

FOUNDATION PHASE OVERVIEW

1. NUMBERS, OPERATIONS AND RELATIONSHIPS

**Progression in Numbers, Operations and Relationships**

- The main progression in Numbers, Operations and Relationships happens in three ways:
  - The number range increases.
  - Different kinds of numbers are introduced.
  - The calculation strategies change.
- As the number range for doing calculations increases up to Grade 3, learners should develop more efficient strategies for calculations.
- Contextual problems should take account of the number range for the grade as well as the calculation competencies of learners. .

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>NUMBER CONCEPT DEVELOPMENT: Count with whole numbers</b>				
<b>1.1</b> <b>Count objects</b>	<b>Count concrete objects</b> Estimate and count to at least 10 everyday objects reliably.	<b>Count concrete objects</b> Estimate and count to at least 50 everyday objects reliably. Counting by grouping is encouraged.	<b>Count concrete objects</b> Estimate and count to at least 200 everyday objects reliably. Counting by grouping is encouraged.	<b>Count concrete objects</b> Estimate and counts to at least 1000 everyday objects reliably. Counting by grouping is encouraged.
<b>1.2</b> <b>Count forwards and backwards</b>	Count forwards and backwards in ones from 1 to 10 Use number rhymes and songs	Count forwards and backwards in ones from any number between 0 and 100. <b>Count forwards in:</b> <ul style="list-style-type: none"> <li>• 10s from any multiple of 10 between 0 and 100</li> <li>• 5s from any multiple of 5 between 0 and 100</li> <li>• 2s from any multiple of 2 between 0 and 100</li> </ul>	Count forwards and backwards in: <ul style="list-style-type: none"> <li>• 1s from any number between 0 and 200</li> <li>• 10s from any multiple of 10 between 0 and 200</li> <li>• 5s from any multiple of 5 between 0 and 200</li> <li>• 2s from any multiple of 2 between 0 and 200</li> <li>• 3s from any multiple of 3 between 0 and 200</li> <li>• 4s from any multiple of 4 between 0 and 200</li> </ul>	Counts forwards and backwards in: <ul style="list-style-type: none"> <li>• 1s from any number between 0 and 1000</li> <li>• 10s from any multiple of 10 between 0 and 1000</li> <li>• 5s from any multiple of 5 between 0 and 1000</li> <li>• 2s from any multiple of 2 between 0 and 1000</li> <li>• 3s from any multiple of 3 between 0 and 1000</li> <li>• 4s from any multiple of 4 between 0 and 1000</li> <li>• in 20s, 25s, 50s, 100s to at least 1000</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>NUMBER CONCEPT DEVELOPMENT: Represent whole numbers</b>				
	Say and use number names in familiar context.			
<b>1.3</b> <b>Number symbols and number names</b>	<b>Recognise, identify and read number symbols</b> <ul style="list-style-type: none"> <li>Recognise, identify and read number symbols 1 to 10</li> <li>Recognise, identify and read number names 1 to 10</li> </ul>	<b>Recognise, identify and read number symbols</b> <ul style="list-style-type: none"> <li>Recognise, identify and read number symbols 1 to 100</li> <li>Write number symbols 1 to 20</li> <li>Recognise, identify and read number names 1 to 10</li> <li>Write number names 1 to 10</li> </ul>	<b>Recognise, identify and read number symbols</b> <ul style="list-style-type: none"> <li>Recognise, identify and read number symbols 0 to 200</li> <li>Write number symbols 0 to 200</li> <li>Recognise, identify and read number names 0 to 100</li> <li>Write number names 0 to 100</li> </ul>	<b>Recognise, identify and read number symbols</b> <ul style="list-style-type: none"> <li>Recognise, identify and read number symbols 0 to 1 000</li> <li>Write number symbols 0 to 1 000</li> <li>Recognise, identify and read number names 0 to 1 000.</li> <li>Write number names 0 to 1 000</li> </ul>
<b>NUMBER CONCEPT DEVELOPMENT: Describe, compare and order whole numbers</b>				
<b>1.4</b> <b>Describe, compare and order numbers</b>	<b>Describe, compare and order collection of objects up to 10.</b> <ul style="list-style-type: none"> <li>Describe whole numbers up to 10</li> <li>Compare which of two given collection of objects is big, small, smaller than, greater than, more than, less than, equal to, most, least, fewer up to 10.</li> <li>Order more than two given collections of objects from smallest to greatest up to 10</li> </ul>	<b>Describe, compare and order objects up to 20</b> <ul style="list-style-type: none"> <li>Describe and compare collections of objects according to most, least, the same as</li> <li>Describe and order collections of objects from most to least and least to most</li> </ul>		

