Year 7 Mathematics Curriculum Map

NUMBER

SHAPE, SPACE AND MEASURE

ALGEBRA

RATIO AND PROPORTION

STATISTICS AND PROBABILITY

Year 7 Unit of work	Skills learnt
Number – Calculating with integers	- Addition/subtraction/Multiplication/Division using different strategies - Inverse operations - Understand and use BIDMAS - Develop calculator skills - Order numbers - Round to decimal places and significant numbers - Estimation/Approximation - Understand and recognise square numbers and cube numbers - Work with negative numbers
Decimals and measures	- Understand and use decimal notation and place value - Compare and order decimals(including contexts of measure) - Choose suitable units of measure for length, mass and capacity - Read and interpret scales with decimals - Add/Subtract/Multiply/Divide with decimals - Round decimals to a decimals places and significant numbers - Enter and interpret numbers on a calculator in different contexts (money and time) - Convert between units - Read scales and plot coordinates - Convert between decimals, fractions, percentages - Write terminating decimals as fractions
Assessment 1	
Algebra	- Describe and interpret functions - Understand and use algebraic notation - Construct algebraic expressions - Simplify algebraic expressions by collecting like terms - Identify the difference between an expression, equation, formula and identity - Write and substitute into formulae including negative numbers - Expand single and double brackets - Rearrange formula - Construct and solve linear equations - Solve simple quadratic equations
Sequences and graphs	- Understand the infinite nature of a set of integers - Interpret real life graphs - Read, generate and plot x and y coordinates in all four quadrants - Recognise and plot straight line graphs - Recognising arithmetic, geometric and other sequences - Generate terms of a sequence - Find the nth term expression for an arithmetic sequence
Assessment 2	
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Angles and shapes	- Identify properties of 2D shapes - Recognise and use correct notation for right angles, parallel and perpendicular lines - Distinguish between different types of angles - Understand how to use a protractor to measure angles - Estimate, measure and draw angles - Understand and use angle facts - Solve geometric problems using properties of 2D shapes - Derive exterior and interior angles in polygons
Transformations	- Identify line and rotational symmetry - Describe and carry out reflections - Describe and carry out translations - Describe and carry out a rotations - Describe and carry out enlargements using scale factors - Combine transformations - Describe congruence and similarity
Assessment 3	
Fractions	- Compare and order fractions - Simplify fractions - Understand and use equivalent fractions - Add and subtract fractions - Multiply and divide fractions - Convert between a mixed fraction and an improper fraction - Calculate a fraction of a quantity - Convert between fractions, decimals and percentages - Understand and use fractions in real life
Ratio and proportional reasoning	- Simplifying ratios - Divide a quantity in a given ratio - Develop knowledge of standard metric units - Comparing ratios to the unitary method - Understand the relationship between ratio and proportion - Solve worded problems involving direct and inverse proportion - Relate ratios to fractions and algebra
Assessment 4	
Perimeter and area and volume	- Understand and work out the perimeter and missing lengths of shapes - Deduce and use the area of a triangle, parallelogram and trapezium and other shapes - Calculate the area of compound shapes - Know and use geometric properties of cuboids - Calculate volume of prisms - Explore more complex 3D shapes - Convert between units
Assessment 5	

Analysing and interpreting data Cross curricular with topics that students are learning in Geography and science in the summer term	Learning will be in context of: - students learning in science in summer term - Energy resources, food/digestion, chemical reactions - students learning in geography in summer term - Humanities project on student - Where they live, holidays, carbon footprint. - Read, draw and interpret charts and graphs - Calculating averages from sets of data and tables - Understand the differences between discrete and continuous data - Understand the difference between qualitative and quantitate data - Understand and use two-way tables - Compare two distributions - Construct and interpret pie-charts - Identify misleading charts - Construct frequency tables and frequency diagrams - Use ICT to present data and construct charts
Assessment 6 – End of year Exam	