

3.5.2. Clarification of Grade 2 content

GRADE 2 TERM 1				
1. NUMBERS, OPERATIONS AND RELATIONSHIPS				
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)
NUMBER CONCEPT DEVELOPMENT: Count with whole numbers				
1.1 Count objects	<p>Counting concrete objects</p> <p>Estimate and count reliably to at least 200 everyday objects. The strategy of grouping is encouraged.</p>	<p>Count reliably to at least 100 everyday objects.</p> <p>Give a reasonable estimate of a number of objects that can be checked by counting.</p>	<p>See notes for Grade 1, Terms 3 and 4</p> <p>Term 1 in Grade 2 is a consolidation of work done in term 4 of Grade 1.</p> <p>Counting in groups</p> <p>The focus in this term is on counting on and counting in groups.</p> <p>Help learners to count large numbers of objects, by encouraging them to group objects in twos, fives and tens.</p> <p>Number cards should be displayed at each collection to show the number of objects counted. The counting in groups will prepare learners for understanding multiples.</p> <p>Learners should be given the opportunity to see that a group of 100 can be composed in different ways, for example:</p> <ul style="list-style-type: none"> • 10 groups of ten; • 100 loose ones; or • 2 groups of 50. <p>Counting on</p> <p>Learners still need the experience of being given a collection of objects and then count on from there.</p> <p>Resources:</p> <p>Careful consideration needs to be given to the kind of apparatus used to encourage learners to count in groups. Suitable types of apparatus include:</p> <ul style="list-style-type: none"> • Structured apparatus, such as a string of counting beads • The abacus to practice counting in groups of ten • Making bundles of 2, bundles of 5 and ten and then counting all with counting sticks or matches • Play money 	

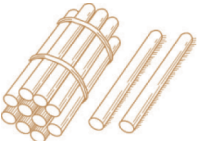
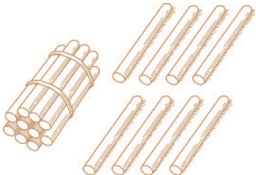
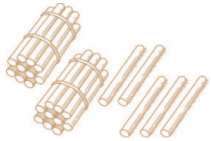
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1.1 Count objects	<p>Counting concrete objects</p> <p>Estimate and count reliably to at least 200 everyday objects. The strategy of grouping is encouraged.</p>	<p>Count reliably to at least 100 everyday objects.</p> <p>Give a reasonable estimate of a number of objects that can be checked by counting.</p>	<p>Once learners have seen pre-structured or pre-grouped counting apparatus, encourage them to group objects when counting.</p> <p>Learners need to make the link between ordinal and cardinal counting. This is achieved when they realise that stopping the count on reaching the 50th object means that they have counted 50 objects. By the end of the term learners should be able to:</p> <ul style="list-style-type: none"> • count objects they can touch or hold; • count the counters in groups of fives and tens and • re-arrange them and count again. Learners should be able to answer the question: “Do you still have the same number of counters?” <p>Further activities:</p> <p>Learners should be able to respond to the following kind of instructions and questions:</p> <ul style="list-style-type: none"> • Here are 100 counters. Count them by grouping them in tens. Now check by counting in ones. Before you start, do you think that the total will be the same? • To count all 100 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. 	



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<p>1.2</p> <p>Count forwards and backwards</p>	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 	<p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 0 and 100 • 10s from any multiple of 10 between 0 and 100 • 5s from any multiple of 5 between 0 and 100 • 2s from any multiple of 2 between 0 and 100 	<p>Term 1 in Grade 2 is a consolidation of work done in term 1 in Grade 1.</p> <p>A skip counting remains an important skill that will help learners when calculating. Reciting number sequences remains an important skill needed for counting. Counting should continue to form part of learners' everyday lives and so rhymes, songs and stories should form part of the counting experience.</p> <p>In Grade 1 learners have developed the following concepts related to counting:</p> <ul style="list-style-type: none"> • The concept of conservation • The cardinality principle - naming a collection • Subitising • Matching in a one-to-one correspondence <p>Skip counting</p> <p>Skip counting is another name for counting in groups. It helps to develop an awareness of number patterns. Skip counting encourages learners to count and think in groups, which makes them more efficient. This also helps them develop their estimation skills.</p> <p>Counting in groups makes them aware of the relationships between non-consecutive numbers. It lays the basis for number patterning and for multiplication.</p> <p>Learners should continue to be supported by images to help the skip counting.</p> <p>Example:</p> <table border="1" data-bbox="1006 901 1594 1227"> <tbody> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td></tr> <tr><td>22</td><td>24</td><td>26</td><td>8</td><td>30</td></tr> <tr><td>32</td><td>34</td><td>36</td><td>38</td><td>40</td></tr> <tr><td>42</td><td>44</td><td>46</td><td>48</td><td>50</td></tr> <tr><td>52</td><td>54</td><td>56</td><td>58</td><td>60</td></tr> <tr><td>62</td><td>64</td><td>66</td><td>68</td><td>70</td></tr> <tr><td>72</td><td>74</td><td>76</td><td>78</td><td>80</td></tr> <tr><td>82</td><td>84</td><td>86</td><td>88</td><td>90</td></tr> <tr><td>92</td><td>94</td><td>96</td><td>98</td><td>100</td></tr> </tbody> </table> <p>Further activities:</p> <p>Counting forwards and backwards to 100 using the large 100 chart: (5 - 7 min per day) Start counting with the WHOLE CLASS together, stop at a certain number e.g. 24. The learners take turns counting on from that number in groups/pairs/individuals as indicated by the teacher, writing the number at each stop.</p> <p>Ask questions such as what pattern do you see? Where does the first pattern stop? (Example: Pattern for counting in 2s: 2; 4; 6; 8; 10)</p>	2	4	6	8	10	12	14	16	18	20	22	24	26	8	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	
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<p>1.2 Count forwards and backwards</p>	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 	<p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 0 and 100 • 10s from any multiple of 10 between 0 and 100 • 5s from any multiple of 5 between 0 and 100 • 2s from any multiple of 2 between 0 and 100 	<p>By the end of the term learners should be able to: Count verbally and respond to questions such as:</p> <ul style="list-style-type: none"> • Start at 52, count on in ones to 72. • Start at 88 and count back in ones to 70. • Start at 38 and count in twos to 50. • Start at 45 and count in fives to 100. • Start at 10 and count in tens to 100. <p>Learners should be able to apply their counting skills to written activities. For example, in independent work they can complete number sequences: Learners copy and extend different number sequences, Example: 76; 75; 74; __; 72; __; __; __; 68 (backwards in ones) 27; 28; 29; __; __; 32; __ (in ones forwards) 8; 10; __; 14, __ (in twos or even numbers) 5; 10, 15, 20; 25; __ (in fives) 90; __; 70 60; __ (counting backwards in tens) 10, 20, 30, 40, __, 60, 70, __ (counting forward in tens).</p>	

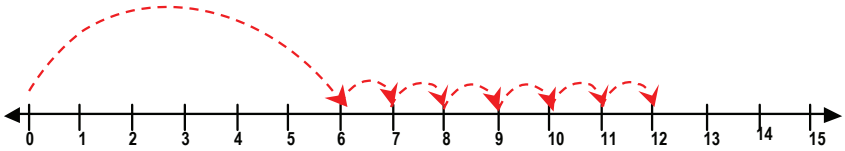
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<p>1.3 Number symbols and number names</p>	<p>Recognise, identify and read numbers</p> <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 200 Write number symbols 0 - 200 Recognise, identify and read number names 0 - 100 Write number names 0 - 100 	<p>Recognise, identify and read numbers</p> <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 100 Write number symbols 0 - 100 Recognise, identify and reads number names 0 - 25 Write number names 0 - 25 	<p>During this term learners continue to</p> <ul style="list-style-type: none"> read and write number symbols to 100; and read and write number names to 25. <p>By the end of the term learners should be able to:</p> <p>Write the number symbol for the number name presented:</p> <ul style="list-style-type: none"> seventeen twenty-three <p>Match the symbols to the number names</p> <table border="1" data-bbox="1010 596 1726 868"> <tbody> <tr> <td>66</td> <td>Ninety-one</td> </tr> <tr> <td>8</td> <td>Fifty-three</td> </tr> <tr> <td>172</td> <td>Forty</td> </tr> <tr> <td>109</td> <td>Thirty-eight</td> </tr> <tr> <td>91</td> <td>One hundred and seventy-two</td> </tr> <tr> <td>40</td> <td>Sixty-six</td> </tr> <tr> <td>53</td> <td>eight</td> </tr> <tr> <td>38</td> <td>One hundred and nine</td> </tr> </tbody> </table> <p>Read aloud the numbers on each card:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">83</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">47</div> </div>	66	Ninety-one	8	Fifty-three	172	Forty	109	Thirty-eight	91	One hundred and seventy-two	40	Sixty-six	53	eight	38	One hundred and nine	
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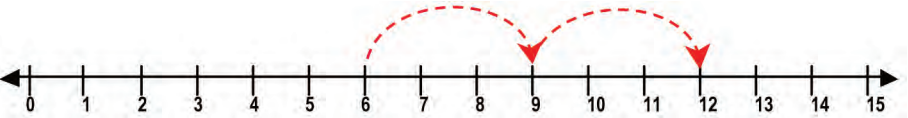
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<p>1.4 Describe, compare, order numbers</p>	<p>Order and compare numbers to 99</p> <ul style="list-style-type: none"> Order whole numbers up to 99 from smallest to greatest, and greatest to smallest . Compare whole numbers up to 99 using smaller than, greater than, more than, less than and is equal to. <p>Use ordinal numbers to show order, place or position</p> <p>Position objects in a line from first to tenth or first to last e.g. first, second, third ... twentieth.</p>	<p>Order and compare numbers to 25</p> <ul style="list-style-type: none"> Order whole numbers from smallest to greatest, and greatest to smallest . Compare whole numbers using smaller than, greater than, more than, less than and is equal to. <p>Use ordinal numbers to show order, place or position</p> <p>Position objects in a line from first to tenth or first to last e.g. first, second, third ... tenth.</p>	<p>The number range for ordering and comparing matches the calculation number range. This means that in order to calculate to 99, learners' number sense should be well developed to arrive at solutions. If learners can order and compare confidently beyond the requirement then it will only increase their number and operational sense.</p> <p>Learners should continue to use the language of ordering and comparing:</p> <ul style="list-style-type: none"> First, second, third, fourth, fifth, sixth..... How many... As many as, the same number as... Equal to, more than, less than, fewer than, greater than, smaller than, larger than... First, last, before, after, next, between ... <p>Through ordering and comparing objects and numbers learners have learnt that:</p> <ul style="list-style-type: none"> the cardinal aspect of a number is used to describe the number in a set; the ordinal aspect of a number refers to a number in relation to its position in the set. Example: Colour the third circle yellow. <p>Further activities</p> <ul style="list-style-type: none"> Ordinal Numbers: Discuss the difference between the words 'one' and 'first'; 'two' and 'second' etc. Ask questions such as: When would you use the word 'three' and when 'third'? Can we write first, second, third in a shorter way? Divide the class into three to four equal groups. Each learner gets a card on which to write his/her name. The group put their names cards in alphabetical order. Teacher and learners can then ask questions, e.g. who is fourth in your group? 	
<p>1.5 Place value</p>	<p>Recognise the place value of at least two-digit numbers to 99</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers up to 99 into multiples of tens and ones/units Identify and state the value of each digit 	<p>Recognise the place value of at least two-digit numbers to 25</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers into multiples of tens and units/ones Identify and state the value of each digit 	<p>What is different from Grade 1?</p> <p>In Term 1, learners work with a higher number range and continue to:</p> <ul style="list-style-type: none"> count and group to make a group of tens and loose ones; and write $18 = 1 \text{ ten and } 8 \text{ loose ones}$ $13 = 10 \text{ and } 3$. <p>During this term learners have to continue to engage in many experiences to establish ten as a benchmark and a unit. Ten is 1 ten that contains 10 ones. Regular 'ten and one' words (24 is 2 groups of 10 and 4 ones or 2 tens and 4 ones) need to be used regularly to establish a language that symbolises decomposing and composing.</p>	

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1.5 Place value	<p>Recognise the place value of at least two-digit numbers to 99</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers up to 99 into multiples of tens and ones/units Identify and state the value of each digit 	<p>Recognise the place value of at least two-digit numbers to 25</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers into multiples of tens and units/ones Identify and state the value of each digit 	<p>Working with concrete apparatus</p> <ul style="list-style-type: none"> Counting sticks/matches Counting sticks or matches can be grouped to show bundles of tens and loose ones. Example: <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>To show 12</p>  </div> <div style="text-align: center;"> <p>To show 18</p>  </div> <div style="text-align: center;"> <p>To show 25</p>  </div> </div> The abacus Learners should continue to manipulate concrete apparatus by grouping to form ten ones and understanding that 10 is one group of ten loose ones. Using an abacus, learners should be able to show: <ul style="list-style-type: none"> one ten; one ten and 5 ones; one ten and 6 ones; one ten and 7 ones; one ten and 8 ones; and one ten and 9 ones. Dienes blocks During this term the resources to teach place value can be widened. Base ten blocks (part of the Dienes blocks) can be introduced to develop the idea of a ten as a single entity and that: <ul style="list-style-type: none"> 10 ones make 1 ten; 20 ones make 2 tens; and 16 ones make 1 ten and 6 loose ones. <p>Although learners still need to count and group in tens, they can also show 18 by placing one base ten block and eight loose blocks to show the number. Learners should also group to show 20.</p> 	

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<p>1.5 Place value</p>	<p>Recognise the place value of at least two-digit numbers to 99</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers up to 99 into multiples of tens and ones/units Identify and state the value of each digit 	<p>Recognise the place value of at least two-digit numbers to 25</p> <ul style="list-style-type: none"> Know what each digit represents Decompose two-digit numbers into multiples of tens and units/ones Identify and state the value of each digit 	<p>Equivalent representations</p> <p>During this term the focus is showing equivalent representations for the same number. Twenty should be described as 2 tens (using the bundles or groups of objects) or 2 groups of tens. It is important to show learners that 20 can look different. So show 20 loose objects, one group of ten and 10 loose ones and 2 groups of ten. Learners should be given the opportunity to describe the arrangements, say what is different and what is the same.</p> <ul style="list-style-type: none"> Place value cards/Flard cards <p>Place value cards can be introduced and used during this term to show how the numbers are constructed. The place value cards can be shown alongside the bundles or groups of objects.</p> <ul style="list-style-type: none"> The value of the digits <p>Learners should start saying what each digit represents. Ask learners:</p> <ul style="list-style-type: none"> What number does the 7 represent in 27? What number does the 2 represent in 29? <p>Learners should use the place value cards to prove their statements.</p> <ul style="list-style-type: none"> Moving to written texts <p>During independent time learners should be engaged in written activities that build and consolidate:</p> <ul style="list-style-type: none"> the concept of groups of ten and loose ones/units; and the value of a digit. <p>Example:</p> <p>Colour 12 beads</p>  <p>Colour 16 beads</p>  <p>Fill in the missing number (this can be done or explained using concrete apparatus)</p> <p>18 = 1 ten and ___ ones</p> <p>23 = ___ tens and 3 ones</p>	



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			Recommended resources Objects that can be grouped: <ul style="list-style-type: none">• Counting sticks• Counters that can be threaded• Matchsticks• Ice cream sticks• Interlocking cubes	

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<p>1.6 Problem-solving techniques</p>	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Learners are expected to solve the word problems using the following techniques:</p> <ul style="list-style-type: none"> Building up or breaking down numbers Doubling and halving Number lines <p>Drawings or concrete apparatus</p> <p>Learners will continue to draw pictures and use concrete apparatus to solve problems. It is important that the pictures or drawings contain numbers as well as number sentences.</p> <p>Building up and breaking down</p> <p>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.</p> <p>Doubling and halving</p> <p>This technique is quite sophisticated and requires a strong number sense. Learners who are able to choose this a technique are quite flexible in the strategies they use. For example:</p> <p>Word problem: On one day at the clinic 17 children were given flu vaccinations. The next day 16 children were vaccinated. How many children were vaccinated altogether?</p> <p>The problem could be solved by using doubling. A learner might say double 16 plus 1 or double 17 minus 1.</p> <p>Number lines</p> <p>Using number lines in order to help calculate will allow 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. By now they 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.</p> <p>During the term there will be progression in the structuring of the number lines.</p> <p>Example of how learners can use the number line to record calculating techniques: Zonke has 6 fluffy toys. Zia has 6 more than Zonke. How many fluffy toys does Zia have? Learners will construct the following number lines to help them arrive at an answer.</p>  <p>Learners can also break 6 into groups of 2. The number line will then show jumps of 2s from 6.</p>	

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<p>1.6</p> <p>Problem-solving techniques</p>	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Example:</p>  <p>Once learners are confident in counting on from a given number, the number line should start at 6. The way this number line is structured matches the concept of counting on. It is important that learners see number lines starting at different numbers when using it for counting or ordering of numbers. One can break up 6 into groups of 2 and add on from 6</p> <p>Example:</p>  <p>6 can be halved and 2 jumps of 3 are recorded.</p> <p>Example:</p>  <p>Learners should be given lots of opportunity to say how a number can be reached using the number line.</p> <p>One can ask: What are the different jumps we can do to reach 15? In order to jump towards numbers, learners need to know the bonds to 15 or be able to use the number line to arrive at an answer. It is important that learners talk about how 'big' the jump is. Practising this kind of activity prepares learners for working with empty lines.</p> <p>When working with number lines, some learners may need to hold a string of beads above or below the number line to help them count.</p> <p>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 ones. Learners are practising these strategies. They do not have to be fluent in their use.</p> <p>Note that learners often use different ways of solving a problem that may not be what the teacher expects. For example, a division problem may be solved by repeated subtraction, addition, or multiplication. Learners' methods will change in the course of the year as their understanding of and familiarity with the problem types grow, and as their number concept develops.</p>	

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1.7 Addition and subtraction	Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 99.	Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 20.	<p>What is different from Grade 1</p> <p>During this term learners practise doing word problems and work on becoming confident in using the following the techniques when solving problems:</p> <ul style="list-style-type: none"> • Drawings or concrete apparatus • Building up and breaking down • Doubling and halving • Number lines <p>In this term, give learners plenty of support in their attempts to record and represent their calculations. Learners should be writing down number sentences as a written record for the problem solved. It is important to watch which learners struggle to write a number sentence to identify particular problems.</p> <table border="1" data-bbox="1006 731 1993 1065"> <thead> <tr> <th colspan="3">Problem type 1: Change</th> </tr> <tr> <th></th> <th>Join</th> <th>Separate</th> </tr> </thead> <tbody> <tr> <td>Result unknown</td> <td>Moeketsi has 6 sweets. Mahlodi gives him 9 more. How many sweets does Moeketsi have altogether?</td> <td>There are 15 sweets. Moeketsie eats 6. How many are left for Mahlodi?</td> </tr> <tr> <td>Change unknown</td> <td>Moeketsi has 6 sweets. How many more does he need to have 15?</td> <td>Moeketsi has 15 sweets. Mahlodi eats some. There are 9 left. How many did Mahlodi eat?</td> </tr> <tr> <td>Start unknown</td> <td>Moeketsi had some sweets. Mahlodi gives him 9 more. Now he has 15. How many did Moeketsi start with?</td> <td>Moeketsi eats some sweets. He gave 6 to Mahlodi. Now he has 8 sweets left. How many did he start with?</td> </tr> </tbody> </table> <table border="1" data-bbox="1006 1091 1993 1397"> <thead> <tr> <th colspan="3">Problem type 2: Compare</th> </tr> <tr> <th></th> <th>Join</th> <th>Separate</th> </tr> </thead> <tbody> <tr> <td>Result unknown</td> <td>Moeketsi has 6 sweets.</td> <td>Mahlodi has 15 sweets.</td> </tr> <tr> <td>Change unknown</td> <td>Mahlodi has 9. How many more sweets does Mahlodi have than Moeketsi?</td> <td>Mahlodi has 6 sweets. He has 9 fewer sweets than Moeketsi. How many sweets does Mahlodi have?</td> </tr> <tr> <td>Start unknown</td> <td>Mahlodi has 15 sweets. She has 9 more sweets than Moeketsi. How many sweets does Moeketsi have?</td> <td>Mahlodi has 16 sweets. Moeketsi has 9 fewer sweets than Mahlodi. How many sweets does Mahlodi have?</td> </tr> </tbody> </table>	Problem type 1: Change				Join	Separate	Result unknown	Moeketsi has 6 sweets. Mahlodi gives him 9 more. How many sweets does Moeketsi have altogether?	There are 15 sweets. Moeketsie eats 6. How many are left for Mahlodi?	Change unknown	Moeketsi has 6 sweets. How many more does he need to have 15?	Moeketsi has 15 sweets. Mahlodi eats some. There are 9 left. How many did Mahlodi eat?	Start unknown	Moeketsi had some sweets. Mahlodi gives him 9 more. Now he has 15. How many did Moeketsi start with?	Moeketsi eats some sweets. He gave 6 to Mahlodi. Now he has 8 sweets left. How many did he start with?	Problem type 2: Compare				Join	Separate	Result unknown	Moeketsi has 6 sweets.	Mahlodi has 15 sweets.	Change unknown	Mahlodi has 9. How many more sweets does Mahlodi have than Moeketsi?	Mahlodi has 6 sweets. He has 9 fewer sweets than Moeketsi. How many sweets does Mahlodi have?	Start unknown	Mahlodi has 15 sweets. She has 9 more sweets than Moeketsi. How many sweets does Moeketsi have?	Mahlodi has 16 sweets. Moeketsi has 9 fewer sweets than Mahlodi. How many sweets does Mahlodi have?	
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<p>1.8 Repeated addition leading to multiplication</p>	<p>Solve word problems in context and explain own solution to problems using repeated addition or multiplication with answers up to 50.</p>	<p>Solve word problems in context and explains own solution to problems involving repeated addition leading to multiplication with answers up to 20.</p>	<p>Multiplication</p> <p>The basic understanding of multiplication in this grade is grouping. Making groups can help the learner in representing multiplication situations.</p> <p>There are three main categories of problem situations that involve the multiplication of whole numbers:</p> <ul style="list-style-type: none"> • Equivalent groups (e.g. three tables, each with four children): which are represented as repeated sets • Multiplicative comparison (e.g. three times as many boys as girls): which is represented as many to one correspondence • Rectangular arrays (e.g. three rows of four children): which are represented as rows and columns <p>Each of these situations can be associated with particular ways of asking a question (see Problem-solving types in Grade 2 of Section 2).</p> <p>Problem situations for multiplication involve the following three numbers in a mathematical relationship:</p> <ul style="list-style-type: none"> • The number of objects in each set • The number of sets • The total number 																

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<p>1.8 Repeated addition leading to multiplication</p>	<p>Solve word problems in context and explain own solution to problems using repeated addition or multiplication with answers up to 50.</p>	<p>Solve word problems in context and explains own solution to problems involving repeated addition leading to multiplication with answers up to 20.</p>	<p>Examples of problems that can be done this term</p> <p>It is expected that while solving the problems below, learners will use pictures, drawings or concrete apparatus to aid calculation. If learners are drawing pictures to help them calculate, the drawings should reflect a grouping situation. Learners should be encouraged to write number sentences for all the word problems. Expect learners to use repeated addition number sentences to show the solution.</p> <p>Examples of problems that can be done:</p> <p>Repeated addition</p> <ul style="list-style-type: none"> • How many wheels do 4 bicycles have? • How many eyes do 7 children have? Learners might solve the problem in the following way: <p>Pictures or drawings should show grouping.</p>  <p>Learners should be encouraged to count in 2s to get to the answer. They should also be encouraged to represent their counting in a number sentence.</p>  $2 + 2 + 2 + 2 + 2 + 2 + 2 = 14$ <p>Rate</p> <p>Thami drinks 3 cups of milk every day. How many cups of milk does he drink in a week?</p> <p>Grids or arrays</p> <p>Mr Khumalo plants 3 rows of cabbage plants. There are 5 plants in a row. How many cabbage plants are there altogether?</p> <ul style="list-style-type: none"> • A vegetable garden has 5 rows of plants. Every row has the same number of plants. If there is a total of 15 plants, how many plants are in each row? • A vegetable garden has 18 plants that are planted in rows. There are 6 plants in each row. How many rows are there? 	

