



CAMI Education linked to CAPS: Mathematics: Grade 5

GRADE 5 CAPS Curriculum		
Term 1		
TOPICS	CONCEPTS	CAMI Keys
Mental Mathematics	Mental calculations involving: <ul style="list-style-type: none"> • Addition and subtraction facts of: <ul style="list-style-type: none"> ❖ Units ❖ Multiples of 10 ❖ Multiples of 100 ❖ Multiples of 1 000 • Multiplication of whole numbers to at least 10×10 • Multiplication facts of: <ul style="list-style-type: none"> ❖ Units by multiples of 10 ❖ Units by multiples of 100 ❖ Units by multiples of 1 000 ❖ Units by multiples of 10 000 	3.3.3.10 3.3.4.9 3.3.5.4 3.3.6.4 3.3.5.9 3.3.6.9
	Number range for counting, ordering, comparing and representing numbers and for the place value of digits <ul style="list-style-type: none"> • Count backwards and forwards in whole number intervals up to at least 10 000 • Order, compare and represent numbers to at least 4-digit numbers • Represent odd and even numbers to at least 1 000 • Recognize the place value of digits in whole numbers to at least 4-digit numbers • Round off to the nearest 5, 10, 100 and 1 000 	1.1.2.7 1.1.2.8 1.7.8.4 1.1.10.3 1.1.6.10 1.1.8.10 1.1.8.5 1.1.8.6 1.1.9.5 1.1.9.9 1.7.9.3 1.7.1.1 1.7.1.5
	Calculation techniques Use a range of techniques to perform and	



