ENGLISH MATHEMATICS _2023 WEEKLY TEACHING PLAN _ GRADE 6

TERM 1	Week 1 3 days	Week 2 5 days	Week 3 5 days	Week 4 5 days:	Week 5 5 days	Week 6 5 days	Week 7 5 days	Week 8 5 days	Week 9 5 days	Week 10 3/5 days	Week 11 5/3 days
Hours per topic	9 hrs.		12 hrs.		12 hrs.		3 hrs	12 hrs.		3/6 hrs	6/3 hrs

Topics, concepts and skills	Week 1–2	Week 3–4	Week 5–6	Week 7	Week 8–9	Week 10	Week 11

	REVISION OF GRADE 5 WORK (to be integrated into the topics, accordingly)
	
	WHOLE NUMBERS:
	
	Counting, ordering, comparing, representing and place value (6 – 9 digit numbers)
	• Order, compare and represent numbers up to at least 9-digit numbers
	• Represent prime numbers to at least 100
	• Recognize the place value of digits in whole numbers to at least 9-digit numbers
	• Round off to the nearest 5, 10, 100 and 1 000
		WHOLE NUMBERS:
		
		Addition and subtraction
		
		Number range for calculations
		• Addition and subtraction of whole numbers with at least 5-digit and 6-digit numbers
		
		Calculation techniques
		• Use **any two** of the range of techniques to perform and check written and mental calculations with whole numbers including:
		  − estimation
		  − adding, subtracting in columns
		  − building up and breaking down numbers
		  − rounding off and compensating
		  − using a number line
		  − using addition and subtraction as inverse operations
		  − using a calculator
		Note:
		• **Ensure that the strategies used do not compromise conceptual understanding**
		• **Calculator must only be used to check the correctness of the solution**
		
		Properties of whole numbers
		• Recognize and use the commutative; associative; distributive properties of whole numbers
		• 0 in terms of its additive property
		
		Solving problems
		• Solve problems involving whole numbers, including:
		  − financial contexts
		  − mmeasurement contexts
			WHOLE NUMBERS:
			
			Multiplication
			
			Number range for calculations
			• Multiplication of at least whole **4-digit by 3-digit numbers**
			• Multiple operations on whole numbers with or without brackets
			
			Calculation techniques
			• Use **any two** of the range of techniques to perform and check written and mental calculations with whole numbers including:
			  − estimation
			  − multiplying in columns
			  − building up and breaking down numbers
			  − doubling and halving
			  − using multiplication and division as inverse operations
			  − using a calculator
			Note:
			• **Ensure that the strategies used do not compromise conceptual understanding**
			• **Calculator must only be used to check the correctness of the solution**
			
			Number range for multiples and factors
			• Multiples of 2-digit and 3-digit numbers
			• Factors of 2-digit and 3-digit whole numbers
			• Prime factors of numbers to at least 100
			
			Properties of whole numbers
			• Recognize and use the commutative; associative; distributive properties of whole numbers
			• 1 in terms of its multiplicative property
			
			Solving problems
			• Solve problems involving whole numbers, including:
			  − financial contexts
			  − measurement contexts
			  − comparing two or more quantities of the same kind (ratio)
			  − comparing two quantities of different kinds (rate)
				FORMAL ASSESSMENT TASK
				
				ASSIGNMENT
				Whole numbers
				• Counting, ordering, comparing, representing and place value
				• Addition and subtraction
				• Multiplication
				Note: Assignment to be completed in class within 3 hrs
					WHOLE NUMBERS:
					
					Division
					
					Number range for calculations
					• Division of at least whole 4-**digit by 3-digit numbers**
					• Multiple operations on whole numbers with or without brackets
					
					Calculation techniques
					• Use **any two** of the range of techniques to perform and check written and mental calculations with whole numbers including:
					  − estimation
					  − long division
					  − building up and breaking down numbers
					  − using multiplication and division as inverse operations
					  − using a calculator
					Note:
					• **Ensure that the strategies used do not compromise conceptual understanding**
					• **Calculator must only be used to check the correctness of the solution**
					
					Properties of whole numbers
					• Recognize and use the distributive property of whole numbers
					• 1 in terms of its multiplicative property
					
