

Y8	
HT1	Expected outcomes
Ratio, proportion and rates of change	Understand ratio
	Ratio problems (whole given)
	Ratio problems (part given)
	Ratio problems (difference given)
	Simplify ratios
	Express ratios in the form 1:n and n:1 (E)
	Compare ratios and fractions
	Solve problems with ratio
	Assessment 1: 1. Ratio plus feedback
	Direct proportion
	Conversion graphs
	Convert between currencies
	Direct proportion graphs
	Similar shapes
	Convert metric units
	Scale diagrams
	Interpret maps using scale factors and ratio
Algebra	Form algebraic expressions
	Identify and use formulae, expressions, identities and equations
	Simplify expressions
	Use directed number with algebra
	Substitution with directed number
	Expand a single bracket
	Factorise into a single bracket
	Expand single brackets and simplify
	Expand double brackets of the form $(x \pm a)(x \pm b)$ (E)
	Factorise quadratic expressions (E)
	STEM Space futures (careers) 06.10.26
	Assessment 2: 3. algebraic manipulation plus feedback
	Problem solving / catch up
HT2	Small Steps (objectives)
Algebra	Coordinates in all four quadrants
	Lines parallel to the axes

	Table of values
	Recognise and use the line $y=x$
	Lines of the form $y=mx$
	Link $y=mx$ to direct proportion (E)
	Introduce gradient ($y=mx$)
	Lines with a negative gradient
	Lines of the form $y=x+c$
	Lines of the form $y=mx+c$
	Find the midpoint of a line segment (E)
	Solve problems with coordinates and graphs (E)
	Quadratic graphs (E)
	Maths Week (16-20 Nov)
Number	Divide a fraction by an integer
	Multiply a fraction by an integer
	Multiply fractions
	Understand reciprocals
	Divide an integer by a fraction
	Divide a fraction by a unit fraction
	Divide fractions
	Multiply and divide mixed numbers
	Multiply and divide algebraic fractions (E)
Geometry and measures	Line symmetry
	Rotational symmetry
	Reflect a shape in a horizontal or vertical line
	Reflect a shape in a diagonal line
	Reflect a shape given equation of a line (E)
	Describe a reflection (E)
	Assessments 3,4: 1-6. Summative WRM Term 1 - w/c 07.12.26
	Name 2-D and 3-D shapes
	Area of a 2-D shape
	Area of a compound shape
	Recognise prisms (including language of edges and vertices)
	Volume of cubes and cuboids
	Problem solving / catch up
CHRISTMAS	
HT3	Small Steps (objectives)
Geometry and measures	Convert metric units of mass and capacity
	Understand the units of mass/density/volume

	Solve problems with density, mass and volume
Algebra	Solve simple 1 and 2-step equations
	Solve more complex equations
	Solve fractional equations
	Form and solve equations
	Solve equations with unknowns on both sides
	Understand and use inequalities
	Inequalities on a number line
	Solve simple inequalities
	Form and solve inequalities
	Solve inequalities with unknowns on both sides (E)
	Assessment 5: 8. Equations and inequalities and feedback
Number	Step 1 Percentage of an amount
	Step 2 Convert between percentages and decimals
	Step 3 Use multipliers to find percentages
	Step 4 Convert between decimals and percentages greater than 1
	Step 5 Percentage increase using a multiplier
	Step 6 Percentage decrease using a multiplier
	Step 7 Percentage increase and decrease using a multiplier
	Step 8 Express one number as a fraction or a percentage of another (calculator)
	Step 9 Express one number as a fraction or a percentage of another (non-calculator)
	Step 10 Percentage change
	Step 11 Find the original value given a percentage
	Step 12 Choose appropriate methods to solve percentage problems
	Problem solving / catch up
HT4	Small Steps (objectives)
Algebra	Step 1 Add and subtract expressions with indices
	Step 2 Multiply and divide expressions with indices
	Step 3 Addition law for indices
	Step 4 Subtraction law for indices
	Step 5 Addition and subtraction laws for indices
	Step 6 Powers of powers (E)
	Step 7 Negative indices (E)
	Step 8 Fractional indices (E)
Number	Step 1 Positive and negative powers of 10
	Step 2 Numbers greater than 1 in standard form
	Step 3 Numbers between 0 and 1 in standard form

	Step 4 Standard form on a calculator
Statistics	Step 1 Types of data
	Step 2 Outliers and errors
	Step 3 Averages and range
	Step 4 Choose the most appropriate average
	Step 5 Compare distributions using average and the range
	Step 6 Averages from an ungrouped frequency table
	Step 7 Represent and interpret grouped discrete data
	Step 8 Represent and interpret continuous data grouped into equal classes
	Step 9 Mean and mode from a grouped frequency table (E)
	Assessments 6,7: 7-12. Summative WRM Term 2
EASTER	
HT5	Small Steps (objectives)
Geometry and measures	Step 1 Basic angles rules and notation
	Step 2 Angles between parallel lines and a transversal
	Step 3 Alternate and corresponding angles
	Step 4 Alternate, corresponding and co-interior angles
	Step 5 Solve complex problems with angles in parallel lines
	Step 6 Properties of special quadrilaterals and their diagonals
	Step 7 Find sides and angles in special quadrilaterals
	Step 8 Exterior angles of a polygon
	Step 9 Interior angles of a polygon
	Step 10 Interior angles in a regular polygon
	Step 11 Prove simple geometric facts (E)
Probability	Step 1 Probability vocabulary
	Step 2 The probability scale
	Step 3 Probability of a single event
	Step 4 Use the sum of probabilities being equal to 1
	Step 5 Probability experiments
	Step 6 Sample spaces for 1 or more events
	Step 7 Probabilities from sample space diagrams
	Step 8 Two-way tables
	Step 9 Probabilities from two-way tables
	Step 10 Frequency trees
	Step 11 Probabilities from frequency trees
	Assessment 8: 14. Tables and probability and feedback
	Problem solving / catch up
HT6	Small Steps (objectives)

Geometry and measures	Step 1 Circle vocabulary
	Step 2 Pi as a ratio
	Step 3 Circumference of a circle
	Step 4 Perimeter of parts of a circle
	Step 5 Area of a circle
	Step 6 Area of parts of a circle
	Step 7 Area and circumference of a circle
	Step 8 Perimeter of compound shapes with circles
	Step 9 Perimeter and area of compound shapes with circles
	Assessment 9: 15. Circles and feedback
Statistics	Pictograms and bar charts
	Vertical line charts
	Draw pie charts
	Interpret pie charts
	Line graphs
	Choose the most appropriate graph or chart
	Compare distributions using graphs
	Misleading graphs and charts
Algebra	Step 1 Generate and describe a sequence given a rule in words
	Step 2 Generate a sequence given a simple algebraic rule
	Step 3 nth term of a linear sequence
	Step 4 Generate a sequence given a complex algebraic rule (E)
	Assessments 10,11: 13-17. Summative WRM Term 3
	Sports Day and Activities week
SUMMER	

<https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study#key-stage-3>