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> • Estimation • Adding and subtracting in columns • Building up and breaking down numbers • Using a number line • Rounding off and compensating • Doubling and halving • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> • Multiples of 2-digit whole numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> • Recognize and use the commutative, associative and distributive properties of whole numbers • 0 in terms of its additive property • 1 in terms of its multiplicative property 	<p>1.7.10.4 1.7.10.8 1.7.3.8 1.7.6.1 1.7.6.2 3.8.8.5</p> <p>1.8.1.1</p> <p>1.7.7.1 1.7.7.6</p>
<p>1.1 Whole numbers Counting, ordering, comparing, representing and place value of digits</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> • Count forwards and backwards in whole number intervals up to at least 10 000 • Order, compare and represent numbers to at least 4-digit numbers • Represent odd and even numbers to at least 1 000 • Recognize the place value of digits in whole numbers to at least 6-digit 	<p>1.1.2.7 1.1.2.8</p> <p>1.7.8.4</p> <p>1.1.10.3 1.1.6.10 1.1.8.10 1.1.8.5 1.1.8.6</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>numbers</p> <ul style="list-style-type: none"> Rounding off to the nearest 5, 10, 100 and 1 000 	<p>1.1.9.5 1.1.9.9 1.7.9.3</p> <p>1.7.1.1 1.7.1.5</p>
<p>2.1 Number sentences Introduction to algebraic expressions</p>	<p>Number sentences</p> <ul style="list-style-type: none"> Write number sentences to describe problem situations Solve and complete number sentences by <ul style="list-style-type: none"> ❖ Inspection ❖ Trial and improvement Check the solution by substitution 	<p>3.8.8.1 3.8.8.2</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers with at least 5-digit numbers.</p> <p>Calculation techniques Using a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> Estimation Adding and subtracting in columns Building up and breaking down numbers Using a number line Rounding off and compensating Doubling and halving Using addition and subtraction as inverse operations Using multiplication and division as inverse operations <p>Properties of whole numbers</p> <ul style="list-style-type: none"> Recognize and use the commutative, associative and distributive properties of whole numbers 	<p>1.2.6.8 1.3.7.3 1.3.8.5 1.3.8.6 1.7.10.9</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> • 0 in terms of its additive property • 1 in terms of its multiplicative property <p>Solving problems Solve problems involving whole numbers, including:</p> <ul style="list-style-type: none"> • Financial contexts • Measurement contexts 	<p>3.8.4.6 3.8.4.7</p>
<p>2.1 Numeric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none"> • Investigate and extend numeric patterns looking for relationships or rules of patterns <ul style="list-style-type: none"> ❖ Sequences involving a constant difference or ratio ❖ Of learner's own creation • Describe observed relationships or rules in learner's own words <p>Input and output values Determine input values, output values and rules for patterns and relationships using flow diagrams.</p> <p>Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented</p> <ul style="list-style-type: none"> • Verbally • In a flow diagram • By a number sentence 	<p>4.1.1.6 4.1.4.1</p> <p>3.2.5.1 3.2.5.2</p>
<p>1.1 Whole numbers Multiplication and division</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> • Multiplication of at least whole 3-digit by 2-digit numbers • Division of at least whole 3-digit by 1-digit numbers <p>Calculation techniques</p> <ul style="list-style-type: none"> • Estimation 	<p>1.4.2.4 1.4.2.5 1.4.3.3 1.4.3.4 1.4.4.3 1.4.4.4</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> • Adding and subtracting in columns • Building up and breaking down numbers • Using a number line • Rounding off and compensating • Doubling and halving • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> • Multiples of 2-digit whole numbers to at least 100 • Factors of 2-digit numbers to at least 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> • Recognize and use the commutative, associative and distributive property of whole numbers • 0 in terms of its additive property • 1 in terms of its multiplicative property <p>Solving problems</p> <ul style="list-style-type: none"> • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Financial contexts ❖ Measurement contexts • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Comparing two or more quantities of the same kind (ratio) ❖ Comparing two quantities of different kinds (rate) ❖ Grouping and equal sharing with remainders 	<p>1.5.3.7 1.5.5.7</p> <p>1.7.2.2 1.7.2.3</p> <p>3.8.7.2</p>
<p>4.4 Time</p>	<p>Reading time and time instruments Read, tell and write time in 12-hour and 24-</p>	<p>3.8.6.6</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>hour formals on both analogue and digital instruments in</p> <ul style="list-style-type: none"> • Hours • Minutes • Seconds <p>Instruments include clocks, watches and stopwatches.</p> <p>Reading calendars</p> <p>Calculations and problem solving related to time include</p> <p>Calculation of time intervals where time is given in</p> <ul style="list-style-type: none"> • Seconds and / or minutes • Minutes and / or hours • Hours and / or in days • Days and / or in weeks and / or months • Months and / or years • Years and / or decades <p>History of time</p> <p>Know how time was measured and expressed in ancient times.</p>	<p>9.2.1.1</p> <p>9.2.1.5</p> <p>9.2.1.6</p> <p>9.2.1.7</p> <p>9.2.1.8</p> <p>9.2.1.9</p> <p>9.2.4.2</p> <p>3.8.6.5</p> <p>9.2.2.3</p> <p>9.2.2.4</p> <p>9.2.2.5</p> <p>9.2.2.6</p> <p>9.2.2.7</p> <p>9.2.2.8</p> <p>9.2.2.9</p> <p>9.2.3.1</p> <p>9.2.3.2</p> <p>9.2.3.3</p> <p>9.2.3.4</p> <p>9.2.3.5</p>
<p>5.1 Collecting and organizing data</p>	<ul style="list-style-type: none"> • Collect data using tally marks and tables for recording • Order data from smallest group to largest group 	<p>10.1.1.3</p>
<p>5.2 Representing data</p>	<p>Draw a variety of graphs to display and interpret data including</p> <ul style="list-style-type: none"> • Pictographs (many-to-one correspondence) • Bar graphs 	<p>10.1.2.2</p> <p>10.1.2.3</p> <p>10.1.2.4</p> <p>10.1.2.5</p>
<p>5.3 Analyzing, interpreting and reporting data</p>	<p>Critically read and interpret data represented in</p> <ul style="list-style-type: none"> • Words • Pictographs 	<p>10.1.4.2</p> <p>10.1.4.1</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none">• Bar graphs• Pie graphs Analyze data by answering questions related to <ul style="list-style-type: none">• Data categories• Data sources and contexts Summarize data verbally and in short written paragraphs that include: <ul style="list-style-type: none">• Drawing conclusions about the data• Making predictions based on the data Examine ungrouped numerical data to determine the most frequently occurring score in the data set (mode)	10.3.1.1
3.1 2-D shapes	Shapes learners need to know and name <ul style="list-style-type: none">• Regular and irregular polygons – triangles, squares, rectangles, other quadrilaterals, pentagons, hexagons, heptagons• Circles• Similarities and differences between squares and rectangles Characteristics learners use to distinguish, describe, sort and compare shapes <ul style="list-style-type: none">• Straight and / curved sides• Numbers of sides• Length of sides• Angles: limited to<ul style="list-style-type: none">❖ Right angles❖ Angles smaller than right angles❖ Angles greater than right angles Further activities to focus learners on characteristics of shapes <p>Draw 2-D shapes on grid paper. Angles limited to</p> <ul style="list-style-type: none">• Right angles	8.1.1.4 8.1.1.5



