ARETÉ LEARNING TRUST
Being the best we can be

Stokesley School & Sixth Form College
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Year 9 Mathematics

In Year 9 Mathematics, students build upon their prior knowledge from Year 8. Students follow the same 13 topic strands taught in Blocks throughout Year 9 with support and challenge in place for every learner. However, the content has become extended further and difficulty raised from that met in Year 8. All work in each Block is fully differentiated into Bronze, Silver, Gold and Platinum levels in line with student pathways. 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.

Year 9 Curriculum	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Topic(s)	**Block 1: Calculations and Accuracy** - Rounding - Calculator Skills - Upper and Lower Bounds - Estimating calculations - Error intervals **Block 2: Simplifying and Substituting** - Substitution - Expand single brackets - Factorise into single brackets - Expand double brackets - Factorise quadratics - Difference of two squares	**Block 4: Integers, Powers and Roots** - Index notation - Reciprocals - Negative indices - Converting between standard form and ordinary numbers - Calculation with standard form - Fractional indices - Simplify surds **Block 5: Sequences, Functions and Graphs** - Plot a linear graph from table of values - Find gradient of a line - y=mx+c - Special sequences and numbers	**Block 6: Area and Perimeter** - Find the area and perimeter of compound shapes - Area and circumference of circles - Pythagoras in 2D - Distance between two points - Pythagoras in 3D **Block 7: Transformations** - Reflect shapes - Perform an enlargement on a grid - Rotations - Perform an enlargement from a centre - Reflect shapes in diagonal lines - Translations	**Block 9: Fractions, Decimals and Percentages** - 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 **Block 10: Lines, Angles and Shapes**	**Block 11: Forming and Solving 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 formulae - Solve by factorising quadratic equations **Block 12: Data and Interpreting Results**	**Block 13: Measures, Volume and Surface Area** - 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 **Maths Engagement Week**

	Block 3: Ratio and Proportion - Sharing in ratio - Currency conversions - Exchange rates - Proportional reasoning - Speed problems - Density - Distance-Time graphs	- Recognise parallel and perpendicular lines - Sketch quadratic, cubic and reciprocal graphs using a table **Maths Engagement Week**	- Fractional scale factors of enlargement **Block 8: Probability** - Relative frequency - Sample space diagrams - Probability tree diagrams	- Angles in parallel lines - Simple bearings - Angles in polygons - Circle nomenclature - 2D Trigonometry (SOHCAHTOA)	- 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	
Assessment	**Assessment 1** covers all the content listed above. The assessment will be completed in the lesson and lasts 1 hour. Students and parents will receive information from the class teacher to confirm the exact date of the assessment. Students are expected to revise for the assessment to showcase their abilities such that intervention or	**Assessment 2** covers all the content listed above. The assessment now contains a "Review and Recall" section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.	**Assessment 3** covers all the content listed above. The assessment still contains a "Review and Recall" section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.	**Assessment 4** covers all the content listed above. The assessment still contains a "Review and Recall" section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.	**Assessment 5** covers all the content listed above. The assessment still contains a "Review and Recall" section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.	**End of Year Examinations** cover all topics across the year. The examinations are sat in lessons. There is a non-calculator and a calculator paper. Students are expected to revise thoroughly for these examinations to highlight their progress across the year. Their results also inform any set movements as we progress into the next academic year.

	challenge work can take place afterwards.	Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	

Independent Work

At the end of each block of work, students will receive an “Independent Block Review Sheet” which must be completed fully and handed in to the teacher. The sheet contains key questions and work from key concepts from the block of learning they have just completed. Each question has attached a HegartyMaths video clip number to support full completion of the sheet. These sheets make excellent starting points for revision when an assessment is approaching. These can be found in students’ books to aid sequential learning. Students are also encouraged to complete the HegartyMaths quizzes.