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<p>1.9 Grouping and sharing leading to division</p>	<p>Solve and explain solutions to practical problems that involve equal sharing and grouping up to 99 with answers that may include remainders.</p>	<p>Solves and explain solutions to practical problems that involve equal sharing and grouping up to 20 with answers that may include remainders.</p>	<p>As with multiplication, the basic understanding of division in this grade, is equal sharing and grouping</p> <ul style="list-style-type: none"> • grouping (e.g. twelve children at tables of four, how many tables) • sharing (e.g. twelve children at four tables, how many at each) <p>Some learners arrive at school capable of modelling both grouping and sharing division problems with concrete apparatus.</p> <p>Problem situations for multiplication and division involve the following three numbers in a mathematical relationship:</p> <ul style="list-style-type: none"> • The number of objects in each set • The number of sets • the total number <p>Examples of problems that can be done this term</p> <p>Sharing</p> <ul style="list-style-type: none"> • I have 12 pencils to share equally among the three of you; how many will you each get? • There are 18 toy cars; can you share them equally between the two of you? • There are 16 plums and 8 children share them out equally. How many plums does each child have? • Naomi has 20 flowers. She puts them into 2 vases. How many flowers in each vase? • Tom bakes 8 cakes. He has 40 smarties. How many smarties can he put on each cake? <p>Grouping</p> <ul style="list-style-type: none"> • How many cars can you make if you have 8 wheels? How many motorbikes? • There are 18 apples in a box. How many bags of 3 apples can be filled? • A baker bakes 30 buns. She puts 6 buns in every box. How many boxes can she fill? • There are 16 children here today. How many teams of 4 children can we make? <p>Array</p> <p>Mongezi packs out 20 counters into 10 rows. How many counters in a row?</p>	

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<p>1.11 Money</p>	<ul style="list-style-type: none"> Recognise and identify the South African coins, c, 10c, 20c, 50c, R1, R2, R5, and bank notes R10, R20, R50 Solve money problems involving totals and change to R99 and in cents up to 90c 	<ul style="list-style-type: none"> Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5, and bank notes. R10, R20, R50 Solve money problems involving totals and change in cents up to 50c or rands to R20 	<p>What is different from Grade 1</p> <p>During this term learners practise recognising money and breaking money into smaller parts.</p> <p>Examples of problems that can be done this term</p> <ul style="list-style-type: none"> Could you share 50c equally among four children? Explain how. Bubble gum sweets cost 10c each. Busi spent 50c. How many bubble gum sweets did she buy? Thenje pays R5 to travel by taxi to school in the morning. She pays with a R20 note. How much change does she receive? How much money will she have left when she travels back home by taxi? A fizzpop costs R2,50. Palesa wants to buy 4 fizzpops. She has R8,00. Does she have enough money? If not, how much more money does she need? 	<p>.</p>

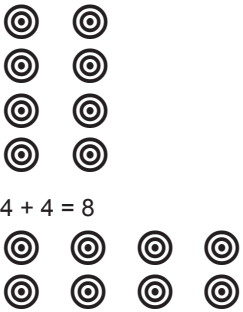
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<p>1.12 Techniques (methods or strategies)</p>	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> • drawings or concrete apparatus e.g. counters • building up and breaking down numbers • doubling and halving • number lines 	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> • Drawings or concrete apparatus e.g. Counters • Building up and breaking down numbers • Doubling and halving • Number lines 	<p>What is different from Grade 1</p> <p>Learners are expected to solve context free-calculations using the following techniques:</p> <ul style="list-style-type: none"> • Drawings or concrete apparatus • Building up or breaking down numbers • Doubling and halving • Number lines <p>Drawings or concrete apparatus</p> <p>Learners will continue to draw pictures and use concrete apparatus to solve problems. It is important that the pictures or drawings contain numbers as well as number sentences.</p> <p>Building up and breaking down</p> <p>This is one of the most important techniques in the Foundation Phase (learners will also use decomposing frequently in the Intermediate Phase). Using this technique allows learners to split (decompose) and recombine numbers to help make calculations easier.</p> <p>During this term learners will:</p> <ul style="list-style-type: none"> • break up numbers using place value; • break up numbers using multiples of 10; and • break up into number pairs e.g. pairs that make 20. <p>Doubling and halving</p> <p>Learners continue using doubling and halving as a calculating strategy.</p> <p>Number lines</p> <p>See the notes for further examples of doing number lines in the problem-solving section.</p> <ul style="list-style-type: none"> • Addition and subtraction <p>Learners should be constructing their own number lines and breaking up the numbers in manageable parts.</p> <p>Example:</p> <p>$8 + 12$</p> <p>The number line should start at 8 and learners can create:</p> <ul style="list-style-type: none"> - 2 jumps of 6 - 4 jumps of 3 - 3 jumps of 4 - One jump of 10 and then a jump of 2 	



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1.12 Techniques (methods or strategies)	Use the following techniques when performing calculations: <ul style="list-style-type: none"> • drawings or concrete apparatus e.g. counters • building up and breaking down numbers • doubling and halving • number lines 	Use the following techniques when performing calculations: <ul style="list-style-type: none"> • Drawings or concrete apparatus e.g. Counters • Building up and breaking down numbers • Doubling and halving • Number lines 	<ul style="list-style-type: none"> • 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. <p>Example:</p> $5 + 5 + 5 + 5 + 5 = 25$ 5 hops of 5 make 25 5 groups of 5 = 25 $5 \times 5 = 25$ <p>For a given multiplication, learners should be able to explain how jumps can be made on the number line.</p> <p>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 ones. Note that learners may often solve a problem in ways that a teacher may not expect. For example, a division problem may be solved by repeated subtraction, addition, or multiplication. Learners' methods will change in the course of the year as their understanding of and familiarity with the problem types grow, and as their number concept develops.</p>	

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<p>1.13</p> <p>Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 10 	<ul style="list-style-type: none"> • Add to 20 • Subtract from 20 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 10 	<p>What is different from Grade 1?</p> <p>There is a greater focus on developing calculation strategies or techniques during this term. Breaking down numbers in order to calculate becomes an important technique that learners will practise.</p> <p>This term focuses on:</p> <p>Using building-up and breaking-down number activities that will help develop an understanding of addition and subtraction</p> <p>Learners practise addition and subtraction to 20. It is within this number range that learners will begin to develop place value concepts of tens and units/ones. Counting in groups remains important and learners should begin to realise that counting on in ones is simply not an efficient strategy. It is within this number range that learners should really think hard about the strategies that they will use. Choosing an appropriate calculating strategy helps learners to become proficient in calculating.</p> <p>In order to calculate within the number range 0 - 20 learners' experience should include:</p> <ul style="list-style-type: none"> • counting objects; • recognising, reading and writing numbers; • comparing and ordering numbers; • building up and breaking down numbers; • practise doing addition and subtraction up to 20; • doubling and halving; and • memorising some number facts. 	

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<p>1.13</p> <p>Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 10 	<ul style="list-style-type: none"> • Add to 20 • Subtract from 20 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 10 	<p>Possible calculating techniques for addition and subtraction</p> <p>The techniques shown below allow learners to formalise their counting and number sense. Practising the techniques below will encourage learners to reflect upon the relationships between numbers and teach learners that they can actually use and apply their knowledge in order to calculate.</p> <p>Put the greater number first in order to count on or back</p> <p>$4 + 12 = \square$</p> <p>Rearrange $4 + 12$ as $12 + 2$ and count on from 12</p> <p>Identify near doubles</p> <p>$8 + 7$</p> <p>The learner can explain that the sum can be written as $8 + 8 - 1$ (double 8 minus 1) or $7 + 7 + 1$ (double 7 plus 1).</p> <p>Learners might record their strategies using arrows</p> <p>$8 + 8 \rightarrow 16 + 1 = 15$</p> <p>Change a number to ten and then subtract or add ones</p> <p>This strategy can be taught with quite low number ranges and applied to higher numbers.</p> <p>$9 + 6 = \square$</p> <p>Learners can say to themselves: "I will take one away from the 6 and add it to the 9 to make 10."</p> <p>Therefore $9 + 6$ can be written as $10 + 5 = 15$.</p> <p>$8 + 5 = \square$</p> <p>The learners can say to themselves: "I will take two away from the 5 and add it to the 8 to make 10."</p> <p>Therefore $8 + 5$ can be written as $10 + 3 = 13$</p>	

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<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> Add to 99 Subtract from 99 Use appropriate symbols (+, -, =, □) Practise number bonds to 10 	<ul style="list-style-type: none"> Add to 20 Subtract from 20 Use appropriate symbols (+, -, =, □) Practise number bonds to 10 	<p>Breaking down a number into smaller parts to make calculation easier</p> <p>Learners will break up a number into different parts that are manageable for them.</p> <p>Counting on by breaking up one number</p> $11 + 7 = \square$ $11 + 4 + 3$ $11 + 4 \rightarrow 15 + 3 = 18$ $11 + 7 = \square$ $11 + 5 + 2$ $11 + 5 \rightarrow 16 + 2 = 18$ $17 - 9 = \square$ $17 - (7 + 2)$ $17 - 7 \rightarrow 10 - 2 = 8$ $12 + 7 = \square$ $10 + 2 + 7$ $7 + 2 \rightarrow 9 + 10 = 19$ <p>Use knowledge of the inverse relationship between addition and subtraction</p> $15 - 9 = \square$ <p>The learner knows that the sum can be rewritten as an addition sum: "I know that $9 + \square = 15$."</p> <p>The learner might use counting on in order to do the calculation.</p> <p>Number bonds</p> <p>In order to practise the number bonds, a variety of activities must be given to learners. This is ideally done during independent time.</p> <p>The number line can also be used to practise the bonds to 10.</p>	

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)
<p>1.14 Repeated addition leading to multiplication</p>	<ul style="list-style-type: none"> Add the same number repeatedly to 50 Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 Use appropriate symbols (+, x, =, □) 	<ul style="list-style-type: none"> Add the same number repeatedly to 20 Multiply numbers 1 to 10 by, 2, Use appropriate symbols (+, x, =, □) 	<p>What is different from Grade 1</p> <p>Learners will make the transition from repeated addition to multiplication. They will begin to understand the concept of multiplication. They will be engaged in activities that allow them to see the relationship between numbers:</p> <ul style="list-style-type: none"> The number of objects in a set/group The number of sets or groups The total number <p>Learners arrive in Grade 2 understanding repeated addition.</p> <p>By the end of the term they should be able to:</p> <ul style="list-style-type: none"> relate skip counting and repeated addition to the understanding of multiplication; use, read and write the multiplication sign; write multiplication number sentences; and multiply numbers 1 to 10 by 2. <p>When doing solving word problems learners will most likely use repeated addition, except for those word problems that contain the array image. It is in the context of free situations that other images for multiplication can be used.</p> <p>Arrays</p> <p>As learners gain experience with a variety of multiplication word sums, organising groups into arrays can provide a structure for showing the commutative nature of multiplication e.g. 2 x 4 is the same as 4 x 2.</p>  <p>4 + 4 = 8</p> <p>2 + 2 + 2 + 2 = 8</p>	

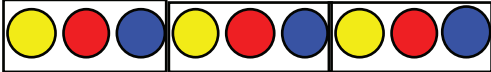
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.14 Repeated addition leading to multiplication</p>	<ul style="list-style-type: none"> Add the same number repeatedly to 50 Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 Use appropriate symbols (+, x, =, □) 	<ul style="list-style-type: none"> Add the same number repeatedly to 20 Multiply numbers 1 to 10 by, 2, Use appropriate symbols (+, x, =, □) 	<p>Using arrays allows for:</p> <ul style="list-style-type: none"> the building up and breaking down of numbers; linking multiplication to and repeated addition; thinking of multiplication as an array; and laying the basis for the commutative law. <p>Focus learner's attention on the number of rows and the number of counters in the rows.</p>  <p>$4 + 4 = 8$</p> <p>There are 4 rows of 2, which is 8 altogether. Learners should also record in the following way:</p>  <p>$2 + 2 + 2 + 2 = 8$</p> <p>There are 2 rows of 4, which is 8 altogether. The word "times" can then be introduced: 4 times 2 is 8. Once learners have had sufficient experience, the multiplication sign can be introduced together with the following language that has been developed:</p> <ul style="list-style-type: none"> 4 groups of 2 4 twos $2 + 2 + 2 + 2 = 8$ 4 groups of two or 4 times 2 is 8 <p>Even though the sign is introduced, words, pictures and multiple images to support the understanding of the operation remain important. Images for understanding multiplication:</p> <ul style="list-style-type: none"> Unifix cubes can be used and you could pack out 4 columns of cubes and in each column there could be 2 cubes. This allows the learner to say: there are four stacks and there are 2 in each stack. It allows them to record $2 + 2 + 2 + 2$ and 4 groups of 2 is 4×2. The number line can be used to show the repeated addition or groups of numbers. This is strongly linked to skip counting. <p>Learners should be able to record the following:</p> <p>1 group of 2 is 2 or 1 times 2 is 2 or $1 \times 2 = 2$ 2 groups of 2 are 4 or 2 times 2 is 4 or $2 \times 2 = 4$ 3 groups of 2 are 6 or 3 times 2 is 6 or $3 \times 2 = 6$</p>	

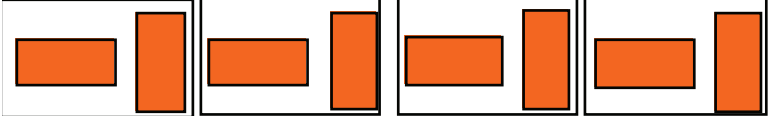
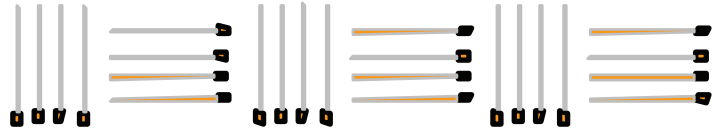
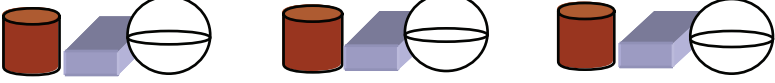
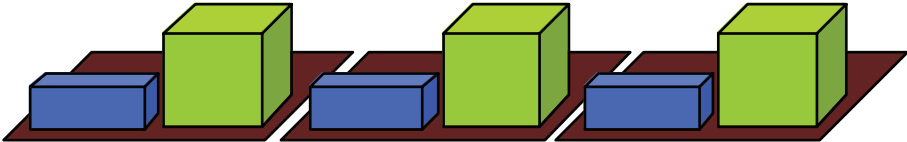
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.16 Mental mathematics</p>	<p>Number concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers. Compare numbers to 99 and say which is more or less Know which number is 1 more or 1 less Know which number is 2 more or 2 less Know which number is 3 more or 3 less Know which number is 4 more or 4 less Know which number is 5 more or 5 less. Know which number is 10 more or less. <p>Rapidly recall:</p> <ul style="list-style-type: none"> Addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 	<p>Number concept: Range 25</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 99 and say which is more or less Know which number is 1 more or 1 less Know which number is 2 more or 2 less Know which number is 10 more or 10 less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Recall addition and subtraction facts to 10 <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> Put the larger number first in order to count on or count back Mental number line Doubling and halving Building up and breaking down Use the relationship between addition and subtraction 	<p>What is different from Grade 1?</p> <p>This term focuses on:</p> <p>The mental mathematics programme should be developed systematically over the year. Learners should not be asked to do random calculations each day. As learners cover topics and develop calculating strategies in the main part of the lesson, aspects of these can be incorporated into the mental mathematics programme: concepts and skills are developed through the main lesson, and then practised, sometimes with smaller number ranges, in the mental mathematics programme.</p> <p>You can keep the number range lower in Term 1 and increase it during the year. At the start of the year, number ranges and calculation strategies can be based on those developed in Grade 1.</p> <p>Number concept:</p> <p>Examples of questions that can be asked:</p> <p>Number names and symbols</p> <p>Hold up a card or write down a number name. Choose a learner to write the matching numeral.</p> <p>More or less</p> <p>What is</p> <ul style="list-style-type: none"> 1 less than 15 1 more than 9 10 more than 15 10 less than 16 <p>What is the 5th letter of the alphabet?</p> <p>What is the 9th month of the year?</p> <p>Ordering and comparing</p> <p>Which is more: 12 or 21?</p> <p>Give a number between 17 and 19.</p>	

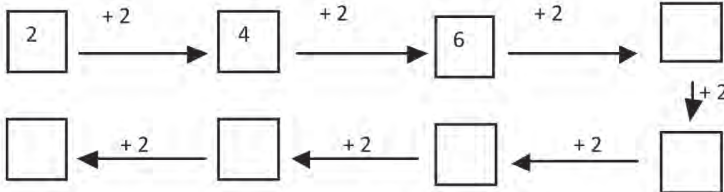
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.16 Mental mathematics</p>	<p>Calculation strategies Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 		<p>Addition and subtraction facts:</p> <ul style="list-style-type: none"> Know by heart all addition and subtraction number bonds to 10 <ul style="list-style-type: none"> $\square + \triangle = 10$ $\square + \triangle = 8$ <p>Add and subtract fact for all numbers up to and including 10</p> <p>$1 + 9 = 10$ $9 + 1 = 10$ $2 + 8 = 10$ $8 + 2 = 10$</p> <p>$8 - 4 = 4$ $8 - 4 = 4$ $8 - 5 = 3$ $8 - 3 = 5$</p> <p>Quickly recall addition doubles to 10. This should include corresponding subtraction facts.</p> <ul style="list-style-type: none"> $1 + 1 = 2$ $2 + 2 = 4$ $3 + 3 = 6$ $4 + 4 = 8$ $5 + 5 = 10$ <p>Show me the number to add to to make 10 (writing down or using the place value or Flard cards)</p> <ul style="list-style-type: none"> 8 2 9 5 3 <p>Show me the number left when Is taken away from 10(writing down or using the place value or Flard cards)</p> <ul style="list-style-type: none"> 5 3 6 1 7 <p>Some mental mathematics can be done without apparatus, but it is often useful to do mental mathematics with apparatus and to record what is done.</p> <p>Recommended apparatus</p> <ul style="list-style-type: none"> a number line (structured and empty) a number grid place value cards (Flard cards) counting beads 	

GRADE 2 TERM 1

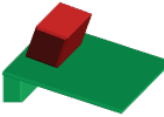
2. PATTERNS, FUNCTIONS AND ALGEBRA

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)
<p>2.1 Geometric patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects. <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawings lines, shapes or objects <p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Copy, extend and describe</p> <ul style="list-style-type: none"> • Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects 	<p>Copying the pattern helps learners to see the logic of how the pattern is made.</p> <p>Extending the pattern helps learners to check that they have properly understood the logic of the pattern.</p> <p>Describing the pattern helps learners to develop their language and speaking skills. It also helps you to see how learners have interpreted the pattern.</p> <p>It is usually easier for learners to talk about the pattern after they have made it. Learners need to be trained in what to look for and how to describe the pattern. You can model this for them by asking questions like.</p> <p>“What shapes do you see in this pattern?” “</p> <p>“Are they all the same colour?”</p> <p>“Do you see one or more shapes in the pattern?”</p> <p>“Do the objects all face the same way?”</p> <p>“Are there the same number of objects in each group?”</p> <p>“How many objects are in each group?”</p> <p>“Are all the shapes the same size?”etc.</p> <p>Include the 2-D geometric shapes and 3-D geometric objects that learners have learned about. Learners can make 2-D shapes by cutting out paper or card, or they can draw them. They can make patterns from box shapes, ball shapes and cylinders that they have made from clay or play dough.</p> <p>Patterns can be made by using one object but having the colours of the object change in a regular way.</p> <p>Example:</p>  <p>Patterns can be made from identical repeating groups, where each group has only one kind of object but the position of the objects in a group change. Identical groups are repeated</p>	<p>1 lesson</p>

