroom scale. The expectation is that learners only read to the nearest numbered gradation line. They describe their mass as almost/nearly/close to/a bit more than/more or less/or exactly the number (of kilograms) they read off the mass meter. • Where balancing scales with mass pieces calibrated in grams are available, learners can measure the mass of different objects. No conversions between grams and kilograms required	**What is different from Grade 2?** In Grade 2 learners focussed on informal measurement with non-standard units of mass. Learners used a measuring balance to do this. They also began to work with kilograms. They ordered everyday products which have their mass stated in kilograms. They read their mass off bathroom scales. **Informal measurement of mass using a measuring balance and non-standard units** Learners can learn all the principles and practises of measurement using non-standard units. Measuring with non-standard units should not be considered to be inferior to measuring with standard units. Learners should consolidate their measuring skills by doing some informal measuring of mass with non-standard units. Commercial mass balances can be used. If you don't have a commercial balance, you can make one by attaching a pair of one of the following to a coat hanger: a yoghurt cup, the cut-off base of a 2 litre bottle, the cut-off bottom of a litre milk or cold drink box (identical containers are attached to either side of the coat hanger). Measuring with mass with non-standard units involves counting how many of the chosen unit are the same mass as the object being measured. For example, a ruler has the same mass as 9 blocks. Learners should measure a variety of objects using a range of objects as informal units. Learners should be taught always to state the unit when giving the mass, e.g. the book is has the same mass as 34 marbles. Once learners have measured with any unit a couple of times, they should estimate about how many of that unit will have the same mass as the object being measured. Estimation before measuring is important, but can only be done once learners have done some measuring with that unit. Learners need to be taught that in order to compare masses of different objects the same unit needs to be used. For example if a ruler has a mass of 20 blocks and a pair of scissors has a mass of 20 marbles, you cannot say whether they have the same mass or not, or which one is heavier.	3 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.3 Mass	**Informal measuring**
	
	• Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc
	
	• Use language to talk about the comparison e.g. light, heavy, lighter, heavier
	
	Introducing formal measuring
	
	• Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt
	
	• Measure their own mass in kilograms using a bathroom scale
	
	• No conversions between grams and kilograms required
		Informal measuring
		
		• Estimate, measure, compare, order and record mass using a measuring balance and non-standard measures e.g. blocks, bricks etc
		
		• Use language to talk about the comparison e.g. light, heavy, lighter, heavier
		
		Introducing formal measuring
		
		• Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour or in grams, e.g. 500 grams of salt
		
		• Where bathroom scales are available, learners can measure their own mass in kilograms using a bathroom scale. The expectation is that learners only read to the nearest numbered gradation line. They describe their mass as almost/nearly/close to/a bit more than/more or less/or exactly the number (of kilograms) they read off the mass meter.
		
		• Where balancing scales with mass pieces calibrated in grams are available, learners can measure the mass of different objects.
		
		No conversions between grams and kilograms required
			Recording measurements
			Although measuring is a practical skill, learners should record their measurements at all times.
			Working with kilograms
			    o ordering products according to mass
			Learners can work with groceries that are sold in kilograms, where the number of kilograms is stated on the packaging. Learners can compare the mass of packages of different substances (such as rice, sugar, mealie meal, flour or washing powder) that are sold in 1 kg amounts. They can place these on a measuring balance to see that although the size of the packages may differ, they have more or less the same mass.
			Learners can then be given a range of packages of different items to sequence from heaviest to lightest, where they sequence according to the mass stated on the package e.g. 2 kg rice, 1 kg sugar, 5 kg mealie meal, 10 kg samp.
			Learners will need to know the abbreviation "kg" for kilograms.
			Working with grams
			    o ordering products according to mass
			Learners can work with groceries that are sold in grams, where the number of grams is stated on the packaging. Learners can compare the mass of packages of different substances (such as cereals, tea, coffee, salt, beans, small packets of sugar, small packets of milk powder, packets of jelly, small packets of rice etc) that are sold in grams.
			Learners can then be given a range of packages of different items to sequence from heaviest to lightest, where they sequence according to the mass stated on the package e.g. 2 kg rice, 1 kg sugar, 5 kg mealie meal, 10 kg samp.
			It is important that learners are exposed to small, heavy packages like salt and large light packages like rice crispies or corn flakes. This allows them to understand that bigger items are not always heavier than smaller items, unless the same substance is being compared. You can only be certain that the bigger item has the greater mass if
			
			- the same substance is being compared; and
			
			- you check the masses on a scale (which is not required in the Foundation Phase).
			
			Learners will need to know the abbreviation "g" for grams.
				3 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.3 Mass	**Informal measuring** • Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc • Use language to talk about the comparison e.g. light, heavy, lighter, heavier **Introducing formal measuring** • Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt • Measure their own mass in kilograms using a bathroom scale • No conversions between grams and kilograms required	**Informal measuring** • Estimate, measure, compare, order and record mass using a measuring balance and non-standard measures e.g. blocks, bricks etc • Use language to talk about the comparison e.g. light, heavy, lighter, heavier **Introducing formal measuring** • Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour or in grams, e.g. 500 grams of salt • Where bathroom scales are available, learners can measure their own mass in kilograms using a bathroom scale. The expectation is that learners only read to the nearest numbered gradation line. They describe their mass as almost/nearly/close to/a bit more than/more or less/or exactly the number (of kilograms) they read off the mass meter. • Where balancing scales with mass pieces calibrated in grams are available, learners can measure the mass of different objects. No conversions between grams and kilograms required	Learners are NOT required to read kitchen scales in grams. This is done in the Intermediate Phase. **Reading bathroom scales in kilograms** Where bathroom scales are available learners can use these to read their own mass. There are two kinds of mass meters: digital and analogue. Digital scales are easier to read because the mass is written in numbers. If you have a digital bathroom scale, check that it states the mass only in whole kilograms. You can re-set some scales to show only whole kilograms. If you cannot set it to show only whole kilograms, teach learners to ignore the parts of kilograms for now. Most analogue bathroom scales have every 10 kg numbered, with a longer line showing the position of 5 kg. The 1 kg lines are usually not numbered. This is similar to the way lines and numbers work on a ruler. Let learners start by counting to see that there are 10 spaces before the 10 kg mark, so that each space represents 1 kilogram, and the longer line represents 5 kg. Learners can read measurement off real bathroom scales as well as pictures of bathroom scales. It is easier to read the mass off a picture of a bathroom scale than off a real scale. **Recording measurements** Although measuring is a practical skill, learners should record their measurements at all times. **Measuring mass as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of mass; and • measuring mass in kilograms. Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term. Learners are NOT expected • to know that 1 000 g = 1 kg; or • to do conversions between grams and kilograms. Calculations in grams can be chosen so that they do not go over 1 000 g.	3 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.4 **Capacity/ Volume**	**Informal measuring** • Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity of 4 cups **Introducing formal measuring** • Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres • Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil • Know that a standard cup is 250 millilitres • Know that a teaspoon is 5 millilitres No conversions between millilitres and litres required	During independent work time learners should continue to Estimate and measure, compare, order and record the capacity of containers or the volume in containers using non-standard measures. Following recipes, including baking, is a useful context in which learners can practise measuring. Choose recipes where ingredients are given in cups, teaspoons or informal units. • Compare and order the capacity of a range of bottles and grocery items where the volume is stated on the packaging. • Use either 1 litre bottles or 1 litre jugs to estimate and measure, compare, order and record the capacity of containers or the volume in containers in litres. See the notes for Term 3. Learners should be given written tasks to consolidate the following, including reading pictures of • products with their capacity written on them in order to sequence in order; and • pictures of jugs where the volume is near to a numbered 1 litre or 2 litre gradation line. The expectation is that learners only read to the nearest numbered gradation line. They describe their volume as almost/nearly/close to/a bit more than/more or less/ exactly the number (of litres) they read off the jug. **Measuring capacity as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of capacity/volume; • e.g. Gogo uses 2 cups of milk to make a pudding. If she doubles the recipe, how much milk will she need? • litres Take account of the number range appropriate for the term, as well as the range of problems types.	

	GRADE 3 TERM 2			
	5. DATA HANDLING			
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

5.4 **Collect and organise data**	**Collect and organise data**
	 • Collect data about the class or school to answer questions posed by the teacher
	 • Organise data supplied by teacher or book
	
	 Organise data in
	    o lists
	    o tallies
	    o tables			

5.5 **Represent data**	**Represent data** Represent data in • pictograph • bar graphs			
5.6 **Analyse and interpret data**	**Analyse and Interpret data** Answer questions about data presented in • pictographs • bar graphs	Analyse data from representations provided.	If learners have worked through the whole data cycle in Term 1, then analysing different forms of data representations should be more meaningful. It is recommended that in Term 2 you give learners data to analyse in at least • 1 pictograph • table Learners should answer questions that you ask about the graph and table; see Term 1 for suitable types of questions	1 lesson

	GRADE 3 TERM 3			
	1. NUMBERS, OPERATIONS AND RELATIONSHIPS			
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION**
1.1 Count objects	**Counting concrete objects** Estimate and counts to at least 1 000 everyday objects reliably. The strategy of grouping is encouraged.	Group to at least 700 everyday objects to estimate and count reliably. Give a reasonable estimate of a number of objects that can be checked by counting.	**What is different from Term 2?** The number range has increased and learners should be given the opportunity to touch, move and count out 700 objects grouped differently. See the notes for Term 1 and 2	
1.2 Count forwards and backwards	Count forwards and backwards in: • 1s from any number between 0 and 1000 • 10s from any multiple between 0 and 1000 • 5s from any multiple of 5 between 0 and 1000 • 2s from any multiple of 2 between 0 and 1000 • 3s from any multiple of 3 between 0 and 1000 • 4s from any multiple of 4 between 0 and 1000 • 20s, 25s, 50s,100s to at least 1 000	Count forwards and backwards in: • 1s from any number between 0 and 700 • 10s from any multiple between 0 and 700 • 5s from any multiple of 5 between 0 and 700 • 2s from any multiple of 2 between 0 and 700 • 3s from any multiple of 3 between 0 and 700 • 4s from any multiple of 4 between 0 and 700 • 20s, 25s, 50s,100s to at least 1000	**What is different from Term 2** The number range increases to 700. **See Term 1 and 2 notes**	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.3 **Number symbols and number names**	**Recognise, identify and read numbers** • Recognise, identify and read number symbols 0 - 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 1 000 • Write number names 0 - 1000	Recognise, identify and read numbers • Recognise, identify and read number symbols 0 - 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and reads number names 0 - 500 • Write number names 0 - 500	**What is different from Term 2** Learners identify, read and write: • number symbols to 1 000; and • number names to 500. See Term 2 notes–	
1.4 **Describe, compare and order numbers**	**Order and compare numbers to 999** • Order whole numbers up to 999 from smallest to greatest, and greatest to smallest • Compare whole numbers up to 999 using smaller than, greater than, more than, fewer than and is equal to. **Use ordinal numbers to show order, place or position** • Use, read and write ordinal numbers, including abbreviated form up to 31.	**Order and compare numbers to 500** • Order whole numbers up to 500 from smallest to greatest, and greatest to smallest • Compare whole numbers up to 500 using smaller than, greater than, more than, fewer than and is equal to. **Use ordinal numbers to show order, place or position** • Use, read and write ordinal numbers, including abbreviated form up to 31.	**What is different from Term 2** Learners order and compare numbers to 500 and continue to use the abbreviated form for writing ordinal numbers.. **See term 2 notes**	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.5 **Place value**	**Recognise the place value of three-digit numbers to 999** • Know what each digit represents • Decompose three-digit numbers up to 999 into multiples of 100, multiple of tens and ones/unit • Identify and state the value of each digit	**Recognise the place value of numbers to 750** • Know what each digit represents • Decompose three-digit numbers up to 750 into multiple of hundreds, tens and ones/units • Identify and state the value of each digit	**What is different in Term 3** The same type of questions and instructions are given in term 3. The number range has increased but learners are still working with three- digit numbers. The focus during this term should continue to be on: • the value of the number; • decomposing numbers into hundreds, tens and ones using place value cards and base ten blocks; and • writing the expanded form of numbers. See notes for Term 2.	
		NUMBER PROBLEMS		
1.6 **Problem-solving techniques**	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when solving problem: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Learners are expected to solve the word problems using the following techniques: • Building up or breaking down numbers • Doubling and halving • Number lines • Rounding off See notes for Term 2.	