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>NUMBER CONCEPT DEVELOPMENT: Describe, compare and order whole numbers</b>				
<b>1.4</b> <b>Describe, compare and order numbers</b>	<p><b>Use ordinal numbers to show order, place or position</b></p> <p>Develop an awareness of ordinal numbers e.g. first, second, third up to sixth and last</p>	<p><b>Describe, compare and order numbers to 20</b></p> <ul style="list-style-type: none"> <li>Describe and compare whole numbers according to smaller than, greater than and more than, less than, is equal to</li> <li>Describe and order numbers from smallest to greatest and greatest to smallest</li> </ul> <p><b>Use ordinal numbers to show order, place or position</b></p> <p>Position objects in a line from first to tenth or first to last e.g. first, second, third ... tenth</p>	<p><b>Describe, compare and order numbers to 99</b></p> <ul style="list-style-type: none"> <li>Describe and compare whole numbers up to 99 using smaller than, greater than, more than, less than and equal to</li> <li>Describe and order whole numbers up to 99 from smallest to greatest, and greatest to smallest</li> </ul> <p><b>Use ordinal numbers to show order, place or position</b></p> <p>Position objects in a line from first to twentieth or first to last e.g. first, second, third ... twentieth</p>	<p><b>Describe, compare and order numbers to 999</b></p> <ul style="list-style-type: none"> <li>Describe and compare whole numbers up to 999 using smaller than, greater than, more than, less than and equal to</li> <li>Describe and order whole numbers up to 999 from smallest to greatest, and greatest to smallest</li> </ul> <p><b>Use ordinal numbers to show order, place or position</b></p> <p>Use, read and write ordinal numbers, including abbreviated form (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> up to 31<sup>st</sup>)</p>
<b>NUMBER CONCEPT DEVELOPMENT: Place value</b>				
<b>1.5</b> <b>Place value</b>		<p><b>Begin to recognise the place value of at least two-digit numbers to 20</b></p> <ul style="list-style-type: none"> <li>Decompose two-digit numbers into multiples of 10 and ones/units</li> </ul>	<p><b>Recognise the place value of at least two-digit numbers to 99</b></p> <ul style="list-style-type: none"> <li>Decompose two-digit numbers up to 99 into multiples of 10 and ones/units</li> <li>Identify and state the value of each digit</li> </ul>	<p><b>Recognise the place value of three-digit numbers to 999</b></p> <ul style="list-style-type: none"> <li>Decompose three-digit numbers up to 999 into multiples of 100, multiples of 10 and ones/units</li> <li>Identify and state the value of each digit</li> </ul>
<b>SOLVE PROBLEMS IN CONTEXT</b>				
<b>1.6</b> <b>Problem-solving techniques</b>	<p>Use the following techniques up to 10:</p> <ul style="list-style-type: none"> <li>concrete apparatus e.g. counters</li> <li>physical number ladder</li> </ul>	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> <li>concrete apparatus e.g. counters</li> <li>pictures to draw the story sum</li> <li>building up and breaking down numbers</li> <li>doubling and halving</li> <li>number lines supported by concrete apparatus</li> </ul>	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> <li>drawings or concrete apparatus e.g. counters</li> <li>building up and breaking down of numbers</li> <li>doubling and halving</li> <li>number lines</li> </ul>	<p>Use the following techniques when solving problems and explain solutions to problems:</p> <ul style="list-style-type: none"> <li>building up and breaking down numbers</li> <li>doubling and halving</li> <li>number lines</li> <li>rounding off in tens</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>1.7</b> <b>Addition and subtraction</b>	Solve word problems (story sums) in context and explain own solution to problems involving addition and subtraction with answers up to 10.	Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20.	Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99.	Solve word problems in context and explain own solution to problems involving addition and subtraction leading answers up to 999.
<b>1.8</b> <b>Repeated addition leading to multiplication</b>		Solve word problems in context and explain own solution to problems involving repeated addition with answers up to 20	Solve word problems in context and explain own solution to problems using repeated addition and multiplication with answers up to 50.	Solve word problems in context and explain own solution to problems using multiplication with answers up to 100
<b>1.9</b> <b>Grouping and sharing leading to division</b>	Solve and explain solutions to word problems in context (story sums) that involve equal sharing, grouping with whole numbers up to 10 and answers that may include remainders.	Solve and explain solutions to practical problems involving equal sharing and grouping with whole numbers up to 20 and with answers that may include remainders.	Solves and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that may include remainders.	Solve and explain solutions to practical problems that involve equal sharing and grouping up to 100 with answers that may include remainders
<b>SOLVE PROBLEMS IN CONTEXT</b>				
<b>1.10</b> <b>Sharing leading to fractions</b>			Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary fractions.	Solve and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions.
<b>1.11</b> <b>Money</b>	Develop an awareness of South African coins and bank notes	<ul style="list-style-type: none"> <li>Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5) and bank notes R10 and R20</li> <li>Solve money problems involving totals and change to R20 and in cents up to 20c</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and identify the South African coins (5c, 10c, 20c, 50c, R1, R2, R5) and bank notes R10, R20, R50</li> <li>Solve money problems involving totals and change to R99 and in cents up to 90c</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and identify all the South African coins and bank notes</li> <li>Solve money problems involving totals and change in rands or cents</li> <li>Convert between rands and cents</li> </ul>