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> Angles smaller than right angles Angles greater than right angles 	
<p>4.3 Capacity/ Volume</p>	<p>Practical measuring of 3-D objects by</p> <ul style="list-style-type: none"> Estimating Measuring Recording Comparing and ordering <p>Measuring instruments Measuring spoons, measuring cups, measuring jugs</p> <p>Units Milliliter (ml), litre (l)</p> <p>Calculations and problem-solving related to capacity / volume include</p> <ul style="list-style-type: none"> Solving problems in contexts using capacity / volume Converting between litres and milliliters limited to examples with whole numbers and fractions 	<p>9.1.3.4 9.5.1.4</p> <p>3.8.6.3</p>
Term 2		
Mental Mathematics		See Term 1
<p>1.1 Whole numbers Counting, ordering, comparing, representing and place value of digits</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> Count forwards and backwards in whole number intervals up to at least 10 000 Order, compare and represent numbers to at least 6-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 6-digit numbers 	<p>1.1.2.7 1.1.2.8</p> <p>1.7.8.4</p> <p>1.1.10.3 1.1.6.10 1.1.8.10 1.1.8.5 1.1.8.6 1.1.9.5</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> Rounding off to the nearest 5, 10, 100 and 1 000 	<p>1.1.9.9 1.7.9.3</p> <p>1.7.1.1 1.7.1.5</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers with at least 5-digit numbers.</p> <p>Calculation techniques Using a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> Estimation Adding and subtracting in columns Building up and breaking down numbers Using a number line Rounding off and compensating Doubling and halving Using addition and subtraction as inverse operations Using multiplication and division as inverse operations <p>Properties of whole numbers</p> <ul style="list-style-type: none"> Recognize and use the commutative, associative and distributive properties of whole numbers 0 in terms of its additive property 1 in terms of its multiplicative property <p>Solving problems Solve problems involving whole numbers, including:</p> <ul style="list-style-type: none"> Financial contexts Measurement contexts 	<p>1.2.6.8 1.3.7.3 1.3.8.5 1.3.8.6</p> <p>3.8.4.6 3.8.4.7</p>
1.2	Concepts, skills and number range	



