

In Year 8 Mathematics, students build upon their prior knowledge from Year 7. Students follow 13 topic strands taught in blocks throughout Year 8 with support and challenge in place for every learner. All work in each block is fully differentiated and identifies the “core” and “extend” knowledge for Foundation Support, Foundation and Higher strand. The mathematical skills acquired in Years 7, 8 and 9 are taught to fully prepare each student for the GCSE course and beyond.

Retrieval practice is embedded into lessons. This is usually seen in ‘Brain in Gears’ at the start of all lessons and may include recall questions from previous lessons or a recap of prior learning. Retrieval practice includes interleaved questions from previous topics, making connections between topics where possible.

Following each block of learning, students complete a ‘block review’ sheet which summaries the key questions for that block of learning. Sparx Maths clips are attached to each question to support any gaps in knowledge. Whole-class feedback is given after each block of learning to ensure students receive regular feedback to address any misconceptions as well as provide challenge to those who need it.

Year 8 Curriculum	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Topic(s)	<p>Block 1: Calculations and Accuracy</p> <ul style="list-style-type: none"> - Four operations with negative numbers - Order of Operations - Money Problems - Rounding - Calculator Skills - Upper and Lower Bounds - Estimating calculations <p>Block 2: Simplifying and Substituting</p> <ul style="list-style-type: none"> - Collecting ‘like’ terms 	<p>Block 4: Integers, Powers and Roots</p> <ul style="list-style-type: none"> - HCF and LCM - Prime factor decomposition - Squares, cubes and roots - Index notation - Reciprocals - Negative indices - Converting between standard form and ordinary numbers <p>Block 5: Sequences, Functions and Graphs</p> <ul style="list-style-type: none"> - Draw and 	<p>Block 6: Area and Perimeter</p> <ul style="list-style-type: none"> - Find area and perimeter of triangles and trapeziums - Find the area and perimeter of compound shapes - Area and circumference of circles - Pythagoras in 2D <p>Block 7: Transformations</p> <ul style="list-style-type: none"> - Lines of symmetry - Rotational symmetry - Scale factors of 	<p>Block 9: Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> - Four operations with decimals - Order fractions - Four operations with fractions - Fractions of amounts - Percentage of quantities - Percentage multipliers - Percentage increase and decrease - Percentage change - Four operations with mixed numbers 	<p>Block 11: Forming and Solving Equations</p> <ul style="list-style-type: none"> - Function machines - Solve simple linear equations - Words to formula - Solve linear equations with unknowns on both sides - Draw simple linear inequalities on a number line - Solve linear equations with unknowns on both sides and brackets - Rearrangement of simple linear 	<p>Block 13: Measures, Volume and Surface Area</p> <ul style="list-style-type: none"> - Convert metric units - Volume of cubes and cuboids - Surface area of cubes and cuboids - Volume and surface area of triangular prisms - Volume and surface area of cylinders <p>Maths Engagement Week</p>

	<ul style="list-style-type: none"> - Substitution - Expand single brackets - Factorise into single brackets - Expand double brackets <p>Block 3: Ratio and Proportion</p> <ul style="list-style-type: none"> - Unitary method - Sharing in ratio - Best value problems - Recipes - Currency conversions - Exchange rates - Proportional reasoning - Speed problems 	<p>recognise horizontal and vertical lines</p> <ul style="list-style-type: none"> - Find and use the nth term - Plot a linear graph from table of values - Find gradient of a line - $y=mx+c$ - Special sequences and numbers <p>Maths Engagement Week</p>	<p>enlargement</p> <ul style="list-style-type: none"> - Reflect shapes - Perform an enlargement on a grid - Rotations - Perform an enlargement from a centre <p>Block 8: Probability</p> <ul style="list-style-type: none"> - Two-way tables - Relative frequency - Sample space diagrams - Probability tree diagrams 	<p>Block 10: Lines, Angles and Shapes</p> <ul style="list-style-type: none"> - Types of triangle - Classifying angles - Measuring and estimating angles - Angle facts - Drawing nets of 3D shapes - Angles in parallel lines - Simple bearings 	<p>formulae</p> <p>Block 12: Data and Interpreting Results</p> <ul style="list-style-type: none"> - Draw stem and leaf diagrams - Mode, median, mean and range - Pie charts - Scatter graphs - Compare data sets - Lines of best fit - Correlation - Types of data and sampling - Questionnaires 	
<p>Assessment</p>	<p>Assessment 1 (Blocks 1 – 3)</p>	<p>Assessment 2 (Blocks 4 - 5 + 'Review and Recall' section)</p>	<p>Assessment 3 (Blocks 6 - 8 + 'Review and Recall' section)</p>	<p>Assessment 4 (Blocks 9 - 10 + 'Review and Recall' section)</p>	<p>Assessment 5 (Blocks 11 - 12 + 'Review and Recall' section)</p>	
<p>Students and parents will receive information from the class teacher to confirm the exact date of the assessment.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards. Revision resources are provided to all students to support preparation.</p> <p>Assessments that contain a “Review and Recall” section place emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously to assess a deeper knowledge.</p>						

Independent Work

Students receive weekly Sparx Maths homework to complete. The homework is in line with the scheme of learning and is fully differentiated so 100% completion is expected. Sparx Maths builds in retrieval practice to ensure students remember more across time. Students have the option of completing extra practice (XP Boost) and challenge work (Target) each week to support their learning outside the classroom.