<b>CONTEXT-FREE CALCULATIONS</b>				
<b>1.12</b> <b>Techniques (methods or strategies)</b>		<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> <li>drawings or concrete apparatus e.g. counters</li> <li>building up and breaking down numbers</li> <li>doubling and halving</li> <li>number lines supported by concrete apparatus</li> </ul>	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> <li>drawings or concrete apparatus e.g. counters</li> <li>building up and breaking down numbers</li> <li>doubling and halving</li> <li>number lines</li> </ul>	<p>Use the following techniques when performing calculations:</p> <ul style="list-style-type: none"> <li>building up and breaking down numbers</li> <li>doubling and halving</li> <li>number lines</li> <li>rounding off in tens</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>1.13</b> <b>Addition and subtraction</b>	Solve verbally stated addition and subtraction problems with solutions up to 10	<ul style="list-style-type: none"> <li>Add to 20</li> <li>Subtract from 20</li> <li>Use appropriate symbols (+, −, =, □)</li> <li>Practise number bonds to 10</li> </ul>	<ul style="list-style-type: none"> <li>Add to 99</li> <li>Subtract from 99</li> <li>Use appropriate symbols (+, −, =, □)</li> <li>Practice number bonds to 20</li> </ul>	<ul style="list-style-type: none"> <li>Add to 999</li> <li>Subtract from 999</li> <li>Use appropriate symbols (+, −, =, □)</li> <li>Practice number bonds to 30</li> </ul>
<b>CONTEXT-FREE CALCULATIONS</b>				
<b>1.14</b> <b>Repeated addition leading to multiplication</b>		<ul style="list-style-type: none"> <li>Add the same number repeatedly to 20</li> <li>Use appropriate symbols (+, =, □)</li> </ul>	<ul style="list-style-type: none"> <li>Multiply numbers 1 to 10 by 2, 5, 3, and 4 to a total of 50</li> <li>Use appropriate symbols (+, x, =, □)</li> </ul>	<ul style="list-style-type: none"> <li>Multiply any number by 2, 3, 4, 5, 10 to a total of 100</li> <li>Use appropriate symbols (x, □)</li> </ul>
<b>1.15</b> <b>Division</b>				<ul style="list-style-type: none"> <li>Divide numbers up to 100 by 2, 3, 4, 5, 10</li> <li>Use appropriate symbols (÷, =, □)</li> </ul>
<b>1.16</b> <b>Mental mathematics</b>	<p><b>Number concept: Range 10</b></p> <p>Each activity commences with mental maths:</p> <ul style="list-style-type: none"> <li>Counting everyday objects</li> <li>Counting forwards and backwards</li> <li>Ordinal counting</li> <li>Clap hands many/few times</li> <li>Which claps are most/least/more/fewer</li> <li>Which number comes before/after/between</li> </ul>	<p><b>Number concept: Range 20</b></p> <ul style="list-style-type: none"> <li>Name the number before and after a given number.</li> <li>Order a given set of selected numbers</li> <li>Compare numbers up to and say which is 1 and 2 more or less</li> </ul>	<p><b>Number concept: Range 99</b></p> <ul style="list-style-type: none"> <li>Order a given set of selected numbers</li> <li>Compare numbers up to 99 and say which is 1, 2, 3, 4, 5 and 10 more or less</li> </ul>	<p><b>Number concept: Range 1000</b></p> <ul style="list-style-type: none"> <li>Order a given set of selected numbers</li> <li>Compare numbers up to 1000 and say which is 1, 2, 3, 4, 5 and 10 more or less</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>CONTEXT-FREE CALCULATIONS (cont.)</b>				
<b>1.16</b> <b>Mental mathematics</b>		<b>Rapidly recall:</b> <ul style="list-style-type: none"> <li>Addition and subtraction facts to 10</li> </ul> <b>Calculation strategies</b> Use calculation strategies to add and subtract efficiently: <ul style="list-style-type: none"> <li>Put the larger number first in order to count on or count back</li> <li>Number line</li> <li>Doubling and halving</li> <li>Building up and breaking down</li> </ul>	<b>Rapidly recall:</b> <ul style="list-style-type: none"> <li>Addition and subtraction facts to 20</li> <li>Add or subtract multiples of 10 from 0 to 100</li> </ul> <b>Calculation strategies</b> Use calculation strategies to add and subtract efficiently: <ul style="list-style-type: none"> <li>Put the larger number first in order to count on or count back</li> <li>Number line</li> <li>Doubling and halving</li> <li>Building up and breaking down</li> <li>Use the relationship between addition and subtraction.</li> </ul>	<b>Rapidly recall:</b> <ul style="list-style-type: none"> <li>Recall addition and subtraction facts to 20</li> <li>Add or subtract multiples of 10 from 0 to 100</li> <li>Multiplication facts for the:               <ul style="list-style-type: none"> <li>2 times table with answers up to 20</li> <li>10 times table with answers up to 100</li> </ul> </li> <li>Division facts for numbers:               <ul style="list-style-type: none"> <li>up to 20 divisible by 2</li> <li>up to 100 divisible by 10</li> </ul> </li> </ul> <b>Calculation strategies</b> Use the following calculation strategies: <ul style="list-style-type: none"> <li>Put the larger number first in order to count on or count back</li> <li>Number line</li> <li>Doubling and halving</li> <li>Building up and breaking down</li> <li>Use the relationship between addition and subtraction</li> <li>Use the relationship between multiplication and division.</li> </ul>
<b>1.17</b> <b>Fractions</b>			<ul style="list-style-type: none"> <li>Use and name unitary fractions including halves, quarters, thirds and fifths</li> <li>Recognise fractions in diagrammatic form</li> <li>Write fractions as 1 half</li> </ul>	<ul style="list-style-type: none"> <li>Use and name unitary and non-unitary fractions including halves, quarters, eighths, thirds, sixths, fifths.</li> <li>Recognise fractions in diagrammatic form</li> <li>Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent</li> <li>Write fractions as 1 half and 2 thirds.</li> </ul>