CAMI Education linked to CAPS: Mathematics: Grade 5

<p>Common fractions</p>	<ul style="list-style-type: none"> • Describing and ordering fractions • Count forwards and backwards in fractions • Compare and order common fractions to at least twelfths <p>Calculations with fractions</p> <ul style="list-style-type: none"> • Addition of common fractions with the same denominator • Recognize, describe and use the equivalence of division and fractions <p>Solving problems Solve problems in contexts involving common fractions, including grouping and sharing.</p> <p>Equivalent forms Recognize and use equivalent forms of common fractions with denominators which are multiples of each other.</p>	<p>2.1.3.1 2.1.3.2 2.1.4.3 2.1.4.5 2.1.4.6 2.1.5.2 2.1.5.5 2.2.1.1 2.2.1.2 2.2.1.3 2.2.2.3 2.2.3.1 2.2.3.2 2.2.3.3 2.2.5.7 3.4.5.2 3.4.5.3 3.4.5.4 3.4.5.5 3.4.5.6 3.4.5.7 3.4.5.8 3.4.6.2 3.4.6.3 3.4.6.4 3.8.5.2</p>
<p>4.1 Length</p>	<p>Practical measuring of 2-D shapes and 3-D objects by:</p> <ul style="list-style-type: none"> • Estimating • Measuring • Recording • Comparing and ordering <p>Measuring instruments Rulers, meter sticks, tape measures, trundle wheels</p> <p>Units Millimetres (mm), centimeters (cm), metres (m), kilometers (km)</p>	<p>9.1.1.2 9.1.2.1 9.1.2.3</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>Calculations and problem-solving related to length</p> <p>Solve problems in context related to length.</p> <p>Conversations include converting between any of the following units: mm , cm , m , km</p> <p>Conversions limited to whole numbers and fractions.</p>	3.8.6.1
<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations Multiplication of at least whole 3-digit by 2-digit numbers</p> <p>Calculation techniques Using a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Using a number line • Rounding off and compensating • Doubling and halving <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> • Multiples of 2-digit whole numbers to at least 100 • Factors of 2-digit numbers to at least 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> • Recognize and use the commutative, associative and distributive property of whole numbers • 0 in terms of its additive property • 1 in terms of its multiplicative property 	<p>1.4.2.4 1.4.2.5 1.4.3.3 1.4.3.4 1.4.4.3 1.4.4.4 1.4.6.6 1.4.6.7</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>Solving problems</p> <ul style="list-style-type: none"> • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Financial contexts ❖ Measurement contexts • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Comparing two or more quantities of the same kind (ratio) 	<p>3.8.7.2</p>
<p>3.2 Properties of 3-D objects</p>	<p>Objects learners need to know and name:</p> <ul style="list-style-type: none"> • Rectangular prisms and other prisms • Cubes • Cylinders • Cones • Pyramids • Similarities and differences between • Cubes and rectangular prisms <p>Characteristics learners use to distinguish, describe, sort and compare shapes</p> <ul style="list-style-type: none"> • Shape of faces • Number of faces • Flat and curved surfaces • Further activities to focus learners on characteristics of objects • Make 3-D models using cut-out polygons • Cutting open boxes to trace and describe their nets 	<p>8.1.2.3</p> <p>Class activity</p>
<p>2.2 Geometric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none"> • Investigate and extend geometric patterns looking for relationships or rules of patterns <ul style="list-style-type: none"> ❖ Represented in physical or diagram form ❖ Sequences involving a 	<p>4.1.1.7</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>constant difference</p> <ul style="list-style-type: none"> ❖ Of learner's own creation • Describe observed relationships or rules in learner's own words <p>Input and output values Determine input values, output values and rules for the patterns and relationships using flow diagrams.</p> <p>Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented</p> <ul style="list-style-type: none"> • Verbally • In a flow diagram • By a number sentence 	
3.3 Symmetry	Recognize, draw and describe lines of symmetry in 2-D shapes	3.2.6.2 8.10.1.4 8.10.1.5
1.1 Whole numbers Division	<p>Number range for calculations Division of at least whole 3-digit by 2-digit numbers</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Using multiplications and division as inverse operations <p>Number range for counting, ordering and representing, and place value of digits</p> <ul style="list-style-type: none"> • Recognize the place value of digits in whole numbers to at least 6-digit numbers • Round off to the nearest 10, 100 and 	1.5.1.7 1.5.1.10 1.5.5.1 1.5.5.2 1.5.5.3 1.5.5.4 1.5.5.5 1.5.5.6 1.5.7.1 1.5.7.2 1.5.7.3 1.5.8.1 3.5.5.3 3.8.2.6