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)
<p>2.1 Geometric patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects. <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawings lines, shapes or objects <p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Copy, extend and describe</p> <ul style="list-style-type: none"> • Copy, extend and describe in words • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects 	<p>Example:</p>   <p>In some patterns different objects are used to make up a group, but the groups of objects are repeated in exactly the same way.</p> <p>Example:</p>  <p>Patterns can be made in which the size of objects alternates in exactly the same way.</p>  <p>Learners can make patterns by threading beads. Patterning can also be done in the Life Skills lesson.</p>	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)
<p>2.2</p> <p>Number patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe simple number sequences to at least 200</p> <p>Create and describe own patterns</p> <p>Create own number patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe simple number sequences to at least 100</p> <p>Sequences should show counting forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 1 and 100 • 10s from any multiple of 10 between 1 and 100 • 5s from any multiple of 5 between 1 and 100 • 2s from any multiple of 2 between 1 and 100 	<p>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.</p> <p>Sequences should show counting forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 1 and 100 • 10s from any multiple of 10 between 1 and 100 • 5s from any multiple of 5 between 1 and 100 • 2s from any multiple of 2 between 1 and 100 <p>In Grade 2 learners count backwards in multiples of 10, 5, and 2 for the first time.</p> <p>Learners can point to numbers as they count. It is useful to give learners number sequences in different representations e.g.</p> <ul style="list-style-type: none"> • A written sequence of numbers 100; 99; 98; 97; 96, • Number lines • Number grids • Number chains <p>Learners can cover, colour, or circle numbers as they count on number lines and number grids.</p> <p>Learners can fill in missing numbers on number lines, number grids, in written number sequences and number chains e.g.</p> <div style="text-align: center;">  </div> <p>By the end of the term learners count work with sequences to and from 100.</p>	<p>3 lessons</p>

GRADE 2 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)
3.2 3-D objects	<p>Range of objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) cylinders <p>Features of objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide <p>Focussed activities</p> <p>Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>Range of objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) <p>Features of Objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide <p>Focussed activities</p> <p>Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>What is different from Grade 1?</p> <ul style="list-style-type: none"> Cylinders are new to Grade 2 but can be introduced in Term 3. <p>In Term 1, learners can revise and consolidate what they did in Grade 1. Learners can focus on cylinders in Term 3.</p> <p>Most of the work on 3-D objects in Grade 2 should be done with concrete/physical objects. We experience the world in three dimensions, so starting with physical objects helps learners to build on the experience that they bring to school.</p> <p>Many young learners struggle to interpret 3-D geometric objects from pictures. Working with the physical objects helps learners to interpret pictures of the geometric objects later. When you hold a physical object you can turn it around and look at it from all sides. You can see what it looks like from behind and underneath.</p> <p>When you only have a picture, you have to imagine the parts that are not visible in the drawing. This is not always easy for young learners. If learners are only given a definition of an object without seeing it or holding it, it is very difficult to understand the features of an object completely.</p> <p>Building with 3-D objects</p> <p>Learners copy a model of something that you as the teacher provides e.g. a tower, a robot, train, taxi, castle etc. Models or constructions can be made using building blocks, recycling material, construction kits, other 3-D geometric objects, cut-out 2-D shapes. This can be done in independent time. It is important for learners to talk about the models they have made. For example, if a tower is built of boxes or blocks, you can ask learners, "Can you build a tower with only balls?" They should explain their answer.</p> <p>Comparing and describing 3-D objects: size</p> <p>Learners compare the size of similar objects e.g.</p> <ul style="list-style-type: none"> order balls according to size ; and use the language of size to compare objects: "The box is bigger than the ball, because I can put the ball inside the box." 	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)
<p>3.2 3-D objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) cylinders <p>Features of objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide <p>Focussed activities Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) <p>Features of Objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide <p>Focussed activities Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>Describing 3-D objects: colour Learners talk about the colours of objects and then sort objects according to colour. Identifying and naming objects and their colours, as well as comparing sizes of objects, can be practised during work with patterns.</p> <p>3-D objects in Grade 2 Learners work with</p> <ul style="list-style-type: none"> balls and objects shaped like balls; and various boxes and other objects shaped like rectangular prisms or cubes. Learners investigate which of the objects can roll, which slide. <p>Focussing on features of 3-D objects Learners can make a slide or incline by placing a box under one end of a large book. They can then experiment to see whether objects slide or roll. This is a continuation of what they did in Grade 1, but now cylinders are included.</p>  <p>Learners can also investigate whether they can make stacks or towers using only balls, or only boxes.</p> <p>Recognising and naming balls (spheres) and boxes (prisms) Learners should be given a range of objects to work with:</p> <ul style="list-style-type: none"> shaped like spheres, e.g. balls or different size, marbles, oranges etc.; and shaped like prisms, such as blocks, bricks, boxes of different sizes, e.g. matchboxes, cereal boxes, tea boxes, toothpaste boxes. <p>Learners can find objects shaped like a ball (sphere), or shaped like a box (prisms) when given a collection of objects. Learners can find or show objects shaped like boxes (prisms) in the classroom. e.g. this brick is shaped like a box or this orange is shaped like a ball.</p>	<p>3 lessons</p>

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)
3.2 3-D objects			<p>During independent time learners can continue to</p> <ul style="list-style-type: none"> • sort objects according to size; • sort objects according to colour; • build with objects; and • make balls and box shapes (prisms) from clay or play dough. <p>Written exercises</p> <p>Although most of the work with 3-D objects is done practically, work must be consolidated through written exercises.</p>	
3.2 3-D objects	<p>Range of objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focussed activities</p> <p>Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>Range of objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) <p>Features of Objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focussed activities</p> <p>Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling material, construction kits, other 3-D geometric objects</p>	<p>Language</p> <p>It is important to develop learners' ability to talk about 3-D objects.</p> <ul style="list-style-type: none"> • Language of size: Big, bigger, biggest, small, smaller, smallest • Colours • Language of objects: Boxes, balls (learners are not expected to know the term sphere) • Language of position to describe construction e.g. on top of, under, behind, in front, next to, alongside, under, over, near, between, inside, outside <p>The language of size and colour can be developed in the language or Life Skills lesson time and applied or practised in the Mathematics lesson time. The language of position can be developed in the Language or life Skills Lesson time and when learners focus specifically on position. It can be applied or practised when learners work with 3-D objects.</p>	3 lessons

GRADE 2 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	<p>Telling the time</p> <ul style="list-style-type: none"> • Know days of week • Know months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <p>Use calendars to calculate and describe lengths of time in days or weeks.</p> <p>Use clocks to calculate length of time in hours, half hours or quarter hours.</p>	<p>Telling the time</p> <ul style="list-style-type: none"> • Knows days of week • Knows months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours on analogue clocks 	<p>In Grade 1 learners spoke about</p> <ul style="list-style-type: none"> • the sequences of events; and • the duration of time. <p>They learned the days of the week and months of the year and used these as well as other language to talk about the sequencing of events from their lives. They spoke about how long things take, using language such as longer or shorter and faster or slower.</p> <p>Learners ordered sequences of pictures such as</p> <ul style="list-style-type: none"> • the steps to make a sandwich or a cup of tea; • photographs showing a baby grown into an elderly person; • life cycle of animals e.g. egg to chicken, or egg to frog or egg to a butterfly; and • regular events in the day (waking up, being at school, playing, eating supper, sleeping). <p>They place birthdays on the calendar throughout the year.</p> <p>In Grade 2 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 become familiar with calendars by the continual placing of</p> <ul style="list-style-type: none"> • birthdays; • religious festivals; • historical events; • school events; and • public holidays <p>on the calendar</p> <p>During independent work time learners continue to sequence events from their daily lives and sequence pictures of events in order.</p>	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)
<p>4.1 Time</p>	<p>Telling the time</p> <ul style="list-style-type: none"> • Know days of week • Know months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <p>Use calendars to calculate and describe lengths of time in days or weeks.</p> <p>Use clocks to calculate length of time in hours, half hours or quarter hours.</p>	<p>Telling the time</p> <ul style="list-style-type: none"> • Knows days of week • Knows months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours on analogue clocks 	<p>What is different from Grade 1?</p> <p>A focus in Grade 2 is on telling the time, especially reading clocks. In Term 1 learners focus their attention on telling the time in hours, using an analogue clock. However, learners should also tell the time of regular events during the day on a continual 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. 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. Show me what the time will be 2 hours after 10.</p>	<p>2 lessons</p>

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)
<p>4.2</p> <p>Length</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. 	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <p>Estimate, measure, order and record length using metres (either metre sticks or metre long lengths of string) as the standard unit of length.</p>	<p>What is different from Grade 1?</p> <p>In Grade 1 learners focused on</p> <ul style="list-style-type: none"> placing objects directly next to each to compare lengths, heights and widths; and informal measurement with non-standard units of length. <p>In Term 1 of Grade 2 learners should continue to focus on informal measurement using non-standard units, but can also be introduced to metres as a unit of measurement.</p> <p>Informal measurement of length using non-standard units of length</p> <p>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.</p> <p>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.</p> <p>Learners should measure a variety of objects using a range of objects as informal units.</p> <p>There are three ways to use informal units: length, distance and height.</p> <ul style="list-style-type: none"> 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. <p>Here it is important that</p> <ul style="list-style-type: none"> 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 no gaps are left between the objects: they need to be packed out so that they touch each other 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. Use only one object as the non-standard measure, either flipping it over or marking its end point before sliding it along. 	<p>3 lessons</p>

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)
<p>4.2 Length</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. 	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <p>Estimate, measure, order and record length using metres (either metre sticks or metre long lengths of string) as the standard unit of length.</p>	<p>Learners should be taught always to state the unit e.g. the book is 12 bottle tops wide, the classroom is 9 paces long.</p> <p>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.</p> <p>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.</p> <p>Learners need to measure with a range of informal units, so that they can</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measurement</p> <p>Most of the time spent on measurement in Grade 2 should be on informal measurement. However, you can give learners the opportunity to begin to develop a sense of how long a metre is. This is best done if learners measure with a 1 metre long “instrument” (such as a metre ruler, 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.</p> <p>Learners can begin by finding 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 is 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.</p> <p>Once learners have some experience of measuring in metres, they should estimate before every measurement</p> <p>Learners can then find things that are either longer or shorter than 1 metre. Finally they can measure a variety of lengths or distances in metres.</p> <p>Recording measurements</p> <p>Although measuring is a practical skill, learners should record their measurements (with both informal units and metres) at all times.</p> <p>Measuring length as a context for solving problems and calculations</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the contexts of</p> <ul style="list-style-type: none"> informal measurement of length, e.g. Lebo’s desk is 11 hand spans long. Teacher’s desk is 19 hand spans long. How much longer is the teacher’s desk? measuring lengths in metres <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>	<p>3 lessons</p>

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)
<p>4.3</p> <p>Mass</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using non-standard measures and a balance e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 Measure their own mass in kilograms using a bathroom scale 		<p>In Grade 1 it was recommended that learners focus on working with a measuring balance to</p> <ul style="list-style-type: none"> compare the mass of objects directly; order and compare the mass of three or more objects, by placing pairs of objects on a balance, until all objects can be sequenced; and find the mass of objects using informal units of mass. <p>Learners also focussed on developing the language to talk about mass.</p> <p>During independent work time learners can practise to estimate, measure, compare, order and record mass using a balance and informal units of mass.</p> <p>Measuring mass as a context for solving problems and calculations</p> <p>Problem-solving and calculations can continue to use the context of mass given in informal measurements.</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of informal measurement of mass, e.g. The duster has a mass of 11 marbles. The box of crayons has a mass of 8 marbles. Together they will have a mass of how many marbles?</p> <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>	

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)
<p>4.4</p> <p>Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 		<p>In Grade 1 it was recommended that learners focus on</p> <ul style="list-style-type: none"> developing the language to talk about differences in volume; comparing the volumes in two identical containers; comparing the volumes in two different-looking containers, especially wider and narrower containers; and measuring volumes and capacities with non-standard instruments and units. <p>What is capacity? What is volume?</p> <p>A bottle can have a capacity of four full cups, but it may not be filled to its full capacity; it could, for example, only contain a volume of one cup of water at a particular time.</p> <p>Capacity is the total amount that an object can hold (or the amount of space inside the object).</p> <p>Volume is the amount of space that something takes up.</p> <p>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.</p> <p>At other times learners will be measuring how much a container can hold if it is filled to its maximum capacity.</p> <p>During independent work time learners can practise to estimate, measure, compare, order and record volumes and capacities with non-standard instruments and informal units of capacity. Cooking and baking are a useful context in which learners can practise measuring capacity. Choose recipes in which measurements are given in cups, teaspoons and other informal units.</p> <p>Measuring capacity as a context for solving problems and calculations</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of informal measurement of capacity or volume, e.g. Gogo uses 2 cups of milk to make a pudding. If she doubles the recipe, how much milk will she need?</p> <p>Take account of the number range appropriate for the term, as well as the range of problems types.</p>	

GRADE 2 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 <ul style="list-style-type: none"> Collect data about the class or school to answer questions posed by the teacher 	Collect and organise data Collect data about the class or school to answer questions posed by the teacher	What is different from Grade 1? <ul style="list-style-type: none"> Learners no longer work with collections of objects. 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 handling cycle In the data handling cycle, <ul style="list-style-type: none"> learners collect information to answer a question. In the Foundation and Intermediate Phase this question is normally provided by the teacher or textbook; learners sort and represent the information in ways which make it easier to analyse. The form of representation that learners in Grade 2 practise is a pictograph; and learners analyse the information in the pictograph by answering questions posed by the teacher. A class pictograph It is recommended that Grade 2 learners work through the complete data cycle to make a class pictograph at least twice in the year (once in Term 1 and once in Term 3). 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, e.g. drawing all the pictures. Making a class graph allows you to focus the learners' attention on the key aspects of data handling and also on what they need to know about the important features of a pictograph. Features of a pictograph that learners need to be taught: <ul style="list-style-type: none"> Where and how to label the graph (graph title) Where and how to label the categories The pictograph needs to have a key which explains what each picture means The pictures or the spaces for pictures need to be the same size How to place the pictures evenly in rows How to read the graph 	3 lessons
5.5 Represent data	Represent data Represent data in pictograph	Represent data Represent data in pictograph		
5.6 Analyse and interpret data	Analyse and interpret data Answer questions about data in pictograph	Analyse and Interpret data Answer questions about data in pictograph		

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)
			<p>Learners need to know that it is important first to read the graph title, 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.</p> <p>We normally read from left to right, but when learners read graphs they need to read from left to right and bottom to top. This needs to be explained to learners. They also need to practise these skills.</p> <p>Choosing a topic and asking questions to collect data</p> <p>In Grade 2 you should pose questions, e.g. “What are our class’s favourite TV programmes?” Teachers in the phase should ensure that different topics are chosen for data collection and analysis in each of the grades.</p> <p>Suitable topics include favourite sports, favourite cool drinks, favourite colours, favourite pass, favourite foods, favourite TV programmes etc.</p> <p>Setting categories to collect information</p> <p>Give learners a range of categories to choose from.</p> <p>Representing data</p> <p>Learners can each get a piece of paper the same size to draw their answer.</p> <p>The drawings are then arranged in rows to make a pictograph. Titles are added to the axes and the graph.</p> <p>Analyse and interpret data</p> <p>Learners answer questions that you pose about the picture graph, e.g.</p> <p>“What TV programme is the most popular in our class?”</p> <p>“What programme is the favourite of the fewest learners in the class?”</p> <p>“Do more learners like or?”</p> <p>“How many more learners prefer to?”</p>	

GRADE 2 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 Count objects	<p>Counting concrete objects</p> <p>Estimate and count to at least 200 everyday objects reliably. The strategy of grouping is encouraged.</p>	<p>Count to at least 150 everyday objects reliably.</p> <p>Give a reasonable estimate of a number of objects that can be checked by counting.</p>	<p>What is different from Term 1?</p> <p>In Term 2 the number range has increased and learners now count 150 objects. Because this is a large number of objects to count, the focus has to be on counting in groups. This is a skill that learners have been practising since Grade 1 and it is now applied to a higher number range.</p> <p>It is important that by the end of the term learners have seen a collection of 150 objects and they can suggest the most efficient way to count it.</p> <p>Counting objects in this term supports:</p> <ul style="list-style-type: none"> • the counting skills necessary for understanding place value; • rote counting; • the saying of number names; • the recognition of number symbols; and • the counting skills necessary for calculating. <p>Resources:</p> <p>Careful consideration needs to be given to the kind of apparatus used.</p> <ul style="list-style-type: none"> • Structured apparatus, such as a string of counting beads • The abacus to practice counting in groups of ten • Bundles of 2, bundles of 5 and ten which are then all counted • The Dienes blocks, especially the base ten blocks • Play money 	-

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)
<p>1.2 Count forwards and backwards</p>	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 	<p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 0 and 150 • 10s from any multiple of 10 between 0 and 150 • 5s from any multiple of 5 between 0 and 150 • 2s from any multiple of 2 between 0 and 150 • 3s from any multiple of 3 between 0 and 99 • 4s from any multiple 4 between 0 and 100 	<p>What is different from Term 1</p> <p>In Term 2 the counting number range has increased and learners start counting in threes and fours for the first time. This can be introduced when counting out physical objects, counting on a string of number beads, using the hundred grid and the number line.</p> <p>By the end of the term learners are able to respond to questions such as:</p> <ul style="list-style-type: none"> • Start at 132, count on in ones to 150. • Start at 120 and count back in ones to 98. • Start at 60 and count on in twos to 100. • Start at 100 and count on in twos to 138. • Start at 3 and count on in threes to 30. • Start at 60, count back in threes to 42. • Start at 4 and count in fours to 40. • Start at 84 and count back in fours to 68. • Start at 45 and count in fives to 100. • Start at 100 and count back in tens to 10. <p>Learners should also be counting back from any given multiple.</p>	

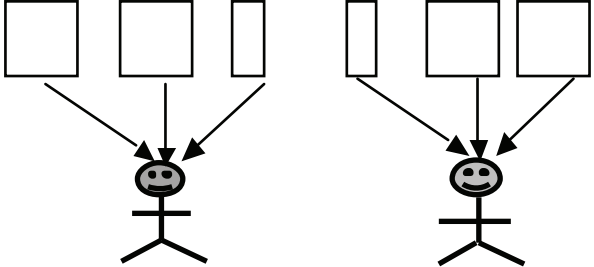
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)				
<p>1.3</p> <p>Number symbols and number names</p>	<p>Recognise, identify and read numbers</p> <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 200. Write number symbols 0 –200. Recognise, identify and read number names 0 - 100. Write number names 0 - 100. 	<p>Recognise, identify and read numbers</p> <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 150. Write number symbols 0 - 150. Recognise, identify and reads number names 0 - 50. Write number names 0 - 50. 	<p>What is different from Term 1?</p> <p>Learners continue to read and write number symbols and number names to an increased number range. Learners will be recognising, reading and writing symbols beyond one hundred and write number names to 50.</p> <p>Care should be taken when talking about three-digit numbers, for example one should say “ three hundred and twenty-three” rather than “ one, two, three”.</p> <p>When writing three-digit numbers between 100 and 110, the digit in the tens position is zero. Some learners find it difficult to write these numbers in symbols when they are given symbols in words. For example, writing 102 might be difficult for some learners. They might write 1002. 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.</p> <p>Examples of written recording:</p> <ul style="list-style-type: none"> Write the number symbols. <table border="1" data-bbox="1008 806 1935 897"> <tbody> <tr> <td>One hundred and thirty-one</td> <td></td> </tr> <tr> <td>One hundred and forty-seven</td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> Match number names to number symbols Complete number sequence Complete number lines and number tracks 	One hundred and thirty-one		One hundred and forty-seven		
One hundred and thirty-one								
One hundred and forty-seven								

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)
<p>1.4 Describe, compare and order numbers</p>	<p>Describe, compare and order numbers to 99</p> <ul style="list-style-type: none"> 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 <p>Use ordinal numbers to show order, place or position</p> <p>Position objects on a line from first to tenth or first to last e.g. first, second, third ... twentieth.</p>	<p>Describe, compare and order numbers to 50</p> <ul style="list-style-type: none"> Describe and compare whole numbers using smaller than, greater than, more than, less than and is equal to Describe and order whole numbers from smallest to greatest, and greatest to smallest <p>Use ordinal numbers to show order, place or position</p> <p>Position objects on a line from first to fifteenth or first to last e.g. first, second, third ... tenth.</p>	<p>What is different from Term 1</p> <p>During this term learners continue to order and compare numbers.</p> <p>The number line remains an important image that is particularly helpful for assessing where a number is positioned in relation to other numbers. The number line image will also support learners in their mental strategies for calculations.</p> <p>Further independent activities:</p> <p>Practise writing first to tenth.</p> <p>Record the following in class work books:</p> <ul style="list-style-type: none"> Which number comes just before 46? Which number comes after 48? Which number lies between 45 and 47? Use the given number line and fill in the missing numbers. Write 1 more than each of these numbers: <ul style="list-style-type: none"> 1 more than 23 is ____ 1 more than 29 is ____ 1 more than 42 is ____ Write 1 less than each of these numbers: <ul style="list-style-type: none"> 1 less than 20 is ____ 1 less than 31 is ____ 1 less than 42 is ____ Write 10 more than each of these numbers: <ul style="list-style-type: none"> 10 more than 20 is ____ 10 more than 30 is ____ Write 10 less than each of these numbers. <ul style="list-style-type: none"> 10 less than 50 is ____ 10 less than 40 is ____ Write the numbers in order from the biggest to the smallest. (130, 133, 123, 143, 103, 113) Complete the sentence. Fill in more or less: <ul style="list-style-type: none"> 24 is _____ than 24 36 is _____ than 19 	