## FOUNDATION PHASE OVERVIEW

## 2. PATTERNS, FUNCTIONS AND ALGEBRA

**Progression in Patterns, Functions and Algebra**

- In Patterns, Functions and Algebra, learners get opportunities to:
  - complete and extend patterns represented in different forms ; and
  - identify and describe patterns.
- Describing patterns lays the basis for learners in the Intermediate Phase to describe rules for patterns. This in turn becomes more formalised in algebraic work in the Senior Phase.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>2.1</b> <b>Geometric patterns</b>	<b>Copy and extend</b> Copy and extend simple patterns using physical objects and drawings (e.g. using colours and shapes).	<b>Copy, extend and describe</b> Copy, extend and describe in words <ul style="list-style-type: none"> <li>• simple patterns made with physical objects</li> <li>• simple patterns made with drawings of lines, shapes or objects</li> </ul> <b>Create own patterns</b> Create own geometric patterns <ul style="list-style-type: none"> <li>• with physical objects</li> <li>• by drawing lines, shapes or objects</li> </ul> <b>Patterns around us</b> Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> <li>• in nature</li> <li>• from modern everyday life</li> <li>• from our cultural heritage</li> </ul>	<b>Copy, extend and describe</b> Copy, extend and describe in words <ul style="list-style-type: none"> <li>• simple patterns made with physical objects</li> <li>• complex patterns made with drawings of lines, shapes or objects</li> </ul> <b>Create and describe own patterns</b> <ul style="list-style-type: none"> <li>• with physical objects</li> <li>• by drawing lines, shapes or objects</li> </ul> <b>Patterns around us</b> Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> <li>• in nature</li> <li>• from modern everyday life</li> <li>• from our cultural heritage</li> </ul>	<b>Copy, extend and describe</b> Copy, extend and describe in words <ul style="list-style-type: none"> <li>• simple patterns made with physical objects</li> <li>• more complex patterns made with drawings of lines, shapes or objects</li> </ul> <b>Create and describe own patterns</b> <ul style="list-style-type: none"> <li>• with physical objects</li> <li>• by drawing lines, shapes or objects</li> </ul> <b>Patterns around us</b> Identify, describe in words and copy geometric patterns <ul style="list-style-type: none"> <li>• in nature</li> <li>• from modern everyday life</li> <li>• from our cultural heritage</li> </ul>
<b>2.2</b> <b>Number patterns</b>		<b>Copy, extend and describe</b> Copy, extend and describe simple number sequences to at least	<b>Copy, extend and describe</b> Copy, extend and describe simple number sequences to at least	<b>Copy, extend and describe</b> Copy, extend and describe simple number sequences to at least
		<b>Create and describe own patterns</b>	<b>Create and describe own patterns</b>	<b>Create and describe own patterns</b>