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>1 000</p> <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> • Multiples of 2-digit numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 <p>Multiplication facts</p> <ul style="list-style-type: none"> • Units by multiples of 10 • Units by multiples of 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> • Recognize and use the commutative, associative and distributive properties of whole numbers • 1 in terms of its multiplicative property <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts</p> <p>Solve problems involving whole numbers, including:</p> <ul style="list-style-type: none"> • Comparing two or more quantities of the same unit (ratio) • Comparing two quantities of different kinds (rate) • Grouping and equal sharing with remainders 	
Term 3		
Mental Mathematics		Same as Term 1
1.2 Common fractions	<p>Concepts, skills and number range</p> <ul style="list-style-type: none"> • Count forwards and backwards in fractions • Compare and order common fractions to at least twelfths 	<p>2.1.3.1 2.1.3.2 2.1.4.3 2.1.4.5 2.1.4.6 2.1.5.2</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>Calculations with fractions</p> <ul style="list-style-type: none"> • Addition of common fractions with the same denominator • Addition and subtraction of mixed numbers • Fractions of whole numbers which result in whole numbers • Recognize, describe and use the equivalence of division and fractions <p>Solving problems Solve problems in contexts involving common fractions, including grouping and sharing.</p> <p>Equivalent forms Recognize and use equivalent forms of common fractions with denominators which are multiples of each other</p>	<p>2.1.5.5 2.2.1.1 2.2.1.2 2.2.1.3 2.2.1.4 2.2.2.3 2.2.3.1 2.2.3.3 2.2.5.7 3.4.5.2 3.4.5.3 3.4.5.4 3.4.5.5 3.4.5.6 3.4.5.8 3.4.6.2 3.4.6.3 3.4.6.4 2.2.3.2</p>
<p>4.2 Mass</p>	<p>Practical measuring of 3-D objects by Estimating, measuring, recording, comparing and ordering</p> <p>Measuring instruments Bathroom scales, kitchen scales and balances</p> <p>Units Grams (g) and kilograms (kg)</p> <p>Calculations and problem-solving related to mass include Solve problems in contexts related to mass</p> <p>Converting between grams and kilograms limited to examples with whole numbers and fractions.</p>	<p>9.1.2.2 9.1.2.3</p> <p>3.8.6.2</p>
<p>1.1 Whole numbers Counting,</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p>	



