OVERVIEW

In the Year 8 curriculum, students study topics from five key strands of mathematics: Number, Algebra, Geometry, Statistics & Probability, and Ratio & Proportion. Each strand builds on their prior learning from Year 7 and the primary curriculum. We focus on developing knowledge and skills in each of the five strands which students will then build on to solve problems and exhibit their mathematical reasoning.

Autumn

8.01: Powers and Roots – Index form, square and cube numbers, square and cube roots and working with powers

8.02: Prime Factorisation – Prime factors and prime factor decomposition

8.03: Rounding to Significant Figures – Significant and non-significant zeros, rounding integers to significant figures and rounding decimals to significant figures

8.04: Fractions – Equivalent fractions, simplifying fractions, add/subtract fractions with like/unlike denominators, multiplying fractions and dividing fractions

8.05 Negative Numbers – Adding/subtracting negative numbers with double signs and multiplying negative numbers

8.06: Solving Linear Equations – Solving linear equations with four operations, solving multistep equations, solving equations with negative unknowns and equations with unknowns on both sides.

8.07: Forming Expressions – Forming one/two step expressions, forming expressions involving area/perimeter/angles and forming expressions with unknowns on both sides.

Assessment:

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

Pupils will be assessed with a KPI at the end of each unit.

Pupils sit formative in-class fluency tests every fortnight with a focus on key skills as well as literacy.

Spring

8.10: Angles in Parallel Lines – Alternate angles, corresponding angles, co-interior angles, vertically opposite angles, solving multistep problems involving all four rules and algebra.

8.11: Interior & Exterior Angles – Interior/Exterior angles of regular polygons, interior/exterior angles of irregular polygons and problem solving with interior/exterior angles.

8.12: Circumference – Properties of a circle, circumference, revolutions, perimeter of parts of a circle, equal perimeters

8.13: Proportional Reasoning – Unitary/Non-unitary method, best buys, recipes

8.14: FDP – Converting between FDP, ordering FDP, percentages of amounts (non calc/calc), percentage change, reverse percentages

8.15: Ratio – Writing ratios from diagrams, writing in the form 1:n, simplifying ratios, completing ratios, share into a given ratio, working between two ratios.

Assessment:

Mid-Year assessments will take place in January.

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

Pupils will be assessed with a KPI at the end of each unit.

Pupils sit formative in-class fluency tests every fortnight with a focus on key skills as well as literacy.

Summer

8.16: Area of Composite Shapes – Area of a trapezium, area of a circle, area of parts of circles, calculating shaded areas, comparing areas, compound area, determining the radius and diameter, area and circumference.

8.17: Statistical Diagrams – Data tables frequency and interpreting, bar charts, line graphs, reading and drawing pie charts

8.18: Averages and Range – calculating the mean, reversing the mean, calculating the median, changing the median, mode and range, and problem solving

8.20: Volume – Volume of cubes/cuboids, volume of basic prisms, compound volume, volume of cylinders

Assessment:

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

Pupils will be assessed with a KPI at the end of each unit.

Pupils sit formative in-class fluency tests every fortnight with a focus on key skills as well as literacy.

End of Year assessments will take place in June.

Useful resources for supporting your child at home:

Videos on Sparx (www.sparxmaths.uk)

Videos on Corbett Maths (Videos and Worksheets – Corbettmaths)

CGP KS3 revision guides/workbooks (KS3 Maths | CGP Books)

Homework:

Homework will be set on Sparx (www.sparxmaths.uk).

Homework will be set once a week and students are expected to complete 100% of their homework each week. Homework is bespoke for all students depending on their performance in previous weeks.

Should your child be struggling to access their homework – please encourage them to speak to their teacher.