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)
1.5 Place value	<p>Recognise the place value of at least two-digit numbers to 99</p> <ul style="list-style-type: none"> Recognise what each digit represents Decompose two-digit numbers into multiple of tens and ones Identify and state the value of each digit 	<p>Recognise the place value of at least two-digit numbers to 50</p> <ul style="list-style-type: none"> Recognise what each digit represents Decompose two-digit numbers into multiple of tens and ones Identify and state the value of each digit 	<p>What is different from Term 1</p> <p>During this term the number range has increased from 25 to 50. Learners now apply their knowledge of place value concepts to a higher number range.</p> <p>During this term learners continue to:</p> <ul style="list-style-type: none"> count and group to show tens and ones in different ways; count pre-grouped/pre-structured apparatus; use place value cards to show the number grouped and counted; show different arrangements of numbers, for example, 35 can be shown as 35 loose ones, 3 tens and 5 loose ones and 2 groups of tens and 15 loose ones; and state the value of each digit. <p>The above work is often done in focus groups and during independent time learners can record the following:</p> <p>48 = 4 groups of tens and 8 loose ones 48 = 40 and 8</p> <p>This is supported by using the Flard cards or place value cards.</p> <p>The value of the digits</p> <p>Learners should start saying what each digit represents. Ask learners:</p> <ul style="list-style-type: none"> What number does the 7 represent in 27? What number does the 4 represent in 49? <p>Learners should use the place value cards to prove their statements.</p>	
SOLVING PROBLEMS IN CONTEXT				
1.6 Problem-solving techniques	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Learners are expected to solve word problems using the following techniques:</p> <ul style="list-style-type: none"> Drawings or concrete apparatus e.g. counters Building up or breaking down numbers Doubling and halving Number lines <p>Drawings or concrete apparatus</p> <p>Learners will continue to draw pictures and use concrete apparatus to solve problems. Drawing up to 30 or 50 objects individually becomes inefficient and should be discouraged. Encourage them to include number symbols in their recordings, including in picture representations. Learners can also be encouraged to write number sentences.</p> <p>See notes for Term 1.</p>	

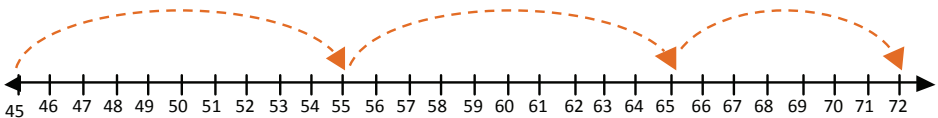
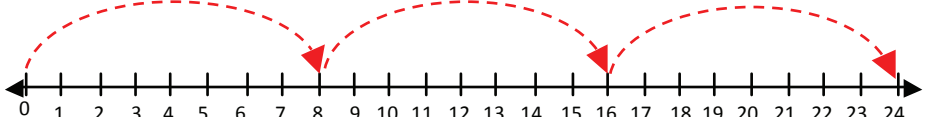
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.7 Addition and subtraction</p>	<p>Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 99.</p>	<p>Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 50.</p>	<p>What is different from Term 1</p> <p>During this term learners continue practising doing word problems and work on using the following techniques when solving problems:</p> <ul style="list-style-type: none"> • Drawings or concrete apparatus e.g. counters • Building up and breaking down of numbers • Doubling and halving • Number lines <p>The focus during this term remains on recording. Learners should be writing down number sentences as a written record for the problem solved. It is important to watch which learners struggle to write a number sentence to deal with particular problems. If learners ask you to show them how to represent a problem with a number sentence after they have solved it, it is a good time to show them.</p> <p>For examples of problems that can be done this term, see Term 2 notes.</p>	
<p>1.8 Repeated addition leading to multiplication</p>	<p>Solve word problems in context and explains own solution to problems using repeated addition or multiplication with answers up to 50.</p>	<p>Solve word problems in context and explains own solution to problems involving multiplication with answers up to 30.</p>	<p>What is different from Term 1</p> <p>The number range for the term has increased to 30.</p> <p>Learners should be encouraged to write number sentences for all the word problems. One can expect learners to use repeated addition number sentences to show the solution. During this term learners should be writing multiplication number sentences for their solutions. They were introduced to the multiplication sign in Term 1 and should use this experience when solving multiplication number problems. Repeated addition and grid/array type problems should show a multiplication number sentence. There will still be learners who will be far more confident in recording their solutions using repeated addition and not multiplication.</p> <p>Examples of problems that can be done this term</p> <p>Repeated addition</p> <ul style="list-style-type: none"> • How many wheels do 8 bicycles have? • How many eyes do 9 children have? <p>Rate</p> <p>Thami drinks 6 glasses of water every day. How many glasses of water does he drink in a week?</p> <p>Grids/ Arrays</p> <p>Mr Khumalo plants 6 rows of cabbage plants. There are 5 plants in a row. How many cabbage plants are there altogether?</p>	

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)
<p>1.9 Grouping and sharing leading to division</p>	<p>Solves and explain solutions to practical problems that involve equal sharing and grouping up to 99 with answers that can include remainders.</p>	<p>Solves and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders.</p>	<p>Examples of problems that can be done this term</p> <p>During this term allow learners to use drawings and concrete apparatus to show their solutions. Number sentences should be used. Learner might use repeated subtraction to show how they arrived at an answer.</p> <p>Array/Grid</p> <p>Mongezi packs out 20 counters into 10 rows. How many counters are in a row?</p> <p>Grouping</p> <p><i>Grouping, discarding the remainder</i></p> <p>Stella sells apples in bags of 6 apples each. She has 40 apples. How many bags of 6 apples each can she make up?</p> <p><i>Grouping, incorporating the remainder in the answer</i></p> <p>Ben wants to take 35 eggs to his grandmother. How many egg boxes that can take 6 eggs each does he need to pack all the eggs?</p> <p>Sharing</p> <p><i>Sharing, discarding the remainder</i></p> <ul style="list-style-type: none"> • Share 45 sweets among 4 friends so that they all get the same number of sweets. • Sue and Greg do a piece of work together. Sue works for 3 hours and Greg works for 1 hour. They get paid R40. How must they share the money? 	
<p>1.10 Sharing leading to fractions</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ etc.</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ etc.</p>	<p>What is different from Grade 1</p> <p>One of the first goals in the development of fractions should be to help learners construct the idea of fractional parts of the whole - the parts that result when the whole or unit has been partitioned into equally sized portions or fair shares.</p> <p>Learners seem to understand the idea of separating a quantity into two or more parts to be shared fairly among friends. They eventually make connections between the idea of fair shares and fractional parts. Sharing activities are therefore good places to begin the idea of fractions. Our curriculum also introduces the concept of sharing resulting in fractional parts.</p> <p>Sharing activities are generally posed in the form of simple word problems. Initially when learners perform sharing activities (division) they find dividing or sharing leaves left-over pieces. They then share the left-over pieces again. The language of fractions can be introduced verbally. Then one can write out fraction words, e.g. one-half, one-quarter, one-third. When writing about many fractions parts. e.g. 3 halves, 3 quarters, write this as the figure and the word. The expression 3 over 2 or 3 over 4 is meaningless and it is best to leave this symbolism to the Intermediate Phase.</p>	

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<p>1.10</p> <p>Sharing leading to fractions</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. etc.</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. etc.</p>	<p>Sharing</p> <p>In the examples below an equal sharing situation with a remainder that can also be shared is used.</p> <p>Two children share 5 chocolate bars so that each gets the same amount. How much can each child have? Learners will give each child 2 and then halve the remaining chocolate bar</p>  <p>Remainders</p> <p>It is important that learners draw their answers. Initially let learners describe in their own words the 'part' that they have broken up. Expect that when learners cut up the remaining piece. The pieces may be of unequal size. This might not influence how they describe the sharing process. Once learners can share fairly well, fraction names can be given to the parts.</p> <p>Moving from sharing problems with solutions that have remainders to solutions with whole numbers and fractional parts, means that learners are exposed to improper fractions and mixed numbers. Learners are not required to know and use this terminology. For example: 2 and a half piece can be formally written as $2\frac{1}{2}$, which is a mixed number.</p> <p>Sharing tasks and fraction language</p> <p>The discussion of learners' solutions is a good time to introduce the vocabulary of fractional parts. When a chocolate bar has been broken into equal shares, simply say, 'we call these fourths'. The whole biscuit has been cut into four parts. All the parts are the same size. Learners need to be aware of two aspects of fractional parts:</p> <ul style="list-style-type: none"> • The number of parts; and • the equality of the parts. 	

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<p>1.10 Sharing leading to fractions</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. etc.</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. etc.</p>	<p>Sharing activities help learners to develop the following concepts:</p> <ul style="list-style-type: none"> • When we divide something into 2 equal parts, we call these parts halves. • When we divide something into 3 equal parts, we call these parts thirds. • When we divide something into 4 equal parts, we call these parts quarters. • When we divide something into 5 equal parts, we call these parts fifths. <p>The focus of fraction word problems in this term allows learners to:</p> <ul style="list-style-type: none"> • share and group things equally; • name fraction parts; • find fractions of whole objects; and • recognise that a fraction is part of a whole. <p>Examples of problems suitable for Term 2</p> <ul style="list-style-type: none"> • Erin, Tawfiq and Thami must share 4 chocolate bars equally. How much chocolate must each child get? Draw a picture to show your answer. • Miles, Hannah, Mathew and Ndaweni share 5 fruit bars. How can they share them equally? Draw a picture to show your answer. • Serebolo and Jamie share 1 liquorice stick. Jamie says each one must get a half. Is she correct? Draw a picture to show your answer. <p>It is important that when learners draw the solutions they are able to describe how they shared. At the beginning use learners' informal language to describe the fractional parts. Once they are confident and understand the concept of a 'whole and a bit', the fraction name can be introduced. Then one can write out fraction words, e.g. one-half, one quarter, one third. The fraction symbol is not introduced, as the expression 1 over 2 is meaningless and it is best to leave this symbolism to later grades.</p>	
<p>1.11 Money</p>	<ul style="list-style-type: none"> • Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5), and bank notes (R10, R20, R50) • Solve money problems involving totals and change to R99 and in cents up to 90c 	<ul style="list-style-type: none"> • Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5), and bank notes (R10, R20, R50) • Solve money problems involving totals and change in cents up to 50c or rands to R50 	<p>What is different from Term 1</p> <p>During this term learners practise recognising money and breaking up money into smaller parts.</p> <p>Examples of problems that can be done this term</p> <ul style="list-style-type: none"> • Could you share 50c equally among four children? Explain how. • Joe spent 50c on 10c bubblegum sweets. How many bubblegum sweets did he buy? • Thenje pays R5 to travel by taxi to school in the morning. She pays with a R20 note. How much change does she receive? How much money will she have left when she returns home by taxi? • Zurina's taxi fare is R5,50. How much change does she get from R10? <p>Mia spent R38. She had R50. How much money does she have left?</p>	

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CONTEXT-FREE CALCULATIONS				
1.12 Techniques (methods or strategies)	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down numbers doubling and halving number lines 	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>What is different from Term 1</p> <p>Learners are expected to solve context-free calculations using the following techniques:</p> <ul style="list-style-type: none"> Building up or breaking down numbers Doubling and halving Number lines <p>Drawings or concrete apparatus</p> <p>Learners will continue to draw pictures and use concrete apparatus to solve problems. It is important that the pictures or drawings contain numbers as well as number sentences.</p> <p>Building up and breaking down</p> <p>This is one of the most important techniques in the Foundation Phase (it is also used frequently throughout the Intermediate Phase) Using this technique allows learners to split (decompose) and recombine numbers to help make calculations easier.</p> <p>It is important that learners apply known knowledge when breaking up numbers e.g.</p> <ul style="list-style-type: none"> breaking up using place value; breaking up using multiples of 10; and breaking up into number pairs <p>Doubling and halving</p> <p>Learner often find doubling easy; however, it is useful to train learners to apply their knowledge of doubling:</p> <ul style="list-style-type: none"> Use recognition of doubles to see near-doubles <p>Doubles Near doubles</p> <p>12 + 12 12 + 13</p> <p>25 + 25 25 + 24</p> <ul style="list-style-type: none"> Use a doubling strategy and then compensate for the difference, e.g. 13 + 14 = double 13 plus 1 <p>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.</p> <p>Example:</p> <p>On one day at the clinic 24 children were given flu vaccinations. The next day 25 children were vaccinated. How many children were vaccinated altogether?</p> <p>The problem could be solved by using doubling. A learner might say double 24 plus 1 or double 25 minus 1.</p>	

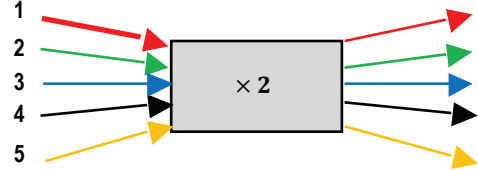
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.12</p> <p>Techniques (methods or strategies)</p>	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down numbers doubling and halving number lines 	<p>Use the following techniques when solving problem and explain solutions to problems:</p> <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	<p>Number lines</p> <p>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.</p> <p>Learners have been using number lines since Grade 1. By now they 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.</p> <p>Example of how learners can use the number line:</p> <ul style="list-style-type: none"> Addition and subtraction. <p>Learners should be constructing their own number lines and breaking up the numbers in manageable parts.</p> <p>Example:</p> <p>$45 + 27$</p>  <p>• Multiplication</p> <p>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.</p> <p>Example:</p>  <p>$8 + 8 + 8 = 24$</p> <p>3 hops of 8 make 24</p> <p>3 groups of 8 = 24</p> <p>$3 \times 8 = 24$</p> <p>For a given multiplication learners should be able to explain how jumps can be made on the number line.</p>	

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<p>1.13</p> <p>Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 20 	<ul style="list-style-type: none"> • Add to 50 • Subtract from 50 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 15 	<p>What is different from Term 1?</p> <p>Learners in Grade 2 will continue to use concrete apparatus and other images to help establish number sense and to calculate. The use of these images will become more and more abstract over time. By the end of the year in Grade 3 learners should be calculating up to three-digit numbers without the use of concrete apparatus. Learners in Grade 2 continue to use and refine their own calculating strategies. They need to be supported in making sure that their recording is systematic, so that it can be read by themselves and others. Grade 2s will use a wide variety of recordings and will be more confident in using numbers and symbols as a recording method.</p> <p>Learners should be able to ‘think’ about the question posed to them and look at the number range of the problem to decide on the best strategy. Through problem-solving learners have started developing their own calculating strategy and their own recording method. In Grade 2 they will refine this. During this term they should become confident in reading their recording methods and explaining how they arrived at the answer.</p> <p>Learners should be able to do the following with addition and subtraction:</p> <p>Although learners are using concrete apparatus and images to support their calculations when it comes to working with numbers, they should be able to calculate on an abstract level.</p> <p>During the term learners need to continue calculating doubling questions in a variety of ways so that they can use near doubling as a calculating strategy.</p> <p>Example:</p> <p>Double 20. Write this as an addition number sentence</p> <p>Copy and complete:</p> <ul style="list-style-type: none"> • $12 + 12 = \square$ • $15 + \square = 30$ • $16 + \square = 32$ • $17 + 17 = \square$ • $36 = 18 + \square$ • $38 = \square + 19$ <p>Possible methods to show addition and subtraction calculations.</p>	

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1.13 Addition and subtraction	<ul style="list-style-type: none"> Add to 99 Subtract from 99 Use appropriate symbols (+, −, =, □) Practise number bonds to 20 	<ul style="list-style-type: none"> Add to 50 Subtract from 50 Use appropriate symbols (+, −, =, □) Practise number bonds to 15 	<p>Breaking down a number into smaller parts to make a calculation easier</p> <p>Using knowledge of place value to break down numbers into tens and ones</p> <p><i>Adding two-digit numbers by breaking up both numbers</i></p> $23 + 36 = \square$ $23 + 36 = (20 + 3) + (30 + 6)$ $= (20 + 30) + (3 + 6)$ $= 50 + 9$ $= 59$ <p>Adding by breaking up one number</p> <p><i>Adding two-digit numbers by breaking up one number</i></p> $23 + 36 = \square$ $23 + (30 + 6)$ $23 + 30 \rightarrow 53 + 6 = 59$ <p>Learners might break down the number in ways that are manageable for them. This means that they will do it in different ways:</p> $23 + 36 = \square$ $23 + (10 + 10 + 10 + 6)$ $23 + 10 \rightarrow 33 + 10 \rightarrow 43 + 10 \rightarrow 53 + 6 = 59$ <p>Subtraction</p> <ul style="list-style-type: none"> Breaking up both numbers $47 - 26 = \square$ $47 - 26 = (40 + 7) - (20 + 6)$ $= (40 - 20) + (7 - 6)$ $= 20 + 1$ $= 21$ $42 - 26 = \square$ $42 - 26$ $(30 + 12) - (20 + 6)$ $30 - 20 = 10$ $12 - 6 = 6$ $10 + 6 = 16$	

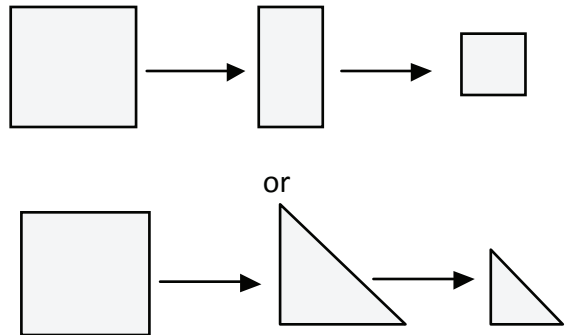
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> Add to 99 Subtract from 99 Use appropriate symbols (+, −, =, □) Practise number bonds to 20 	<ul style="list-style-type: none"> Add to 50 Subtract from 50 Use appropriate symbols (+, −, =, □) Practise number bonds to 15 	<ul style="list-style-type: none"> Subtracting by breaking up one number $47 - 26 = \square$ $47 - (20 + 6)$ $47 - 20 = 27$ $27 - 6 = 21$ $42 - 26 = \square$ $(30 + 12) - 26$ $30 - 26 = 4$ $12 + 4 = 16$ <ul style="list-style-type: none"> Expect that some learners might break up the number in different ways to make it easier for them calculate: $47 - 26 = \square$ $47 - (10 + 10 + 6)$ $47 - 10 \rightarrow 37 - 10 \rightarrow 27 - 6 = 21$ <p>Using and applying previous knowledge as techniques</p> <p>The techniques shown below allow learners to formalise their counting and number sense. Practising the techniques below will encourage learners to reflect upon the relationships between numbers and teach learners that they can actually use and apply their knowledge to help them calculate.</p> <p>Count on and count back</p> <p>Counting up in ones from 39 is an appropriate strategy because the numbers are close to one another.</p> $48 - 39 = \square$ <p>Identify near doubles</p> <p>24 + 25 explaining that it is double 24 plus 1 or double 25 minus 1.</p> $24 + 24 + 1$ <p>Learners might record their strategies using arrows</p> $24 + (20 + 4) + 1$ $24 + 20 \rightarrow 44 + 4 \rightarrow 48 + 1 = 49$	

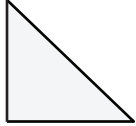




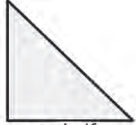
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.13</p> <p>Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 20 	<ul style="list-style-type: none"> • Add to 50 • Subtract from 50 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 15 	<p>Using halving to break down a number</p> <p>$29 + 12$</p> <p>$29 + (6 + 6)$</p> <p>$29 + 6 \rightarrow 35 + 6 = 41$</p> <p>Change a number to a multiple of ten and then subtract or add ones</p> <p>Count up or down to the nearest 10</p> <p>$28 + 19 = \square$</p> <p>Here learners need to say to themselves that they have two options. Change 28 or 19 to the nearest multiple of 10. The choice is theirs.</p> <p>The sum can be written as:</p> <p>$28 + 19 = 28 + 20 - 1$</p> <p>$28 + 20 \rightarrow 48 - 1 = 47$</p> <p>Some learners might break down 20 into 2 groups of 10 to calculate accurately.</p> <p>It helps learners to become more confident in and more independent at mathematics, if they have strategies</p> <ul style="list-style-type: none"> - to check their solutions themselves; and - to judge the reasonableness of their solutions. 	

