Year 8 Mathematics

In Year 8 Mathematics, students build upon their prior knowledge from Year 7. Students follow the same 13 topic strands taught in Blocks throughout Year 8 with support and challenge in place for every learner. However, the content has become extended further and difficulty raised from that met in Year 7. 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 8 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** - Four operations with negative numbers - Order of Operations - Money Problems - Rounding - Calculator Skills - Upper and Lower Bounds - Estimating calculations **Block 2: Simplifying and Substituting** - Collecting 'like' terms - Substitution - Expand single brackets	**Block 4: Integers, Powers and Roots** - HCF and LCM - Prime factor decomposition - Squares, cubes and roots - Index notation - Reciprocals - Negative indices - Converting between standard form and ordinary numbers **Block 5: Sequences, Functions and Graphs** - Draw and recognise horizontal and vertical lines	**Block 6: Area and Perimeter** - Find area and perimeter of triangles and trapeziums - Find the area and perimeter of compound shapes - Area and circumference of circles - Pythagoras in 2D **Block 7: Transformations** - Lines of symmetry - Rotational symmetry - Scale factors of enlargement - Reflect shapes - Perform an	**Block 9: Fractions, Decimals and Percentages** - 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 **Block 10:**	**Block 11: Forming and Solving Equations** - 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 formulae **Block 12:**	**Block 13: Measures, Volume and Surface Area** - 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 **Maths Engagement Week**

	- Factorise into single brackets - Expand double brackets **Block 3: Ratio and Proportion** - Unitary method - Sharing in ratio - Best value problems - Recipes - Currency conversions - Exchange rates - Proportional reasoning - Speed problems	- 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 **Maths Engagement Week**	enlargement on a grid - Rotations - Perform an enlargement from a centre **Block 8: Probability** - Two-way tables - Relative frequency - Sample space diagrams - Probability tree diagrams	**Lines, Angles and Shapes** - Types of triangle - Classifying angles - Measuring and estimating angles - Angle facts - Drawing nets of 3D shapes - Angles in parallel lines - Simple bearings	**Data and Interpreting Results** - 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	
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.	**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	**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	**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	**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	**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.

	Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	been taught previously. Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	been taught previously. Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	been taught previously. Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	been taught previously. Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.	Their results also inform any set movements as we progress into the next academic year.

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. Students will glue these into their book to aid sequential learning. Students are also encouraged to complete the HegartyMaths quizzes.