## FOUNDATION PHASE OVERVIEW

## 3. SPACE AND SHAPE (GEOMETRY)

**Progression in Space and Shape**

The main progression in Space and Shape is achieved by:

- focussing on new properties and features of shapes and objects in each grade; and
- moving from learning the language of position and matching different views of the same objects to reading and following directions on informal maps.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>3.1</b>  <b>Position, orientation and views</b>	<b>Language of position</b> 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.  <b>Position and directions</b> Follow directions to move around the classroom	<b>Language of position</b> 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.  <b>Position and views</b> <ul style="list-style-type: none"> <li>• Recognise and match different views of the same everyday object</li> </ul> <b>Position and directions</b> <ul style="list-style-type: none"> <li>• Follow directions to move around the classroom</li> <li>• Follow instructions to place one object in relation to another, e.g. put the pencil behind the box</li> </ul>	<b>Language of position</b> 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.  <b>Position and views</b> <ul style="list-style-type: none"> <li>• Recognise and match different views of the same everyday object.</li> </ul> <b>Position and directions</b> Follow directions to move around the classroom	<b>Position and views</b> <ul style="list-style-type: none"> <li>• Recognise and match different views of the same everyday object</li> <li>• Name an everyday object when shown an unusual view of it</li> <li>• Read, interpret and draw informal maps, or top views of a collection of objects</li> <li>• Find objects on maps</li> </ul> <b>Position and directions</b> <ul style="list-style-type: none"> <li>• Follow directions to move around the classroom and school</li> <li>• Give directions to move around the classroom and school</li> <li>• Follow directions from one place to another on an informal map</li> </ul>



TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<p><b>3.2</b></p> <p><b>3-D objects</b></p>	<p><b>Range of objects</b></p> <p>Recognise and name 3-D objects in the classroom</p> <ul style="list-style-type: none"> <li>ball shapes,</li> <li>box shapes</li> </ul> <p><b>Features of objects</b></p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> <li>size</li> <li>colour</li> <li>objects that roll</li> <li>objects that slide</li> </ul> <p><b>Focussed activities</b></p> <ul style="list-style-type: none"> <li>Use 3-D objects such as building blocks, recycling material etc, to construct composite objects e.g. towers, bridges etc</li> </ul>	<p><b>Range of objects</b></p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> <li>ball shapes (spheres)</li> <li>box shapes (prisms)</li> </ul> <p><b>Features of objects</b></p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> <li>size</li> <li>colour</li> <li>objects that roll</li> <li>objects that slide</li> </ul> <p><b>Focussed activities</b></p> <ul style="list-style-type: none"> <li>Observe and build given 3-D objects using concrete materials such as building blocks, recycling material, construction kits</li> </ul>	<p><b>Range of objects</b></p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> <li>ball shapes (spheres)</li> <li>box shapes (prisms)</li> <li>cylinders</li> </ul> <p><b>Features of objects</b></p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> <li>size</li> <li>objects that roll</li> <li>objects that slide</li> </ul> <p><b>Focussed activities</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	<p><b>Range of objects</b></p> <p>Recognise and name 3-D objects in the classroom and in pictures</p> <ul style="list-style-type: none"> <li>ball shapes (spheres)</li> <li>box shapes (prisms)</li> <li>cylinders</li> <li>pyramids</li> <li>cones</li> </ul> <p><b>Features of objects</b></p> <p>Describe, sort and compare 3-D objects in terms of:</p> <ul style="list-style-type: none"> <li>2-D shapes that make up the faces of 3-D objects</li> <li>flat or curved surfaces</li> </ul> <p><b>Focussed activities</b></p> <ul style="list-style-type: none"> <li>Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>3.3</b> <b>2-D shapes</b>	<b>Recognise, identifies and names two-dimensional shapes in the classroom and in pictures, including:</b> <ul style="list-style-type: none"> <li>Learners Symbols</li> <li>Class name</li> </ul>	<b>Range of shapes</b> Recognise and name 2-D shapes <ul style="list-style-type: none"> <li>circles</li> <li>triangles</li> <li>squares</li> </ul> <b>Features of shapes</b> Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> <li>size</li> <li>colour</li> <li>straight sides</li> <li>round sides</li> </ul>	<b>Range of shapes</b> Recognise and name 2-D shapes <ul style="list-style-type: none"> <li>circles</li> <li>triangles</li> <li>squares</li> <li>rectangles</li> </ul> <b>Features of shapes</b> Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> <li>size</li> <li>shape</li> <li>straight sides</li> <li>round sides</li> </ul>	<b>Range of shapes</b> Recognise and name 2-D shapes <ul style="list-style-type: none"> <li>circles</li> <li>triangles</li> <li>squares</li> <li>rectangles</li> </ul> <b>Features of shapes</b> Describe, sort and compare 2-D shapes in terms of: <ul style="list-style-type: none"> <li>shape</li> <li>straight sides</li> <li>round sides</li> </ul> <b>Draw shapes</b> <ul style="list-style-type: none"> <li>circles</li> <li>triangles</li> <li>squares</li> <li>rectangles</li> </ul>
<b>3.4</b> <b>Symmetry</b>	<b>Symmetry</b> <ul style="list-style-type: none"> <li>Recognise symmetry in own body</li> </ul>	<b>Symmetry</b> <ul style="list-style-type: none"> <li>Recognise symmetry in own body.</li> <li>Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes</li> </ul>	<b>Symmetry</b> <ul style="list-style-type: none"> <li>Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes</li> </ul>	<b>Symmetry</b> <ul style="list-style-type: none"> <li>Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.</li> <li>Determine line of symmetry through paper folding and reflection</li> </ul>

## FOUNDATION PHASE OVERVIEW

## 4. MEASUREMENT

**Progression in Measurement**

- The main progression in measurement across the grades is achieved by the introduction of:
  - new forms of measuring;
  - new measuring tools, starting with informal tools and moving to formal measuring instruments in Grades 2 and 3;
  - new measuring units, particularly in Grades 2 and 3.
- Calculations and problem-solving with measurement should take cognisance of the number work that has already been covered.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>4.1 Time</b>	<b>Passing of time</b> Talk about the passing of time <ul style="list-style-type: none"> <li>• Talk about things that happen during the day and things that happen during the night</li> <li>• Learners sequence events that happen to them during the day</li> <li>• Order regular events from their own lives</li> </ul>	<b>Passing of time</b> Talk about the passing of time <ul style="list-style-type: none"> <li>• Order regular events from their own lives</li> <li>• Compare lengths of time using language e.g. longer, shorter, faster, slower</li> <li>• Sequence events using language such as yesterday, today, tomorrow</li> </ul>		