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<p>1.14</p> <p>Repeated addition leading to multiplication</p>	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 Use appropriate symbols (+, x, =, □) 	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 2, 5 Use appropriate symbols (+, x, =, □) 	<p>What is different in Term 2?</p> <p>During the second term learners keep practising their understanding of multiplication. Multiplying 1 to 10 by 5 is introduced.</p> <p>For introducing multiplication by 5, see the notes for multiplying by 2 in Term 1</p> <p>By the end of the term learners should be able to record the following:</p> <p>1 group of 5 is 5 or 1 times 2 is 2 or $1 \times 2 = 2$</p> <p>2 groups of 2 are 4 or 2 times 2 is 4 or $2 \times 2 = 4$</p> <p>3 groups of 2 are 6 or 3 times 2 is 6 or $3 \times 2 = 6$</p> <p>The focus is not on memorising tables but rather on building the concept of multiplication. Learners are also learning to read and understand the multiplication number sentence.</p> <p>Multiple images for multiplication should be provided and lots of recording done in the class work book.</p> <p>Examples of written work</p> <p>Recording in tables:</p> <table border="1" data-bbox="1006 850 1991 928"> <tr> <td>Number of children</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> </tr> <tr> <td>Number of legs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Flow diagrams</p>  <p>When working with number patterns, multiplication can be linked to skip counting, by investigating patterns of multiples on a number grid.</p> <p>Example: Learners can record 2 s and 5 s on a number grid. They can talk about which numbers occur in both the two-times table and the five-times table.</p>	Number of children	1	2	3	4	5	6	7	8	9	Number of legs										
Number of children	1	2	3	4	5	6	7	8	9															
Number of legs																								

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<p>1.16 Mental mathematics</p>	<p>Number Concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 99 and say which is 1, 2, 3, 4, 5, and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Calculation Strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Number Concept: Range 50</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 100 and say which is 1, 2, 3, 4, 5, and 10 more or less <p>Rapidly recall:</p> <p>Recall addition and subtraction facts to 10</p> <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Number concept:</p> <p>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 contexts.</p> <p>Examples of questions that can be asked:</p> <p>Number names and symbols</p> <p>Hold up a card or write down a number name. Choose a learner to write the matching numeral.</p> <p>More or less</p> <p>What is?</p> <ul style="list-style-type: none"> 1 less than 50 1 more than 39 3 less than 27 10 more than 20 <p>What is the 5th letter of the alphabet?</p> <p>What is the 9th month of the year?</p> <p>Before and after</p> <p>What number comes just before 37?</p> <p>What number comes just after 39?</p> <p>Ordering and comparing</p> <p>Which is more: 21 or 41?</p> <p>Give me a number between 37 and 39.</p> <p>Addition and subtraction facts:</p> <p>See notes for Term 1.</p>	

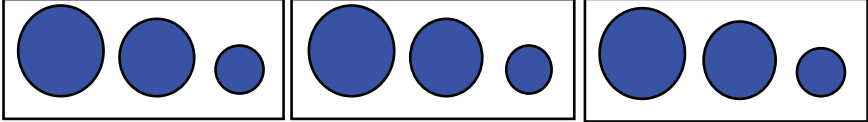
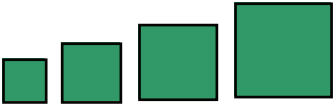

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.16</p> <p>Mental mathematics</p>	<p>Number Concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 99 and say which is 1, 2, 3, 4, 5, and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Calculation Strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Number Concept: Range 50</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 100 and say which is 1, 2, 3, 4, 5, and 10 more or less <p>Rapidly recall:</p> <p>Recall addition and subtraction facts to 10</p> <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Calculation Strategies:</p> <p>Use calculation strategies to add and subtract efficiently.</p> <p>Add several numbers by using strategies such as:</p> <ul style="list-style-type: none"> Look for pairs of numbers that make 10 and use these first <p>$2 + 7 + 8$ $2 + 8$ make 10 and then add 7</p> <p>Put the larger number first in order to count on or count back</p> <ul style="list-style-type: none"> Start with the largest number <p>$3 + 6$</p> <p>Restate the number sentence: $6 + 3$ and count on to 9</p> <ul style="list-style-type: none"> Use doubling as a mental calculation strategy <p>Identify near doubles.</p> <p>Example:</p> <p>$5 + 4 = 9$ explaining that it is double 4 plus 1 or double 5 minus 1</p> <p>Recognise that when two numbers are close in size to each other then it is easier to find a difference by counting up rather than counting back.</p> <p>$8 - 6 = 2$ and explain that counting up from 6 to 8 gives 2</p> <p>Some mental mathematics can be done without apparatus, but it is often useful to do mental mathematics with apparatus.</p> <p>Recommended apparatus</p> <ul style="list-style-type: none"> 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 1	SOME CLARIFICATION NOTES or TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.17 Fractions</p>	<ul style="list-style-type: none"> Use and name fractions including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<ul style="list-style-type: none"> Use and name fractions including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<p>This term focuses on:</p> <p>During this term learners are introduced to fractions. Learners will be introduced to fractions through sharing word problems and activities.</p> <p>However, the concept of fractional parts is so important that it should be developed further using additional activities.</p> <ul style="list-style-type: none"> Making half and quarter shapes by folding and cutting <p>Learners can fold paper into half and name each part. It is important that they understand that when you make two equal parts from something, you call each part a half. They could fold the piece of paper into half again. The importance here is to fold the page in different ways to obtain a different-looking half.</p> <div style="text-align: center;">  <p>The diagram illustrates two methods of folding a square. In the first method, a square is folded vertically into two equal rectangles, and then each rectangle is folded horizontally to create four equal smaller squares. In the second method, a square is folded diagonally into two equal right-angled triangles, and then each triangle is folded again to create four equal smaller right-angled triangles.</p> </div> <p>Always ask learners to predict how many pieces they will get and allow them to unfold the page and check. Comparing the two different half shapes or the two different quarter shapes can lead to interesting conversations on shape and size.</p>	

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)
<p>1.17 Fractions</p>	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<p>You could ask learners:</p> <p>Can I call these two shapes by the same number name, one half?</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Prove to me that I can call these two shapes by the number name one quarter.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Learners should name each part and this can be done by writing the fractions. For example:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>one quarter</p> </div> <div style="text-align: center;">  <p>one half</p> </div> </div> <ul style="list-style-type: none"> Combining to make a whole <p>Let learners use fraction circles or cut out circles from paper to find out how the half and quarter shapes can be combined to make the whole again.</p> <ul style="list-style-type: none"> Colouring or shading fractions <p>These kind of activities encourage:</p> <ul style="list-style-type: none"> knowing that fractions are equal parts; identifying fraction parts; and naming fraction parts. <p>Writing fraction names</p> <p>We do not introduce learners to writing the symbol of fractions. Learners learn how to label fraction parts by writing one half or one quarter.</p>	

GRADE 2 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)
<p>2.1 Geometric patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create and describe own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects <p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create and describe own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects 	<p>In Grade 1 and Term, 1 Grade 2 it was recommended that learners work with patterns in which elements (shapes, lines or objects) are repeated in exactly the same way. In Term 2 of Grade 2 learners can begin to work with patterns in which the size of the shapes or number of shapes changes in a predictable way.</p> <p>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 shape gets smaller.</p>  <p>Some patterns are made up from a single kind of shape, but each example of the shape increases or decreases in size</p> <p>Example</p>  <p>Some patterns are made up from groups in which the same shapes of objects occur, but the number of each kind of shape or object increases or decreases in a regular way e.g.</p>  <p>Copying the pattern helps learners to see the logic of how the pattern is made.</p> <p>Extending the pattern helps learners to check that they have properly understood the logic of the pattern.</p> <p>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.</p>	<p>1 lesson</p>

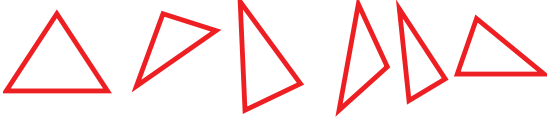
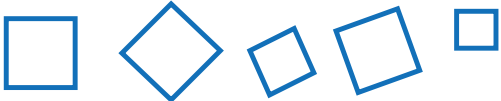

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 2	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>2.2 Number patterns</p>	<p>Copy, extend and describe Copy, extend and describe simple number sequences to at least 200</p> <p>Create and describe own patterns Create own number patterns.</p>	<p>Copy, extend and describe Copy, extend and describe simple number sequences to at least 150.</p> <p>Sequences should show counting forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 0 and 150 • 10s from any multiple of 10 between 0 and 150 • 5s from any multiple of 5 between 0 and 150 • 2s from any multiple of 2 between 0 and 150 • 3s and 4s from any multiple of 3 and 4 between 0 and 150 	<p>See notes for Term 1, but extend the number range to 150.</p>	<p>3 lessons</p>


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

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)
<p style="text-align: center;">3.1</p> <p>Position, orientation and views</p>	<p>Language of position Describe the position of one object in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to.</p> <p>Position and views Match different views of the same everyday object.</p> <p>Position and directions Follow directions to move around the classroom.</p>	<p>Language of position Describe the position of one object in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to.</p> <p>Position and directions Follow directions to move around the classroom.</p>	<p>Recommended focus for Term 2: language of position, following directions The focus in Term 2 can be on position and orientation. In Term 3 learners can work with views. Begin by assessing what learners know and remember about position and orientation.</p> <p>What is different from Grade 1 In Grade 2, learners consolidate the work that they have done on position, orientation and views in Grade 1.</p> <p>Language of position Language of position should be introduced and practised through practical activities that involve learners in physical movement, including songs and rhymes with movement and games with movement words. This can be done through whole class teaching time or focus group teaching time. It is suggested that you spend two lessons on position activities during Term 2, but then continue to introduce and practise position words for short parts of whole class, focus group and independent work time. The language of position can also be practised during Language and Life Skills lessons.</p> <p>The language of position can be consolidated through written recording such as colouring or matching drawings with words, drawing an object or shape when told its position relative to another object or shape, colouring or matching drawings with words.</p> <p>Position and directions Teaching learners to follow directions should be done through practical activities in which learners move themselves according to instructions. In Grade 2 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 rubbish bin”.</p>	<p>2 lessons</p>

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)
<p>3.2 3-D objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of Objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focussed activities Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling, construction kits, other 3-D geometric objects.</p>		<p>No specific focus on 3-D work is recommended for Term 2. However, work on 3-D can be consolidated through written exercises. Learners can also continue to build D-3 objects from recycling material or construction kits during independent work time.</p>	

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)
<p>3.3 2-D shapes</p>	<p>Range of shapes Recognise and name 2-D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2-D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	<p>Range of shapes Recognise and name 2-D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2-D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	<p>What is new in Grade 2</p> <ul style="list-style-type: none"> • rectangles <p>Most work with shapes in Grade 2 is done practically with concrete objects. All work should be consolidated through written exercises.</p> <p>Learners start with free play with various shapes including making pictures with cut-out geometric shapes. This can be done in independent time. This can also be done during Life Skills lessons.</p> <p>Learners copy pictures made up of geometric shapes. These pictures can be provided by the textbook or the teacher. This helps learners to be able to identify</p> <ul style="list-style-type: none"> • circles and squares of different sizes; • squares, rectangles and triangles in different positions; and, • triangles and rectangles with different shapes. This can be done in independent time. This can also be done during Life Skills 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)
<p>3.3 2-D shapes</p>	<p>Range of shapes Recognise and name 2-D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2-D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	<p>Range of shapes Recognise and name 2-D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes Describe, sort and compare 2-D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	<p>Comparing and describing 2-D shapes: size Learners compare the size of similar shapes e.g.</p> <ul style="list-style-type: none"> • order circles from smallest to greatest, • put all squares of the same size together, <p>Use the language of size to compare different shapes e.g. "I drew a triangle inside the square, so the triangle is smaller than the square."</p> <p>Describing 2-D shapes: colour Learners talk about the colours of shapes and then sort shapes according to colour. Identifying and naming objects and their colours, as well as comparing sizes of objects, can be practised during work with patterns.</p> <p>Recognising and naming circles, triangles, squares and rectangles Learners should work with circles and squares of different sizes and triangles with different shapes.</p> <p>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</p> <ul style="list-style-type: none"> - Triangles that are shaped differently and placed in different positions. These are some examples of triangles:  <ul style="list-style-type: none"> - Squares of different sizes, placed in different positions. These are some examples of squares:  <ul style="list-style-type: none"> - Rectangles with different shapes, placed in different position. These are some examples of rectangles: 	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 Recognise and name 2-D shapes <ul style="list-style-type: none"> circles triangles squares rectangles Features of shapes Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> size colour shape straight sides round sides 	Range of shapes Recognise and name 2-D shapes <ul style="list-style-type: none"> circles triangles squares rectangles Features of shapes Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> size colour shape straight sides round sides 	<ul style="list-style-type: none"> Circles of different sizes. These are some examples of circles:  <p>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.</p> <p>Learners sort shapes according to whether they have straight or round sides.</p> <p>Learners sort and groups shapes according to whether they are triangles, squares, or circles.</p> <p>Work is consolidated through written exercises. These exercises can include colouring, matching names to shapes etc.</p>	3 lessons
3.4 Symmetry	Symmetry Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.	Symmetry Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.	Learners should look for lines of symmetry in concrete objects and pictures. Written exercises <ul style="list-style-type: none"> should NOT only be “draw in the other half”; should include examples where learners draw in the line of symmetry. The line of symmetry should not always be a vertical line, e.g. in a picture of a snake the line of symmetry could be horizontal; and may include examples with more than one line of symmetry. <p>If learners are not sure whether a picture or shape has a line of symmetry, they can test by folding the piece of paper and seeing whether the two halves match exactly. If they do, then the fold line is the line of symmetry.</p>	1 lesson

GRADE 2 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	<p>Telling the time</p> <ul style="list-style-type: none"> • Know days of week • Know months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <p>Use calendars to calculate and describe lengths of time in days or weeks.</p> <p>Use clocks to calculate length of time in hours, half hours or quarter hours.</p>	<p>Telling the time</p> <ul style="list-style-type: none"> • Know days of week • Know months of year • Place birthdays, religious festivals, public holidays, historical events, school events on a calendar • Tell 12-hour time in hours and half hours on analogue clocks <p>Calculate length of time and passing of time</p> <p>Use clocks to calculate length of time in hours or half hours.</p>	<p>Learners continue to practise talking about the duration of time and the sequencing of time.</p> <p>During whole class teaching time and focus group time, learners continue to talk about the day of the week and month of the year and the date of the current day, as well as days before and days to come. Learners become familiar with calendars by the continual placing of</p> <ul style="list-style-type: none"> • Birthday; • religious festivals; • historical events; • school events; and • public holidays <p>on the calendar.</p> <p>During Independent work time learners continue to sequence events from their daily lives and sequence pictures of events. Learners also work with exercises related to telling the time in hours.</p> <p>What is different from Term 1?</p> <p>A focus in Term 2 is telling them time in hours and half hours using an analogue clock. This can be the focus of a lesson. It should include talking about the use of a.m. and p.m. with 12-hour time. Telling the time, should then be practised during the term on a continual 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 a half 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." "Show me what the time will be half an hour later."</p>	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)
<p>4.2 Length</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <p>Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length</p>		<p>During Term 1 it was recommended that learners focus on estimating, measuring, comparing and recording lengths, widths and heights with informal units but also do a some estimating, measuring, comparing and recording measurements in metres.</p> <p>Both these methods of measuring length can be practised in independent work time throughout the term. All work should be recorded.</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the contexts of</p> <ul style="list-style-type: none"> informal measurement of length; and measuring lengths in metres. <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>	

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)
<p>4.3</p> <p>Mass</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using non-standard measures and a balance e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 Measure their own mass in kilograms using a bathroom scale 	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using a balance and non-standard measures e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 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 whole kilogram. 	<p>What is different in Grade 2?</p> <p>In Grade 1 it was recommended that learners focus on working with a measuring balance to</p> <ul style="list-style-type: none"> directly comparing the mass of objects, ordering and comparing the masses of 3 or more objects, by placing pairs of objects on a balance, until all objects can be sequenced find the mass of objects using informal units of mass <p>Learners also focussed on developing the language to talk about mass.</p> <p>Learners should begin by consolidating what they know about using a balance and informal units to measure mass.</p> <p>Then they can be exposed to mass in kilograms</p> <p>Informal measurement of mass using a balance and non-standard units</p> <p>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.</p> <p>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).</p> <p>Measuring with mass with non-standard units involves counting how many of the chosen unit have the same mass as the object being measured. For example a ruler has the same mass as 9 blocks.</p> <p>Learners should measure a variety of objects using a range of objects as informal units.</p> <p>Learners should be taught to always state the unit when giving the mass e.g. the book is has the same mass as 34 marbles.</p> <p>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.</p> <p>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 the mass of 20 marbles, you cannot say whether they have the same mass or not, or which one is heavier.</p> <p>Recording measurements</p> <p>Although measuring is a practical skill learners should record their measurements at all times.</p>	<p>3 lessons</p>

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)
<p>4.3 Mass</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using non-standard measures and a balance e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 Measure their own mass in kilograms using a bathroom scale 	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using a balance and non-standard measures e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 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 whole kilogram. 	<p>Working with kilograms</p> <p>Learners can begin to be introduced to kilograms by working with groceries that are sold in kilograms, where the number of kilograms is stated on the packaging.</p> <p>For example 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 balance to see that although the size of the packages may differ, they have more or less the same mass.</p> <p>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.</p> <p>Reading bath room scales</p> <p>Where bath room scales are available learners can use these to read their own mass. There are two kinds of mass meters: digital and analogue.</p> <p>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. Some scales you can re-set to show only whole kilograms. If you cannot set it to show whole kilograms, teach learners to ignore the parts of kilograms for now.</p> <p>Most analogue bathroom scales have every 10 kg numbered, with a longer line showing the position of 5 kg. The 1kg lines are usually not numbered. This is similar to the way lines and numbers work on a ruler.</p> <p>Let learner start by counting to see that there are 10 spaces before the 10 kg mark, so that each space represents one kilogram, and the longer line represent 5 kg.</p> <p>Learners can read measurement of real bathroom scales as well as pictures of bathroom scales. It is easier to read the mass of a picture of a bathroom scale than off a real scale.</p> <p>Recording measurements</p> <p>Although measuring is a practical skill learners should record their measurements at all times.</p> <p>Measuring mass as a context for solving problems and calculations</p> <p>During time allocated to <i>Numbers, Operations and Relationships</i> learners can solve problems that use the context of</p> <ul style="list-style-type: none"> informal measurement of mass <p>Example: The duster has a mass of 11 marbles. The box of crayons has a mass of 8 marbles. Together they will have a mass of how many marbles?</p> <ul style="list-style-type: none"> measuring mass in kilograms <p>Example: Puleka bought 12 kg of mealie meal, 5 kg of sugar and 2kg of rice. How much did her shopping weigh altogether.</p> <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>	<p>3 lessons</p>

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)
<p>4.4 Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 		<p>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.</p> <p>So far this year it was recommended that learners focus on</p> <ul style="list-style-type: none"> developing the language to talk about differences in volume. comparing the volumes in two identical containers, comparing the volumes in two different looking containers especially wider and narrower containers measuring volumes and capacities with non-standard instruments and units. <p>During independent work time learners can to estimate, measure, compare, order and record volumes and capacities with non-standard instruments and informal units of capacity. Cooking and baking are useful a context in which learners can practise measuring capacity. Choose recipes in which measurements are given in cups, teaspoons and other informal units.</p> <p>Measuring capacity as a context for solving problems and calculations</p> <p>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?</p> <p>Take account of the number range appropriate for the term, as well as the range of problems types</p>	

GRADE 2 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 <ul style="list-style-type: none"> Collect data about the class or school to answer questions posed by the teacher Organise data in tallies 			
5.5 Represent data	Represent data <ul style="list-style-type: none"> Represent data in pictograph 			
5.6 Analyse and interpret data	Analyse and interpret data <ul style="list-style-type: none"> Answer questions about data in pictograph 	Analyse data from representations provided.	<p>Learners should have experienced the whole data cycle in Term 1, they can focus on analysing representations that are given to them.</p> <p>It is recommended that in Term 2 learners analyse (answer questions about) at least one pictograph</p> <p>Learners answer questions that you ask about the picture graph e.g.</p> <ul style="list-style-type: none"> “What TV programme is the most popular in our class?” “What programme is the favourite of the fewest learners in the class?” “Do more learners like or?” “How many more learners prefer than?” 	1 lesson

GRADE 2 TERM 3				
1. NUMBERS, OPERATIONS AND RELATIONSHIPS				
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)
1.1 Count objects	<p>Counting concrete objects</p> <p>Estimate and count to at least 200 everyday objects reliably. The strategy of grouping is encouraged.</p>	<p>Count to at least 180 everyday objects reliably.</p> <p>Give a reasonable estimate of a number of objects that can be checked by counting</p>	<p>What is different from Term 2?</p> <p>In Term 2 the number range has increased and learners now count 180 objects.</p> <p>Counting objects in this term continues to support:</p> <ul style="list-style-type: none"> the counting skills necessary for understanding place value; rote counting; the saying of number names; the recognition of number symbols; and the counting skills necessary for calculating. <p>The focus is still on group counting using a variety of structured or pre-grouped apparatus. It is useful to use some of the same apparatus when doing place value. Example: Learners can use the base 10 blocks to count in tens and show groups of 10.</p> <p>Useful questions to ask learners when counting objects are:</p> <ul style="list-style-type: none"> How do you know that you've counted that number? How can you check your answer? 	
1.2 Count forwards and backwards	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> 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 	<p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> 1s from any number between 0 and 180 10s from any multiple of 10 between 0 and 180 5s from any multiple of 5 between 0 and 180 2s from any multiple of 2 between 0 and 180 3s from any multiple of 3 and between 0 and 180 4s from any multiple of 4 between 0 and 180 	<p>What is different from Term 2?</p> <p>The number range in Term 3 increases from 150 to 180.</p> <p>When doing rote or oral counting it is necessary to focus learners' attention on the numbers they are counting. For example,ask: When we count in twos from 120 to 140 will we count the number 121? Why not?</p> <p>It is still important that the number line and the 100 grid be used to see how the words they are saying connect with the structure of the number system. Learners need to have a number grid from 100 to 200 to use for identifying and counting.</p> <p>See the notes for Term 2.</p>	

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)
REPRESENT WHOLE NUMBERS				
1.3 Number symbols and number names	Recognise, identify and read numbers <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 200 Write number symbols 0 - 200 Recognise, identify and read number names 0 - 100 Write number names 0 - 100 	Recognise, identify and read numbers <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 - 180 Write number symbols 0 - 180 Recognise, identify and reads number names 0 - 75 Write number names 0 - 75 	What is different from Term 2? The number range for: <ul style="list-style-type: none"> knowing, reading and writing number symbols increases to 180; and knowing, reading and writing to 75. Learners should be able to identify numbers and begin to explain the difference in their own words. Example: They have to look at the following number cards and be able to tell the difference between any two numbers: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">16</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">11</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">16</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">13</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">16</div> </div> Also see notes for Term 2	

