OVERVIEW

In the Year 8 curriculum students study topics from four key strands of mathematics: Number, Algebra, Geometry 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 four strands which students will then build on to solve problems and exhibit their mathematical reasoning.

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Unit 1: Powers and Roots – Index form, square and cube numbers, square and cube roots and working with powers

Unit 2: Prime Factorisation – Prime factors and prime factor decomposition

Unit 3: Rounding to Sig .Fig. – Significant and non-significant zeros, rounding integers to significant figures and rounding decimals to significant figures

Unit 4: Fractions – Equivalent fractions, simplifying fractions, add/subtract fractions with like/unlike denominators, multiplying fractions and dividing fractions

Unit 5: Negative Numbers – Adding/subtracting negative numbers with double signs and multiplying negative numbers

Unit 6: Solving Linear Equations – Solving linear equations with four operations, solving multistep equations, solving equations with negative unknowns and equations with unknowns on both sides.

Unit 7: Forming Expressions – Forming one/two step expressions, forming expressions involving area/perimeter/angles and forming expressions with unknowns on both sides.

Unit 8: Co-ordinates and Basic Graphs – plot and read co-ordinates, finding midpoints, and identifying equations of horizontal/vertical lines.

Assessment:

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

There will be at least 4 end of unit assessments during this term after every other unit.

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Unit 9: Standard Units – Working with time, converting between units of capacity/length/mass and area.

Unit 10: Angles in parallel lines – Alternate angles, corresponding angles, co-interior angles, vertically opposite angles, solving multistep problems involving all four rules and algebra.

Unit 11: Interior/Exterior Angles – Interior/Exterior angles of regular polygons, interior/exterior angles of irregular polygons and problem solving with interior/exterior angles.

Unit 12: Circumference – Properties of a circle, circumference, revolutions, perimeter of parts of a circle, equal perimeters

Unit 13: Proportional Reasoning – Unitary/Non-unitary method, best buys, recipes

Unit 14: FDP – converting between FDP, ordering FDP, percentages of amounts (non calc/calc), percentage change, reverse percentages

Unit 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.

There will be at least 4 end of unit assessments during this term after every other unit.

Sum

Unit 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.

Unit 17: Statistical Diagrams – Data tables frequency and interpreting, bar charts, line graphs, reading and drawing pie charts

Unit 18: Averages and Range – calculating the mean, reversing the mean, calculating the median, changing the median, mode and range, and problem solving

Unit 19: 3D Visualisation – Properties of 3D solids, nets of 3d solids

Unit 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.

There will be at least 4 end of unit assessments during this term.

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/work books (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.