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
4.1 Time		<p><b>Telling the time</b></p> <ul style="list-style-type: none"> <li>Describe when something happens using language e.g. morning, afternoon, night, early, late</li> <li>Name and sequence days of week and months of year</li> <li>Place birthdays on a calendar</li> </ul>	<p><b>Telling the time</b></p> <ul style="list-style-type: none"> <li>Name and sequence days of week and months of year</li> <li>Place birthdays, religious festivals, public holidays, historical events, school events on a calendar</li> <li>Tell 12-hour time in hours, half hours and quarter hours</li> </ul> <p><b>Calculate length of time and passing of time</b></p> <ul style="list-style-type: none"> <li>Use calendars to calculate and describe lengths of time in: <ul style="list-style-type: none"> <li>days,</li> <li>weeks</li> </ul> </li> <li>Use clocks to calculate length of time in: <ul style="list-style-type: none"> <li>hours</li> <li>half hours</li> </ul> </li> </ul>	<p><b>Telling the time</b></p> <ul style="list-style-type: none"> <li>Read dates on calendars</li> <li>Place birthdays, religious festivals, public holidays, historical events, school events on a calendar</li> <li>Tell 12-hour time in <ul style="list-style-type: none"> <li>hours</li> <li>half hours</li> <li>quarter hours</li> <li>minutes</li> </ul> </li> </ul> <p>on analogue clocks and digital clocks and other digital instruments that show time e.g. cell phones</p> <p><b>Calculate length of time and passing of time</b></p> <ul style="list-style-type: none"> <li>Use calendars to calculate and describe lengths of time in: <ul style="list-style-type: none"> <li>days</li> <li>weeks</li> <li>months</li> </ul> </li> <li>Converting between days and weeks</li> <li>Converting between weeks and months</li> <li>Use clocks to calculate length of time in: <ul style="list-style-type: none"> <li>hours</li> <li>half hours</li> <li>quarter hours</li> </ul> </li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>4.2</b> <b>Length</b>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Compare and order the length, height or width of two or more objects by placing them next to each other. Use language to talk about the comparison e.g. longer, shorter, taller, wider</li> </ul>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Compare and order the length, height or width of two or more objects by placing them next to each other. Use language to talk about the comparison e.g. longer, shorter, taller, wider</li> <li>Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters</li> <li>Describe the length of objects by counting and stating the length in informal units</li> </ul>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters</li> <li>Describe the length of objects by counting and stating the length in informal units</li> </ul> <b>Introducing formal measuring</b> Estimate, measure, compare order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length.	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record length using non-standard measures e.g. hand spans, paces, pencil lengths, counters</li> <li>Describe the length of objects by counting and stating how many informal units long they are.</li> </ul> <b>Introducing formal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length</li> <li>Estimate and measure lengths in centimetres using a ruler</li> </ul> (No conversions between metres and centimetres required)

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>4.3</b>  <b>Mass</b>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Compare and order the mass of two or more objects by feeling them or using a balancing scale</li> <li>Use language to talk about comparison e.g. light, heavy, lighter, heavier</li> </ul>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks</li> <li>Describe the mass of objects by counting and stating the mass in informal units</li> <li>Use language to talk about the comparison e.g. light, heavy, lighter, heavier</li> </ul>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks.</li> <li>Describe the mass of objects by counting and stating the mass in informal units</li> <li>Use language to talk about comparison e.g. light, heavy, lighter, heavier</li> </ul> <b>Introducing formal measuring</b> <ul style="list-style-type: none"> <li>Compare, order and record the mass of commercially packaged objects which have their mass stated only in kilograms e.g. 2 kilograms of rice and 1 kilogram of flour</li> <li>Measure own mass in kilograms using a bathroom scale</li> </ul>	<b>Informal measuring</b> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks</li> <li>Describe the mass of objects by counting and stating the mass in informal units</li> <li>Use language to talk about comparison e.g. light, heavy, lighter, heavier</li> </ul> <b>Introducing formal measuring</b> <ul style="list-style-type: none"> <li>Compare, order and record the mass of commercially packaged objects which have their mass stated in: <ul style="list-style-type: none"> <li>kilograms e.g. 2 kilograms of rice and 1 kilogram of flour</li> <li>grams e.g. 500 grams of salt</li> </ul> </li> <li>Measure own mass in kilograms using a bathroom scale</li> </ul> (No conversions between grams and kilograms are required)

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<p><b>4.4</b></p> <p><b>Capacity/ Volume</b></p>	<p><b>Informal measuring</b></p> <ul style="list-style-type: none"> <li>Compare and order the amount of liquid (volume) in two containers placed next to each other. Learners check by pouring into a third container if necessary</li> <li>Compare and order the amount of liquid that two containers can hold if filled (capacity)</li> <li>Use language to talk about comparison e.g. more than, less than, full, empty</li> </ul>	<p><b>Informal measuring</b></p> <ul style="list-style-type: none"> <li>Compare and order the amount of liquid (volume) in two containers placed next to each other. Learners check by pouring into a third container if necessary</li> <li>Compare and order the amount of liquid that two containers can hold if filled (capacity).</li> <li>Use language to talk about comparison e.g. more than, less than, full, empty</li> <li>Estimate, measure, compare, order and record the capacity of containers by using non-standard measures e.g. spoons and cups</li> </ul>	<p><b>Informal measuring</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	<p><b>Informal measuring</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
4.4 Capacity/ Volume		<ul style="list-style-type: none"> <li>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</li> </ul>	<p>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> <p><b>Introducing formal measuring</b></p> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record the capacity of objects by measuring in litres</li> <li>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</li> </ul>	<p>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> <p><b>Introducing formal measuring</b></p> <ul style="list-style-type: none"> <li>Estimate, measure, compare, order and record the capacity of objects by measuring in litres, half litres and quarter litres</li> <li>Compare, order and record the capacity of commercially packaged objects whose capacity is stated in litres e.g. 2 litres of milk, 1 litre of cool drink, 5 litres of paint or stated in millilitres e.g. 500 millilitres of milk, 340 millilitres of cool drink, 750 millilitres of oil.</li> <li>Know that a standard cup is 250 millilitres</li> <li>Know that a standard teaspoon is 5 millilitres</li> </ul> <p>(No conversions between millilitres and litres required)</p>
4.5 Perimeter and Area				<p><b>Perimeter</b></p> <p>Investigate the distance around 2-D shapes and 3-D objects using direct comparison or informal units.</p> <p><b>Area</b></p> <p>Investigate the area using tiling.</p>



