Wightwick Hall High School Maths Long Term Plan

2025-2026

Discoverers/Navigators/Pathfinders/Pioneers

GCSE Maths Curriculum						
Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Baseline Assessment Negative Numbers BIDMAS Fractions Decimals Percentages Powers, Roots, Primes	Linear Graphs Metric & Imperial Units Ratio & Proportion Mock Assessment Week Algebra	Indices Standard Form Algebra Sequences Geometry & Measures Circles Volume & Surface Area	Angles & Lines Polygons Loci & Construction Bearings Pythagoras' Theorem Transformations Probability	Statistics Graphs & Charts Trigonometry (if time) Revision	Revision
Pre-Teaching Assessment Suggestions	Foundational skills check using past paper questions Recall activity Check understanding of key words Diagnostic questions, e.g. "correct the errors"	Foundational skills check using past paper questions Recall activity Check understanding of key words Diagnostic questions, e.g. "correct the errors"	Foundational skills check using past paper questions Recall activity Check understanding of key words Diagnostic questions, e.g. "correct the errors"	Foundational skills check using past paper questions Recall activity Check understanding of key words Diagnostic questions, e.g. "correct the errors"	Foundational skills check using past paper questions Recall activity Check understanding of key words Diagnostic questions, e.g. "correct the errors"	Past paper questions
'Step On' Knowledge-Embedded literacy work and weekly class reading sessions.	Four operations fluency (add, subtract, multiply, divide integers) Place value knowledge (including decimals) Times tables; basic understanding of factors, multiples Recognise fractions and convert between simple forms Basic understanding of percentages (fraction of 100)	Co-ordinates in the first two quadrants Recognise straight-line graph patterns Convert between common metric units Understand equivalence and scaling (KS3 ratio) Use letters to represent unknowns Basic substitution into expressions	Square numbers, cube numbers Multiply/divide by powers of 10 Recognise patterns in number sequences Use substitution in expressions	Properties of 2D shapes Knowing $\pi \approx 3.14$ Read scales and measuring accurately Angles on a straight line / around a point Co-ordinates Understand right-angled triangles Reflect/rotate simple shapes	Interpret bar charts, pie charts and scatter diagrams Read tables and frequency tallies Understand right-angled triangles Use calculators confidently	Retrieval of key skills from across the year Calculator and non-calculator fluency Understand command words in exam questions

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	Read number lines, including negatives Simple square numbers and square roots Understand what a prime number is					
'Extending up' Knowledge	Order of operations with brackets and multi-step calculations Fraction → decimal → percentage conversions in real contexts Calculate percentage increase/decrease with a calculator Powers and roots beyond squares/cubes (but not full index laws) Prime factor decomposition	Plot straight-line graphs from y = mx + c Use conversion graphs Solve ratio problems in real-life contexts (recipes, maps, etc.) Simplify expressions and form basic equations Two-step equations (e.g. 3x + 2 = 11)	Basic index laws for multiplication/division Standard form conversions Generate terms from nth-term (simple linear) Form and solve equations involving sequences	Use formulae for area/circumference of a circle Volume of cubes, cuboids and prisms Angle reasoning in multi-step problems Bearings (three-figure format) Construct perpendicular or angle bisectors Apply Pythagoras' Theorem to real-life contexts Describe all four transformations	Draw and interpret frequency polygons Averages and range from raw and grouped data Time-series graphs SOHCAHTOA in right-angled triangles (only the basics if time allows)	Multi-topic mixed past papers Strategies for unfamiliar problems Calculator tips (memory, Ans, fraction button, etc.) Time management and general exam strategies
Cross Curricular Links	Science: use of decimals, units, and converting measurements Cooking: ratio in recipes, scaling quantities ICT/Computing: understanding number systems and logical operations; spreadsheet calculations Life Skills: money calculations, budgeting, percentages	Geography: interpreting climate graphs, map scales, ratios Science: distance–time graphs; unit conversions Art: symmetry and basic transformations DT: precision measurement and scale drawings	Science: standard form for large or small numbers, powers in equations Computing: indices in binary and data storage (powers of 2) Music: repeating patterns and sequences English: pattern identification in texts or structures	Geography: bearings, map interpretation Art: symmetry, rotations, transformations DT: nets, 3D shapes, measurements, accuracy PE: angles of movement, spatial awareness	Geography: population data; climate graphs PE: performance statistics; scatter graphs Science: data handling from experiments ICT: spreadsheets and data entry	Whole-school literacy (exam command words, vocabulary building) ICT (using calculators effectively, spreadsheet practice) Life Skills (applying maths to real-life scenarios)

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Careers in the Curriculum Opportunities	Finance and banking (percentages, interest) Construction trades (measurements, fractions, decimals) Retail (discounts, stock quantities, pricing) STEM pathways (importance of numeracy in science and engineering)	Engineering (graph interpretation, measurement accuracy) Transport and logistics (metric/imperial conversions) Architecture or technical drawing (scales, straight-line graphs) Data and admin roles (reading simple charts and spreadsheets)	Lab technician (standard form) IT and computing careers (binary powers, algorithms) Data analyst (identifying patterns, generating rules) Engineering apprenticeships (use of formulae)	Construction trades (angles, measurements, area/volume) Mechanical engineering (3D shapes, Pythagoras in real structures) Surveying and architecture (bearings, constructions, scale) Graphic design (symmetry, transformations)	Healthcare (interpreting charts and basic statistics) Sports analysis (data trends and comparisons) Business/admin (graphs, charts, interpreting data) Public services (risk assessment, probability basics)	Any post-16 destination requiring Maths (highlighting importance of revision, resilience, numeracy) Discussion of pathways accessible with a Grade 4
LOtC Opportunities	Measuring tasks around school (lengths of corridors, areas of playground) Percentage/ratio challenges using real-world objects outdoors	Outdoor co-ordinate graphing (mapping points around the school) Walk a simple “conversion trail” - convert distances measured around site Collecting real data outside (temperature, footfall counts, traffic surveys)	Pattern spotting outdoors (natural sequences: spacing of fences, paving patterns) Number trail linking powers of 10 with real objects (labels around school)	Bearings activity on the school field (simple directional tasks) Angle hunt outdoors (architectural angles, ramps, roof pitches) Estimating and measuring areas/volumes of outdoor spaces (playground, planters)	Collecting data around school (traffic counts, plant growth, temperature) Simple outdoor surveys feeding into bar charts and pie charts	Quiet outdoor revision spaces in good weather