OVERVIEW

In the Year 9 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 Years 7and 8. 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

9.01: Decimal Manipulation – Addition, subtraction, multiplication and division of decimals.

9.02: Estimation and Limits of accuracy – Estimation, truncation, error intervals

9.04: HCF and LCM of large numbers – Prime factor decomposition

9.05: Fraction Calculations – Add/subtract/multiply mixed numbers, fractions of amounts, dividing fractions and mixed numbers, writing one number as a fraction of another.

9.06: Algebraic manipulation – Multiplying algebraic terms, simplifying algebraic fractions, add/subtract/multiply and divide algebraic fractions

9.07: Index Laws – working with index laws

9.08: Expanding & Factorising – expanding and simplifying brackets, factorising an expression, expanding double brackets, factorising quadratics

9.09: Expressions & Substitution – forming expressions, substitution using integers, decimals, BIDMAS and fraction, substituting into formulae

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

9.10: Percentages with calculators – Using multipliers, increase and decrease, reverse percentages, percentage change

9.12: Probability – Scale and listing outcomes, single event probability, relative frequency, expected outcomes, frequency trees, sample space, Venn diagram.

9.13: Linear Equations – one and two step equations, subject in the denominator, negative unknowns, multistep equations, equations with brackets and fractions, unknowns on both sides, substituting and solving

9.14: Linear Inequalities – drawing on a number line, integer solutions, solving inequalities, solving double inequalities, solving negative inequalities

9.16: Pythagoras – Finding the hypotenuse, finding the shorter side, multistep Pythagoras and problem solving with Pythagoras

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

9.17: Interior/Exterior angles – Interior/Exterior angles of regular polygons, interior/exterior angles of irregular polygons, tessellation and problem solving with interior/exterior angles.

9.18: Parallel lines – Alternate angles, corresponding angles, co-interior angles, vertically opposite angles, solving multistep problems involving all four rules and algebra.

9.19: Basic Vectors – Drawing vectors, adding/subtracting vectors, multiplying vectors, resultant vectors, parallel vectors

9.20: Basic transformations – Rotation, reflection, translation, enlargement and a combination of these

9.22: Circles – Circumference, arc length, revolutions, compound perimeter, area and parts, sector area, compound area

9.23: Surface Area – nets, cuboids, prisms, cylinders, cones, spheres

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/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.