CAMI Education linked to CAPS: Mathematics: Grade 5

<p>ordering, comparing, representing and place value of digits</p>	<ul style="list-style-type: none"> Count forwards and backwards in whole number intervals up to at least 10 000 Order, compare and represent numbers to at least 6-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 6-digit numbers <ul style="list-style-type: none"> Rounding off to the nearest 5, 10, 100 and 1 000 	<p>1.1.2.7 1.1.2.8</p> <p>1.7.8.4</p> <p>1.1.10.3 1.1.6.10 1.1.8.10 1.1.8.5 1.1.8.6 1.1.9.5 1.1.9.9 1.7.9.3</p> <p>1.7.1.1 1.7.1.5</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers with at least 5-digit numbers.</p> <p>Calculation techniques Using a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> Estimation Adding and subtracting in columns Building up and breaking down numbers Using a number line Rounding off and compensating Doubling and halving Using addition and subtraction as inverse operations Using multiplication and division as inverse operations <p>Properties of whole numbers</p> <ul style="list-style-type: none"> Recognize and use the commutative, associative and distributive properties of whole numbers 	<p>1.2.6.8 1.3.7.3 1.3.8.5 1.3.8.6</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> • 0 in terms of its additive property • 1 in terms of its multiplicative property <p>Solving problems Solve problems involving whole numbers, including:</p> <ul style="list-style-type: none"> • Financial contexts • Measurement contexts 	<p>3.8.4.6 3.8.4.7</p>
<p>3.5 Viewing objects</p>	<p>Position and views Link the position of viewer to views of single everyday objects, collections of everyday objects or scenes from everyday life.</p>	
<p>3.1 Properties of 2-D shapes</p>	<p>Shapes learners need to know and name</p> <ul style="list-style-type: none"> • Regular and irregular polygons – triangles, squares, rectangles, other quadrilaterals, pentagons, hexagons, heptagons • Circles • Similarities and differences between squares and rectangles <p>Characteristics learners use to distinguish, describe, sort and compare shapes</p> <ul style="list-style-type: none"> • Straight and / curved sides • Numbers of sides • Length of sides • Angles: limited to <ul style="list-style-type: none"> ❖ Right angles ❖ Angles smaller than right angles ❖ Angles greater than right angles <p>Further activities to focus learners on characteristics of shapes Draw 2-D shapes on grid paper. Angles limited to</p> <ul style="list-style-type: none"> • Right angles 	<p>8.1.1.4 8.1.1.5</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> • Angles smaller than right angles • Angles greater than right angles 	
<p>3.4 Transformations</p>	<p>Use transformations to create composite shapes Create composite 2-D shapes including shapes with line symmetry by tracing and moving a 2-D shape by</p> <ul style="list-style-type: none"> • Rotation • Translation • Reflection <p>Use transformations to create tessellations Make tessellated patterns including some patterns with line symmetry by tracing and moving 2-D shapes by</p> <ul style="list-style-type: none"> • Rotation • Translation • Reflection <p>Describe patterns Refer to lines, 2-D shapes, 3-D objects and / or lines of symmetry and / or rotations and / or reflections and / or translations when describing patterns</p>	<p>Class activity</p>
<p>4.5 Temperature</p>	<p>Practical measuring of temperature by Estimating, measuring, recording, comparing and ordering</p> <p>Measuring instruments Thermometers</p> <p>Units Degrees Celsius (°C)</p> <p>Calculations and problem-solving related to temperature Solve problems in contexts involving temperature.</p>	<p>9.1.4</p> <p>3.8.6.5</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	Calculate temperature differences limited to positive whole numbers.	
5.1 Collecting and organizing data	<ul style="list-style-type: none"> Collect data using tally marks and tables for recording Order data from smallest group to largest group 	10.1.1.3
5.2 Representing data	<p>Draw a variety of graphs to display and interpret data including:</p> <ul style="list-style-type: none"> Pictographs with a many-to-one representation Bar graphs 	10.1.2.2 10.1.2.3 10.1.2.5
5.3 Analyzing, interpreting and reporting data	<p>Critically read and interpret data represented in</p> <ul style="list-style-type: none"> Words Pictographs Bar graphs Pie graphs <p>Analyze data by answering questions related to:</p> <ul style="list-style-type: none"> Data categories Data sources and contexts <p>Summarize data verbally and in short written paragraphs that include:</p> <ul style="list-style-type: none"> Drawing conclusions about the data Making predictions based on the data 	10.1.4.2 10.1.4.1 10.3.1.1
2.1 Numeric patterns	<p>Investigate and extend patterns</p> <ul style="list-style-type: none"> Investigate and extend numeric patterns looking for relationships or rules of patterns <ul style="list-style-type: none"> ❖ Sequences involving a constant difference or ratio 	4.1.1.6 4.1.4.1