					Solving problems
					• Solve problems involving whole numbers, including:
					  − financial contexts
					  − measurement contexts
					  − comparing two or more quantities of the same kind (ratio)
					  − ccomparing two quantities of different kinds (rate)
					  − grouping and equal sharing with remainders
						REVISION	**FORMAL ASSESSMENT TASK**
							TEST
							All topics

| Prerequisite skill or pre-knowledge | • Counting, ordering, comparing, representing and place value of (4 – 6 digit numbers)
• Represent odd and even numbers to at least 1 000. | • Addition and Subtraction of 5-digit numbers
• Properties of operations with whole numbers | • Multiplication of 3-digit by 2-digit numbers
• Prime numbers
• Multiples of 2-digits whole numbers to at least 100
• Factors of 2-digit whole numbers to at least 100
• Properties of operations with whole numbers | | • Division of 3-digit by 2-digit numbers
• Multiples of 2-digits whole numbers to at least 100
• Factors of 2-digit whole numbers to at least 100
• Properties of operations with whole numbers | | |

TERM 2	3 hrs	Week 1 3 days	Week 2 5 days	Week 3 3 days	Week 4 4 days	Week 5 5 days	Week 6 5 days	Week 7 5 days	Week 8 5 days	Week 9 5 days	Week 10 4 days	Week 11 5 days
Hours per topic		6 hrs		6 hrs	6 hrs	15 hrs			12 hrs.		4 hrs	6 hrs
Topics, concepts and skills	**FORMAL ASSESSMENT TASK** **INVESTIGATION** **Note:** Administer an investigation on any ONE of the Term 2 topics before teaching it.	**NUMBER SENTENCES** • Write number sentences to describe problem situations • Solve and complete number sentences by: – inspection – trial and improvement • Check solutions by substitution		**NUMERIC PATTERNS** **Investigate and extend patterns** • Investigate and extend numeric patterns looking for relationships or rules of patterns: – sequences not limited to a constant difference or ratio – of learner's own creation represented in tables • Describe observed relationships or rules in learner's own words **Input and output values** • Determine input values, output values and rules for the patterns and relationships using: – flow diagrams – tables **Equivalent forms** • Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – in a table – by a number sentence	**GEOMETRIC PATTERNS** **Investigate and extend patterns** • Investigate and extend geometric patterns looking for relationships or rules of patterns: – represented in physical or diagram form – sequences not limited to a constant difference or ratio – of learner's own creation • Describe observed relationships or rules in learner's own words **Input and output values** • Determine input values, output values and rules for the patterns and relationships using: – flow diagrams – tables **Equivalent forms** • Determine equivalence of different descriptions of the same relationship or rule presented: – verbally – in a flow diagram – in a table – by a number sentence	COMMON FRACTIONS **Describing and ordering fractions** • Compare and order common fractions, including specifically tenths and hundredths **Calculations with fractions:** • Addition and subtraction of common fractions in which one denominator is a multiple of another • Addition and subtraction of mixed numbers • Fractions of whole numbers **Solving problems** • Solve problems in contexts involving common fractions, including grouping and sharing **Percentages** • Find percentages of whole numbers **Equivalent forms** • Recognize and use equivalent forms of common fractions with 1-digit or 2-digit denominators (fractions in which one denominator is a multiple of another) • Recognize equivalence between common fraction and percentage forms of the same number			**DECIMAL FRACTIONS** **Recognizing, ordering and place value of decimal fractions** • Count forwards and backwards in decimal fractions to at least two decimal places • Compare and order decimal fractions to at least two decimal places • Place value of digits to at least two decimal places **Calculations with decimal fractions** • Addition and subtraction of decimal fractions of at least two decimal places • Multiply decimal fractions by 10 and 100 **Solving problems** • Solve problems in context involving decimal fractions **Equivalent forms:** • Recognize equivalence between common fraction and decimal fraction forms of the same number • Recognize equivalence between common fraction, decimal fraction and percentage forms of the same number		**REVISION OF TERM 1 & 2 WORK**	**ASSESSMENT TASK** **TEST** All Term 1 & 2 topics
Prerequisite skill or pre-knowledge		Number sentences at the level of grade 5		• Investigate and extend patterns • Describe patterns in own words • Describe general rules observed in patterns • Determine input and output values	• Investigate and extend patterns • Describe patterns in own words	• Whole numbers • Equal sharing • Fractions of whole numbers Equivalence			• Common fractions • Percentages • Compare and order tenths and hundredths • Fractions of whole numbers Equivalence			