1.7
 	
Addition and subtraction
	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 999.	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 800	Examples of types of problems that can be done this term
			
			• Addition and subtraction problems
			
			• Pamela has collected 413 bottle tops. If Ken give her 29 bottle tops, he will have the same number as Pamela.
			
			  - How many bottle tops will they both have?
			
			  - How many bottle tops did Ken have to begin with?
			
			• The grade 2s have a collection of 500 marbles. The Grade 3s have 170 fewer marbles than the Grade 2s. How many marbles do the Grade 3s have?
			
			• Mark and Martha collect 250 stickers. Mark found 160. How many stickers did Martha find?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.8 **Repeated addition leading to multiplication**	Solve word problems in context and explain own solution to problems using multiplication with answers up to 99.	Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75.	**Examples of types of problems that can be done this term** **Problem type 9: Array** • A vegetable garden has 12 rows of plants. Each row has 7 plants. How many plants are there in the garden? • A vegetable garden has 12 rows of plants. Every row has the same number of plants. If there are a total of 48 plants, how many plants are in each row? • A vegetable garden has 48 plants that are planted in rows. There are 7 plants in each row. How many rows are there? **Comparison/Ratio** Samuel has 6 sweets. Samuel has three times as many as Moeketsi. How many sweets does Moeketsi have? Marlene has 18 sweets. This is three times as many as Samuel has. How many sweets does Samuel have? Rate Peaches are sold at R8 per kilogram. If I buy 4 kilogram, how much will it cost? Peaches cost R8 per kilogram. If I have R32, how many kilograms can I buy? I buy 4 kilograms of peaches and it costs me R32. What is the price for one kilogram? **Using rounding off** A taxi takes 15 passengers. Can 73 people fit into 5 taxis?	
1.9 **Grouping and sharing leading to division**	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 200 with answers that may include remainders.	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 150 with answers that may include remainders.	**Examples of kinds of problems that can be done this term** • Mrs Tshongwe packs 66 muffins into packets of 6. How many packets does she have? • Remi gets R72 from selling R9,00 raffle tickets. How many tickets did he sell? • The community helps the 9 families who lost possessions in a fire. There are 75 blankets for the families to share equally. a) How many does each family receive? b) How many are left? **Rate** • Peaches cost R8 per kilogram. If I have R32, how many kilograms can I buy? • I buy 4 kilograms of peaches and it costs me R32. What is the price for one kilogram? Rate problems are new problem types in Term 3. Learners may need more time when solving these problems. See notes for Term 2.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.10 **Sharing leading to fractions**	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. etc.	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions e.g. etc.	**Examples of problems that can be done this term** Sharing, leading to fractions • Share 7 chocolate bars among 3 friends so that they all get the same amount of chocolate bar and there is nothing left over. • Share 13 bars of chocolates equally among 4 children. How much does each get? Fraction of a collection • Grandmother gives Kiki R12. Kiki wants to save a third of the money. How much money must she save? • There are 12 biscuits on a plate. Nomonde takes one quarter of the biscuits. How much is left? **Writing** Learners are not required to write the fraction symbol. Learners learn how to label fraction parts as 1 fifth, 3 quarters or 3 sixths. This helps them firstly to understand that the fraction names describe how many equal parts the whole has been divided into, for example, halves, thirds, quarters, etc and secondly how many of those parts are being considered, e.g. 2 thirds. **Representing fractions word problems** Learners must draw their answers to prove that they understand the problem. Expect that some learners may draw correctly but misname the fraction part. Learners must name the parts that have been shared by writing it as 2 thirds.	
1.11 **Money**	• Recognise and identify the South African coins and bank notes • Solve money problems involving totals and change in rand or cents • Convert between rand and cents	• Recognise and identify the South African coins and bank notes • Solve money problems involving totals and change in rand or cents. • Convert between rand and cents	**Examples of problems that can be done this term** Value of money and making up totals e.g. Write 325c as rand and cents. In how many different ways can you make up R400 using only bank notes? How do you know whether you have all the solutions? Mr Lebethe is a builder and receives a bonus for completing a job on time. He decides to share the bonus between the carpenter and himself. Each person receives R400. What is the value of the bonus? Nina and her three friends shared R20,60. How much did each of them get?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
		CONTEXT-FREE CALCULATIONS		
1.12 **Techniques (methods or strategies)**	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens	Learners are expected to calculate word problems using the following techniques: • Building up or breaking down numbers • Doubling and halving • Number lines • Rounding off in tens See notes for Term 1.	

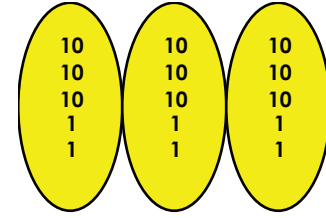| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION

1.13 Addition or subtraction	• Add to 999
	 • Subtract from 999
	 • Use appropriate symbols(+, –, =, □)
	 • Practise number bonds to 30
		• Add up to 800
		 • Subtract from 800
		 • Use appropriate symbols (+, –, =, □)
		 • Practice number bonds to 30
			During this term learners continue to calculate with three digit numbers till 800. In order to calculate with three-digit numbers learners have to be able to:
			 • confidently read and write number symbols to 800;
			 • confidently order and compare numbers to at least 800;
			 • confidently count in groups to 800; and
			 • count confidently in intervals of 2, 3, 4, 5, 10, 50 and 100 to 800.
			 Possible methods to show addition and subtraction calculations.
			 • Adding by breaking down both number
			 Adding three-digit with two-digit
			 524 + 82 = □
			 = (500 + 20 + 4) + (80 + 2)
			 = 500 + (20 + 80+ (4 + 2)
			 = (500 + 100) + 6
			 = 600 + 6
			 = 606
			 Adding three-digits and three-digits
			 323 + 436 = □
			 323 + 436 = (300 + 20 + 3) + (400 + 30 + 6)
			      = (300 + 400) + (20 + 30) + (3 + 6)
			      = 700 + 50 + 9
			      = 759
			 • Adding (by breaking down the number to be added)
			 Learners will break down the number in ways that are manageable for them. This means that they will do it in different ways.
			 524 + 82 = □
			 524 + (40 + 40 + 2)
			 524 + 40 564 + 40 604 + 2 = 606
			 Counting on 40 from 524 could be done by counting in 10s.
			 Adding three-digit and three-digits
			 323 + 436 = □
			 = 323 + (400 + 20 + 6)
			 = (323 + 400) + 20 + 6
			 = (723 + 20) + 6
			 = 743 + 6
			 = 749	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.13 **Addition or subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, −, =, □) • Practise number bonds to 30	• Add up to 800 • Subtract from 800 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	• Subtraction by breaking up both numbers three-digit subtract two-digit $889 - 137 = □$ $889 - 137 = (800 + 80 + 9) - (100 + 30 + 7)$ $\quad = (800 - 100) + (80 - 30) + (9 - 7)$ $\quad = 700 + 50 + 2$ $\quad = 752$ • Subtracting by breaking up one number $889 - 137 = □$ $889 - (100 + 30 + 7)$ $889 - 100 \quad 789 - 30 \quad 759 - 7 = 752$ • Using halving to break down a number $525 + 16$ $= 525 + 8 + 8$ $= (525 + 8) + 8$ $= 533 + 8$ $= 541$ • Count on and count back $805 = 798 = □$ Counting up in ones from 798 is an appropriate strategy because the numbers are close to each other. • Identify near doubles $245 + 246$ One can say the above sum as double 245 + 1 pr double 246 − 1 $245 + 245 + 1$ $= (200 + 40 + 5) + (200 + 40 + 5) + 1$ $= (200 + 200) + (40 + 40) + (5 + 5) + 1$ $= 400 + 80 + 10 + 1$ $= 400 + (80 + 10) + 1$ $= 400 + 90 + 1$ $= 491$	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.13 **Addition or subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30	• Add up to 800 • Subtract from 800 • Use appropriate symbols (+, –, =, □) • Practice number bonds to 30	• Change a number to a multiple of ten and then subtract or add ones Count up or down to the nearest 10 588 + 9 588 + 10 = 598 598 – 1 = 597 588 + 19 588 + 20 = 608 608 – 1 = 607 **Developing and practising addition and subtraction skills** Learners need practice to practice certain kinds of addition and subtraction skills Learners should have opportunities to do the following type of calculations with numbers up to 800: Add or subtract a pair of multiples of 10, crossing 100 • 40 + 70 • 70 + 80 • 120 – 30 • 150 – 60 Add or subtract 10 to or from any two or three-digit number including crossing the 100s Example: • 65 + 10 • 124 + 10 • 326 – 10 • 358 – 10 Add or subtract a single digit to or from a three-digit number without crossing the tens Example: • 634 + 5 • 775 + □ = 779 • 768 – 4 Add and subtract a single digit to and from a multiple of 100	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.13 **Addition or subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, −, =, □) • Practise number bonds to 30	• Add up to 800 • Subtract from 800 • Use appropriate symbols (+, −, =, □) • Practice number bonds to 30	Example: • 600 + 4 • 500 + 3 • 700 – 6 • 800 – 5 Begin to add and subtract a pair of multiples of 100 • 100 + 100 • 100 + 200 • 200 + 200 • 300 + 400 Learners should be given opportunities to practice patterns in addition and subtraction If I know that 1 + 1 = 2 Then What is: • 10 + 10 • 100 + 100 Begin to add or subtract a pair of multiples from any three-digit number Example: • 675 + 100 • 762 – 100 **Checking results of calculations** Judging reasonableness of solutions Learners should be trained to judge the reasonableness of solutions. One way to do this is to estimate their answers before calculating. When adding two numbers that are close to each other, e.g. 145 and 146, learners can use doubling as a way of estimating their answers. **Checking solutions** Learners should know that they can • check an addition calculation by subtracting. **Example:** If 436 + 118 = 454; then 454 – 118 = 436 • check a subtraction calculation by adding. **Example:** 684 – 248 = 436, then 436 + 248 = 684 Using the inverse operation to check solutions is one reason for teaching addition and subtraction together.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 2, 3, 4, 5, 10 to a total of 99 • Use appropriate symbols(x, =, □)	• Multiply 2, 3, 4, 5, 10 to a total of 99 • Use appropriate symbols(x, =, □)	During this term learners continue to: • use and understand the language of multiplication; • represent multiplication as arrays; • use the appropriate symbols to interpret number sentences; • understand that repeated addition can be represented using the multiplication symbol; • practise and understand that multiplication can be done in any order (the commutative law or property); • use the number line to show multiplication calculations and be able to explain the representation (how the jumps show repeated addition); and • begin to understand the distributive property of multiplication. Learners continue to use various images to understand multiplication. See notes for Term 2. Useful multiplication strategies • Using doubling **Example:** Fill in the times five row. What patterns do you see?	

	1	2	3	4	5	6	7	8	9	10
× 5										
× 10										

Double the numbers in the times five row to get the numbers in the times 10 row. What patterns do you see?

Fill in the times two row.

	1	2	3	4	5	6	7	8	9	10
× 2										
× 4										

Double the numbers in the times two row to get the numbers in the times four row. What patterns do you see?