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>❖ Of learner's own creation</p> <ul style="list-style-type: none"> Describe observed relationships or rules in learner's own words <p>Input and output values Determine input values, output values and rules for patterns and relationships using flow diagrams.</p> <p>Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented</p> <ul style="list-style-type: none"> Verbally In a flow diagram By a number sentences 	<p>3.2.5.1 3.2.5.2</p>
<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations Multiplication of at least whole 3-digit by 1-digit numbers</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> Estimation Building up and breaking down numbers <p>Number range for counting, ordering, representing and place value of digits</p> <ul style="list-style-type: none"> Recognize the place value of digits in whole numbers to at least 6-digit numbers Round off to the nearest 10, 100 or 1000 <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> Multiples of 2-digit numbers to at least 100 	<p>1.4.2.4 1.4.2.5 1.4.3.3 1.4.3.4 1.4.4.3 1.4.4.4 1.4.6.6 1.4.6.7 3.8.3.5</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> Factors of 2-digit whole numbers to at least 100 <p>Multiplication facts for</p> <ul style="list-style-type: none"> Units by multiples of 10 Units by multiples of 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> Recognize and use the commutative, associative and distributive properties with whole numbers 1 in terms of its multiplicative property <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p> <p>Solve problems involving whole numbers, including</p> <ul style="list-style-type: none"> Comparing two or more quantities of the same kind (ratio) Comparing two quantities of different kinds (rate) 	3.8.7.2
Term 4		
Mental mathematics		Same as Term 1
1.1 Whole numbers Counting, ordering, comparing, representing and place value of digits	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> Count forwards and backwards in whole number intervals up to at least 10 000 Order, compare and represent numbers to at least 6-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 6-digit 	1.1.2.7 1.1.2.8 1.7.8.4 1.1.10.3 1.1.6.10 1.1.8.10 1.1.8.5



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>numbers</p> <ul style="list-style-type: none"> Rounding off to the nearest 5, 10, 100 and 1 000 	<p>1.1.8.6 1.1.9.5 1.1.9.9 1.1.3.9 1.7.1.1 1.7.1.5</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculations Addition and subtraction of whole numbers of at least 5 digits.</p> <p>Calculation techniques Using a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> Estimation Building up and breaking down numbers Rounding off and compensating Doubling and halving Using a number line Using addition and subtraction as inverse operations <p>Number range for multiples and factors Multiples of 2-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative and associative properties with whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.2.6.8 1.3.7.3 1.3.8.5 1.3.8.6</p>
<p>3.2 Properties of 3-D objects</p>	<p>Objects learners need to know and name:</p> <ul style="list-style-type: none"> Rectangular prisms and other prisms Cubes Cylinders Cones 	<p>8.1.2.3</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none"> • Pyramids • Similarities and differences between cubes and rectangular prisms <p>Characteristics learners use to distinguish, describe, sort and compare shapes</p> <ul style="list-style-type: none"> • Shape of faces • Numbers of faces • Flat and curved surfaces <p>Further activities to focus learners on characteristics of objects</p> <ul style="list-style-type: none"> • Create 3-D models using cut-out polygons • Cutting open boxes to trace and describe their nets 	
<p>1.2 Common fractions</p>	<p>Describing and ordering fractions</p> <ul style="list-style-type: none"> • Count forwards and backwards in fractions • Compare and order common fractions to at least twelfths <p>Calculations with fractions</p> <ul style="list-style-type: none"> • Addition of common fractions with the same denominator • Addition and subtraction of mixed numbers • Fractions of whole numbers which result in whole numbers • Recognize, describe and use the equivalence of division and fractions <p>Solving problems Solve problems in contexts involving common fractions, including grouping and sharing.</p> <p>Equivalent forms Recognize and use equivalent forms of common fractions with denominators which</p>	<p>2.1.3.1 2.1.3.2 2.1.4.3 2.1.4.5 2.1.4.6 2.1.5.2 2.1.5.5 2.2.1.1 2.2.1.2 2.2.1.3 2.2.1.4 2.2.2.3 2.2.3.3 2.2.3.1 2.2.5.7 3.4.5.2 3.4.5.3 3.4.5.4 3.4.5.5 3.4.5.6 3.4.5.7 3.4.5.8 3.4.6.2 3.4.6.3</p>



