



Overview

In the Year 9 curriculum students study topics from four key strands of mathematics: Number, Algebra, Geometry and Ratio & Proportion. Each strand builds on their prior learning from Years 7 and 8. 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.

Autumn

Unit 1: Estimation and Limits of accuracy – rounding to significant figures, estimation, truncation, error intervals
Unit 2 Related Calculations – related calculations with multiplication and division
Unit 3: Expanding & Factorising – collecting like terms, expanding and simplifying brackets, factorising an expression, expanding double brackets, factorising quadratics, *expanding triple brackets
Unit 4: Bearings – Scale maps and drawings, reading and drawing bearings, bearings and angles
Unit 5: Equations and Inequalities 2 – multistep equations, equations with brackets and fractions, unknowns on both sides, representing on a number line, solving inequalities, solving inequalities with unknowns on both sides, solving negative inequalities and *quadratic inequalities
Unit 6: Probability – Probability sums to 1, relative frequency and expected outcomes, Venn diagrams – sets and probability and tree diagrams
Unit 7: Plotting graphs – Types of graphs, plotting straight line graphs with positive and negative gradients, plotting quadratic graphs, properties of quadratic graphs and cubic graphs

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

Spring

Unit 8: Sequences – linear sequences, nth term, finding terms, non-linear sequences and *quadratic nth term
Unit 9: Vectors 1 – adding/subtracting and multiplying vectors, resultant vectors and *forming and solving equations with vectors
Unit 10: Interior/Exterior angles – Interior/Exterior angles of regular polygons, interior/exterior angles of irregular polygons, number of sides, problem solving with interior/exterior angles and ratios and angles
Unit 11: Pythagoras – identify the hypotenuse, determining whether a triangle is right-angled, finding the hypotenuse, finding the shorter side, multistep Pythagoras and problem solving with Pythagoras
Unit 12: Representing Data 3 – scatter graphs, frequency polygons, time series graphs, stem and leaf diagrams and pie charts
Unit 13: Constructions and Loci – *constructing triangles, line bisectors, angle bisectors and loci

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 an assessment checkpoint at the end of each half term

Summer

Unit 14: Compound Measures – calculating speed, distance and time, using decimal times, two part journeys, distance time graphs, calculating density, mass and volume, *combined density, calculating pressure, force and area and real life graphs
Unit 15: Circles – mixed circumference and area, arc length, compound perimeter, area of a sector, compound area, working in reverse and non-calculator methods
Unit 16: Surface Area– nets of 3D shapes, surface area of: cubes and cuboids, prisms, *cylinders, functional problems, *surface area of cones and spheres and converting between units of area and units of volume
Unit 17: Plans and Elevations – Plans and elevations of typical 3D shapes, sketching plans and elevations of 3D shapes and accurate drawings

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.

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.