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)
<p>1.4</p> <p>Describe, compare and order numbers</p>	<p>Order and compare numbers to 99</p> <ul style="list-style-type: none"> Order whole numbers up to 99 from smallest to greatest, and greatest to smallest Compare whole numbers up to 99 using smaller than, greater than, more than, less than and is equal to <p>Use ordinal numbers to show order, place or position</p> <p>Position objects on a line from first to tenth or first to last e.g. first, second, third ... twentieth</p>	<p>Order and compare numbers to 75</p> <ul style="list-style-type: none"> Order whole numbers from smallest to greatest, and greatest to smallest Compare whole numbers using smaller than, greater than, more than, less than and is equal to <p>Use ordinal numbers to show order, place or position</p> <p>Position objects on a line from first to twentieth or first to last e.g. first, second, third ... tenth.</p>	<p>What is different from Term 2?</p> <p>In this term learners order and compare numbers to 75.</p> <p>Up until now learners have been comparing and ordering numbers in order to develop a feel for the size of numbers in relation to each other. Questions on numbers should be carefully chosen to assist learners to develop higher order thinking skills about number value. Learners need to be challenged by the type of questions asked.</p> <p>Also help learners to develop the language to explain their thinking.</p> <p>Examples of questions may include:</p> <ul style="list-style-type: none"> Give me a number between 50 and 60. Is the number closer to 50 or 60? Explain your answer using a number line. Learners should be taught how to think about the ordering of numbers. Learners should explain why 15 is smaller than 50. Explanations can be supported by using concrete apparatus. <p>By the end of the term they should, for example:</p> <ul style="list-style-type: none"> know which numbers are smaller than 50, more than 50; and be able to show the position of all numbers in the 30s; 40s etc., using the number grid. <p>Instead of always giving learners number sentences to complete, sometimes ask them to make up their own sentences, to show relative size of numbers. Example:</p> <p>Make the following sentences true:</p> <ul style="list-style-type: none"> <input type="checkbox"/> is 1 more than <input type="checkbox"/> <input type="checkbox"/> is 1 less than <input type="checkbox"/> <input type="checkbox"/> is 10 more than <input type="checkbox"/> <input type="checkbox"/> is 10 less than <input type="checkbox"/> <p>Also see notes for Term 2.</p>	

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)
1.5 Place value	<p>Recognise the place value of at least two-digits numbers to 99</p> <ul style="list-style-type: none"> • Know 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 	<p>Recognise the place value of at least 2-digit numbers to 75</p> <ul style="list-style-type: none"> • Know what each digit represents • Decompose two digit numbers into multiple of tens and ones • Identify and state the value of each digit 	<p>What is different from Term 2?</p> <p>In this term learners continue to develop their understanding of place value concepts to 75.</p> <p>During this term learners continue to:</p> <ul style="list-style-type: none"> • count and group to show tens and ones in different ways; • count pre-grouped/pre-structured apparatus; • use place value cards to show the amount grouped and counted; and • show different arrangements of numbers. Example: 35 can be shown as 35 loose ones, 3 tens and 5 loose ones and 2 groups of tens and 15 loose ones. <p>The above work is often done in focus groups and during independent time learners can record the following:</p> <p>68 = 6 groups of tens and 8 loose ones 68 = 60 and 8</p> <p>This is supported by using the Flard cards or place value cards.</p> <p>Learners should be able to respond to questions and instructions such as:</p> <ul style="list-style-type: none"> • Which number is the same as 50 and 7? • Show me 75 using the place value cards. • Show me 75 on the abacus. • Show me 75 using the base ten blocks. • Show me 75 using unifix cubes. • Show me 75 using the string beads. • Count out 70 matchsticks using bundles of 10. How many bundles of 10 did you get? <p>The recording in class workbooks and workbooks continue during independent time.</p>	

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)
SOLVING PROBLEMS IN CONTEXT				
1.6 Problem-solving techniques	Use the following techniques when solving problem and explain solutions to problems: <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	Use the following techniques when solving problem and explain solutions to problems: <ul style="list-style-type: none"> drawings or concrete apparatus e.g. counters building up and breaking down of numbers doubling and halving number lines 	Learners are expected to solve the word problems using the following techniques: <ul style="list-style-type: none"> Drawings or concrete apparatus e.g. counters Building up or breaking down numbers Doubling and halving Number lines See notes for Term 2.	
1.7 Addition and subtraction	Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 99.	Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 75.	What is different from Term 2? Learners continue to work with the following type word problems outlined in Section 2 but the number range has increased to 75. See notes for Term 2.	
1.8 Repeated addition leading to multiplication	Solve word problems in context and explains own solution to problems using repeated addition or multiplication with answers up to 50.	Solve word problems in context and explains own solution to problems using repeated addition leading to multiplication with answers up to 40.	What is different from Term 1 Learners continue to work with the following type word problems outlined in chapter 2 but the number range has increased to 40 See notes for Term 2.	
1.9 Grouping and sharing leading to division	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 99 with answers that can include remainders.	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 75 with answers that can include remainders.	During this term learners to continue to use drawings and concrete apparatus to show their solutions. Number sentences should be used. Learners will use repeated subtraction to show how they arrived at an answer. See notes for Term 2.	

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)
1.10 Sharing leading to fractions	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ etc.	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ etc	<p>The focus of fraction word problems in this term continues to allow learners to:</p> <ul style="list-style-type: none"> • share and group things equally; • name fraction parts; • find fractions of whole objects; • recognise that a fraction is part of a whole; and • write fractions as one third. <p>During this term learners name thirds and fifths. It is important that learners are exposed to fractions other than one half and one quarter.</p> <p>Examples of problems that can be done this term:</p> <ul style="list-style-type: none"> • Six friends share 7 liquorice sticks equally. Draw a picture to show your answer. Compare your answer with that of a friend. • Eight friends share 9 liquorice sticks equally. Draw a picture to show your answer. Compare your answer with that of a friend. • 1 quarter <p>See notes for Term 2.</p>	
1.11 Money	<ul style="list-style-type: none"> • Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5), and bank notes (R10, R20, R50) • Solve money problems involving totals and change to R99 and in cents up to 90c 	<ul style="list-style-type: none"> • Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5), and bank notes (R10, R20, R50) • Solve money problems involving totals and change in cents up to 75c or rands to R75 	<p>Examples of problems that can be done:</p> <ul style="list-style-type: none"> • 35 learners and 1 teacher go on school trip to a nature reserve. The school pays R1.20 per learner to enter the nature reserve. How much must be paid? • Ma Hewu buys 2 loaves of bread for her family each day. A loaf costs R4, 99. How much does she spend in 5 days? <p>See notes for Term 2.</p>	

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)
CONTEXT-FREE CALCULATIONS				
1.12 Techniques (methods or strategies)	Use the following techniques when performing calculations: <ul style="list-style-type: none"> • drawings or concrete apparatus e.g. counters • building up and breaking down numbers • doubling and halving • number lines 	Use the following techniques when performing calculations: <ul style="list-style-type: none"> • Drawings or concrete apparatus e.g. Counters • Building up and breaking down numbers • Doubling and halving • Number lines 	Learners are expected to solve context-free calculations using the following techniques: <ul style="list-style-type: none"> • Building up or breaking down numbers • Doubling and halving • Number lines See notes for Term 2.	

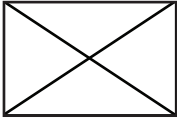

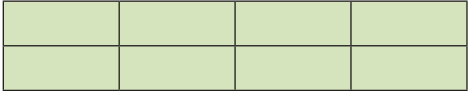
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
1.13 Addition and subtraction	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 20 	<ul style="list-style-type: none"> • Add to 75 • Subtract from 75 • Use appropriate symbols (+, -, =, □) • Practise number bonds to 20 	<p>See notes for Term 2.</p> <p>Learners continue to break down the numbers and gain confidence in their recording strategies.</p> <p>Possible methods to show addition and subtraction calculations:</p> <p>Breaking down a number into smaller parts to make a calculation easier</p> <p>Using knowledge of place value to break down numbers into tens and ones</p> <p>Adding two-digit numbers by breaking up both numbers</p> $33 + 36 = \square$ $33 + 36 = (30 + 3) + (30 + 6)$ $= (30 + 30) + (3 + 6)$ $= 60 + 9$ $= 69$ <p>Adding by breaking up one number</p> $33 + 36 = \square$ $33 + (30 + 6)$ $33 + 30 \rightarrow 63 + 6 = 69$ <p>Learners might break down the number in ways that are manageable for them. This means that they will do it in different ways</p> $33 + 36 = \square$ $33 + (10 + 10 + 10 + 6)$ $33 + 10 \rightarrow 43 + 10 \rightarrow 53 + 10 \rightarrow 63 + 6 = 69$ <p>Subtraction</p> <ul style="list-style-type: none"> • Breaking up both numbers $75 - 54 = \square$ $75 - 54 = (70 + 7) - (50 + 4)$ $= (70 - 50) + (7 - 4)$ $= 20 + 3$ $= 23$ <ul style="list-style-type: none"> • Subtracting by breaking up one number $75 - 54 = \square$ $75 - (50 + 4)$ $75 - 50 \rightarrow 27 - 4 = 23$	

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)
1.13 Addition and subtraction	<ul style="list-style-type: none"> Add to 99 Subtract from 99 Use appropriate symbols (+, -, =, □) Practise number bonds to 20 	<ul style="list-style-type: none"> Add to 75 Subtract from 75 Use appropriate symbols (+, -, =, □) Practise number bonds to 20 	<p>Expect that some learners might break up the number in different ways to make easier for them calculate:</p> $75 - 54 = \square$ $75 - (20 + 20 + 10 + 6)$ $75 - 20 \rightarrow 57 - 20 \rightarrow 37 - 10 \rightarrow 27 - 4 = 23$ <p>Using halving to break down a number</p> $59 + 12$ $59 + (6 + 6)$ $59 + 6 \rightarrow 65 + 6 = 71$ <p>Using and applying previous knowledge as techniques</p> <p>The techniques shown below allow learners to formalise their counting and number sense. Practising the techniques below will encourage learners to reflect upon the relationships between numbers and teach learners that they can actually use and apply their knowledge to help them calculate.</p> <p>Count on and counting back</p> $68 - 59 = \square$ <p>Counting up in ones from 59 is an appropriate strategy because the numbers are close to one another.</p> <p>Identify near doubles</p> $34 + 35$ explaining that it is double 34 plus 1 or double 35 minus 1 $34 + 34 + 1$ <p>Learners might record their strategies using arrows:</p> $34 + (30 + 4) + 1$ $34 + 30 \rightarrow 64 + 4 \rightarrow 68 + 1 = 69$ <p>Change a number to a multiple of ten and then subtract or add ones</p> <p>Count up or down to the nearest 10</p> $58 + 19 = \square$ <p>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.</p> <p>The sum can be written as: $58 + 19 = 58 + 20 - 1$</p> $58 + 20 \rightarrow 78 - 1 = 77$ <p>Some learners might break down 20 into 2 groups of 10 to calculate accurately.</p>	

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)																																												
1.14 Repeated addition leading to multiplication	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 Use appropriate symbols (+, x, =, □) 	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 2, 5, 4 Use appropriate symbols(+, x, =, □) 	<p>What is different from Term 2?</p> <p>During the third term learners keep practising their understanding of multiplication and use the multiplication grid for the first time.</p> <p>They continue to:</p> <ul style="list-style-type: none"> record in the following way: <p>1 group of 2 is 2 or 1 times 2 is 2 or $1 \times 2 = 2$ 2 groups of 2 are 4 or 2 times 2 is 4 or $2 \times 2 = 4$ 3 groups of 2 are 6 or 3 times 2 is 6 or $3 \times 2 = 6$</p> <p>During this term learners start multiplying by 4. Multiplying by 2 and 5 continue to be practised.</p> <p>Multiple images for multiplication should continue to be provided and lots of recording should be done in the class work. Understanding can be consolidated in the workbooks as well. Number lines, flow diagrams and tables can be used to build up understanding of the operation. Learners should be given number sentences to complete. such as:</p> <p>$6 \times 2 = \square$ $5 \times 7 = \square$ $4 \times 6 = \square$</p> <p>Learners should use the multiplication grid to find the answers. This will help them to read and understand the table and master multiplication facts.</p> <table border="1"> <thead> <tr> <th>×</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> </tr> </thead> <tbody> <tr> <th>2</th> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> <td>16</td> <td>18</td> <td>20</td> </tr> <tr> <th>4</th> <td>4</td> <td>8</td> <td>12</td> <td>14</td> <td>20</td> <td>24</td> <td>28</td> <td>32</td> <td>26</td> <td>40</td> </tr> <tr> <th>5</th> <td>5</td> <td>10</td> <td>15</td> <td>20</td> <td>25</td> <td>30</td> <td>35</td> <td>40</td> <td>45</td> <td>50</td> </tr> </tbody> </table>	×	1	2	3	4	5	6	7	8	9	10	2	2	4	6	8	10	12	14	16	18	20	4	4	8	12	14	20	24	28	32	26	40	5	5	10	15	20	25	30	35	40	45	50	
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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)
<p>1.16 Mental mathematics</p>	<p>Number Concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 99 and say which is 1,2,3,4,5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Calculation strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Number Concept: Range 75</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 75 and say which is 1,2,3,4,5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Recall addition and subtraction facts to 15 Add or subtract multiples of 10 from 0 to 50 <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Examples of questions that can be asked: Number concept:</p> <p>Number names and symbols</p> <p>Hold up a card or write down a number name. Choose a learner to write the matching numeral.</p> <p>More or less</p> <p>What is</p> <ul style="list-style-type: none"> 1 less than 45 1 more than 69 5 less than 36 10 more than 30 <p>What is the 5th letter of the alphabet? What is the 9th month of the year?</p> <p>Ordering and comparing</p> <p>Which is more: 21 or 171? Give any number between 154 and 159.</p> <p>Addition and subtraction facts:</p> <ul style="list-style-type: none"> Know by heart all addition and subtraction number bonds to 20 $\square + \triangle = 20$ $\square + \triangle = 16$ $18 = \square - \triangle$ <p>Add and subtract fact for all numbers to 15.</p> <p>Example</p> $1 + 14 = 15 \quad 14 + 1 = 15$ $2 + 13 = 12 \quad 13 + 2 = 15$ $15 - 4 = 11 \quad 15 - 11 = 4$ $15 - 5 = 10 \quad 15 - 10 = 5$ <p>Quickly recall addition doubles up to 15. This should include corresponding subtraction facts.</p> <ul style="list-style-type: none"> $1 + 1 = 2$ $2 + 2 = 4$ $3 + 3 = 6$ $4 + 4 = 8$ 	

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)
<p>1.16 Mental mathematics</p>	<p>Number Concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 99 and say which is 1,2,3,4,5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Calculation strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Number Concept: Range 75</p> <ul style="list-style-type: none"> Order a given set of selected numbers Compare numbers to 75 and say which is 1,2,3,4,5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Recall addition and subtraction facts to 15 Add or subtract multiples of 10 from 0 to 50 <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> 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 	<p>Show me the number to add to make 15 (writing down or using the place value or flard cards)</p> <ul style="list-style-type: none"> 8 2 9 <p>Show me the number left when is taken away from 15 (writing down or using the place value or Flard cards)</p> <ul style="list-style-type: none"> 5 13 0 <p>Calculation strategies:</p> <p>See notes for Term 2.</p>	

<p>1.17 Fractions</p>	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 third 	<p>What is different in Term 2?</p> <p>During this term learners' attention is focused on how the fraction name is linked to the number of equal parts that the whole has been divided into. A variety of diagrams can be used to build further understanding.</p> <p>Example:</p>  <p>The following type questions can be asked:</p> <p>How many equal parts are there? What do we call each part?</p>  <p>How many equal parts are there? What do we call each part?</p>  <p>How many equal parts are there? What do we call each part?</p> <p>These kind of activities encourage:</p> <ul style="list-style-type: none"> knowing that fractions are equal parts; identifying fraction parts; and naming fraction parts. <p>Writing</p> <p>We do not introduce learners to writing the symbol of fractions. Learners learn how to label fraction parts as 1 quarter, 1 fifth</p>	
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GRADE 2 TERM 3


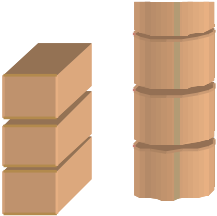
2. PATTERNS, FUNCTIONS AND ALGEBRA

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)
<p>2.1 Geometric patterns</p>	<p>Copy, extend and describe Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create own patterns Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects <p>Patterns all around us Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Copy, extend and describe Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects • simple patterns made with drawings of lines, shapes or objects <p>Create own patterns Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects 	<p>Continue to give learners a similar range of patterns to Term 2. See notes for Term 2.</p> <p>Allow learners first to copy, 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</p>	<p>1 lesson</p>

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)
<p>2.2</p> <p>Number patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe simple number sequences to at least 200</p> <p>Create own patterns</p> <p>Create own number patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe simple number sequences to at least 180</p> <p>Sequences should show counting forwards and backwards in:</p> <ul style="list-style-type: none"> • 1s from any number between 0 and 180 • 10s from any multiple of 10 between 0 and 180 • 5s from any multiple of 5 between 0 and 180 • 2s from any multiple of 2 between 0 and 180 • 3s and 4s from any multiple of 3 and 4 between 0 and 180 <p>Create own number patterns</p>	<p>See notes for Term 1, but extend the number range to 180.</p>	<p>3 lessons</p>

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

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)
<p style="text-align: center;">3.1</p> <p>Position, orientation and views</p>	<p>Language of position Describe the position of one object in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to.</p> <p>Position and views Match different views of the same everyday object.</p> <p>Position and directions Follow directions to move around the classroom.</p>	<p>Position and views</p> <ul style="list-style-type: none"> • Match different views of the same everyday object <p>Position and directions</p> <ul style="list-style-type: none"> • Follow directions to move around the classroom 	<p>Recommended focus for Term 3: Position and views</p> <p>What is different from Grade 1?</p> <p>In Grade 2 learners practise and consolidate what they have learned about matching different views of the same everyday objects.</p> <p>Position and views</p> <p>Learners in the Foundation Phase need to understand that objects look different when you look at them from different positions. Learners may take for granted that objects such as cars look small when they are far away. As learners work more with books and illustrations in books, they need to understand why something in the foreground is show larger than something in the background. In focus group time learners can experiment with placing their hands in front of them, to block their view of larger objects that are further away.</p> <p>In Grade 2 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.</p> <p>This will eventually help learners to interpret drawings of geometric objects done from different perspectives.</p>	<p>1 lessons</p>

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)
<p>3.2 3-D objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) cylinders <p>Features of objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide <p>Focussed activities Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling, construction kits, other 3-D geometric objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> ball shapes, (spheres) box shapes (prisms) cylinders <p>Features of objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> size objects that roll objects that slide 	<p>What is new in Term 3: Cylinders are added to the objects.</p> <p>3-D objects in Grade 2 Learners work with</p> <ul style="list-style-type: none"> balls and objects shaped like balls; cylinders and objects shaped like cylinders; and various boxes and other objects shaped like rectangular prisms or cubes. <p>Focussing on features of 3-D objects: Rolling and sliding This is a continuation of what they did in Grade 1 and Term 1, but now cylinders are included.</p>  <p>Learners can also investigate whether they can make stacks or towers using only balls, or only boxes, only cylinders.</p>  <p>Recognising and naming balls (spheres) and boxes (prisms) and cylinders Learners continue to name, sort and group objects, but now cylinders are added. Learners should be given a range of objects to work with shaped like:</p> <ul style="list-style-type: none"> spheres e.g. balls or different size, marbles, oranges etc.; prisms e.g. blocks, bricks, boxes of different sizes e.g. matchboxes, cereal boxes, tea boxes, toothpaste boxes; and 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. 	<p>2 lessons</p>

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)
<p>3.2 3-D objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focussed activities Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling, construction kits, other 3-D geometric objects</p>	<p>Range of objects Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of objects Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide 	<p>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 coffee tin is shaped like a cylinder”.</p> <p>During independent time learners can continue to</p> <ul style="list-style-type: none"> • build with objects; and • make balls, cylinders and box shapes (prisms) from clay or play dough. <p>Written exercises Although most of the work with 3-D objects is done practically, work must be consolidated through written exercises.</p> <p>Language Continue to develop learners’ ability to talk about 3-D objects: See notes for Term 1.</p>	<p>2 lessons</p>

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)
3.3 2-D shapes	<p>Range of Shapes</p> <p>Recognise and name 2-D shapes</p> <ul style="list-style-type: none"> • circles • triangles • squares • rectangles <p>Features of shapes</p> <p>Describe, sort and compare 2-D shapes in terms of:</p> <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 		<p>No specific focus on 2-D shapes is recommended for Term 2. However, work on 2-D shapes can be consolidated through written exercises during Independent work time. Learners can continue to make pictures with 2-D geometric shapes both during independent work time or during arts and culture time.</p>	

GRADE 2 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)
<p>4.1</p> <p>Time</p>	<p>Telling the time</p> <ul style="list-style-type: none"> Name and sequence days of week Name and sequence months of year Place birthdays, religious festivals, public holidays, historical events, school events on a calendar Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <p>Use calendars to calculate and describe lengths of time in days or weeks.</p> <p>Use clocks to calculate length of time in hours, half hours or quarter hours.</p>	<p>Telling the time</p> <ul style="list-style-type: none"> Name and sequence days of week Name and sequence months of year Place birthdays, religious festivals, public holidays, historical events, school events on a calendar Tell 12-hour time in hours, half hours and quarter hours on analogue clocks <p>Calculate lengths of time and passing of time</p> <ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in days or weeks Use clocks to calculate length of time in hours or half hours 	<p>Learners continue to practise talking about the duration of time and the sequencing of time.</p> <p>During whole class teaching time and focus group time, learners continue to talk about the day of the week, and month of the year and the date of the current day, as well as days before and days to come. Learners become familiar with calendars by the continual placing of</p> <ul style="list-style-type: none"> Birthdays; religious festivals; historical events; school events; and public holidays <p>on the calendar.</p> <p>During independent work time learners continue to sequence events from their daily lives and sequence pictures of events in order. Learners also work with exercises related to telling the time in hours and half hours.</p> <p>What is different from Term 2?</p> <ul style="list-style-type: none"> Telling the time in hours, half hours and quarter hours <p>A focus in Term 3 is telling time in hours and half hours and quarter hours using an analogue clock. This can be the focus of two lessons.</p> <p>Telling the time however, should then be practised during the term on a continual basis.</p> <p>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 a half hour or a quarter of an hour. It is useful to have a large working clock displayed in the classroom, so that learners can refer to it. Learners can make models of clocks. You can then ask them to show various times e.g. "Show me 10 o'clock. Show me what the time was a quarter of an hour before."</p>	<p>3 lessons</p>