• Using halving

Three groups of 8 is 24

six groups of 4 is 24

Therefore:

6 groups of 4 is the same as 3 groups of 8.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.15 **Division**	• Divide numbers to 99 by 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)	• Divide numbers to 99 by 2, 4, 5, 10, 3, • Use appropriate symbols(÷, =, □)	**What is different from Term 2?** During this term the number range learners will work with has increased to 99. Working with an increased number range means that learners need to begin to work with appropriate calculation strategies and written recordings to arrive at their answers. **Recording strategies** During Terms 3 and 4 learners will be practising recording division using numbers and become less dependent on drawings. The recording strategies will not be accessible to learners if they do not understand the operation. In attempting to try a method that they do not understand will result in errors that learners themselves will not have the ability to detect. It is important that learners are able to identify links among multiplication and division. The purpose of the written recordings should also be to develop learners' understanding of number relationships. **Using multiplication** Learners should be able to use their knowledge of multiplication. They should begin to say: "What do I know about multiplication in order to find the answer?" $96 ÷ 3 = □$ I know: $10 \times 3 = 30$ Then: $96 – 30 = 66$ I know $10 \times 3 = 30$ Then: $66 – 30 = 36$ I know $10 \times 3 = 30$ Then: $36 – 30 = 6$ $6 ÷ 3 = 2$ In the above method, learners use multiplication and then repeatedly subtract from 96. They then add up how many times they have subtracted: $2 + 10 + 10 + 10 = 32$ **Breaking up numbers** Learners could 'chunk' 96 into numbers that are associated with 3. Once again learners are using and applying their knowledge of multiplication in order to do a division calculation.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.15 Division	• Divide numbers to 99 by 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)	• Divide numbers to 99 by 2, 4, 5, 10, 3, • Use appropriate symbols(÷, =, □)	96 ÷ 3 = □ 96 = 30 + 30 + 30 + 6 ↓ ↓ ↓ ↓ 10 groups of 3 10 groups of 3 10 groups of 3 2 groups of 3 What learners are doing in both examples is using repeated subtraction by 'chunking'. Just as multiplication 'builds' up numbers, division can be seen as 'breaking down' numbers'. In this way the understanding of division is reinforced as the inverse to multiplication. Learners may use repeated subtraction as chunking, and record in it ways that are similar to shown below. 10 10 10 / 10 10 10 / 10 10 10 / 1 1 / 1 1 / 1 1 96 ÷ 3 = □ 96 ÷ 3 = 32 **Working with remainders** Learners will have worked with remainders when doing grouping and sharing word problems. It is important that they are presented with division number sentences (context-free) that allow for remainders. Example: Explain to learners that: If they know that 28 ÷ 7 = 4. What would **29** ÷ 7 = 4 be? It is expected that learners record their answers in the following way: 29 ÷ 7 = 4 remainder 1. We want learners to be able to say which division facts they know; e.g. I know 25 ÷ 5 = 5 therefore 26 ÷ 5 = 5 remainder 1	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.16 **Mental mathematics**	**Number concept: Range 999** • Order a given set of selected numbers • Compare numbers to 999 and say which is more or fewer • Know which number is 1 more or 1 fewer • Know which number is 2 more or 2 fewer • Know which number is 3 more or 3 les • Know which number is 4 more 4 fewer • Know which number is 5 more or 5 fewer • Know which number is 10 more or 10 fewer **Rapidly recall:** • Addition and subtraction facts to 20 • Add or subtract multiples of 10 from 0 to 100 • Multiplication and division facts for the: • two times table up to 2 x 10 • ten times table up to 10 x 10 **Calculation strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Number concept: Range 700** • Order a given set of selected numbers • Compare numbers to 200 and say which is more or fewer • Know which number is 1 more or 1 fewer • Know which number is 2 more or 2 fewer • Know which number is 3 more or 3 fewer • Know which number is 4 more or 4 fewer • Know which number is 5 more or 5 fewer • Know which number is 10 more or fewer **Rapidly recall:** • Recall addition and subtraction facts to 20 • Add or subtract multiples of 10 from 0 to 100 **Mental strategies** Use the following calculation strategies: • Put the larger number first in order to count on or count back • Number line • Doubling and halving • Building up and breaking down • Use the relationship between addition and subtraction • Use the relationship between multiplication and division	**Mental mathematics** See notes for Term 2, but use the higher number range specified in Term 3.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION
1.17 **Common fractions**	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths • Recognise fractions in diagrammatic form • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent • Write fractions as 1 half, 2 thirds		During this term learners continue to: • learn the names of fraction parts; • use the names in different contexts; • identify the fraction part; • begin to understand the relative size of fractions; • find fractions of objects; • learn about equivalent fractions and • compare fractions. During this term learners can begin to **count fractional parts** and learn new fraction names. Counting fractional parts allow learners to see multiple parts and gives them the language for mixed and improper fractions. Fraction circles are ideal to use for this concept. Encourage learners to count as they would count a collection of objects, e.g. one-fourth, two-fourths, three-fourths, four-fourths, five fourths ... You can ask learners to make one whole using the fourths and then ask: "If we have five fourths, is that more than one whole, less than one whole, or the same as one whole?" Also take this opportunity to prepare the groundwork for mixed fractions by asking: "take seven thirds. How many wholes can you make? How many parts are left over?" We want learners to say that there are: "two wholes and one third left over." This type of activity encourages: • Understanding the number of halves in wholes • Different ways to talk about multiple numbers of halves	

GRADE 3 TERM 3

2. PATTERNS, FUNCTIONS AND ALGEBRA

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.1 Geometric patterns	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create own patterns** Create own geometric patterns • with physical objects • by drawing lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects Patterns in which the number or size of shapes in each stage changes in a predictable way i.e. regularly increasing **Range of patterns**: Patterns in which the number of shapes in each stage changes in a predictable way i.e. regular increasing patterns **Create own patterns** Create own geometric patterns; • with physical objects • by drawing lines, shapes or objects	Continue to give learners a similar range of patterns as Term 1, but include all new shapes and objects in the patterns as they are dealt with in Shape and Space. See pattern notes Term 1 and Space and Shape notes Term 2. Allow learners to copy first, then extend and finally describe the patterns. By now they should be able to describe patterns without the aid of guiding questions. Continue to focus on developing the language they need to describe the patterns	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.2 **Number patterns**	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 200. **Create own patterns** Create own number patterns.	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 180. Sequences should show counting forwards and backwards in: • 1s from any number between 0 and 750 • 10s from any multiple of 10 between 0 and 750 • 5s from any multiple of 5 between 0 and 750 • 2s from any multiple of 2 between 0 and 750 • 3s from any multiple of 3 between 0 & 750 • 4s from any multiple of 4 between 0 and 750 • 20s,25s, 50s,100s to at least 1000 **Create and describe own patterns** Create and describe own number patterns.	See notes for Term 1 Extend the sequences to include the following • 1s from any number between 0 and 750 • 10s from any multiple of 10 between 0 and 750 • 5s from any multiple of 5 between 0 and 750 • 2s from any multiple of 2 between 0 and 750 • 100s from any multiple of 100 to at least 1 000 • 50s from any multiple of 50 to at least 1 000 • 25s from any multiple of 25 to at least 1 000 • 20s from any multiple of 20 to at least 1 000 • 3s from any multiple of 3 between 0 & 750 • 4s from any multiple of 4 between 0 and 750 Use objects, pictures, tables and flow diagram to support learners' transition from skip counting and sequences to multiplication by 10, 5, 2, 4, 3. Help learners to use patterns they know as the basis for practising and learning other patterns e.g. • sequences of 2s to lay the basis for sequences of 20s	3 lessons

GRADE 3 TERM 3

3. SPACE AND SHAPE (GOMETRY)

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

3.1
 	
Position, orientation and views
	Position and views
	
	• Match different views of the same everyday object
	
	• Name an everyday object when shown an unusual view of it
	
	• Read, interpret and draw informal maps, or top views of a collection of objects.
	
	• Find objects on maps
	
	• Position and directions
	
	• Follow directions to move around the classroom, and school
	
	• Give directions to move around the classroom and school
	
	• Follow directions from one place to another on an informal map
		Position and views
		
		• Read, interpret and draw informal maps or top views of a collection of objects
		
		• Find objects on maps
		
		Position and directions
		
		Follow directions from one place to another on an informal map
			What is new to Grade 3
			
			• Maps, plans and top views of collections of objects
			
			  - finding objects on maps
			
			  - following directions on maps
			
			  - drawing informal maps, plans or top views of collections of objects
			
			Reading, interpreting maps
			
			Maps are a stylised top view of an area. In Grade 3 learners only work with informal maps; this does not include standard road maps or standard geographical maps.
			
			It can help learners to start with plans or top views of smaller areas e.g. a tray of objects or a plan of the classroom. before looking at maps of bigger areas.
			
			In Term 2 deal with matched top views, side views and front views. An oblique view is a view partly from above and partly from the side. Young children see an oblique view of the world more often than a top view. It can help learners to start by matching oblique views of areas with maps of the same areas. When two views (the oblique and the top view) are provided, learners can match what they see in the one view with the other.
			
			First help learners start to understand maps and plans, then ask them to find objects on a plan or places on the map, e.g. "Find the clinic; what is next to it?"
			
			Once learners can easily find individual places on a map, start to give them directions from one place on the map to the next.
			
			Drawing top views of collections of objects and informal maps
			
			It is easier for learners to draw a top view of something they can look down on, than it is for them to draw a map from memory or their imagination. A starting place for drawing top views is to let learners look down on a collection of objects e.g. the objects on the teacher's desk, or a tray of objects placed on the ground, and ask learners to draw it from above. Learners can then move on to drawing informal plans and maps of small areas e.g. the classroom, the school grounds.
				3 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.2 **3-D objects**	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects.	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** Observe and build given 3-D objects using concrete materials such as cut-out 2-D2-D shapes, clay, toothpicks, straws, other 3-D geometric objects.	**Recommended focus of Term 3** - Learners can focus on the objects new to Grade 3, i.e. pyramids and cones. - Learners build objects from straws or pipe cleaners or toothpicks or rolled paper tubes. Introduce learners to cones and pyramids. **Focussing on features of 3-D Objects: flat or curved surfaces, the shapes of flat surfaces** • Flat or curved surfaces In Term 2 • Learners focussed on whether objects had flat or curved surfaces. • Learners described the shape of the flat surfaces by saying whether they were circles, triangles, squares or rectangles. Learners continue to do this in Term 3, but now they also look at pyramids and cones. • Building single 3-D objects Learners use toothpicks, rolled paper tubes, straws or pipe cleaners to make a pyramid. This focusses learners on the edges of the pyramid. Learners are not expected to count the number of edges or corners (this is done in Grade 6). **Recognising and naming objects** Learners should be given a range of objects to work with: - shaped like spheres, e.g. balls or different size, marbles, oranges etc.; - shaped like prisms, e.g. blocks, bricks, boxes of different sizes e.g. matchboxes, cereal boxes, tea boxes, toothpaste boxes; - shaped like cylinders, including both long and narrow cylinders, e.g. pieces of piping with a cylindrical shape, cardboard inner sleeves of roller towel or toilet rolls and short, wide cylinders, e.g. shoe polish tins, snuff tins etc.; - shaped like cones; and - shaped like pyramids. Learners should be asked to find and show objects shaped like a ball (sphere), or shaped like a box (prisms) or shaped like a (cylinder), shaped like a pyramid, or shaped like a cone - when given a collection of objects; or - in the classroom, e.g. this brick is shaped like a box or this orange is shaped like a ball.	4 lessons

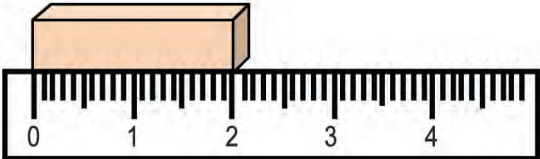| TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
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TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.3 **2-D shapes**	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides **Draw shapes** • circles • triangles • squares • rectangles	**Range of shapes** • circles • triangles • squares • rectangles **Features of shapes** Describe, sort and compare 2-D shapes in terms of: • shape • straight sides • round sides **Draw shapes** • circles • triangles • squares • rectangles	See notes for Term 1. Learners should keep the same focus, but do different activities. Learners work with circles and squares of different sizes and triangles and rectangles with different shapes. They sort them according to whether they have straight or round sides. Learners sort and groups shapes according to whether they are triangles, squares, rectangles or circles. Work is consolidated through written exercises, which should include drawing all the required shapes.	2 lessons

GRADE 3 TERM 3				
4. MEASUREMENT				
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 3**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
4.1 **Time**	**Telling the time** • Read dates on calendars • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in - hours - half hours - quarter hours - minutes on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones **Calculate length of time and passing of time** Use calendars to calculate and describe lengths of time in days or weeks or months including • converting between days and weeks • converting between weeks and months Use clocks to calculate length of time in hours or half hours including	**Telling the time** • Read dates on calendars • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in - hours - half hours - quarter hours - minutes on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones **Calculate length of time and passing of time** Use calendars to calculate and describe lengths of time in days or weeks or months including • converting between days and weeks • converting between weeks and months • Use clocks to calculate length of time in hours, half hours and quarter hours	Learners continue to practise talking about the duration of time and the sequencing of time. During whole class teaching time and focus group time, learners continue to talk about the day of the week, month of the year and the date of the current day, as well as days before and days to come. Learners continue to place the following on a calendar as the events arise • birthdays; • religious festivals; • historical events; • school events; and • public holidays. Continue to ask learners to tell the time at regular intervals on an almost daily basis - in hours and minutes on a digital clock; and - in hours, half hours and quarter hours using analogue clocks. For example, learners can be asked to tell the time when school starts, at break time and at home time, or when they change from one lesson to another. Choose times where the clock shows an exact hour or half hour or quarter hour. It is useful to have a large, working clock displayed in the classroom, so that learners can refer to it. Learners can also make models of clocks. You can then ask them to show various times and include some calculations, e.g. "Show me 10 o'clock. What was the time a quarter of an hour before 10?" See notes for Term 1. During independent work time learners continue do exercises related to telling the time - in hours, half hours and quarter hours on analogue clocks; and - in hours and minutes on a digital clock.	5 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.1
 	
Time
	Telling the time
	
	• Read dates on calendars
	
	• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
	
	• Tell 12-hour time in
	
	  - hours
	
	  - half hours
	
	  - quarter hours
	
	  - minutes
	
	on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
	
	Calculate length of time and passing of time
	
	Use calendars to calculate and describe lengths of time in days or weeks or months including
	
	• converting between days and weeks
	
	• converting between weeks and months
	
	Use clocks to calculate length of time in hours or half hours including
		Telling the time
		
		• Read dates on calendars
		
		• Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
		
		• Tell 12-hour time in
		
		  - hours
		
		  - half hours
		
		  - quarter hours
		
		  - minutes
		
		on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
		
		Calculate length of time and passing of time
		
		Use calendars to calculate and describe lengths of time in days or weeks or months including
		
		• converting between days and weeks
		
		• converting between weeks and months
		
		• Use clocks to calculate length of time in hours, half hours and quarter hours
			Learners can do calculations with weeks or days if provided with a calendar or section of a calendar, e.g. finding dates and calculating the time differences between them.
			
