2023/24 ANNUAL TEACHING PLANS: MATHEMATICS: GRADE 5 (TERM 1)

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
HOURS PER TOPIC	21 hrs				9 hrs	3 hrs	18 hrs			3/6 hrs	6/3 hrs
TOPICS, CONCEPTS AND SKILLS	**REVISION OF GRADE 4 WORK (to be integrated into the topics, accordingly)** **WHOLE NUMBERS:** **Number range for counting, ordering, comparing and representing, and place value of digits** • Order, compare and represent numbers to at least 6-digit numbers • Recognise the place value of digits in whole numbers to at least 6-digit numbers • Round off to the nearest 5, 10, 100 and 1 000					**NUMBER SENTENCES** • Write number sentences to describe problem situations • Solve and complete number sentences by: — Inspection — Trial and improvement • Check solution by substitution	**FORMAL ASSESSMENT TASKS** **ASSIGNMENT** Whole numbers Number sentences **Note:** Assignment to be completed in class within 3 hrs	**WHOLE NUMBERS: Addition and subtraction** **Number range for calculations** • Addition and subtraction of whole numbers with at least 5-digit numbers **Calculation techniques** • Use **any two** of the range of techniques to perform and check written and mental calculations of whole numbers including: — Estimation — Adding and subtracting in columns — Building up and breaking down numbers — Using a number line — Rounding off and compensating — Using addition and subtraction as inverse operations **Note: Ensure that the strategies used do not compromise conceptual understanding** **Properties of whole numbers** • Recognise and use the commutative and associative properties of whole numbers • 0 in terms of its additive property **Solving problems** • Solve problems involving whole numbers, including the following: — Financial contexts — Measurement contexts			**REVISION**	**FORMAL ASSESSMENT TASK** **Test** all topics
PREREQUISITE SKILL OR PRE-KNOWLEDGE	• Counting ordering, comparing, and representing place value of 4-digit numbers • Recognise the place value of digits in whole numbers to at least 4-digit numbers • Rounding off to the nearest 100					Basic operations with whole numbers		• Addition and subtraction of 4-digit numbers • Round off to the nearest 10, 100, 1 000 and estimate answers • Adding and subtracting units, multiples of 10 and multiples of 100, 1 000 to/from any 4-digit number				

2023/24 ANNUAL TEACHING PLANS: MATHEMATICS: GRADE 5 (TERM 2)

TERM 2		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
HOURS PER TOPIC	3 hrs	15 hrs			15 hrs			9 hrs		6 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	**WHOLE NUMBERS: Multiplication** **Number range for calculations** • Multiplication of at least whole 3-digit by 2-digit numbers **Calculation techniques** • **Use any two** of the range of techniques to perform and check written and mental calculations of whole numbers including: — Estimation — Building up and breaking down numbers — Doubling and halving — Using multiplication and division as inverse operations **Note: Ensure that the strategies used do not compromise conceptual understanding** **Number range for multiples and factors** • Multiples of 2-digits whole numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 **Properties of whole numbers** • Recognise and use the commutative, associative and distributive properties with 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)			**WHOLE NUMBERS: Division** **Number range for calculations** • Division of at least whole 3-digit by 2-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 — Building up and breaking down numbers — Using multiplication and division as inverse operations **Note: Ensure that the strategies used do not compromise conceptual understanding** **Properties of whole numbers** • Recognise and use the distributive property of whole numbers • 1 in terms of its multiplicative property **Solving problems** • Solve problems in contexts 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) — Grouping and equal sharing with remainders			**NUMERIC PATTERNS** **Investigate and extend patterns** • Investigate and extend numeric patterns looking for relationships or rules of patterns — Sequences not limited to constant difference or ratio — Of learner's own creation • Describe observed relationships or rules for sequences involving constant difference or ratio in learner's own words **Input and output values** • Determine input values, output values and rules for patterns and relationships: — 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 **Equivalent forms** • Determine equivalence of different descriptions of the same relationship or rule presented: — Verbally — In a flow diagram — By a number sentence	**REVISION OF TERM 1 & 2 WORK**	**ASSESSMENT TASK** **TEST** All term 1 & 2 topics
PREREQUISITE SKILL OR PRE-KNOWLEDGE		• Describe, compare and order common fractions of different denominators (halves, thirds, quarters, fifths, sixths, sevenths, eighths) fractions in diagram form • Equivalent fractions • Multiply at least and 2-digit by 2-digit numbers • Doubling and halving • Multiplication facts for units by multiples of 10, 100 and 1 000 • Building up and breaking down 4-digit whole numbers • Round off to the nearest 10, 100 and 1 000 to estimate answers • Multiples of 1-digit numbers to at least 100 • 1 in terms of its multiplicative property			• Division of 3-digit numbers by 1-digit numbers • Solve problems in financial and measurement contexts with whole numbers including sharing, grouping and rate • Multiples of 2-digit numbers to at least 100 • Factors of 2-digit whole numbers to at least 100 • 1 in terms of its multiplicative property			• Investigate and extend patterns • Describe patterns in own words • Describe general rules observed in patterns • Determine input and output values in tables and flow diagrams		• Investigate and extend patterns • Describe patterns in own words • Describe general rules observed in patterns • Determine input and output values in tables and flow diagrams		

