

Maths- Y9

MAGHULL HIGH SCHOOL – CURRICULUM MAP



| HALF TERM 4 Feb-March | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | |
|--------------------------------|---|--------------------|------------------------|------------------------|----------------------|----------------------|--|
| TOPIC (S) | HT4 Assessment Perimeter and Area | Perimeter and Area | Circumference and Area | Circumference and Area | Ratio and Proportion | Ratio and Proportion | |
| Knowledge & Skills development | <p><u>Perimeter and Area</u></p> <ul style="list-style-type: none"> identify properties of the faces, surfaces, edges and vertices of: cubes, cuboids, prisms, cylinders, pyramids, cones and spheres calculate the perimeter of 2D shapes and composite shapes find the surface area of pyramids and composite solids know and apply formulae to calculate area of: <ul style="list-style-type: none"> triangles parallelograms trapezia <p><u>Circumference and Area</u></p> <ul style="list-style-type: none"> identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment know the formulae: <ul style="list-style-type: none"> circumference of a circle = $2\pi r = \pi d$ area of a circle = πr^2 calculate the perimeters of 2D shapes, including circles and composite shapes calculate areas of circles and composite shapes calculate the surface area of spheres, cones and composite solids calculate arc lengths, angles and areas of sectors of circles <p><u>Ratio and Proportion</u></p> <ul style="list-style-type: none"> identify and work with fractions in ratio problems express one quantity as a fraction of another, where the fraction is less than 1 or greater than 1 use ratio notation, including reduction to simplest form divide a given quantity into two parts in a given part : part or part : whole ratio express the division of a quantity into two parts as a ratio apply ratio to real contexts and problems (such as those involving conversion, comparison, scaling, mixing, concentrations) express a multiplicative relationship between two quantities as a ratio or a fraction understand and use proportion as equality of ratios relate ratios to fractions and to linear functions | | | | | | |

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| Assessment / Feedback Opportunities | Topic assessments | Self-assessment | Homework (written and online) | Formative teacher assessment - verbal | Retrieval practice | |
| Cultural Capital | Real life application of perimeter and area Application of proportion for recipes and value for money | | | | | |
| SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect) | Willingness to participate in, and respond to mathematical opportunities. Use of social skills in different contexts, including working and socialising with pupils from different religious, ethnic and socio-economic backgrounds. | | | | | |
| Reading opportunities | Murderous Maths, Marvellous Maths, Launch a rocket into space | | | | | |
| Key Vocabulary | Solid, Net, Faces, Edges, Vertices, Area, Perimeter, Formula, Perpendicular, Compound, Circumference, Radius, Diameter, Tangent, Chord, Sector, Segment, Pi, Units, Ratio, Fractions, Proportion, Scale, Functions, Equivalent, Simplify | | | | | |
| Digital Literacy | Desmos, Geogebra, DFM, Mathspad, MStems | | | | | |
| Careers | Business, Finance, Architect, Building, Engineer, Researcher, Retail, Chef, Buyer, Retail. | | | | | |