CAMI Education linked to CAPS: Mathematics: Grade 5

	are multiples of each other.	3.4.6.4
1.1 Whole numbers Division	<p>Number range for calculations Division of at least whole 3-digit by 2-digit numbers</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers <p>Number range for counting, ordering and representing, and place value of digits</p> <ul style="list-style-type: none"> • Recognize the place value of digits in whole numbers to at least 6-digit numbers • Round off to the nearest 10, 100 and 1 000 <p>Number range for multiples and factors</p> <ul style="list-style-type: none"> • Multiples of 2-digit numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 <p>Multiplication facts</p> <ul style="list-style-type: none"> • Units by multiples of 10 • Units by multiples of 100 <p>Properties of whole numbers</p> <ul style="list-style-type: none"> • Recognize and use the commutative, associative and distributive properties of whole numbers • 1 in terms of its multiplicative property <p>Solving problems</p>	1.5.1.7 1.5.1.10 1.5.5.1 1.5.5.2 1.5.5.3 1.5.5.4 1.5.5.5 1.5.5.6 1.5.7.1 1.5.7.2 1.5.7.3 1.5.8.1 3.5.5.3 3.8.2.6



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>Solve problems in contexts involving whole numbers, including financial contexts</p> <p>Solve problems involving whole numbers, including:</p> <ul style="list-style-type: none"> • Comparing two or more quantities of the same unit (ratio) • Comparing two quantities of different kinds (rate) • Grouping and equal sharing with remainders 	3.8.7.2
4.6 Perimeter, area and volume	<p>Perimeter Measure perimeter using rules or measuring tapes.</p> <p>Measurement of area Find areas of regular and irregular shapes by counting squares on grids in order to develop an understanding of square units.</p> <p>Measurement of volume Find volume / capacity of objects by packing or filling them in order to develop an understanding of cubic units.</p>	9.3.1.3 9.3.1.5 9.3.2.1 9.3.2.3 9.3.2.4 9.5.1.3
3.6 Position and movement	<p>Location and direction Locate position of objects / drawings/ symbols on a grid using alpha-numeric grid references.</p> <p>Locate positions of objects on a map using alpha-numeric grid references.</p> <p>Follow directions to trace a path between positions on a map.</p>	9.6.1.1 9.6.1.2 9.6.1.3
3.4 Transformations	<p>Use transformations to create composite shapes Make composite 2-D shapes including shapes with line symmetry by tracing and</p>	Class activity



CAMI Education linked to CAPS: Mathematics: Grade 5

	<p>moving a 2-D shape in one or more of the following ways:</p> <ul style="list-style-type: none">• By rotation• By translation• By reflection <p>Use transformations to make tessellations Make tessellated patterns including some patterns with line symmetry by tracing and moving 2-D shapes in one or more of the following ways:</p> <ul style="list-style-type: none">• By rotation• By translation• By reflection <p>Describe patterns Refer to lines, 2-D shapes, 3-D objects and / or lines of symmetry and / or rotations and / or reflections and / or translations when describing patterns</p>	
<p>2.2 Geometric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none">• Investigate and extend geometric patterns looking for relationships or rules of patterns:<ul style="list-style-type: none">❖ Represented in physical or diagram form❖ Sequences involving a constant difference or ratio❖ Of learner's own words <p>Input and output values Determine input values, output values and rules for the patterns and relationships using flow diagrams.</p> <p>Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented</p> <ul style="list-style-type: none">• Verbally	



CAMI Education linked to CAPS: Mathematics: Grade 5

	<ul style="list-style-type: none">• In a flow diagram• By a number sentence	4.1.1.7 3.2.6.2
2.3 Number sentences (Introduction to algebraic expressions)	Number sentences <ul style="list-style-type: none">• Write number sentences to describe problem situations• Solve and complete number sentences by:<ul style="list-style-type: none">❖ Inspection❖ Trial and improvement• Check solution by substitution	3.5.6.2 3.5.6.3
5.2 Probability	Perform simple repeated events and list possible outcomes for events such as <ul style="list-style-type: none">• Tossing a coin• Rolling a die• Spinning a spinner Count and compare the frequency of actual outcomes for a series of trials up to 20 trials.	10.2.1.3 10.2.1.4