## FOUNDATION PHASE OVERVIEW

## 5. DATA HANDLING

**Progression in Data Handling**

- The main progression in Data Handling across the grades is achieved by:
  - moving from working with objects to working with data; and
  - working with new forms of data representation.
- Learners should work through the full data cycle at least once a year - this involves collecting and organising data, representing data, analysing, interpreting and reporting data.
- Some of the above aspects of data handling can also be dealt with as discrete activities.

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>5.1</b> <b>Collect and sort objects</b>	<b>Collect and organise objects</b> Collect and sort everyday physical objects.	<b>Collect and organise objects</b> Collect and sort everyday physical objects.		
<b>5.2</b> <b>Represent sorted collection of objects</b>	<b>Represent sorted collection of objects</b> Draw a picture of collected objects.	<b>Represent sorted collection of objects</b> Draw a picture of collected objects.		
<b>5.3</b> <b>Discuss and report on sorted collection of objects</b>	<b>Discuss and report on sorted collection of objects</b> Answer questions about <ul style="list-style-type: none"> <li>• how the collection was sorted</li> <li>• the drawing of the collection</li> </ul>	<b>Discuss and report on sorted collection of objects</b> <ul style="list-style-type: none"> <li>• Give reasons for how collection was sorted;</li> <li>• Answer questions about               <ul style="list-style-type: none"> <li>- how the sorting was done (process)</li> <li>- what the sorted collection looks like (product)</li> </ul> </li> <li>• Describe the collection and/drawing</li> <li>• Explain how the collection was sorted</li> </ul>		

TOPICS	GRADE R	GRADE 1	GRADE 2	GRADE 3
<b>5.4</b> <b>Collect and organise data</b>		<b>Collect and organise data</b> <ul style="list-style-type: none"> <li>Collect data about the class or school to answer questions posed by the teacher</li> </ul>	<b>Collect and organise data</b> <ul style="list-style-type: none"> <li>Collect data about the class or school to answer questions posed by the teacher</li> </ul>	<b>Collect and organise data</b> <ul style="list-style-type: none"> <li>Collect data about the class or school to answer questions posed by the teacher</li> <li>Organise data supplied by teacher or workbook/textbook</li> <li>Organise data in <ul style="list-style-type: none"> <li>lists</li> <li>tally marks</li> <li>tables</li> </ul> </li> </ul>
<b>5.5</b> <b>Represent data</b>		<b>Represent data</b> <ul style="list-style-type: none"> <li>Represent data in pictograph</li> <li>Limited to pictographs with one-to-one correspondence</li> </ul>	<b>Represent data</b> <ul style="list-style-type: none"> <li>Represent data in pictograph</li> <li>Limited to pictographs with one-to-one correspondence</li> </ul>	<b>Represent data</b> <ul style="list-style-type: none"> <li>Represent data in <ul style="list-style-type: none"> <li>pictograph (limited to pictographs with one-to-one correspondence)</li> <li>bar graphs</li> </ul> </li> </ul>
<b>5.6</b> <b>Analyse and Interpret data</b>		<b>Analyse and interpret data</b> Answer questions about data in pictograph <ul style="list-style-type: none"> <li>limited to pictographs with one-to-one correspondence</li> </ul>	<b>Analyse and interpret data</b> Answer questions about data in pictograph <ul style="list-style-type: none"> <li>limited to pictographs with one-to-one correspondence</li> </ul>	<b>Analyse and interpret data</b> Answer questions about data presented in <ul style="list-style-type: none"> <li>pictographs(limited to pictographs with one-to-one correspondence)</li> <li>bar graphs</li> </ul>