			Reading analogue time in minutes
			
			Spend about 3 lessons focussing learners on the skill needed to read analogue time in minutes.
			
			  - Remind learners about the meanings of a.m. and p.m.
			
			  - Remind learners that there are 60 minutes in an hour; so there are 30 minutes in a half hour and 15 minutes in a quarter of an hour. Let them count in 5s as you point to the numbers on an analogue clock.
			
			  - Explain the conventions "past" and "to".
			
			  - Give learners plenty of practise in analogue time in minutes.
			
			Ask learners to give the time regularly during the day over the entire year. Learners can check on a digital clock whether they have given the correct time when reading an analogue clock. Let learners make model clocks which they can use for telling the time and calculating time differences.
				5 lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 **Length**	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider. **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate and measure lengths in centimetres using a ruler No conversions between metres and centimetres required	**Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate, measure and record lengths in centimetres using a ruler.	**What is different from Term 2?** In Term 2 learners focussed on • informal measurement with non-standard units of length; and • measuring in metres. In Term 3 learners can begin to measure in centimetres using a ruler. This will be the first measuring instrument that learners use where they need to read off measurements at the numbered gradation lines. **Estimating, measuring, comparing and recording lengths, heights and widths using metres** • Learner should consolidate their understanding of the length of 1 metre and using metre lengths for measuring. See notes for Term 2. **Estimating, measuring, comparing and recording lengths, heights and widths in centimetres using a ruler** • Using a ruler Show learners how to start measuring from zero. When learners used informal units, they lined up the start of the objects being used as a unit with the start of the object being measured. When measuring in centimetres, you do not line up the start of the ruler with the start of theobject being measured. You line up the object being measured with the zero on the ruler. The eraser is 2 cm long. It is also possible to align the start of the object being measured with another number on the ruler and then subtract the number at the start of the object from the end of the object.	. lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 Length	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider. **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate and measure lengths in centimetres using a ruler No conversions between metres and centimetres required	**Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. • Estimate, measure and record lengths in centimetres using a ruler.	 The eraser is (3 cm - 1 cm)= 2 cm long Unless learners ask about this, or find it out for themselves, it can be left to Grade 4. • Estimating in centimetres Learners should try to find things that are exactly 1 centimetre long. Perhaps one of their fingers is 1 cm wide. This can be used as a reference point for estimating lengths, widths and heights in centimetres. Once learners have some experience of measuring in centimetres, they should estimate before every measurement. • Lines, drawings and objects Let learners start by measuring lines. It is easier to measure lengths of lines that make up the lengths, heights or widths of drawings of objects when using a ruler. It is more difficult to measure the lengths, height or widths of physical objects using a ruler. In Grade 4 learners will measure in centimetres and millimetres. In Grade 3 they are not expected to use millimetres. • Comparing measurements in centimetres Learners should compare lengths, widths and heights of objects measured in centimetres. • Recording measurements Although measuring is a practical skill, learners should record their measurements (with both informal units and metres) at all times. **Measuring length as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the contexts of • informal measurement of length; • measuring lengths in metres; and • measuring length in centimetres. Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term. Learners are NOT expected • to know that 100 cm = 1 m; • to do conversions between centimetres and metres; • read lengths in millimetres (this is done from Grade 4); • to know that 10 mm = 1 cm; or • to do conversions between centimetres and millimetres. Calculations in centimetres can be chosen so that they do not go over 100 cm.	· lessons

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.3
 	
Mass
	Informal measuring
	
	• Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc.
	
	• Use language to talk about the comparison e.g. light, heavy, lighter, heavier
	
	Introducing formal measuring
	
	• Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt
	
	• Measure their own mass in kilograms using a bathroom scale
	
	No conversions between millilitres and litres required
			During independent work time learners can continue to
			
			• Estimate, measure, order, compare and record the mass of objects using a measuring balance with informal units of measure.
			
			• Compare, order and record their findings
			
			  - groceries with their mass stated in kilograms
			
			  - groceries with the mass stated in grams
			
			See the notes for Term 2.
			
			Measuring mass as a context for solving problems and calculations
			
			During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of
			
			• informal measurement of mass;
			
			• mass in kilograms; and
			
			• mass in grams.
			
			Take into account the number range appropriate for the term, as well as the range of problems types appropriate for the term.	

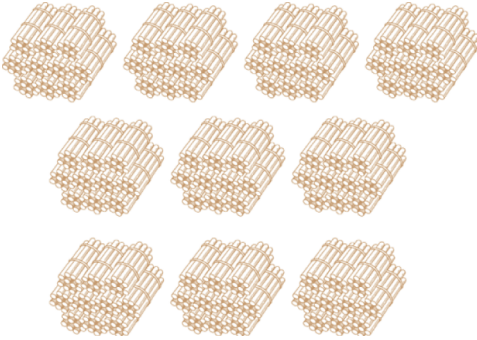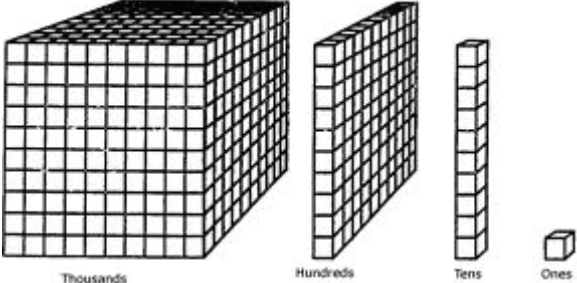| TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.4 **Capacity/ Volume**	**Informal measuring** • Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity four 4cups **Introducing formal measuring** • Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres • Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil • Know that a standard cup is 250 millilitres • Know that a teaspoon is 5 millilitres No conversions between millilitres and litres required		During independent work time learners should continue to Estimate and measure, compare, order and record the capacity of containers or the volume in containers using non-standard measures. Following recipes, including baking, is a useful context in which learners can practise measuring. Choose recipes where ingredients are given in cups, teaspoons or informal units. • Compare and order the capacity a range of bottles and grocery items where the volume is stated on the packaging. • Use either 1 litre bottles or 1 litre jugs to estimate and measure, compare, order and record the capacity of containers or the volume in containers in litres. • Use containers marked in millilitres e.g. 200 ml, 330 ml, 500 ml, 750 ml, or 250 ml measuring cups, or 5 ml measuring spoons, or jugs which have millilitres lines marked on them to measure volumes or capacities of unlabelled containers. See the notes in Term 1. Learners should be given written tasks to consolidate the following, including reading pictures of: • products with their capacity written in litres on them in order to sequence in order • pictures of jugs where the volume is near to a numbered 1 litre or 2 litre gradation line. The expectation is that learners only read to the nearest numbered gradation line. They describe their volume as almost/nearly/close to/a bit more than/more or less/ exactly the number (of litres) they read off the jug. • products with their capacity written in millilitres on them in order to sequence in order • pictures of jugs where the volume is near to a numbered millilitre gradation line The expectation is that learners only read to the nearest numbered gradation line. **Measuring capacity as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of capacity/volume e.g. Gogo uses 2 cups of milk to make a pudding. If she doubles the recipe, how much milk will she need? • litres • millilitres Take into account the number range appropriate for the term, as well as the range of problems types	

TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 13	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.5 **Perimeter and area**	**Perimeter** • Investigate the distance around 2-D shapes and 3-D objects using string **Area** • Investigate the area using tiling	**Perimeter** Investigate the distance around 2-D shapes and 3-D objects using string	**Measuring around objects or measuring a perimeter is new in Grade 3.** Perimeter is only measured informally in Grade 3. Give learners plenty of practice using pieces of string to measure around a range of different objects such their heads, bottles (include tall bottles that look narrower and shorter bottles that look wider) cans, mugs, boxes etc. Let learners first estimate which objects they think have the greater perimeter and then check by marking the distances off on the piece of string and comparing them. Learners can also measure the perimeter of 2-D shapes using a piece of string. Learners can also do informal measurement of perimeters using non-standard units such bottle tops, matchboxes etc.	1 lesson

	GRADE 3 TERM 3			
	5. DATA HANDLING			
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

5.4 Collect and organise data	**Collect and organise data**
	• Collect data about the class or school to answer questions posed by the teacher
	• Organise data supplied by teacher or book
	• Organise data in
	  - lists
	  - tallies
	  - tables
		Collect and organise data
		Collect data about the class or school to answer questions posed by the teacher
		Represent data
		Represent data in bar
		Analyse and interpret data
		Answer questions about data in bar
			It was recommended that in Term 1 learners make a class bar graph, and that in Term 2 they analyse pictographs and tables that you provide. In Term 3 learners can either work through the whole data cycle (see notes for Term 1) or start with data presented in a list or tally or table and re-organise this into a bar graph.
			
			It is easier for learners to draw bar graphs using block paper.
			
			You will probably need to remind learners about the key features of a bar graph (see Term 1 notes).
			