3

TERM 3		Week 1 4 days	Week 2 5 days	Week 3 5 days	Week 4 4 days	Week 5 5 days	Week 6 5 days	Week 7 5 days	Week 8 5 days	Week 9 5 days	Week 10 5 days	Week 11 4 days
Hours per topic		**6 hrs**	**12 hrs**			**9 hrs**		**6 hrs**	**9 hrs.**		**6 hrs.**	**4 hrs.**
Topics, concepts and skills	**FORMAL ASSESSMENT TASK** **PROJECT** **Note:** The project must cover a combination of topics from Term 1 - 3 and must be completed before the end of Term 3	**LENGTH** **Practical measuring** • Estimate and practically measure 2-D shapes and 3-D objects using measuring instruments such as: – rulers – metre sticks – tape measures – trundle wheels • Record, compare and order lengths of shapes and objects in millimetres (mm), centimetres (cm), metres (m), kilometres (km) **Calculations and problem-solving** • Solve problems in contexts involving length • Convert between millimetres (mm), centimetres (cm), metres (m) and kilometres (km) • Conversions should include common fractions and decimal fractions forms to 2 decimal places	**PROPERTIES OF 2-D SHAPES** **Range of shapes** • Regular and irregular polygons – triangles, squares, rectangles, parallelograms, other quadrilaterals, pentagons, hexagons, heptagons, octagons • Similarities and differences between rectangles and parallelograms **Features of shapes** • Describe, sort and compare 2-D shapes in terms of – number of sides – length of sides – size of angles ✓ acute ✓ right ✓ obtuse ✓ straight ✓ reflex ✓ revolution **Further activities** • Draw 2-D shapes on grid paper • Draw circles, patterns in circles and patterns with circles using a pair of compasses **Angles** • Recognize and name the following angles in 2-D shapes: – acute – right – obtuse – straight – reflex – revolution			**SYMMETRY (3 Hrs)** **Recognize, draw and describe lines of symmetry in 2-D shapes** **TRANSFORMATIONS (6 Hrs)** **Use transformations to make composite shapes** • Make composite 2-D shapes including shapes with line symmetry by tracing and moving a 2-D shape in one or more of the following ways: – by rotation – by translation – by reflection **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: – by rotation – by translation – by reflection **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: – in nature – from modern everyday life – from our cultural heritage **Enlargement and reductions** • Draw enlargement and reductions of 2-D shapes to compare size and shape of – triangles – quadrilaterals		**PROPERTIES OF 3-D OBJECTS** **Range of objects** • Recognize, visualize and name 3-D objects in the environment and geometric settings, focusing on: – rectangular prisms – cubes – tetrahedrons – pyramids • Similarities and differences between tetrahedrons and other pyramids **Characteristics of objects** • Describe, sort and compare 3-D objects in terms of: – number and shape of faces – number of vertices – number of edges **Further activities** • Make 3-D models using: – drinking straws, toothpicks etc. – nets	**AREA, PERIMETER AND VOLUME** **Perimeter** • Measure perimeter using rulers or measuring tapes **Measurement of area** • Continue to find areas of regular and irregular shapes by counting squares on grids • Develop rules for calculating the areas of squares and rectangles **Measurement of volume** • Continue to find volume/capacity of objects by packing or filling them • Develop an understanding of why the volume of rectangular prisms is given by length multiplied by width multiplied by height **Investigate:** • Relationship between perimeter and area of rectangles and squares. • Relationship between surface area and volume of rectangular prisms		**REVISION**	**FORMAL ASSESSMENT TASKS** **TEST** All Term 3 topics

4

Prerequisite skill or pre-knowledge		• Estimating, measuring, recording, comparing and ordering length
		• Use Measuring instruments:
		• Units of length:
		• Solve problems in contexts
		• Conversions limited to whole numbers and common fractions
			• Similarities and differences between squares and rectangles
			• Recognize and describe angles in 2-D shapes:
			  – right angles
			  – angles smaller than right angles
			  – angles greater than right angles
			• Describe, sort and compare 2-D shapes in terms of
			  – straight and curved sides
			  – number of sides
			  – lengths of sides
			  – angles in shapes, limited to right angles, angles smaller than right angles and angles greater than right angles
				• 2D shapes
				• Symmetry
				• Similarities and differences between cubes and rectangular prisms
				• Describe, sort and compare 3-D objects in terms of:
				  – shape of faces
				  – number of faces
				  – flat and curved surfaces			