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)
<p>4.1 Time</p>	<p>Telling the time</p> <ul style="list-style-type: none"> Name and sequence days of week Name and sequence months of year Place birthdays, religious festivals, public holidays, historical events, school events on a calendar Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <p>Use calendars to calculate and describe lengths of time in days or weeks.</p> <p>Use clocks to calculate length of time in hours, half hours or quarter hours.</p>	<p>Telling the time</p> <ul style="list-style-type: none"> Name and sequence days of week Name and sequence months of year Place birthdays, religious festivals, public holidays, historical events, school events on a calendar Tell 12-hour time in hours, half hours and quarter hours on analogue clocks <p>Calculate lengths of time and passing of time</p> <ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in days or weeks Use clocks to calculate length of time in hours or half hours 	<p>Learners should also do calculations using the clock e.g. they show the time is 12 noon; ask them what the time will be in 3 hours' time. They move the hands of their model clocks (or look at the class clock or picture of a clock) to calculate their answer. Learners are not expected to calculate length of time in hours or half hours without having access to a clock face.</p> <ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in days or weeks <p>Learners focus on reading calendars. They learn to find and give specific dates.</p> <p>Learners calculate length of time in days or weeks, while looking at a calendar.</p> <p>Learners are not expected to convert between weeks and days.</p> <p>Learners are not expected to do calculations which involve calculating time between dates if they do not have access to a calendar.</p>	<p>3 lessons</p>

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)
<p>4.2 Length</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measuring</p> <p>Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length</p>	<p>During Term 1 it was recommended that learners focus on estimating, measuring, comparing and recording lengths, widths and heights with informal units but also do some estimating, measuring, comparing and recording measurements in metres.</p> <p>Both these kinds of measuring length can be practised in independent work time throughout the term. All work should be recorded.</p> <p>Measuring length as a context for solving problems and calculations</p> <p>During time allocated to <i>Numbers, Operations and Relationships</i> learners can solve problems that use the contexts of</p> <ul style="list-style-type: none"> informal measurement of length e.g. It is 27 paces to the admin office. It is 36 paces to the school gate. How much further is it to the school gate? measuring lengths in metres <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>		

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)
<p>4.3 Mass</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using non-standard measures and a balance e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 Measure their own mass in kilograms using a bathroom scale 		<p>Learners can continue to practise estimating, measuring, comparing and recording mass using informal measures and a measuring balance during independent work time.</p> <p>Measuring mass as a context for solving problems and calculations</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of</p> <ul style="list-style-type: none"> informal measurement of mass; and measuring mass in kilograms. <p>Take account of the number range appropriate for the term, as well as the range of problems types appropriate for the term.</p>	

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)
<p>4.4</p> <p>Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record 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 <p>Introducing formal measuring</p> <p>Estimate, measure, compare, order and record the capacity of objects by measuring in litres using</p> <ul style="list-style-type: none"> using bottles with a capacity of 1 litre a measuring jug which has numbered calibration lines in 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 	<p>What is different from Grade 1?</p> <p>In Grade 1 it was recommended that learners focus on</p> <ul style="list-style-type: none"> developing the language to talk about differences in volume; comparing the volumes in two identical containers; comparing the volumes in two different looking containers especially wider and narrower containers; and <p>informal measuring with non-standard units.</p> <p>In Grade 2 learners continue to focus on doing informal measurement with non-standard units of volume.</p> <p>Learners also develop a sense of how much 1 litre is.</p> <p>What is capacity? What is volume?</p> <p>Capacity is the amount that an object can hold (or the amount of space inside the object).</p> <p>Volume is the amount of space that something takes up.</p> <p>So a bottle can have capacity of 1 litre, but at a particular time it may not be filled to its full capacity; it may for example only contain a volume of one cup of liquid.</p> <p>Informal measurement of capacity using non-standard units</p> <p>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.</p> <p>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.</p> <p>Measuring volume/capacity with non-standard units involves counting how many times you fill and pour from the chosen unit until you reach the required capacity/volume.</p> <p>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.</p> <p>Once learners have measured with any unit a couple of times, they should estimate about capacity/volume using that unit. Estimation before measuring is important, but can only be done once learners have done some measuring with that unit.</p>	<p>3 lessons</p>

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)
<p>4.4 Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record 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 <p>Introducing formal measuring</p> <p>Estimate, measure, compare, order and record the capacity of objects by measuring in litres using</p> <ul style="list-style-type: none"> using bottles with a capacity of 1 litre a measuring jug which has numbered calibration lines in 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 	<p>Learners need to be taught that in order to compare volumes 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.</p> <p>Learners need to measure with a range of informal units, so that they can</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Becoming familiar with litres <p>Learners are told that litres are a common standard unit of measuring capacity and volume. 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.</p> <p>Learners develop a sense of how much a litre is, by filling and pouring from:</p> <ul style="list-style-type: none"> Different-looking 1 litre containers, e.g. cold drink bottles, milk bottles, milk cartons, juice cartons; and measuring jugs which show 1 litre calibration lines. <p>Learners measure in litres using any of the containers mentioned above. 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.</p> <p>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.</p> <p>Recording measurements</p> <p>Although measuring is a practical skill. learners should record their measurements at all times, including all informal and formal measurement.</p> <p>Measuring capacity as a context for solving problems and calculations</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of</p> <ul style="list-style-type: none"> 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 <p>Take account of the number range appropriate for the term, as well as the range of problems types.</p>	<p>3 lessons</p>


GRADE 2 TERM 3

5. DATA HANDLING

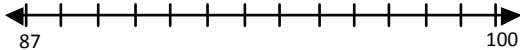
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 3	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
5.4 Collect and organise data	Collect and organise data <ul style="list-style-type: none"> Collect data about the class or school to answer questions posed by the teacher Organise data in tallies 	Collect and organise data Collect data about the class or school to answer questions posed by the teacher Represent data <ul style="list-style-type: none"> Represent data in pictograph 	Organise data It was recommended that learners work through the whole data cycle in Term 1. It is recommended that in Term 3 learners make individual pictographs from data provided in either picture form or tables. Represent data Since learners will be drawing all the pictures that make up the pictograph, it is important to choose topics that have categories that are easy for learners to draw e.g. favourite types of cool drink, since it is fairly easy to draw a simplified can to represent each cool drink; fruit are also fairly easy to draw so favourite fruit is also a possibility. Drawing pictures to show favourite sports, favourite TV programmes etc. may be too difficult for most Grade 2 learners. Analyse and interpret data It is easier for learners to draw graphs if they are given blocked paper. Remind learners about the key features of a pictograph (see Term 1). Analyse and interpret data Learners should answer questions that you ask about the pictograph: See Term 1 for suitable question types.	3 lessons
5.5 Represent data	Represent data <ul style="list-style-type: none"> Represent data in pictograph 	Analyse and Interpret data <ul style="list-style-type: none"> Answer questions about data in pictograph 		
5.6 Analyse and interpret data	Analyse and Interpret data <ul style="list-style-type: none"> Answer questions about data in pictograph 			

GRADE 2 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	<p>Counting concrete objects</p> <p>Estimate and count to at least 200 everyday objects reliably. The strategy of grouping is encouraged.</p>	<p>Counting concrete objects</p> <p>Estimate and count to at least 200 everyday objects reliably. The strategy of grouping is encouraged.</p>	<p>What is different from Term 3?</p> <p>During this term learners count out 200 objects. By the end of this term learners should have seen, touched and moved 200 objects. They should have a sense of the 'muchness' of 200.</p> <p>Continue to focus on grouping objects.</p> <p>By the end of the term they should be able to respond to the following question types and instructions:</p> <ul style="list-style-type: none"> 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 2s or 10s, will the total number of counters still be the same? Count 46 counters by grouping them in 2s. Is it quicker to count in twos than to count in ones? How many groups of 10 did you count in 120 counters? 	

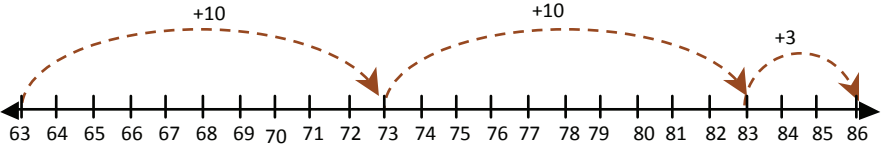
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
<p>1.2</p> <p>Count forwards and backwards</p>	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 	<p>Count forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 	<p>What is different from Term 3?</p> <p>During this term learners count forwards and backwards to 200. Towards the end of the term learners should consolidate their counting by linking the skip counting to the times tables. Learners should describe what they notice in the times tables and be able to recognise this when doing skip counting. They should begin to apply this skill to predict what numbers would be in the count. Example:</p> <p>Ask learners: When we count in twos, will we use the number 20? Is the number 20 in the 2 times table?</p> <p>By the end of the term they should be able to respond to questions such as:</p> <ul style="list-style-type: none"> • Count in tens from 170 to 200. • Count backwards in tens from 180 to 140. • Count in fives from 115 to 145. • Count backwards in fives from 135 to 110. • Count in threes from 66 to 81. • Count backwards in threes from 190 to 169. • Count in fours from 120 to 140. • Count backwards in fours from 180 to 160. <p>Learners can use number grids, number lines, number tracks, abacus and counting beads to support the counting.</p>	

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)																
<p>1.3</p> <p>Number symbols and number names</p>	<p>Recognise, identify and read numbers</p> <ul style="list-style-type: none"> Recognise, identify and read number symbols 0 – 200 Write number symbols 0 – 200 Recognise, identify and read number names 0 – 100 Write number names 0 – 100 		<p>What is different from Term 3?</p> <p>During this term learners now recognise, read and write number symbols to 200. Knowledge of the number symbols is reinforced when counting objects and when counting forwards and backwards.</p> <p>By the end of the term learners should be able to respond to the following type questions or instructions:</p> <p>Write the number symbol:</p> <p>Twenty-three</p> <p>Fifty-seven</p> <p>Ninety-two</p> <p>One hundred and nine</p> <p>One hundred and eleven</p> <p>One hundred and twenty-seven</p> <p>Match the symbols to the number names</p> <table border="1" data-bbox="1017 860 1726 1116"> <tbody> <tr> <td>66</td> <td>Ninety-one</td> </tr> <tr> <td>8</td> <td>Fifty-three</td> </tr> <tr> <td>172</td> <td>Fourty</td> </tr> <tr> <td>109</td> <td>Thirty-eight</td> </tr> <tr> <td>91</td> <td>One hundred and seventy-two</td> </tr> <tr> <td>40</td> <td>Sixty-six</td> </tr> <tr> <td>53</td> <td>Ninety-one</td> </tr> <tr> <td>38</td> <td>One hundred and nine</td> </tr> </tbody> </table> 	66	Ninety-one	8	Fifty-three	172	Fourty	109	Thirty-eight	91	One hundred and seventy-two	40	Sixty-six	53	Ninety-one	38	One hundred and nine	
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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			Read aloud the numbers on each card: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 5px;">198</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">67</div> </div>	
1.4 Describe, compare, order numbers	Order and compare numbers to 99 <ul style="list-style-type: none"> • Order whole numbers up to 99 from smallest to greatest, and greatest to smallest • Compare whole numbers up to 99 using smaller than, greater than, more than, less than and is equal to Use ordinal numbers to show order, place or position Position objects in a line from first to tenth or first to last e.g. first, second, third ... twentieth.		What is different from Term 3? The number range has increased to 99. By the end of the term learners should be able to: Use read and to write First, second, third, fourth, fifth, sixth..... and abbreviations: 1st, 2nd, 3rd, 4 th , Use, read and write the following language of ordering and comparing <ul style="list-style-type: none"> • How many..... • As many as, the same number as... • Equal to, more than, less than, fewer than, greater than, smaller than, larger than..... • Most, least, smallest, largest • Order, first, last, before, after, next, between, halfway between Use the sign = to represent equality Learners should be able to respond to questions such as: Who is standing second in the queue? Which pencil is the shortest? Order numbers to at least 100 and position them on a number line or using square grids.	

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)									
<p>1.4 Describe, compare, order numbers</p>			<p>Fill in the missing numbers on parts of a 100 grid</p>  <p>Write where these numbers would go: 88, 90, 92...</p> <p>Fill in the missing number:</p> <table border="1" data-bbox="1006 561 1689 599"> <tr> <td>115</td> <td></td> <td>117</td> </tr> </table> <table border="1" data-bbox="1006 639 1689 677"> <tr> <td>139</td> <td></td> <td>141</td> </tr> </table> <table border="1" data-bbox="1006 716 1689 754"> <tr> <td>187</td> <td></td> <td>185</td> </tr> </table> <p>Answer orally to the following questions: Which numbers lie between 82 and 87? Which numbers lie between 45 and 50? Which numbers lie between 69 and 75?</p> <p>Write the numbers in order from the biggest to the smallest: 127, 132, 165, 111, 189, 173, 156</p> <p>Write the numbers in order from the smallest to the biggest: 89, 62, 56, 72, 45, 39, 17</p> <p>Show, read and write ordinal numbers.</p>	115		117	139		141	187		185	
115		117											
139		141											
187		185											

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)
PLACE VALUE				
1.5 Place value	Recognise the place value of at least two-digits numbers to 99 <ul style="list-style-type: none"> Recognise what each digit represents Decompose two-digit numbers up to 99 into multiples of tens and ones (TU) Identify and state the value of each digit 		<p>By the end of the term learners should be able to:</p> <ul style="list-style-type: none"> Understand and use the vocabulary of place value: Use, read and begin to write: Ones or units, tens, digit, one-digit number, two-digit number,place value... Partition two-digit numbers in multiple of tens and ones Write the number: 6 tens and 3 ones _____ 2 tens and 5 ones _____ 12 tens and 8 ones _____ 18 tens and 4 ones _____ Use apparatus: Show 4 tens and 5 ones using the abacus. Show 7 tens and 6 ones using the abacus. Say what the digit 8 in 28 represents. And the 2? Say which number is equivalent to or the same as: <ul style="list-style-type: none"> 6 tens Nine tens and three ones Five tens and nine ones <p>Which number needs to go into each box?</p> <p>a) $34 = \square + 4$</p> <p>b) $78 = 70 + \square$</p> <p>Resources</p> <p>Objects that can be grouped:</p> <ul style="list-style-type: none"> Counting sticks Counters that can be threaded Matchsticks Ice cream sticks Interlocking cubes 	

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)
SOLVING PROBLEMS IN CONTEXT				
<p>1.6</p> <p>Problem-solving techniques</p>	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> • drawings or concrete apparatus e.g. counters • building up and breaking down of numbers • doubling and halving • number lines 		<p>Learners are expected to solve the word problems using the following techniques:</p> <ul style="list-style-type: none"> • Building up or breaking down numbers • Doubling and halving • Number lines <p>See Notes for Terms 1 and 2 for:</p> <ul style="list-style-type: none"> • Drawings or concrete apparatus • Building up and breaking down • Doubling and halving <p>Number lines</p> <p>Using number lines in order to help them calculate will allow 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.</p> <p>Learners have been using number lines since Grade 1. In Term 4 they 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.</p> <p>Example of how learners can use the number line:</p> <p>23 children went on an excursion today. There are still 63 children at school. How many children were there to begin with?</p>  <p>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 do so.</p> <p>Note that learners often use different ways of solving a problem that may not be what the teacher expects. For example, a division problem may be solved by repeated subtraction, addition, or multiplication. Learners' methods will change in the course of the year as their understanding of and familiarity with the problem types grow, and as their number concept develops.</p>	

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)
<p>1.7 Addition, subtraction</p>	<p>Solve word problems in context and explain own solution to problems involving addition, subtraction with answers up to 99.</p>		<p>Examples of problems that learners should be able to do by the end of the term</p> <p>Addition and subtraction</p> <p>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:</p> <p>Change</p> <p>Noluthando had 25 sweets. Silo gave her 18 sweets. How many sweets does she have now?</p> <p>Noluthando had 53 sweets. She gave 32 sweets to Silo. How many sweets does she have now?</p> <p>Combine</p> <p>The grade 2 class has 37 green triangles and 19 blue triangles. How many triangles do they have?</p> <p>They have 63 circles; 27 are green and the rest are blue. How many blue circles do they have?</p> <p>Compare</p> <p>Nosisi has 13 bananas. Themba has 5 bananas. How many more bananas does Nosisi have than Themba?</p> <p>Posing each problem in different ways</p> <p>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.</p> <p>Noluthando had some sweets. Silo gave her 18 more sweets. Now she has 43 sweets. How many sweets did Noluthando have in the beginning?</p> <p>Noluthando had 25 apples. Silo gave her some apples. She now has 43 apples. How many apples did Silo give her?</p>	

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)
<p>1.8 Repeated addition leading to multiplication</p>	<p>Solve word problems in context and explains own solution to problems using repeated addition leading to multiplication with answers up to 50.</p>		<p>Examples of problems that learners should be able to do by the end of the term</p> <p>Repeated addition</p> <p>How many wheels do 20 bicycles have?</p> <p>Rate</p> <p>Thami walks 6 blocks a day. How many blocks does he walk in a week?</p> <p>Grids</p> <p>Mr Khumalo plants 7 rows of cabbages. There are 8 cabbages in a row. How many cabbages are there altogether?</p>	
<p>1.9 Grouping and sharing leading to division</p>	<p>Solves and explain solutions to practical problems that involve equal sharing and grouping up to 99 with answers that can include remainders.</p>		<p>Examples of problems that learners should be able to do by the end of the term</p> <p>Grouping</p> <p>Grouping, discarding the remainder</p> <p>Stella sells apples in bags of 10 apples each. She has 80 apples. How many bags of 10 apples each can she make up?</p> <p>Grouping, incorporating the remainder in the answer</p> <p>A farmer has 47 eggs. How many egg boxes that can take 6 eggs each does he need to pack all the eggs?</p> <p>Sharing</p> <p>Sharing, discarding the remainder</p> <p>Share 54 sweets among 7 friends so that they all get the same number of sweets.</p>	

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)
<p>1.10 Sharing leading to fractions</p>	<p>Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ etc.</p>		<p>The focus of fraction word problems in this term continues to allow learners to:</p> <ul style="list-style-type: none"> • share and group things equally; • name fraction parts; • find fractions of whole objects; • recognise that a fraction is part of a whole; • write fractions as 1 third. <p>During this term learners name more fractions. It is important that learners are exposed to fractions other than one half and one quarter.</p> <p>Examples of problems that can be done:</p> <p>Sharing, leading to fractions</p> <ul style="list-style-type: none"> • Share 7 chocolate bars among 3 friends so that they all get the same amount of chocolate bar and there is nothing left over. • Three pancakes are shared equally among 4 friends. How many does each one get? <p>By the end of the term learners should know the following concepts:</p> <p>When you divide something into:</p> <ul style="list-style-type: none"> • two equal parts it is called halving. Each part is called a half; • three equal parts, each part is called a third; • four equal parts, each part is called a quarter; • five equal parts, each part is called a fifth; and • six equal parts, each part is called a sixth. <p>Examples of problems that learners should be able to do by the end of the term</p> <p>Sharing, leading to fractions</p> <p>Share 11 chocolate bars among 4 friends so that they all get the same amount of chocolate bar and there is nothing left over.</p> <p>Fraction of a collection</p> <p>Grandmother gives Kiki 12 oranges. Kiki makes juice with one third of the oranges. How many oranges did she use?</p> <p>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.</p> <p>Putting fractions together</p> <p>The netball coach gives half an orange to each player. There are 14 players. How many oranges does she need?</p> <p>This problem type must only be posed after learners have solved four or five problems of 'sharing, leading to fractions' type and know the names of fractional pieces.</p>	

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)																																				
<p>1.11 Money</p>	<ul style="list-style-type: none"> Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5) and bank notes (R10, R20, R50) Solve money problems involving totals and change in cents up to 99c or rands to R99 		<p>Examples of problems that learners should be able to do by the end of the term</p> <p>Problem situations with different functional relationships</p> <p>Heila sells hotdogs at R4 each. Make a table to help her find the amount for large orders.</p> <table border="1" data-bbox="1008 444 2000 550"> <tr> <td>Number of hotdogs</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>Cost in R</td> <td>4</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Use the table to find the cost of 7 hotdogs and 15 hotdogs.</p> <p>Sedick charges R20 for travel costs, and then R5 per hour for babysitting. Complete this table for him.</p> <table border="1" data-bbox="1008 695 1840 801"> <tr> <td>Number of hours</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>10</td> </tr> <tr> <td>Cost in R</td> <td>25</td> <td>30</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Note that Heila's problem and Sedick's problem work differently.</p>	Number of hotdogs	1	2	3	4	5	6	7	8	9	10	Cost in R	4	8									Number of hours	1	2	3	4	5	10	Cost in R	25	30					
Number of hotdogs	1	2	3	4	5	6	7	8	9	10																														
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Cost in R	25	30																																						
CONTEXT-FREE CALCULATIONS																																								
<p>1.12 Techniques (methods or strategies)</p>	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> Drawings or concrete apparatus e.g. Counters Building up and breaking down numbers Doubling and halving Number lines 		<p>Learners are expected to solve context free calculations using the following techniques:</p> <ul style="list-style-type: none"> Building up or breaking down numbers Doubling and halving Number lines <p>See notes for Terms 1 and 2.</p>																																					