			Learners should answer questions on the bar graph; see Term 1 for suitable types of questions.
				3 lessons

5.5 Represent data	**Represent data** Represent data in • pictograph • bar graphs			
5.6 Analyse and interpret data	**Analyse and interpret data** Answer questions about data presented in • pictographs • bar graphs			

GRADE 3 TERM 4				
1. NUMBERS, OPERATIONS AND RELATIONSHIPS				
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 4**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
1.1 Counting objects	**Counting concrete Objects** Estimate and count reliably to at least 1 000 everyday objects. The strategy of grouping is encouraged.		By the end of this term learners should have seen, touched and moved 1 000 objects. They should have a sense of the 'muchness' of 1 000. The strategy of grouping is encouraged.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.1 Counting objects	**Counting concrete Objects** Estimate and count reliably to at least 1 000 everyday objects. The strategy of grouping is encouraged.		By the end of the term they should be able to respond to the following type of questions and instructions: • Count the counters in groups of fives, tens. • Rearrange and count again. Do you still have the same number of counters? • Here are 200 counters. Count them by grouping them in tens. To count all 200 counters, would you prefer to count them in groups of 20 or 25? Why? • Decide what would be the best way to count a collection of pencils. • Here are 80 counters. • If we count in twos or tens, will the total number of counters still be the same? • Count 46 counters by grouping them in twos. Is it quicker to count in twos than to count in ones?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.2 **Count forwards and backwards**	Counts forwards and backwards in: • 1s from any number between 0 and 1000 • 10s from any multiple between 0 and 1000 • 5s from any multiple of 5 between 0 and 1000 • 2s from any multiple of 2 between 0 and 1000 • 3s from any multiple of 3 between 0 and 1000 • 4s from any multiple of 4 between 0 and 1000 in 20s, 25s, 50s,100s to at least 1 000	Counts forwards and backwards in: • 1s from any number between 0 and 1000 • 10s from any multiple between 0 and 1000 • 5s from any multiple of 5 between 0 and 1000 • 2s from any multiple of 2 between 0 and 1000 • 3s from any multiple of 3 between 0 and 1000 • 4s from any multiple of 4 between 0 and 1000 in 20s, 25s, 50s,100s to at least 1 000	**By the end of the term learners should be able to:** Count confidently, verbally in ones, tens, fives, twos, twenties, twenty-fives, fifties and hundreds to 1000 Respond to questions such as: Count in tens from 400 to 500. Now count back again. Count in 2s from 564 to 580. Now count back again Count back in tens from 200 to 40. Count in fifties from 600 to 800. How many fifties did you count? Count back in 100s from 620. How many hundreds did you count? Count back in ones from 876 to 866. How many ones did you count? How can you make sure that you are correct? Count forward 15 steps in 5s from 305. Where are you now? If you count in 25s from 525 to 850 will you use the number 725? Count and check What number comes next? 467, 468, 469, 725, 750, 775, 420, 440, 460 820, 800, 780 Count using number lines Draw an empty number line and show the following numbers on it: 602, 604, 610. Now where would you place 606? Count using your number line from 602 to 610. Count in tens from 314 to 344. Which digits change? Which digits do not change? Why do the hundreds not change? If you count backward, what happens?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.3 Number symbols and number names	**Recognise, identify and read numbers** • Recognise, identify and read number symbols 0 to 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 1000 • Write number names 0 - 1000	**Recognise, identify and read numbers** • Recognise, identify and read number symbols 0 to 1 000 • Write number symbols 0 - 1 000 • Recognise, identify and read number names 0 - 1000 • Write number names 0 - 1000	**By the end of the term learners should be able to do the following:** Read and write numbers to at least 1 000 Respond to questions such as: • What number is on this card? **642** • Find the card with 738 or seven hundred and thirty-eight. Read the following numbers aloud: 534, 947, 974, 345 Read these words: • Three hundred and forty-two • Eight hundred and twenty-one • Four hundred and sixty-nine • One thousand • Twenty-nine Write in number symbols • Five hundred and seventy • Four hundred • Six hundred and eighty-five	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.4 Describe, compare, order numbers	**Describe, order and compare numbers to 999** • Describe and compare whole numbers up to 999 using smaller than, greater than, more than, fewer than and is equal to. • Describe and order whole numbers up to 999 from smallest to greatest, and greatest to smallest. **Use ordinal numbers to show order, place or position** • Use, read and write ordinal numbers, including abbreviated form up to 31	**Describe, order and compare numbers to 999** • Describe and compare whole numbers up to 999 using smaller than, greater than, more than, fewer than and is equal to. • Describe and order whole numbers up to 999 from smallest to greatest, and greatest to smallest **Use ordinal numbers to show order, place or position** Use, read and write ordinal numbers, including abbreviated form up to 31	**By the end of the term learners should be able to do the following:** Order numbers to at least 1000 Respond to questions posed in a variety of ways: Study the number line. Where does 450 appear? Where does 700 appear? Where does 350 appear. Now fill in the rest of the numbers. Write the numbers from greatest to smallest 345, 428, 389, 561, 600, 739, 620, 824 Compare numbers to 999 **Examples** • What number is 1 more than 563 • What number comes after 768 • What number is 1 fewer than 431 • What number is 10 more than 620 • What number is 10 fewer than 650 • What number is 20 more than 480 • What number is 20 fewer than 740 • What number is 25 more than 625 • What number is 50 more than 250 • What number is 50 fewer than 700 • What number is 100 more than 300 Answer true or false. Give a reason for your answer 220 is closer to 200 than 250 403 is not closer to 400 than 420 15 is closer to 0 than to 30 Fill in more than or fewer than 145 is _____ 154 823 is _____ 789 466 is _____ 664 Use the digits 9, 0, 6 to make the biggest number you can. What is the smallest number you can make?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.5 Place value	**Recognise the place value of three-digit numbers to 999** • Recognise what each digit represents • Decompose 3 digit numbers up to 999 into multiples of 100, multiple of tens and ones (HTU) • Identify and state the value of each digit		During this term consolidation of the following concepts needs to be reinforced and encouraged: • Numbers can be broken up into hundreds, tens and ones. • Understand that 51 is greater than 15 because 51 contains 5 groups/bundles of tens and 15 only one group/bundle of ten. • When counting in tens, when learners reach 40 they know that they have counted 4 tens. **By the end of the term learners should be able to:** **Use, read and write this language to work with place value and understand it.** Units or ones, tens, hundreds, digit, one-digit, two-digit number ..., three-digit number, place value ... **Recognise 0 as place holder in two and three-digit numbers such as:** 60 305 720 **Break up a number to show the value of each digit** 637 = 600 + 30 + 7 **600**　　**30**　　**7** Use their flard cards to demonstrate this Use the Dienes blocks to show the place value of a number. **Respond to questions such as:** Say what the digit 7 in 127 represents And the 2? And the 1? How many hundreds are there in each of the following numbers: 300, 500, 700, 412, 568 How many bundles of tens are there in each of the following numbers? 50, 80, 100, 200, 700, 120 **Write the numbers:** One hundred and five Six hundred and twenty-five Four hundred and eight-nine Three hundred and three	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.5 **Place value**	**Recognise the place value of three-digit numbers to 999** • Recognise what each digit represents • Decompose 3 digit numbers up to 999 into multiples of 100, multiple of tens and ones (HTU) • Identify and state the value of each digit		**Write the numbers:** 1 hundred + 2 tens Two hundred + 3 tens + 7 ones Four hundred + 9 tens + 3 ones Explain what number needs to go into each box 872 = □ + 70 + 2 129 = 100 + □ + 20 + 9 346 = 300 + 40 + □ Write down the value of each digit in 762	
SOLVE PROBLEMS IN CONTEXT				
1.6 **Problem-solving techniques**	Use the following techniques when solving problem and explain solutions to problems: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens		Learners are expected to solve the word problems using the following techniques: • Building up or breaking down numbers • Doubling and halving • Number lines • Rounding off in tens See notes for Term 2 on the following strategies • Building up and breaking down • Doubling and halving • Number lines **Rounding off in tens** During this term learners can apply the technique of rounding off when doing word problems. Example: Noah has R48,00. The pack of cards he collects costs R5,00. How many packs of cards can he buy? The learner can round off R48 to the nearest ten, which is R50,00. This means he can 'nearly' buy 10 packs. Learners will have to do the calculation and then work out if their answer is reasonably close to the amount rounded off. Allow learners to choose the technique most comfortable for them. However, if learners are using techniques that are not efficient then they need to be guided to choose more efficient techniques. Learners do not have to be fluent in the techniques. They will be able to use them again in the Intermediate Phase.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.7 **Addition, subtraction**	Solve word problems in context and explain own solution to problems involving addition, subtraction leading answers up to 999.		**By the end of the term learners should be able to do the following type problems.** **Addition and subtraction** There are at least three basic types of addition and subtraction problems and each type can be posed in different ways. The basic types are: Change Noluthando collected 234 stickers. Silo gave her 80 more stickers. How many stickers does she have now? 500 passengers on a train. 176 passengers got off. How many passengers were left on the train? Combine Nosisi collects items for the schools recycling projects. She collected 124 plastic bottles and 268 tin cans. How many items has she collected? The shop has 368 packets of chips; 82 are chippos and the rest are ziksnacks. How many packets or Zicksnacks are there? Compare Grade 2 collected R446. Grade 3 collected R729. How much more money did the Grade 3s collect? **Posing each problem in different ways** Problems have to be posed in different ways. For example, both of these are change problems, but the "unknowns" are in different places in the problem. The shop had packets of mealie meal; 55 more were ordered. Now there are 170 packets of mealie meal. How many packets were there in the beginning? The shop had 500 packets of sugar. After selling some packets, they had 324 packets of sugar left. How manypackets did they sell?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.8 **Repeated addition leading to multiplication**	Solve word problems in context and explain own solution to problems using multiplication with answers up to 99.		**Examples of problems that can be done this term** **Repeated addition** How many wheels do 36 cars have? **Rate** Thami saves 35c every week. How much money does he save in 8 weeks? **Grids** Mr Khumalo plants 20 rows of orange trees. There are 12 trees in a row. How many trees are there altogether? **Problem situations with different functional relationships** Heila sells hotdogs at R4 each. Make a table to help her find the amount for large orders. Use the table to find the cost of seven hotdogs and 23 hotdogs. Sedick charges R20 for travel costs, and then R5 per hour for babysitting. Complete this table for him.	
1.9 **Grouping and sharing leading to division**	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 200 with answers that may include remainders.		**Examples of problems that can be done this term** **Grouping** Grouping, discarding the remainder A bakery sells bread rolls in bags of 12. They have 118 rolls. How many bags of 12 rolls each can they make up? **Grouping, incorporating the remainder in the answer** A farmer has 227 eggs. How many egg boxes that can take 6 eggs each does he need to pack all the eggs? **Sharing** Sharing, discarding the remainder Five friends share 84 sweets so that they all get the same number of sweets. How many sweets does each get?	

Table embedded in 1.8:

Number of hotdogs	1	2	3	4	5	10	20
Cost in R	4	8					

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.10 **Sharing leading to fractions**	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions 1/2,1/4,3/4,2/5 e.g. etc.		**Examples of problems that can be done this term** Sharing, leading to fractions Share 15 chocolate bars among 6 friends so that they all get the same amount of chocolate bar and there is nothing left over. Share 7 chocolate bars among 3 friends so that they all get the same amount of chocolate bar and there is nothing left over. **Fraction of a collection** Grandmother gives Kiki R12. Kiki wants to save a third of the money. How much money must she save? This problem type must only be posed after learners have solved four or five problems of the sharing, leading to fractions type and know the names of fractional pieces. **Putting fractions together** The netball coach gives half an orange to each player. There are 14 players. How many oranges does she need? This problem type must only be posed after learners have solved four or five problems of the sharing, leading to fractions type and know the names of fractional pieces. **Writing fractions** Learners are not required to write the fraction symbol. Learners learn how to label fraction parts as 1 fifth, 3 quarters or 3 sixths. This helps them firstly to understand that the fraction names describe how many equal parts the whole has been divided into, for example, halves, thirds, quarters, etc. and secondly how many of those parts are being considered, e.g. 2 thirds. **Representing fraction word problems** Learners must draw their answers to prove that they understand the problem. Expect that some learners may draw correctly but misname the fraction part. Learners must name the parts that have been shared by writing it as 2 thirds.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.11 **Money**	• Recognise and identify the South African coins and bank notes
	• Solve money problems involving totals and change in rands or cents.
	• Convert between rands and cents
			Examples of problems that can be done this term
			• Value of money and making up totals e.g.
			  - Write 325c as rands and cents.
			  - In how many different ways can you make up R400 using only bank notes? How do you know whether you have all the solutions?
			  - Travis has a 50c piece and four 20c pieces. Toffees cost R1,20. How much change will he get?
			• Mandla pays R5,50 to take a taxi to school.
			  - What does it cost him to get to and from school each day?
			Buying and selling problems
			• Pedro's granny gave him R5. Which 3 sweets can he buy? Choc chuckle R2,70; gums R1,80; sour worms R1,40; peach treats R1,60; magic mints R2,20; toffee R1,20.
			• Damon bought three books for R80 each; how much change will he get from R300?
			• Packets of 5 mints cost 44c each. Mr King needs 88 mints. How many packets should he buy? What will he pay?	

