



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 exhibits their mathematical reasoning.

Autumn

Unit 1: Index Laws 1 – Index laws for addition, subtraction and powers of powers; mixed index laws, *negative and zero powers and *changing bases
Unit 2: Decimal Manipulation – multiplying simple and harder decimals, dividing decimals by integers and dividing by decimals
Unit 3: Standard Form – Writing in standard form, multiplying/dividing with standard form, adding/subtracting with standard form, using a calculator with standard form, worded standard form
Unit 4: Proportional Reasoning – direct proportion, best buys, recipes, exchange rates, similar shapes and inverse proportion
Unit 5: Prime Factorisation – Prime numbers, prime factor decomposition, HCF and LCM
Unit 6: Mixed Numbers – Multiply, divide, add and subtract fractions, multiply and divide mixed numbers, add and subtract mixed numbers and mixed operations
Unit 7: Linear Equations – Solving two step equations, solving equations with fractions, brackets and unknowns on both sides
Unit 8: Angles in Parallel Lines – Alternate angles, corresponding angles, co-interior angles, vertically opposite angles, solving multistep problems involving all four rules and algebra.

Assessment:

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

There will be an assessment checkpoint at the end of each half term.

Mid-Year assessments will take place in December.

Spring

Unit 9: Circles 1 – Properties of a circle, radius and diameter, circumference, area of a circle, mixed area and circumference, working in reverse, perimeter of parts of a circle, area of a circle, functional problems and *shaded areas with circles
Unit 10: Compound Shapes – Area of rectangles, parallelograms, triangles, trapezia, working in reverse, *equal areas, calculating shaded areas, comparing areas with circles and functional problems
Unit 11: Ratio 1 - writing ratios from diagrams, writing in the form 1:n, simplifying ratios, completing ratios, share into a given ratio, mixed ratio and word problems and *working between two ratios
Unit 12: Straight Line Graphs – lines parallel to the axes, using a table of values, using $y=mx+c$, finding the gradient, equation of a line and real life graphs
Unit 13: Fractions, Decimals and Percentages – converting between FDP, ordering FDP, percentages of amounts (non calc), percentage increase and decrease

Assessment:

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

There will be an assessment checkpoint at the end of each half term.

Summer

Unit 14: Percentage Calculations – percentage of amounts (calc), percentage increase and decrease with multipliers, percentage change, profit and loss, finding original amounts and reverse percentages
Unit 14: Volume and Capacity – Converting between units of length, mass and capacity, volume of cubes and cuboids, reverse volume, basic prisms, cylinders, pyramids, cones and spheres
Unit 16: Averages and Range 2 – mixed averages and range, comparing data, combined mean, sampling, capture recapture, mode, mean and range from a frequency table

Assessment:

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

There will be an assessment checkpoint at the end of each half 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.