**Salford City Academy** The best in evervone™ Year 9 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

OVERVIEW developing knowledge and skills in each of the four strands which students will then build on to solve problems and exhibit their mathematical reasoning. Unit 1: Estimation and Limits of accuracy - Estimation, truncation, error intervals Assessment: Unit 2 Related Calculations - related calculations with multiplication and division Students will be informally Unit 3: Expanding & Factorising - expanding and simplifying brackets, factorising an expression. assessed every lesson expanding double brackets, factorising quadratics, \*expanding triple brackets using questioning, mini whiteboards and marking Unit 4: Bearings - measuring, reading and drawing bearings, bearings with Pythagoras and of independent work. trigonometry Unit 5: Equations and Inequalities - solving equations with negative and fractional subjects, brackets Aut There will be an End of or unknowns on both sides. Then applying these skills to solve inequalities as well as representing Half Termly Assessment inequality solutions using number lines covering those units and Unit 6: Probability - Relative frequency and expected outcomes, Venn diagrams - sets and interleaving previous probability, tree diagrams knowledge. Unit 7: Plotting Graphs - plotting straight line graphs, plotting quadratic graphs, properties of quadratic graphs, cubic and reciprocal graphs Unit 8: Sequences - Linear and non-linear sequences, finding and using the nth term, \*quadratic nth Assessment: term Students will be informally assessed every lesson Unit 9: Vector Arithmetic - Drawing vectors, adding/subtracting vectors, multiplying vectors, resultant using questioning, mini vectors whiteboards and marking Unit 10: Interior/Exterior angles – Interior/Exterior angles of regular polygons, interior/exterior angles of independent work. of irregular polygons, tessellation and problem solving with interior/exterior angles. Spr Unit 11: Pythagoras - Finding the hypotenuse, finding the shorter side, multistep Pythagoras and There will be an End of problem solving with Pythagoras Half Termly Assessment covering those units and Unit 12: Constructions and Loci - line bisectors, angle bisectors, loci rules, loci problem solving interleaving previous Unit 13: Plans and Elevations - Plans and elevations of typical 3D shapes, plans and elevations of knowledge. irregular 3D shapes, sketching 3D shapes from plans and elevations. Unit 14: Compound Measures - calculating speed distance and time, calculating average speed, Assessment: distance time graphs, calculating density mass and volume, calculating force pressure and area Students will be informally assessed every lesson Unit 15: Circles 2 - Circumference, arc length, revolutions, compound perimeter, area and parts, using questioning, mini whiteboards and marking sector area, compound area of independent work. Unit 16: Surface Area- nets and surface area of: cubes and cuboids, prisms, cylinders, cones and There will be an End of Sum spheres and hemispheres Half Termly Assessment covering those units and Unit 17: Representing Data 3 - Reading and drawing pie charts, stem and leaf diagrams, scatter interleaving previous knowledge. graphs, time series graphs and frequency polygons End of Year assessments will take place in June. Useful resources for supporting your child at home:

Videos on Sparx (<u>www.sparxmaths.uk</u>) 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.