CALCULATIONS				
1.12 **Techniques** **(methods or strategies)**	Use the following techniques when performing calculations: • building up and breaking down numbers • doubling and halving • number lines • rounding off in tens		See notes for Term 3.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		During this term learners continue to break down numbers in order to calculate. Possible methods to show addition and subtraction calculations. **Breaking down a number into smaller parts to make a calculation easier** **Using knowledge of place value to break down numbers into hundred, tens and ones** • Adding by breaking down both numbers Adding three-digit with two-digit 524 + 82 = □ = (500 + 20 + 4) + (80 + 2) = 500 + (20 + 80+ (4 + 2) = (500 + 100) + 6 = 600 + 6 = 606 Adding three-digits and three-digits 323 + 436 = □ 323 + 436 = (300 + 20 + 3) + (400 + 30 + 6) = (300 + 400) + (20 + 30) + (3 + 6) = 700 + 50 + 9 = 759 • Adding (by breaking down the number to be added) Learners will break down the number in ways that are manageable for them. This means that they will do it in different ways. 524 + 82 = □ 524 + (40 + 40 + 2) 524 + 40 → 564 + 40 → 604 + 2 = 606 Adding three-digit and three-digits 323 + 436 = □ = 323 + (400 + 20 + 6) = (323 + 400) + 20 + 6 = (723 + 20) + 6 = 743 + 6 = 749	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		• Subtracting by breaking up both numbers Three-digit subtract three-digit $889 - 137 = □$ $889 - 137 = (800 + 80 + 9) - (100 + 30 + 7)$ $\quad = (800 - 100) + (80 - 30) + (9 - 7)$ $\quad = 700 + 50 + 2$ $\quad = 752$ • Subtracting by breaking up one number Three-digit subtract three-digit $889 - 137 = □$ $889 - (100 + 30 + 7)$ $889 - 100 \rightarrow 789 - 30 \rightarrow 759 - 7 = 752$ • Using halving to break down a number $525 + 16$ $= 525 + 8 + 8$ $= (525 + 8) + 8$ $= 533 + 8$ $= 541$ • Count on and count back $805 = 798 = □$ Counting up in ones from 798 is an appropriate strategy because the numbers are close to each other. • Identify near doubles $245 + 246$ One can say the above sum as double 245 + 1 or double 246 - 1 $245 + 245 + 1$ $= (200 + 40 + 5) + (200 + 40 + 5) + 1$ $= (200 + 200) + (40 + 40) + (5 + 5) + 1$ $= 400 + 80 + 10 + 1$ $= 400 + (80 + 10) + 1$ $= 400 + 90 + 1$ $= 491$	

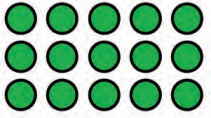| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		**Developing and practising addition and subtraction skills** Learners need to practise certain kinds of addition and subtraction skills **Count up or down to the nearest 10** 588 + 9 588 + 10 = 598 598 – 1 = 597 588 + 19 588 + 20 = 608 608 – 1 = 607 Learners should have opportunities to do the following type of calculations with numbers up to 800: Add or subtract a pair of multiples of 10, crossing 100 40 + 70 70 + 80 120 – 30 150 – 60 Add or subtract 10 to or from any two or three-digit number, including crossing the 100s Example: 65 + 10 124 + 10 326 – 10 358 – 10 Add or subtract a single digit to or from a three-digit number without crossing the tens. Example: 634 +5 775 + □ = 779 768 – 4	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		Add and subtract a single digit to and from a multiple of 100 Example: 600 + 4 500 + 3 700 – 6 800 – 5 Begin to add and subtract a pair of multiples of 100 100 + 100 100 + 200 200 + 200 300 + 400 Learners should be given opportunities to practise patterns in addition and subtraction. If I know that 1 + 1 = 2 Then What is: 10 + 10 100 + 100 Begin to add or subtract a pair of multiples from any three digit number Example: 675 + 100 762 – 100 **Understanding addition by the end of the year** By the end of the year learners should be able to: Use and understand the language of addition: more, add, sum, total, altogether, equals, sign….and read and write the addition sign (+) and the equals sign (=) Continue to develop an understanding of addition as counting on and steps along a number line. For example, answer the following. What do I need to add to 67 to make 85? This is the number sentence for my question: 67 + □ = 85.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, −, =, □) • Practise number bonds to 30		Respond to the following type of questions: • add together 43 and 19 • add ten to 167 • 51 plus 83 • Add 70 to 50 • 280 = 120 + 80 + □ • What is 30 more than 160 • Find the sum of 156 and 14 • Add twelve to a hundred and seventy-five • What number is ten more than 483? • What number must you add to 45 to get 178? • What number must you add to 25 to get 178? • What must I add to 56 to make 170? • Three hundred plus four tens plus 3 ones • 12 tens plus 8 ones • 245 + 10 = □ 245 + 20 = □ 245 + 30 = □ Know that □ stands for an unknown number 45 + 81 = □ 67 + □ = 125 47 + 32 + 8 = □ 31 + □ + 20 = 160 □ + △ = 100 □ + △ = 120 □ + △ = 450 Understand and use the knowledge that addition can be done in any order: 178 + 12 = 190 therefore 12 + 178 = 190	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		**Understanding subtraction by the end of the year** Use and understand the language of subtraction: Take away, subtract, how many are left, how much less is.. than..., difference between, how much more is...than...., how many more to make... and read and write the minus sign (-) Continue to develop understanding of subtraction as: • taking away; and • finding the difference between. Understand that subtracting zero leaves a number unchanged: 192 - 0 = 192 and 192 = 192 - 0 Respond to written question phrased in a variety of ways such as: • 37 take away 13 • Take 40 from 280 • 162 subtract 42 • Subtract 45 from 390 • What is the difference between 738 and 157? • How many fewer is 117 than 449? • What number must you subtract from 56 to get 122? • What number must you subtract from 56 to get 132? • What number must you subtract from 56 to get 142? • Find pairs of numbers with a difference of 10 • There are 45 pencils in the teacher's drawer. She hands out 17 pencils. How many are left? Find pairs of numbers with a difference of 20. Know that □ stands for an unknown number. 557 – 134 = □ 800 – 530 = □ 762 – □ = 448 598 – 42 = □	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, □) • Practise number bonds to 30		$687 – □ = 375$ $13 – 6 = 15 – □$ $□ – 18 = 24$ $174 – 14 = □$ $199 – □ = 25$ Begin to understand that: $125 – 10$ is different from $10 – 125$ Understand the relationship between addition and subtraction. Use the relationship between addition and subtraction. Say and write corresponding subtraction fact to a given addition fact and vice versa. For example: $25 + 68 = 93$ implies that $93 – 68 = 25$ $68 + 25 = 93$ implies that $93 – 25 = 68$ $122 – 104 = 18$ implies that $18 + 104 = 122$ Without the use of apparatus answer the following: You know that $145 + 120 = 265$ What is: $120 + 145$ $265 – 120$ $265 – 145$ You know that $154 – 38 = 116$ What is: $154 – 116$ $116 + 38$ $38 + 116$ Write and answer the following $64 – 37 = □$ therefore $37 + □ = 64$ $137 – 17 = □$ therefore $□ + \triangle = 137$ $200 – 100 = □$ therefore $□ + 100 = 200$ $89 – 38 = 51$; 51 is the difference because $□ + \triangle = 89$ Write four number sentences using these numbers. 160, 35, 125	

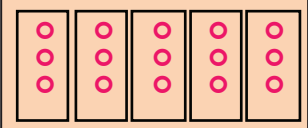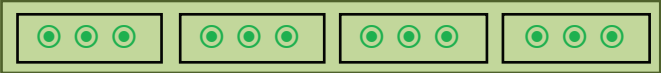| TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 **Addition and subtraction**	• Add to 999 • Subtract from 999 • Use appropriate symbols(+, –, =, ☐) • Practise number bonds to 30		**Checking results of calculations** **Judging reasonableness of solutions** Learners should be trained to judge the reasonableness of solutions. One way to do this is to estimate their answers before calculating. When adding two numbers that are close to each other, e.g. 45 and 46, learners can use doubling as a way of estimating their answers. **Checking solutions** Learners should know that they can • check an addition calculation by subtracting. Example: If 36 + 18 = 54; then 54 – 18 = 36 • check an subtraction calculation by adding Example 84 – 48 = 36, then 36 + 48 = 84 Using the inverse operation to check solutions is one reason for teaching addition and subtraction together.	
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols(x, =, ☐)		During this term learners continue to: • use and understand the language of multiplication; • represent multiplication as arrays; • use the appropriate symbols to interpret number sentences; • understand that repeated addition can be represented using the multiplication symbol; • practise and understand that multiplication can be done in any order (the commutative law or property); • use the number line to show multiplication calculations and be able to explain the representation (how the jumps show repeated addition); and • chant the multiplication tables. By the end of the term learners should be able to: Use the language of multiplication in practical situations: Double, times, multiply, multiplied by, multiple of.., lots of, groups of.., times as (big, long, wide..), twice, three times as much, and read and write the multiplication sign (x) Use the language to do multiplication calculations	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols(x, =, □)		**Understand multiplication as repeated addition** 6 added together 3 times is the same as: 6 + 6 + 6 = 18 3 lots of 6 = 18 3 times 6 = 18 6 x 3 = 183 x 6 = 18 $5×3 = 15$ $3×5 = 15$ **Understand multiplication as describing an array** Begin to recognise that multiplication can be done in any order **Respond to questions posed in different ways** Two fives Double 5 3 times 5 Three counters in a row. There are 4 rows. How many counters altogether? 2 multiplied by 7 16 times 2 **Understanding the commutative law of multiplication** 3 x 4 = 12 is the same as 4 x 3 = 12 **Recognise the use of the place holder □ to stand for an unknown number.** 2 + 2 + 2 = □ 2 x □ = 6 5 + 5 +5 + 5 + 5 therefore 5 x r = 25 4 + 4 + 4 therefore 4 x 3 = □ 10 + 10 + 10 + 10 + 10 therefore 10 x □ = 50 5 x □ = □ x 5 = 45 4 x 8 = □ x 4	.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.14 **Repeated addition leading to multiplication**	• Multiply numbers 1 to 10 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols(x, =, ☐)		8 + 8 + 8 = 3 eights = 8 x ☐ = 24 Understand the relationship between multiplication and doubling Copy the table below. Fill in the 'times 4 row' <table><tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>4s</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2s</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Used a variety of images to do multiplication • Multiplication grids • Flow charts • Tables	.

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 **Division**	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)		**What is different from Term 3?** By the end of the term we have to ensure that learners can: • understand that halving is the inverse of doubling and recall doubles of all numbers to 20 and the corresponding halves; • experience division as grouping; • understand and appreciate the relationship between multiplication and division and that they are inverse operations; • use practical and informal methods written methods to do division of two-digit by one-digit numbers; • use their knowledge of place value to do multiplication and division calculations; • explain what calculation they did and why; • discuss their answers and explain their thinking; and • use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations. **Recording strategies** There are certain recording strategies that learners may use in Grade 3. Learners will not be fluent in all these strategies. They need to be guided in looking at the division number sentence and deciding on the appropriate strategy that needs to be used. It is expected that learners will no longer be dependent on drawing pictures and will using numbers to explain their thinking. **Repeated subtraction** This strategy will have been used when solving word problems and learners need to be guided in looking at the number range and decide whether or not the calculation can be done using repeated subtraction. $40 \div 8 = \square$ $40 - 8 \rightarrow 32 - 8 \rightarrow 24 - 8 \rightarrow 16 - 8 \rightarrow 8 - 8 = 0$ Learners count the number of times they subtracted 8 to get to 0. **Repeated addition** Some learners might use this strategy if they understand the relationship between multiplication and division. Once again the number range will determine if this strategy is appropriate or not. $40 \div 8 = \square$ $8 + 8 \rightarrow 16 + 8 \rightarrow 24 + 8 \rightarrow 32 + 8 \rightarrow 40$ Learners count the number of times they subtracted 8 to get to 0.	

CURRICULUM AND ASSESSMENT POLICY STATEMENT (CAPS)

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 **Division**	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)		**Use multiplication** Learners should be able to say: "What do I know about multiplication that can help me calculate division?" Learners can write down the multiplication facts they know in a clue board, to assist them to divide	

Inside the clue board:

Clue board

I know: 10 x 3 = 30

I know: 4 x 3 = 12

72 ÷ 3 = □

10 x 3 = 30

10 x 3 = 30

30 + 30 = 60

72 – 60 = 12.

4 x 3 = 12

10 + 10 + 4 = 24

Therefore 72 ÷ 3 = 24

Distributive property

The distributive property of division over addition means that the number can be broken up into parts that are easier to calculate.

