

In Year 9 Mathematics, students build upon their prior knowledge from Year 8. Students follow 13 topic strands taught in blocks throughout Year 9 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 9 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"> - Rounding - Calculator Skills - Upper and Lower Bounds - Estimating calculations - Error intervals <p>Block 2: Simplifying and Substituting</p> <ul style="list-style-type: none"> - Substitution - Expand single brackets - Factorise into single brackets - Expand double brackets - Factorise 	<p>Block 4: Integers, Powers and Roots</p> <ul style="list-style-type: none"> - Index notation - Reciprocals - Negative indices - Converting between standard form and ordinary numbers - Calculation with standard form - Fractional indices - Simplify surds <p>Block 5: Sequences, Functions and Graphs</p> <ul style="list-style-type: none"> - Plot a linear graph from table of values - Find gradient of a 	<p>Block 6: Area and Perimeter</p> <ul style="list-style-type: none"> - Find the area and perimeter of compound shapes - Area and circumference of circles - Pythagoras in 2D - Distance between two points - Pythagoras in 3D <p>Block 7: Transformations</p> <ul style="list-style-type: none"> - Reflect shapes - Perform an enlargement on a grid - Rotations - Perform an 	<p>Block 9: Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> - Four operations with fractions - Percentage multipliers - Percentage increase and decrease - Percentage change - Four operations with mixed numbers - Reverse percentages - Compound interest and depreciation - Recurring decimals to fractions 	<p>Block 11: Forming and Solving Equations</p> <ul style="list-style-type: none"> - 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 formulae - Solve by factorising quadratic equations 	<p>Block 13: Measures, Volume and Surface Area</p> <ul style="list-style-type: none"> - Volume of cubes and cuboids - Surface area of cubes and cuboids - Volume and surface area of triangular prisms - Volume and surface area of cylinders - Volume and surface area of spheres and pyramids - Volume and surface area of frustum and cone

	<p>quadratics - Difference of two squares</p> <p>Block 3: Ratio and Proportion - Sharing in ratio - Currency conversions - Exchange rates - Proportional reasoning - Speed problems - Density - Distance-Time graphs</p>	<p>line - $y=mx+c$ - Special sequences and numbers - Recognise parallel and perpendicular lines - Sketch quadratic, cubic and reciprocal graphs using a table</p>	<p>enlargement from a centre - Reflect shapes in diagonal lines - Translations - Fractional scale factors of enlargement</p> <p>Block 8: Probability - Relative frequency - Sample space diagrams - Probability tree diagrams</p>	<p>Block 10: Lines, Angles and Shapes - Angles in parallel lines - Simple bearings - Angles in polygons - Circle nomenclature - 2D Trigonometry (SOHCAHTOA)</p>	<p>Block 12: Data and Interpreting Results - Compare data sets - Lines of best fit - Correlation - Types of data and sampling - Questionnaires - Calculate mean from a table - Estimate mean from a grouped data table - Frequency polygons - Mode and median from tables</p>	<p>Maths Engagement Week</p>
<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.