Main Scheme - 7 x 1hrs per fortnight

Sets and Probability	Identify and represent sets
	Interpret and create Venn diagrams
	Understand and use the intersection, union and complement of sets
	Know and use the vocabulary of probability
	Calculate the probability of a single event
	Understand and use the probability scale
	Know that the sum of probabilities of all possible outcomes is 1
Tables and probability	Construct sample spaces for 1 or more events
	Find probabilities from sample space
	Find probabilities from two-way tables
	Find probabilities from Venn diagrams
The Data Handling Cycle	Set up a statistical enquiry
	Draw and interpret pictograms, bar charts and vertical line charts
	Draw and interpret multiple bar charts
	Draw and interpret pie charts
	Draw and interpret line graphs
	Choose the most appropriate diagram for a given set of data
	Represent and interpret grouped quantitative data
	Find and interpret the range
	Compare distributions using charts
	Identify misleading graphs
Equations,inequalities & formulae	R - Solve one and two-step equations and inequalities
	R - Solve one and two-step equations and inequalities with brackets
	H - Inequalities with negative numbers
	Solve equations with unknowns on both sides
	Solve inequalities with unknowns on both sides
	Solving equations and inequalities in context
	Substituting into formulae and equations
	Rearranging formulae (one-step)
	Rearranging formulae (two-step)
	H - Rearrange complex formulae including brackets and squares

Straight line graphs	Lines, parallel to the axes, y=x and y=-x
	Using table of values
	Compare gradients
	Compare intercepts
	Understand and use y=mx+c
	H - Write an equation in the form y=mx+c
	Find the equation of a line from a graph
	Interpret gradient and intercepts of real-life graphs
Area and perimeter	R - Find area of 2-D shapes (rectangles, parallelograms,triangles)
	Calculate the area of a trapezium
	Investigate the area (and circumference) of a circle
	Calculate the circumference of a circle (and arc lengths) with/without a calculator
	Calculate the area of a circle and parts of a circle with/without a calculator
	Calculate the perimeter and area of compound shapes
	H - Convert metric units of area
Three dimensional shapes	Know names of 3-D shapes
	Recognise prisms
	Accurate nets of cuboids and other 3-D shapes
	Sketch and recognise nets of cuboids and other 3-D shapes
	Plans and elevations
	Surface area of cubes and cuboids
	surface area of triangular prisms
	surface area of a cylinder
	volume of cubes and cuboids
	Volume of other 3-D shapes - prisms and cylinders
	H - Explore volumes of cone, pyramids and spheres
	H - Convert metric units of volume
Percentages & Interest	R - Convert and compare fractions, decimals and percentages
	R - Work out percentages of amounts (with and without a calculator)
	R - Increase and decrease by a given percentage
	R - Express one number as a percentage of another
	Calculate simple and compound interest
	Repeated percentage change
	Find the orginal value after a percentage change
	Solve problems involving growth and decay
	Solve problems involving percentages, ratios and fractions

Maths and Money	Solve problems with bills and bank statements
	Solve problems with VAT
	Calculate wages and taxes
	Solve problems with exchange rates
	Solve unit pricing problems
Line symmetry and reflection	Recognise line symmetry
	Reflect a shape in a horizontal or vertical line 1 (shapes touching the line)
	Reflect a shape in a horizontal or vertical line 2 (shapes not touching the line)
	Reflect a shape in a diagonal line 1 (shapes touching the line)
	Reflect a shape in a diagonal line 2 (shapes not touching the line)
Rotation and Translation	Identify the order of rotational symmetry of a shape
	Compare and contrast rotational symmetry with line symmetry
	Roatate a shape about a point on a shape
	Roatate a shape about a point not on a shape
	Translate points and shapes by a given vector
	Compare rotation and reflection of shapes
	H - Find the result of a series of transformations
Representing data	Draw and interpret scatter graphs
	Understand and describe linear correlation
	Draw and use line of best fit (1)
	Draw and use line of best fit (2)
	Identify non-linear relationships
	Identify different types of data
	Read and interpret ungrouped frequency tables
	Read and interpret grouped frequency tables
	Represent grouped discrete data
	Represent continuous data grouped into equal classes
	Represent data in two-way tables
Measures of Location	Understand and use the mean, median and mode
	Choose the most appropriate average
	H - Find the mean from an ungrouped frequency table
	H - Find the mean from a grouped frequency table
	Identify outliers
	Compare distributions using averages and the range

Solving ratio and proportion problems	R - Solve problems with direct proportion
	R - Direct proportion and conversion graphs
	Solve problems with inverse proportion
	H - Graphs of inverse relationships
	R - Solve ratio problems given the whole or part
	Solve 'best-buy' problems
	H - Solve problems ratio and algebra
Rates	Solve speed, distance and time problems without a calculator
	Solve speed, distance and time problems with a calculator
	Use distance/time graphs
	Solve problems with density, mass and volume
	Solve problems with pressure, force and area
	Solve flow problems and their graphs
	H - Convert compound units
Indices & Roots	R - Square and cube numbers
	Calculate higher powers and roots
	R - The addition and subtraction rules for indices
	Work with powers of powers
	Understand and use the power zero and negative indices
	H - Understand and use fractional indices
	R - Powers of ten and standard form
	R - Calculate with numbers in standard form
Pythagoras	Identify the hypotenuse of a right-angled triangle
	Determine whether a triangle is right angled
	Calculate the hypotenuse of a right-angled triangle
	Calculate missing sides in right-angled triangles
	Use Pythagoras' theroem on coordinate axes
	H - Use Pythagoras' theroem in 3-D shapes
Constructions	R - construct and interpret scale drawings
	Locus of distance from a point
	Locus of distance from a striaght line/shape
	Locus of points equidistant from two points (perpendicular bisector)
	Construct a perpendicular from/ to a point
	Locus of distance from two lines (angles bisector)
	Construct triangles from given information
	Solve loci problems