39 ÷ 3 = □

= (30 + 9) ÷ 3

= (30 ÷ 3) + (9 ÷ 3)

= 10 + 3

= 13

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 Division	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)		Breaking up the numbers into halves: 60 is halved Here learners say to themselves: "What do I know about dividing by 5?" Learners know that 30 is divisible by 5 leaving no remainder. 60 ÷ 5 = □ 30 ÷ 5 = 6 30 ÷ 5 = 6 6 + 6 = 12 Using halving to divide by 4 Learners have been doubling and halving for three years. They need to use these skills as calculating strategies. Knowledge of doubling and halving can be applied to division: 96 ÷ 4 = □ 96 ÷ 2 = 48 48 ÷ 2 = 24 **By the end of the term learners should be able to:** Understand, use and begin to read: One each, two, each … share, half, halve, whole, divide, divide by 3, divide by 4, divide into 2, divide into 3, left over, divided by … equal groups of ..., left over Read, write and use the division sign (÷) Use this language to do division calculations Understand division as grouping, or repeated subtraction Respond to written questions posed in a variety of ways: Share 16 by 2 Divide 20 by 5 How many fives make 50? How many 10c coins make 50c? How many fours in 20, in 28, in 36? How many fives in 20, in 40, in 50, in 60?	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 Division	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, □)		Annina says she learns 5 new words every day. She takes □ days to learn 40 words. 6 tens ÷ 3 = □ tens Recognise the use of symbols such as □ for unknown numbers Look at the counters below and complete the number sentences There are □ groups of 3 15 – 3 – 3 – □ – □ – □ = 0 15 ÷ 3 = □ Look at the drawing and complete the sentences: There are □ dots all together and there are Δ groups of 3 dots each. Therefore: □ ÷ 3 = Δ There are □ dots all together and there are 4 groups of 3 dots in each. Therefore: □ ÷ 4 = Δ Copy and complete: 20 ÷ 2 = □ 20 ÷ □ = 10 20 ÷ □ = 2 21 ÷ 3 = □ 21 ÷ □ = 7 21 ÷ 7 = □ Understand the rules for dividing by 1 and 0 6 ÷ 1 = □ 8 ÷ 1 = □ 12 ÷ □ = 12 6 ÷ 0 = □ □ ÷ 4 = 0 1 ÷ 1 = □ 0 ÷ 7 = □	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.15 **Division**	• Divide numbers to 99 by 1, 2, 3, 4, 5, 10 • Use appropriate symbols (÷, =, ☐)		Use, read and begin to write: Left over, remainder.... Calculate remainders when doing division calculations: 12 ÷ 5 is 2 remainder 2 23 ÷ 7 is 3 remainder 2 Understand the relationship between multiplication and halving Answer the following type of questions: Copy the table below. Fill in the 'times 4' row. What pattern do you see? Halve the numbers in the 'times 4' row to get the numbers in the 'times 2' row. What patterns do you see? Understand that division reverses multiplication. Show these number sentences with drawings 4 x 5 = ☐ 20 ÷ 5 = ☐ 12 x 4 = ☐ 48 ÷ 4 = ☐	

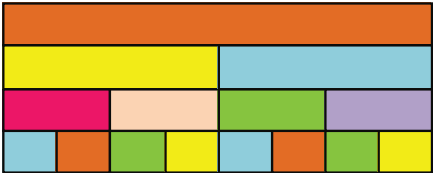|	1	2	3	4	5	6	7	8	9	10
4s										
2s										

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.16
Mental mathematics
	Number concept: Range 999
	
	• Order a given set of selected numbers.
	
	• Compare numbers to 999 and say which is 1, 2, 3, 4, 5 and 10 more or fewer
	
	Rapidly recall:
	
	• Addition and subtraction facts to 20
	
	• Add or subtract multiples of 10 from 0 to 100
	
	• Multiplication and division facts for the:
	
	  - two times table up to 2 x 10
	
	  - ten times table up to 10 x 10
	
	Calculation strategies
	
	Use the following calculation strategies:
	
	• Put the larger number first in order to count on or count back
	
	• Number line
	
	• Doubling and halving
	
	• Building up and breaking down
	
	• Use the relationship between addition and subtraction
	
	• Use the relationship between multiplication and division
			Examples of questions that can be asked:
			
			Number concept:
			
			Number names and symbols
			
			Hold up a card or write down a number name. Choose a learner to write the matching numeral.
			
			More or fewer
			
			What is
			
			1 fewer than 900
			
			1 more than 899
			
			2 more than 702
			
			2 fewer than 405
			
			3 more than 477
			
			3 fewer than 251
			
			4 more than 868
			
			4 fewer than 967
			
			5 more than 729
			
			5 fewer than 685
			
			10 more than 490
			
			10 fewer 660
			
			What is the 5th letter of the alphabet?
			
			What is the 9th month of the year?
			
			Ordering and comparing
			
			Which is more: 621 or 671?
			
			Give me a number between 154 and 159.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.16
Mental mathematics
	Number concept: Range 999
	• Order a given set of selected numbers.
	• Compare numbers to 999 and say which is 1, 2, 3, 4, 5 and 10 more or fewer
	Rapidly recall:
	• Addition and subtraction facts to 20
	• Add or subtract multiples of 10 from 0 to 100
	• Multiplication and division facts for the:
	   - two times table up to 2 x 10
	   - ten times table up to 10 x 10
	Calculation strategies
	Use the following calculation strategies:
	• Put the larger number first in order to count on or count back
	• Number line
	• Doubling and halving
	• Building up and breaking down
	• Use the relationship between addition and subtraction
	• Use the relationship between multiplication and division
			Addition and subtraction facts:
			• Know by heart all addition and subtraction number bonds to 20.
			$\square + \triangle = 20$
			$\square + \triangle = 16$
			$20 = \square - \triangle$
			Add and subtract fact for all numbers up to and including 20.
			$1 + 11 = 12$ $11 + 1 = 12$
			$2 + 10 = 12$ $10 + 2 = 12$
			$3 + 9 = 12$ $9 + 9 = 12$
			$18 - 4 = 14$ $18 - 14 = 4$
			$18 - 5 = 13$ $18 - 13 = 5$
			$18 - 6 = 12$ $18 - 12 = 6$
			Quickly recall addition doubles to 20. This should include corresponding subtraction facts.
			• $1 + 1 = 2$
			• $2 + 2 = 4$
			• $3 + 3 = 6$
			• $4 + 4 = 8$
			• $5 + 5 = 10$
			• $6 + 6 = 12$
			• $7 + 7 = 14$
			• $8 + 8 = 16$
			• $9 + 9 = 18$
			• $10 + 10 = 20$
			Show me the number to add to make 20 (writing down or using the place value or Flard cards).
			• 8
			• 2
			• 9
			• 15
			• 3	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.16
Mental mathematics
	Number concept: Range 999
	• Order a given set of selected numbers.
	• Compare numbers to 999 and say which is 1,2,3,4,5 and 10 more or fewer
	
	Rapidly recall:
	• Addition and subtraction facts to 20
	• Add or subtract multiples of 10 from 0 to 100
	• Multiplication and division facts for the:
	  - two times table up to 2 x 10
	  - ten times table up to 10 x 10
	
	Calculation strategies
	Use the following calculation strategies:
	• Put the larger number first in order to count on or count back
	• Number line
	• Doubling and halving
	• Building up and breaking down
	• Use the relationship between addition and subtraction
	• Use the relationship between multiplication and division
			Show me the number left when …. Is taken away from 20 (writing down or using the place value or flard cards)
			• 5
			• 18
			• 0
			• 14
			• 7
			Calculation strategies:
			Use calculation strategies to add and subtract efficiently.
			Add several numbers by using strategies such as:
			• Look for pairs of numbers that make 10 and use these first
			2 + 7 + 8
			2 + 8 make 10 and then add 7.
			• Put the larger number first in order to count on or count back
			5 + 15
			Restate the number sentence: 15 + 5 and count on to 20
			• Change a number to 10 and then subtract or add 1
			For example:
			8 + 9 = 17 and explain that one could do 8 + 9 = 8 + 10 – 1
			6 + 11 = 17 and explain that one could do 6 + 10 + 1
			17 – 9 = 8 and explain that one could do 17 – 10 + 1
			• Break up a number into its parts and then add
			Build up and break down numbers:
			For example work out mentally and explain:
			Continue to break up numbers into 'small bits'
			8 + 12
			= 8 plus (10 + 2)
			= 8 + 2 + 10
			= 10 + 10
			= 20	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

1.16 Mental mathematics	**Number concept: Range 999**
	• Order a given set of selected numbers.
	• Compare numbers to 999 and say which is 1, 2, 3, 4, 5 and 10 more or fewer
	Rapidly recall:
	• Addition and subtraction facts to 20
	• Add or subtract multiples of 10 from 0 to 100
	• Multiplication and division facts for the:
	  - two times table up to 2 x 10
	  - ten times table up to 10 x 10
	Calculation strategies
	Use the following calculation strategies:
	• Put the larger number first in order to count on or count back
	• Number line
	• Doubling and halving
	• Building up and breaking down
	• Use the relationship between addition and subtraction
	• Use the relationship between multiplication and division
			• Use doubling as a mental calculation strategy
			Identify near doubles. For example:
			8 + 7 = 15 explaining that it is double 7 plus 1 or double 8 minus 1
			Recognise that when two numbers are close in size to each other it is easier to find a difference by counting up, not counting back.
			17 – 13 = 4 and explain that counting up from 13 to 17 gives 4
			Some mental mathematics can be done without apparatus, but it is often useful to do mental mathematics with apparatus.
			Recommended apparatus
			• A number line (structured and empty)
			• A number grid
			• Place value cards (flard cards)
			• Counting beads	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.17 **Fractions**	• Use and name fractions in familiar contexts including halves, quarters eighths, thirds, sixths, fifths • Recognise fractions in diagrammatic form • Begin to recognise that 2 halves or 3 thirds make one whole and that 1 half and 2 quarters are equivalent • Write fractions as 1 half, 2 thirds		By the end of the term learners should be able to: • recognise fractions of shapes and reinforce their understanding that halves must be of equal size; • know that four quarters make one whole and that each quarter must be the same size; • find fractions of a group of objects; • read and write fraction names; and • order, describe and compare fractions. By the end of the term learners understand fractions as part of a whole and be able to answer similar questions: • halves = one whole • quarters = one whole • thirds = one whole • halves = one whole • fifths = one whole • sixths = one whole Respond to questions such as: When a shape is divided into 2 equal parts, we call these parts____ When a shape is divided into 3 equal parts, we call these parts____ When a shape is divided into ____ equal parts we call these parts quarters. **Able to compare the size of fractions** Is 1 half bigger or smaller than 3 quarters? How many quarters is the same as 1 whole? How many eighths is the same as 1 whole? Are two quarters equal to 1 half? Find a fraction of a collection of objects. There are 12 beads. 8 are pink and 4 are white. What fraction of the beads is white?	