TERM 4	Week 1 4 days	Week 2 5 days	Week 3 5 days	Week 4 5 days:	Week 5 5 days	Week 6 5 days	Week 7 5 days	Week 8 5 days	Week 9 5 days	Week 10 3 days
Hours per topic	9 hrs.		6 hrs.	6 hrs.	12 hrs.		6 hrs	6 hrs	6 hrs	3 hrs.

Topics, concepts and skills	**MASS**
	
	Practical measuring
	
	• Estimate and practically measure 3-D objects using measuring instruments such as:
	  – bathroom scales (analogue and digital);
	  – kitchen scales (analogue and digital)
	  – balances
	• Record, compare and order mass of objects in grams (g) and kilograms (kg).
	
	Calculations and problem-solving
	
	• Solve problems in contexts involving mass
	• Convert between grams and kilograms to include fraction and decimal forms (to 2 decimal places)
			TIME
			
			Reading time and time instruments
			
			• Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in:
			  – hours
			  – minutes
			  – seconds
			• Instruments include clocks, watches and stopwatches
			
			Reading calendars
			
			Calculations and problem-solving related to time
			
			• Solve problems in contexts involving time
			• Read time zone maps and calculating time differences based on time zones
			• Calculation of time intervals where time is given in:
			  – seconds and/or minutes;
			  – minutes and/or hours
			  – hours and /or days
			  – days and/or weeks and/or months
			  – years and/or decades
			  – centuries and/or decades and/or years
				CAPACITY AND VOLUME
				
				Practical Measuring
				
				• Estimate and practically measure 3-D objects using measuring instruments such as:
				  – measuring spoons
				  – measuring cups,
				  – measuring jugs
				• Record, compare and order capacity and volume of 3D objects in millilitres (ml), litres (l) and kilolitres (*kl*)
				
				Calculations and problem- solving
				
				• Solve problems in contexts involving capacity/volume
				• Convert between kilolitres, litres and millilitres to include fraction and decimal forms (to 2 decimal places)
					DATA HANDLING
					
					Collecting and organising data
					
					Collect data
					
					• Use tally marks and tables for recording
					• Use simple questionnaires (yes/no type response)
					• Order data from smallest group to largest group
					
					Note: PROVIDE LEARNERS WITH DATA TO SAVE TIME
					
					Representing data
					
					• Draw a variety of graphs to display and interpret data including:
					  – pictographs with many-to-one representations
					  – bar graphs and double bar graphs
					
					Analysing, interpreting and reporting data
					
					• Critically read and interpret data represented in:
					  – words
					  – pictographs
					  – bar graphs
					  – double bar graphs
					  – pie charts
					• Analyse data by answering questions related to:
					  – data categories, including data intervals
					  – data sources and contexts
					  – central tendencies – (mode and median)
					• Summarise data verbally and in short written paragraphs that include
					  – drawing conclusions about the data
					  – making predictions based on the data
							USE ALL FOUR BASIC OPERATIONS TO SOLVE PROBLEMS IN CONTEXT
							
							Solving problems
							
							• Solve problems in contexts involving whole numbers and fractions, including:
							  – financial contexts
							  – measurement contexts
							  – fractions, including grouping and equal sharing
							  – comparing two or more quantities of the same kind (ratio)
							  – comparing two quantities of different kinds (rate)
								REVISION	**FORMAL ASSESSMENT TASK**
									TEST
									
									Term 3 & 4 topics and fundamental topics of Term 1 & 2	

Prerequisite skill or pre-knowledge	• Estimating, measuring, recording, comparing and ordering mass • Use Measuring instruments • Units of mass • Solve problems in contexts • Conversions limited to whole numbers and common fractions		• Calculation of the number of days between any two dates within the same or consecutive years • Calculation of time intervals where time is given in minutes or hours only	• Number sentences • All operations with whole numbers, common fractions and decimal fractions						