2023/24 ANNUAL TEACHING PLANS: MATHEMATICS: GRADE 5 (TERM 3)

TERM 3		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
HOURS PER TOPIC		21 hrs				6 hrs		12 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	**COMMON FRACTIONS** **Describing and ordering fractions** • Count forwards and backwards in fractions • Compare and order common fractions to at least twelfths **Calculations with fractions** • Addition and subtraction of common fractions with same denominator • Addition and subtraction of mixed numbers • Fractions of whole which result in whole numbers • Recognise, describe and use the equivalence of division and fractions **Solving problems** • Solve problems in contexts involving common fractions, including grouping and sharing **Equivalent forms** • Recognise and use equivalent forms of common fractions (fractions in which one denominator is a multiple of another)				**LENGTH** **Practical measuring** • Estimate and practically measure 2D shapes and 3D 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 any of the following units: – Millimetres (mm), – Centimetres (cm), – Metres (m) and – Kilometres (km) • Conversions limited to whole numbers and common fractions		**PROPERTIES OF 2D SHAPES** **Range of shapes** • Recognise, visualise and name 2D shapes in the environment and geometric setting, focusing on: – Regular and irregular polygons – triangles, squares, rectangles, other quadrilaterals, pentagons, hexagons, heptagons – Circles • Similarities and differences between squares and rectangles **Characteristics of shapes** • Describe, sort and compare 2D 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 ✓ Angles greater than right angles **Further activities** • Draw 2D shapes on grid paper **Angles** • Recognise and describe angles in 2D shapes: – Right angles – Angles smaller than right angles – Angles greater than right angles		**PROPERTIES OF 3-D OBJECTS** **Range of objects** • Recognise, visualise and name 3D objects in the environment and geometric settings, focusing on: – Rectangular prisms and other prisms – Cubes – Cylinders – Cones – Pyramids • Similarities and differences between cubes and rectangular prisms **Characteristics of objects** • Describe, sort and compare 3D objects in terms of: – Shape of faces – Number of faces – Flat and curved surfaces **Further activities** • Make 3D models using cut out polygons • Cut open boxes to trace and describe their nets	**REVISION**	**FORMAL ASSESSMENT TASKS** **TEST** All term 3 topics
PREREQUISITE SKILL OR PRE-KNOWLEDGE		• Describe, compare and order common fractions of different denominators (halves, thirds, quarters, fifths, sixths, sevenths, eighths) fractions in diagram form • Equivalent fractions • Adding and subtracting fractions in context				• Estimating, measuring, recording, comparing and ordering length • Use of measuring instruments • Units of length • Solve problems in contexts • Converting between units • Conversions limited to whole numbers and common fractions		• Recognise, visualise and name 2D shapes in the environment and geometric settings: – Regular and irregular polygons up to hexagons – Circles • Describe, sort and compare 2D shapes in terms of: – Straight and curved sides – Number of sides		• Recognise, visualise and name: – Rectangular prisms – Spheres – Cylinders – Cones – Square-based pyramids • Describe, sort and compare 3D objects in terms of: – Shapes of faces – Flat and curved surfaces • Make 3D models using cut-out polygons		

2023/24 ANNUAL TEACHING PLANS: MATHEMATICS: GRADE 5 (TERM 4)

TERM 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
HOURS PER TOPIC	15 hrs			6 hrs	6 hrs	12 hrs		6 hrs	6 hrs	3 hrs

TOPICS, CONCEPTS AND SKILLS	**PERIMETER, AREA AND VOLUME OF 2D SHAPES**
	
	Perimeter
	• Measure perimeter using rulers or measuring tapes
	Measurement of area
	• Find areas of regular and irregular shapes by counting squares on grids in order to develop an understanding of square units
	Measurement of volume
	• Find volume/capacity of objects by packing or filling them in order to develop an understanding of cubic units
				CAPACITY/VOLUME
				
				Practical measuring
				• Estimate and practically measure 3D 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) and litres (l)
				Calculations and problem-solving
				• Solve problems in contexts involving capacity/volume
				• Convert between millilitres and litres limited to examples with whole numbers and fractions
					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 time include:
					• Problems in contexts involving time
					• Calculation of time intervals where time is given in:
					  – Seconds and/or minutes
					  – Minutes and/or hours
					  – Hours and/or days
					  – Days, weeks and/or months
					  – Years and/or decades
						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	• Measure perimeter using rulers or measuring tapes • Find areas of regular and irregular shapes by counting squares on grids in order to develop an understanding of square units			• Millilitres and litres • Measuring instruments such as measuring cups and measuring spoons • Read off measurements where the calibration line is numbered	• Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in hours, minutes and seconds • 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 • Reading calendars	• Number sentences • All operations with whole numbers and common fractions				