	GRADE 3 TERM 4			
	2. PATTERNS, FUNCTIONS AND ALGEBRA			
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 4**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)
2.1 Geometric patterns	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create and describe own patterns** Create and describe own geometric patterns • with physical objects • by drawings lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	Learners will work with patterns from nature, modern everyday life and our cultural heritage from Grade 1 to Grade 6. This means that you do not need to spend a lot of time on this topic. You also need to choose activities and patterns that are appropriate to each grade. One kind of pattern learners can look for is symmetry, e.g. most leaves and animals faces are symmetrical. So are many insects if viewed from above and the patterns on many birds if viewed from below. In Grade 3 there is a focus on finding the line of symmetry through paper folding and reflection. Learners can make patterns by cutting shapes into folded paper. This can include making doilies and traditional shelving paper with cut-out patterns. Learners can then look at and talk about patterns on crocheted doilies and pictures of patterns cut into traditional paper shelving. Learners can also look at patterns on • fences (wire, wooden or vibracrete); • brickwork and floor tiles; • roofing; • clothes and material; • plates, cups and saucers; • soccer balls; • animals such as cows, moths and butterflies, zebra, giraffe, leopards, birds, insects; • flowers and leaves; • wallpaper, including wallpaper made of printed packaging that is often found inside shacks and informal housing; • traditional or modern beadwork; and • traditional clay pots or woven baskets.	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.1 **Geometric patterns**	**Copy, extend and describe** Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects **Create and describe own patterns** Create and describe own geometric patterns • with physical objects • by drawings lines, shapes or objects **Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**Patterns all around us** Identify, describe in words and copy geometric patterns • in nature • from modern everyday life • from our cultural heritage	**How can learners describe the patterns they see around them?** There are different ways to describe the patterns we see around us. Most patterns around us are made up of lines, shapes or objects. The shapes or objects do not need to be linked to the geometrical 2-D shapes and 3-D objects worked with in Grade 2. All that learners are looking at is • what is repeated e.g. dots, lines, any kind of shape; and • how it is repeated e.g. • straight lines that cross each other (as in a dishcloth), lines that run along the bottom of material or across a shirt, lines that run up the legs of trousers; • curved lines like the circular lines visible when you cut across an onion; • lines that are irregular like the lines of finger prints and zebra stripes and wrinkles on elephants, rhino and very old people; • wavy lines that you get when you cut across a cabbage, or that you find on a sand dune; • dots that are the same size, dots that are evenly spread; • shapes that are the same size; • shapes that are the same colour; or • patterns made with shapes that are all different: the shapes that make the patterns on the hide of a giraffe are all different.	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
2.2 **Number patterns**	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 200 **.** **Create and describe own patterns** Create and describe own number patterns.	**Copy, extend and describe** Copy, extend and describe simple number sequences to at least 1 000. Sequences should show counting forwards and backwards in: • 1s from any number between 0 and 1 000 • 10s from any multiple of 10 between 0 and 1 000 • 5s from any multiple of 5 between 0 and 1 000 • 2s from any multiple of 2 between 0 and 1 000 • 100s from any multiple of 100 to at least 1 000 • 50s from any multiple of 50 to at least 1 000 • 25s from any multiple of 25 to at least 1 000 • 20s from any multiple of 20 to at least 1 000 • **Create and describe own patterns** • Create and describe own number patterns • the intervals specified in grade 2 with increased number ranges • 20s, 25s, 50s,100s to at least 1000	See notes for Term 1. Extend the sequences to include the following • 1s from any number between 0 and 1 000 • 10s from any multiple of 10 between 0 and 1 000 • 5s from any multiple of 5 between 0 and 1 000 • 2s from any multiple of 2 between 0 and 1 000 • 100s from any multiple of 100 to at least 1 000 • 50s from any multiple of 50 to at least 1 000 • 25s from any multiple of 25 to at least 1 000 • 20s from any multiple of 20 to at least 1 000 Use objects, pictures, tables and a flow diagram to support learners' transition from skip counting and sequences to multiplication by 10, 5, 2, 4, 3.	3lessons

GRADE 3 TERM 4

3. SPACE AND SHAPE (GEOMETRY)

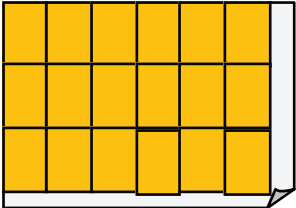| TOPICS	CONCEPTS AND SKILLS: REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS: FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
3.2 **3-D objects**	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces **Focussed activities** • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects	**Range of objects** Recognise and name 3-D objects in the classroom and in pictures • ball shapes, (spheres) • box shapes (prisms) • cylinders • pyramids • cones **Features of objects** Describe, sort and compare 3-D objects in terms of: • 2-D shapes that make up the faces of 3-D objects • flat or curved surfaces	See Notes for Term 2. This term you can practise, revise and consolidate work on 3-D objects through written exercises. Focus on recognising and naming • ball shapes (spheres); • box shapes (prisms); • cylinders; • pyramids; and • cones when shown pictures of geometric or everyday objects. Questions should focus learners on • whether the surfaces of objects are curved or flat; and • whether the flat surfaces of objects are triangles, rectangles, squares or circles.	1 lesson
3.4 **Symmetry**	**Symmetry** • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes • Determine line of symmetry through paper folding and reflection	**Symmetry** • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes	The work on symmetry through paper folding done in Term 2 should help learners to identify lines of symmetry in drawings of geometrical and non-geometrical objects. Written exercises should include examples where • the line of symmetry is not a vertical line; and • there is more than one line of symmetry in the shape or object.	1 lesson

		GRADE 3 TERM 4		
		4. MEASUREMENT		
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 4**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)

4.1 **Time**	**Telling the time**
	
	 • Read dates on calendars
	
	 • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
	
	 • Tell 12-hour time in
	
	   o hours
	   o half hours
	   o quarter hours
	   o minutes
	
	 on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
	
	 Calculate length of time and passing of time
	
	 Use calendars to calculate and describe lengths of time in days or weeks or months including
	
	 • converting between days and weeks
	
	 • converting between weeks and months
	
	 Use clocks to calculate length of time in hours or half hours, and quarter hours
		Telling the time
		
		 • Read dates on calendars
		
		 • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
		
		 • Tell 12-hour time in
		
		   o hours
		   o half hours
		   o quarter hours
		   o minutes
		
		 on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones
		
		 Calculate length of time and passing of time
		
		 Use calendars to calculate and describe lengths of time in days or weeks or months including
		
		 • converting between days and weeks
		
		 • converting between weeks and months
		
		 Use clocks to calculate length of time in hours, half hours and quarter hours
			Learners continue to practice talking about the duration of time and the sequencing of time.
			
			 During whole class teaching time and focus group time, learners continue to talk about the day of the week, month of the year and the date of the current day; as well as days before and days to come. Learners continue to place the following on a calendar as the events arise
			
			 • birthdays;
			
			 • religious festivals;
			
			 • historical events;
			
			 • school events; and
			
			 • public holidays.
			
			 Continue to ask learners to tell the time at regular intervals on an almost daily basis.
			
			   o in hours and minutes on a digital clock; and
			
			   o in hours, half hours and quarter hours using analogue clocks.
			
			 For example, learners can be asked to tell the time when school starts, at break time and at home time, or when they change from one lesson to another. Choose times where the clock shows an exact hour or half hour or quarter hour. It is useful to have a large clock displayed in the classroom, so that learners can refer to it. Learners can also make models of clocks. You can then ask them to show various times and include some calculations e.g. "Show me 10 o'clock. What was the time a quarter of an hour before 10?"
			
			 During independent work time learners continue do exercises related to telling the time
			
			   o in hours, half hours and quarter hours on analogue clocks; and
			
			   o in hours and minutes on a digital clock.
			
			 Learners can do calculations with weeks or days if provided with a calendar or section of a calendar e.g. finding dates and calculating the time differences between them.
			
			 Reading analogue time in minutes
			
			 Spend about 2 lessons focussing on consolidating learners on the skill of reading analogue time in minutes. See notes for Term 3.
				2 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.2 **Length**	**Informal measuring** • Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters etc • Describe the length of objects by counting and stating how many informal units long they are • Use language to talk about the comparison e.g. longer, shorter, taller, and wider **Introducing formal measuring** • Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length • Estimate and measure lengths in centimetres using a ruler No conversions between metres and centimetres required		All kinds of measuring length listed in the column alongside can be practised in independent work time throughout the term. All work should be recorded.	

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)

4.3 **Mass**	**Informal measuring**
	• Estimate, measure, compare, order and record mass using non-standard measures and a measuring balance e.g. blocks, bricks etc.
	• Use language to talk about the comparison e.g. light, heavy, lighter, heavier
	Introducing formal measuring
	• Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour or in grams e.g. 500 grams of salt
	• Measure their own mass in kilograms using a bathroom scale
	No conversions between grams and kilograms required
		Introducing formal measuring
		Learners do written tasks to consolidate the following, including reading pictures of
		• products with mass written on them
		• pictures of mass on bathroom scales where the needle points to a numbered gradation line
			To consolidate the work done on mass throughout the year, learners should do written exercises in which they
			• read pictures which allow them to compare the mass of objects shown on a measuring balance;
			• read pictures which allow them to state the mass of objects on a measuring balance with informal units of measurement;
			• compare, order and record their findings of
			   o pictures of groceries with their mass stated in kilograms; and
			   o pictures of groceries with the mass stated in grams; and
			• read pictures of bathroom scales where the mass is shown to the nearest whole kilogram.
			See the notes for Term 2.
			Measuring mass as a context for solving problems and calculations
			During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of
			• informal measurement of mass;
			• mass in kilograms; and
			mass in grams.
			Take into account the number range appropriate for the term, as well as the range of problems types appropriate for the term.
				1 lessons

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.4 **Capacity/ Volume**	**Informal measuring** • Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) by using non-standard measures e.g. spoons and cups • Describe the capacity of the container by counting and stating how many of the informal units it takes to fill the container e.g. the bottle has the capacity of four cups **Introducing formal measuring** • Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres • Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or in millilitres e.g. 500 ml of milk, 340 millilitres of cool drink, 750 millilitres of oil • Know that a standard cup is 250 millilitres • Know that a teaspoon is 5 millilitres No conversions between millilitres and litres required	**Introducing formal measuring** Learners do written tasks to consolidate the following, including reading pictures of • products with their capacity written on them in order to sequence in order • pictures of jugs where the volume is near to a numbered 1 litre or 2 litre gradation line or half litres or quarter litre • pictures of jugs where the volume is near to a numbered millilitres gradation line The expectation is that learners only read to the nearest numbered gradation line. The describe their volume as almost/nearly/close to/a bit more than/more or less/ exactly the number (of litres) they read off the jug No conversions between millilitres and litres required	During independent work time learners should continue to • estimate and measure, compare, order and record the capacity of containers or the volume in containers using non-standard measures; • compare and order the capacity of a range of bottles and grocery items where the volume is stated on the packaging; and • use either 1 litre bottles or 1 litre jugs to estimate and measure, compare, order and record the capacity of containers or the volume in containers in litres. See the notes for Term 3. Learners should be given written tasks to consolidate the following, including reading pictures of • products with their capacity written on them in order to sequence; and • pictures of jugs where the volume is near to a numbered 1 litre or 2 litre gradation line. The expectation is that learners only read to the nearest numbered gradation line. They describe their volume as almost/nearly/close to/a bit more than/more or less/ exactly the number (of litres) they read off the jug. **Measuring capacity as a context for solving problems and calculations** During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of • informal measurement of capacity/volume e.g. Gogo uses 2 cups of milk to makea pudding. If she doubles the recipe, how much milk will she need? • litres • millilitres Take into account the number range appropriate for the term, as well as the range of problems types.	1 lesson

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.5 **Perimeter and area**	**Perimeter** • Investigate the distance around 2-D shapes and 3-D objects using string • **Area** • Investigate the area using tiling	**Area** Investigate the area using tiling	Learners are introduced to measuring area for the first time in Grade 3. In Grade 3 and for most of the Intermediate Phase area is only measured informally. Learners find out how many shapes or objects cover a surface. They pack out shapes or objects without leaving gaps between the shapes or objects. They then count how many of the shapes cover the surface. For example, learners can pack out squares or rectangles onto a page; they count how many of the shapes cover the page. Learners should state the area of the page in terms of the shape e.g. my page has an area of 16 rectangles. It is most likely that the shapes will not cover the page entirely, as shown below. Learners should then state the size of the page by taking this into account e.g. my page has an area of more than 18 rectangles but fewer than 28 rectangles. Let learners tile the same area with different shapes and similar shapes of different sizes. This will allow learners to see that • the smaller the shape, the more of them will fit onto a surface; and • the shape you choose will affect the numerical answer you get. Learners are not expected to calculate areas by counting squares on a square grid; this they will do in the Intermediate Phase.	2 lessons

GRADE 3 TERM 4				
5. DATA HANDLING				
TOPICS	**CONCEPTS AND SKILLS REQUIREMENT BY YEAR END**	**CONCEPTS AND SKILLS FOCUS FOR TERM 4**	**SOME CLARIFICATION NOTES OR TEACHING GUIDELINES**	**DURATION** (in lessons of 1 hour 24 minutes)

5.4 **Collect and organise data**	**Collect and organise data**
	 • Collect data about the class or school to answer questions posed by the teacher
	 • Organise data supplied by teacher or book
	 • Organise data in
	   - lists
	   - tallies
	   - tables			

5.5 **Represent data**	**Represent data** Represent data in • pictograph • bar graphs			
5.6 **Analyse and interpret data**	**Analyse and Interpret data** Answer questions about data presented in • pictographs • bar graphs	Analyse data from representations provided.	By this stage of the year, learner should have been exposed to all forms of data required in Grade 3 (lists, tallies, tables, pictographs, bar graphs). It is recommended that in Term 4 learners focus on analysing data. You give learners data to analyse in at least • one bar graph; and • one table. Learners should answer questions that you ask about the graph and table; see Term 1 for suitable types of questions.	1 lesson