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)
<p>1.13</p> <p>Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols(+, -, =, □) • Practise number bonds 20 		<p>During this term learners continue to break down numbers in order to calculate.</p> <p>Possible methods to show addition and subtraction calculations</p> <p>Breaking down a number into smaller parts to make a calculation easier</p> <p>Using knowledge of place value to break down numbers into tens and ones</p> <p>Adding two-digit numbers by breaking up both numbers</p> $43 + 36 = \square$ $43 + 36 = (40 + 3) + (30 + 6)$ $= (40 + 30) + (3 + 6)$ $= 70 + 9$ $= 79$ <p>Adding by breaking up one number</p> $43 + 36 = \square$ $43 + (30 + 6)$ $43 + 30 \rightarrow 73 + 6 = 79$ <p>Learners might break down the number in ways that are manageable for them. This means that they will do it in different ways.</p> $43 + 36 = \square$ $43 + (10 + 10 + 10 + 6)$ $43 + 10 \rightarrow 53 + 10 \rightarrow 63 + 10 \rightarrow 73 + 6 = 79$ <p>Subtraction</p> <ul style="list-style-type: none"> • Breaking up both numbers $87 - 56 = \square$ $87 - 56 = (80 + 7) - (50 + 6)$ $= (80 - 50) + (7 - 6)$ $= 30 + 1$ $= 31$	

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)
<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> Add to 99 Subtract from 99 Use appropriate symbols(+, -, =, □) Practise number bonds 20 		<ul style="list-style-type: none"> Subtracting by breaking up one number $87 - 56 = \square$ $87 - (50 + 6)$ $87 - 50 \rightarrow 37 - 6 = 31$ <p>Expect that some learners might break up the number in different ways to make easier for them calculate:</p> $87 - 56 = \square$ $87 - (20 + 20 + 10 + 6)$ $87 - 20 \rightarrow 67 - 20 \rightarrow 47 - 10 = 37 - 6 = 31$ <p>Using halving to break down a number</p> $69 + 12$ $69 + (6 + 6)$ $69 + 6 \rightarrow 75 + 6 = 81$ <p>Count on and count back</p> $78 - 69 = \square$ <p>Counting up in ones from 69 is an appropriate strategy because the numbers are close to each other.</p> <p>Identify near doubles</p> $34 + 35$ explaining that it is double 34 plus 1 or double 35 minus 1. $34 + 34 + 1$ <p>Learners might record their strategies using arrows</p> $34 + (30 + 4) + 1$ $34 + 30 \rightarrow 64 + 4 \rightarrow 68 + 1 = 69$ <p>Change a number to a multiple of ten and then subtract or add ones</p> <p>Count up or down to the nearest 10</p> $58 + 19 = \square$ <p>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.</p> <p>The sum can be written as: $58 + 19 = 58 + 20 - 1$</p> $58 + 20 \rightarrow 78 - 1 = 77$ <p>Some learners might break down twenty into 2 groups of 10 to calculate accurately.</p>	

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)
<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols(+, -, =, □) • Practise number bonds 20 		<p>By the end of the year learners should be able to:</p> <p>Use and understand the language of addition</p> <p>Understand that adding zero leaves a number unchanged</p> <p>$75 + 0 = 75$ $0 + 75 = 75$</p> <p>$75 = 75 + 0$ $75 = 0 + 75$</p> <p>Respond to written questions phrased in a variety of ways such as:</p> <ul style="list-style-type: none"> • add together 43 and 9 • add 10 to 67 • 11 plus 83 • $80 = 62 + 8 + \square$ • What is 30 more than 60 • Find the sum of 56 and 14 • Add twelve to seventy-five • What number is 10 more than 83 • What number must you add to 45 to get 78? • 4 tens plus 3 tens • 12 tens plus 8 ones • $45 + 10 = \square$ $45 + 20 = \square$ $45 + 30 = \square$ <p>Know that □ stands for an unknown number</p> <p>$42 + 44 = \square$</p> <p>$5 + 7 + \square = 80$</p> <p>$57 + \square = 95$</p> <p>$\square + 15 = 81$</p> <p>With the aid of apparatus: Add three numbers together</p> <p>$26 + \square + \square = 72$</p> <p>Choose three of these numbers: 15, 19, 22, 25</p> <p>Add them up.</p> <p>What different totals can you make?</p>	

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)
<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols(+, -, =, □) • Practise number bonds 20 		<p>Respond to written questions and explain how they arrived at their answer:</p> <ul style="list-style-type: none"> • Add 6, 12 and 14. • What is the sum of 10, 5 and 19. <p>Understanding subtraction by the end of the year.</p> <p>By the end of the year learners should be able to:</p> <p>Understand and use the vocabulary of subtraction:</p> <p>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 (-)</p> <p>Continue to develop understanding of subtraction as:</p> <ul style="list-style-type: none"> • taking away; and • finding the difference between. <p>Understand that subtracting zero leaves a number unchanged:</p> <p>$92 - 0 = 92$ $92 = 92 - 0$</p> <p>Respond to written questions phrased in a variety of ways such as:</p> <ul style="list-style-type: none"> • 37 take away 3 • Take 40 from 80 • 62 subtract 42 • Subtract 45 from 90 • What is the difference between 38 and 57? • How many less is 17 than 49 • What number must you subtract from 56 to get 22? • What number must you subtract from 56 to get 32 • What number must you subtract from 56 to get 42 • Find pairs of numbers with a difference of 10 <p>Know that □ stands for an unknown number.</p> <p>$57 - 34 = \square$</p> <p>$62 - \square = 48$</p> <p>$98 - 42 = \square$</p> <p>$13 - 6 = 15 - \square$</p> <p>$\square - 18 = 24$</p>	



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)
<p>1.13 Addition and subtraction</p>	<ul style="list-style-type: none"> • Add to 99 • Subtract from 99 • Use appropriate symbols(+, -, =, □) • Practise number bonds 20 		<p>Begin to understand that:</p> <p>25 - 10 is different from 10 - 25</p> <p>Use the relationship between addition and subtraction</p> <p>Say and write corresponding subtraction facts to a given addition fact and vice versa. For example:</p> <p>73 + 17 = 90 implies that 90 - 17 = 73</p> <p>17 + 73 = 90 implies that 90 - 73 = 17</p> <p>42 - 18 = 24 implies that 24 + 18 = 42</p> <p>42 - 24 = 18 implies that 18 + 24 = 42</p> <p>Without the use of apparatus answer the following:</p> <p>If you know that 62 + 29 = 91.</p> <p>What is:</p> <p>29 + 62</p> <p>91 - 29</p> <p>91 - 62</p> <p>If you know that 66 - 50 = 16</p> <p>What is:</p> <p>66 - 16</p> <p>50 + 16</p> <p>16 + 50</p> <p>Write and answer the following:</p> <p>57 - 34 = 23 □ + 23 = 57 □ - 23 = 34 34 + 23 = □</p> <p>12 + 46 = 58 12 + □ = 58 58 - □ = 12 □ - 46 = 12</p> <p>Write four different number sentences using 3 numbers. For example: 20, 30 and 50</p> <p>20 + 30 = 50</p> <p>30 + 20 = 50</p> <p>50 - 30 = 20</p> <p>50 - 20 = 30</p>	

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)
<p>1.14 Repeated addition leading to multiplication</p>	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 up to 50 Use appropriate symbols(+, x, =, □) 		<p>What is different in Term 4?</p> <p>During this term learners will be multiplying in threes for the first time. See the notes in Term 1 for introducing new concepts</p> <p>By the end of the term learners should be able to:</p> <p>Use the language of multiplication in practical situations:</p> <p>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)</p> <p>Use this language to do multiplication calculations</p> <p>Understand multiplication as repeated addition</p> <p>Example:</p> <p>6 added together 3 times is the same as:</p> <p>$6 + 6 + 6 = 18$</p> <p>3 lots of 6 = 18</p> <p>3 times 6 = 18</p> <p>$3 \times 6 = 18$</p> <p>$3 \times 5 = 18$</p> <p>Understand multiplication as describing an array</p> <p>⊙ ⊙ ⊙ ⊙ ⊙ ⊙</p> <p>⊙ ⊙ ⊙ ⊙ ⊙ ⊙ $5 \times 3 = 15$</p> <p>⊙ ⊙ ⊙ ⊙ ⊙ ⊙</p> <p>$3 \times 5 = 15$</p> <p>Respond to questions such as:</p> <p>four fives</p> <p>Double 6</p> <p>6 times 5</p>	

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)
<p>1.14 Repeated addition leading to multiplication</p>	<ul style="list-style-type: none"> Multiply numbers 1 to 10 by 1, 2, 5, 3 and 4 up to 50 Use appropriate symbols(+, x, =, □) 		<p>Three counters in a row. There are 4 rows. How many counters altogether</p> <p>2 multiplied by 4</p> <p>8 times 2</p> <p>Recognise the use of the place holder □ to stand for an unknown number.</p> <p>3 groups of 2 are 6 or 3 times 2 is 6 or $3 \times 2 = \square$</p> <p>4 groups of 3 are 12 or 4 times 3 is 12 or $4 \times 3 = \square$</p> <p>6 groups of 3 are 18 or 6 times 3 is 18 or $6 \times \square = 18$</p> <p>$7 + \square = 14$</p> <p>2 groups of 7 = □</p> <p>$2 + \square + \square + \square + \square + \square + \square = 14$</p> <p>$\square \times 7 = 14$</p> <p>$1 \times 2 = \square$</p> <p>$2 \times 2 = \square$</p> <p>$3 \times 2 = \square$</p> <p>$1 \times 5 = \square$</p> <p>$2 \times 5 = \square$</p> <p>$3 \times 5 = \square$</p>	

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)
<p>1.16 Mental mathematics</p>	<p>Number concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers. Compare numbers to 99 and say which is 1, 2, 3, 4, 5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Recall addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Mental strategies</p> <p>Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> Put the larger number first in order to count on or count back Use the relationship between addition and subtraction Number line Doubling and halving Building up and breaking down 		<p>Examples of questions that can be asked:</p> <p>Number concept:</p> <p>Number names and symbols</p> <p>Hold up a card or write down a number name. Choose a learner to write the matching numeral.</p> <p>More or less</p> <p>What is</p> <ul style="list-style-type: none"> 1 less than 70 1 more than 80 3 less than 51 4 less than 67 5 less than 85 10 more than 90 10 less 80 <p>What is the 5th letter of the alphabet?</p> <p>What is the 9th month of the year?</p> <p>Ordering and comparing</p> <p>Which is more: 21 or 171?</p> <p>Give me a number between 154 and 159.</p> <p>Addition and subtraction facts:</p> <ul style="list-style-type: none"> Know all addition and subtraction number bonds to 20. <p>$\square + \triangle = 20$</p> <p>$\square + \triangle = 16$</p> <p>19 = $\square - \triangle$</p>	

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)
<p>1.16 Mental mathematics</p>	<p>Number concept: Range 99</p> <ul style="list-style-type: none"> Order a given set of selected numbers. Compare numbers to 99 and say which is 1, 2, 3, 4, 5 and 10 more or less <p>Rapidly recall:</p> <ul style="list-style-type: none"> Recall addition and subtraction facts to 20 Add or subtract multiples of 10 from 0 to 100 <p>Mental strategies Use calculation strategies to add and subtract efficiently:</p> <ul style="list-style-type: none"> Put the larger number first in order to count on or count back Use the relationship between addition and subtraction Number line Doubling and halving Building up and breaking down 		<p>Add and subtract facts for all numbers up to and including 20.</p> <p> $1 + 11 = 12$ $11 + 1 = 12$ $2 + 10 = 12$ $10 + 2 = 12$ $3 + 9 = 12$ $9 + 3 = 12$ $18 - 4 = 14$ $18 - 14 = 4$ $18 - 5 = 13$ $18 - 13 = 5$ $18 - 6 = 12$ $18 - 12 = 6$ </p> <p>Quickly recall addition doubles to 20. This should include corresponding subtraction facts.</p> <ul style="list-style-type: none"> $1 + 1 = 2$ $2 + 2 = 4$ $3 + 3 = 6$ $4 + 4 = 8$ $5 + 5 = 10$ $6 + 6 = 12$ $7 + 7 = 14$ $8 + 8 = 16$ $9 + 9 = 18$ $10 + 10 = 20$ <p>Show me the number to add to make 20 (writing down or using the place value or Flard cards).</p> <ul style="list-style-type: none"> 8 2 9 15 3 <p>Show me the number left when is taken away from 20 (writing down or using the place value or Flard cards).</p> <ul style="list-style-type: none"> 5 18 0 14 7 <p>Calculation strategies: See notes for Term 2.</p>	

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)
<p>1.17 Fractions</p>	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<ul style="list-style-type: none"> Use and name fractions in familiar contexts including halves, quarters, thirds and fifths. Recognise fractions in diagrammatic form Write fractions as 1 half, 2 thirds 	<p>What is different in Term 4?</p> <p>During Term 3 learner's attention was focused on how the fraction name is linked to the number of equal parts into which the whole has been divided. A variety of diagrams were used to build up further understanding.</p> <p>Learners continue to name fractions in diagrams during this term. They are also naming fraction parts when doing word sums. Fraction parts identified are written as 1 half, 1 third, 1 quarter.</p> <p>The focus in this term should be on the whole. Learners should be able to:</p> <p>Complete the sentences</p> <p>Two halves are the same as _____ whole</p> <p>Three thirds are the same as _____ whole</p> <p>Four quarters are the same as _____ whole</p> <p>During this term learners will find fractions of a group of objects.</p> <p>Example:</p> <p>Using counters arranged in arrays learners will find:</p> <p>1 half of 8 counters.</p>  <p>Learners can divide the 8 counters into 2 groups of 4.</p>  <p>Allow learners to use concrete apparatus to do this and to arrange the counters into arrays.</p> <p>By the end of the term learners should be able to find:</p> <ul style="list-style-type: none"> 1 half of a collection of objects; 1 quarter of a collection of objects; 1 third of a collection of objects; and 1 fifth of a collection of objects. 	

GRADE 2 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	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects ; and • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects <p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>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.</p> <p>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.</p> <p>Learners can also look at patterns on</p> <ul style="list-style-type: none"> • 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. <p>How can learners describe the patterns they see around them?</p> <p>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</p> <ul style="list-style-type: none"> • what is repeated e.g. dots, lines, any kind of shape; and • how it is repeated. 	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)
<p>2.1 Geometric patterns</p>	<p>Copy, extend and describe</p> <p>Copy, extend and describe in words</p> <ul style="list-style-type: none"> • simple patterns made with physical objects ; and • simple patterns made with drawings of lines, shapes or objects <p>Create and describe own patterns</p> <p>Create own geometric patterns</p> <ul style="list-style-type: none"> • with physical objects • by drawing lines, shapes or objects <p>Patterns all around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Patterns around us</p> <p>Identify, describe in words and copy geometric patterns</p> <ul style="list-style-type: none"> • in nature • from modern everyday life • from our cultural heritage 	<p>Example:</p> <ul style="list-style-type: none"> - Straight lines that cross each other (like 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 those one gets when cutting across an onion - Lines that are irregular, as on fingerprints and zebras and wrinkles on elephants, rhino and very old people - Wavy lines that one gets when cutting across a cabbage, or that one finds on a sand dune - Dots that are the same size, dots that are evenly spread - Shapes that are the same size, e.g. brick patterns on a wall or paving - Shapes that are the same colour - Patterns made by the same shape facing in different directions e.g. triangles facing up or down in traditional beadwork, or paving bricks facing in different directions - Patterns made with shapes that are all different, like those on a giraffe 	<p>1 lesson</p>

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)
<p>2.2 Number patterns</p>	<p>Copy, extend and describe Copy, extend and describe simple number sequences to at least 200.</p> <p>Create own patterns Create own number patterns.</p>	<p>Copy, extend and describe Copy, extend and describe simple number sequences to at least 200.</p> <p>Sequences should show counting forwards and backwards in:</p> <ul style="list-style-type: none"> • 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 <p>Create own number patterns</p>	<p>See notes for Term 1, but extend the number range to 200</p>	<p>3 lessons</p>

GRADE 2 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	<p>Range of Objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of Objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide <p>Focussed activities</p> <ul style="list-style-type: none"> • Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling, construction kits, other 3-D geometric objects 	<p>Range of Objects</p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> • ball shapes, (spheres) • box shapes (prisms) • cylinders <p>Features of Objects</p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> • size • objects that roll • objects that slide 	<p>Suggested focus or Term 4</p> <p>Work is consolidated through written exercises.</p>	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)
3.3 2-D shapes	Range of shapes Recognise and name 2-D shapes <ul style="list-style-type: none"> • circles • triangles • squares • rectangles Features of shapes Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	Range of shapes Recognise and name 2-D shapes <ul style="list-style-type: none"> • circles • triangles • squares • rectangles Features of shapes Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> • size • colour • shape • straight sides • round sides 	See notes for Term 2 This term you can practise, revise and consolidate work on 2-D shapes. Focus on recognising and naming circles, squares, rectangles and triangles and talking about whether their sides are straight or round. Do different activities from those in Term 2, but keep the focus on features of shapes and naming shapes.	3 lessons
3.4 Symmetry	Symmetry Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.	Symmetry Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.	See notes for Term 2.	1 lesson

GRADE 2 TERM 4				
4. MEASUREMENT				
TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED FOCUS FOR TERM 4	SOME CLARIFICATION NOTES OR TEACHING GUIDELINES	DURATION (in lessons of 1 hour 24 minutes)
4.1 Time	<p>Telling the time</p> <ul style="list-style-type: none"> Name and sequence days of week Name and sequence months of year Place birthdays, religious festivals, public holidays, historical events, school events on a calendar Tell 12-hour time in hours, half hours and quarter hours <p>Calculate length of time and passing of time</p> <ul style="list-style-type: none"> Use calendars to calculate and describe lengths of time in days or weeks Use clocks to calculate length of time in hours, half hours or quarter hours 	<p>Telling the time</p> <ul style="list-style-type: none"> Tell 12-hour time in hours, half hours and quarter hours on analogue clocks <p>Calculate length of time and passing of time</p> <ul style="list-style-type: none"> Use clocks to calculate length of time in hours, half hours or quarter hours 	<p>Learners continue to practice talking about the duration of time and the sequencing of time.</p> <p>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 become familiar with calendars by the continual placing of</p> <ul style="list-style-type: none"> Birthdays; religious festivals; historical events; school events; and public holidays <p>on the calendar.</p> <p>Telling the time in hours, half hours and quarter hours</p> <p>See notes for Term 3.</p>	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)
<p>4.2 Length</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> 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. <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length 	<p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record length using metres (either metre sticks or metre long lengths of string) as the standard unit of length 	<p>What is different from Term 1?</p> <p>During Term 1 it was recommended that learners focus on estimating, measuring, comparing and recording lengths, widths and heights with informal units, but that learners also begin to measure in metres.</p> <p>In Term 4 the focus can be on estimating, measuring, comparing and recording length, heights and widths in metres: See notes for Term 1.</p> <p>This consolidation can be in the form of written exercises.</p>	<p>1 lesson</p>

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	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record mass using non-standard measures and a balance e.g. blocks, bricks etc Use language to talk about the comparison e.g. light, heavy, lighter, heavier <p>Introducing formal measuring</p> <ul style="list-style-type: none"> 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 Measure their own mass in kilograms using a bathroom scale 	<p>Introducing formal measuring</p> <p>Learners do written tasks to consolidate the following, including reading pictures of</p> <ul style="list-style-type: none"> products with mass written on them, pictures of mass on bathroom scales where the needle points to a whole kilogram. 	<p>In Term 2 learners</p> <ul style="list-style-type: none"> measured mass informally using a balance; ordered products according to the mass stated on the package; and read bathroom scales (both real scales and pictures of scales) See notes for Term 2. <p>In Term 4 learners should consolidate their skills in reading bathroom scales and pictures of bathroom scales to the nearest whole kilogram. This consolidation can be in the form of written exercises.</p>	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)
<p>4.4 Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) or the volume in containers 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 	<p>Introducing formal measuring</p> <p>Learners do written tasks to consolidate the following, including reading pictures of</p> <ul style="list-style-type: none"> 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 <p>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/ or exactly the number (of litres) they read off the jug</p>	<p>During independent work time learners should continue to</p> <ul style="list-style-type: none"> 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; 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. <p>See the notes for Term 3.</p> <p>Learners should be given written tasks to consolidate the following, including reading pictures of</p> <ul style="list-style-type: none"> 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. <p>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/ or exactly the number (of litres) they read off the jug.</p>	<p>1 lesson</p>

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)
<p>4.4 Capacity/ Volume</p>	<p>Informal measuring</p> <ul style="list-style-type: none"> Estimate and measure, compare and order the capacity of containers (i.e. the amount the container can hold if filled) or the volume in containers 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 <p>Introducing formal measuring</p> <ul style="list-style-type: none"> Estimate, measure, compare, order and record the capacity of objects by measuring in 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 	<p>Introducing formal measuring</p> <p>Learners do written tasks to consolidate the following, including reading pictures of</p> <ul style="list-style-type: none"> 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 <p>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/ or exactly the number (of litres) they read off the jug</p>	<p>Measuring capacity as a context for solving problems and calculations</p> <p>During time allocated to Numbers, Operations and Relationships learners can solve problems that use the context of</p> <ul style="list-style-type: none"> 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 <p>Take account of the number range appropriate for the term, as well as the range of problems types.</p>	<p>1 lesson</p>

GRADE 2 TERM 4

5. DATA HANDLING

TOPICS	CONCEPTS AND SKILLS REQUIREMENT BY YEAR END	CONCEPTS AND SKILLS SUGGESTED 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 <ul style="list-style-type: none"> Collect data about the class or school to answer questions posed by the teacher Organise data in tallies 			
5.5 Represent data	Represent data Represent data in pictograph			
5.6 Analyse and interpret data	Analyse and Interpret data Answer questions about data in pictograph	Analyse and Interpret data Analyse data from representations provided	Analyse and Interpret data provided By this stage of the year, learner should be familiar with pictographs. It is recommended that in Term 4 learners focus on analysing data. Give learners data to analyse in at least 1 pictograph Learners should answer questions that you pose to the graph and table: See Term 1 for suitable types of questions	1 lesson