

Year 11 Curriculum Overview [2025-2026]

Mathematics

Autumn Term

Autumn Term	Knowledge & Understanding			Literacy Skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT1	Vectors	- Understand and represent vectors - Vector notation - Translate by a vector - Vectors multiplied by a scalar - Add vectors - Add and subtract vectors - Solve problems with vectors (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of topic unit test intervention	- Key vocabulary - True and False Tasks - Questioning Tasks - Problem Solving Tasks - Key words: Column vector, Direction, Scalar, Size, Magnitude	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively - Careers: Engineering, architecture, planning	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of topic tests - End of term tests

	Factors and Powers	• Factors, multiples and primes • Prime factorisation • HCF and LCM • Square and cube numbers • Powers and roots • Negative indices • Irrational numbers and surds • Simplify expressions with surds (E) • Expand brackets with surds (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Questioning Tasks • Problem Solving Tasks • Key words: Factor, Multiple, Highest Common Factor, Lowest Common Multiple, Powers, Indices, Root, Irrational, Rational, Surd, Expand	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: Finance, Geography, Science, Engineering, Golden Ratio, Paper	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests
	Pythagoras' Theorem and Trigonometry	• Pythagoras' theorem (find the hypotenuse) • Pythagoras' theorem (find any side) • Identify hypotenuse, opposite and adjacent sides • Ratios in right-angled triangles • Use the tangent ratio to find an unknown side length	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Questioning Tasks • Problem Solving Tasks • Key words: Hypotenuse, Opposite, Adjacent, Tangent, Sine, Cosine	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests

		• Use the sine and cosine ratio to find an unknown side length • Use trigonometric ratios to find an unknown side length • Use trigonometric ratios to find an unknown angle • Exact trigonometric values (E)			- Using language effectively • Careers: Agriculture, Surveyors, Construction, Aviation, Astronomy, Engineer	• End of term tests
	Simultaneous Equations	• Use one value to find another • Introduction to simultaneous equations • Solve simultaneous equations using graphs • Solve simultaneous equations (no adjustments) • Manipulating equations • Solve simultaneous equations (adjust one) • Solve simultaneous equations (adjust both) (E) • Solve simultaneous equations by substitution (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Questioning Tasks • Problem Solving Tasks • Key words: Numerator, Denominator, Exact Value, LCM, Simplest Form	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: Engineering and architecture and planning	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests
	Ratio and Proportion	• Solve problems with ratio • Direct proportion • Best buy problems	• Retrieval in class starter	• Key vocabulary • True and False Tasks	• Personal skills - Thinking and problem	• Plenary True and False Tasks

		• Conversion graphs • Exchange rates • Inverse proportion • Direct proportion equations (E) • Direct and inverse proportion graphs (E)	• Prior knowledge whiteboard questions • End of topic unit test intervention	• Problem Solving Tasks • Questioning Tasks • Key words: ratio, share, equal parts, whole, unit price, scaling, directly proportional, conversion, origin, linear, exchange rate, currency, convert, equation, formula, constant of proportionality, inverse, inversely proportional, assumption, linear relationship, non-linear relationship, asymptote, constant	• solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: healthcare, construction, engineering, cooking, science, technology, art, design, transportation, trades, everyday service: hair, fitness, real estate • Number skills involved in many areas of different work.	• Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests
HT2	Area and volume	• Isometric drawings • Plans and elevations • Volume of a cylinder • Volume of a sphere • Volume of cones and pyramids • Surface area of a sphere	• Retrieval in class starter • Prior knowledge whiteboard questions	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks	• Personal skills - Thinking and problem solving - Working	• Plenary True and False Tasks • Peer and self-assessment

		• Surface area of a cylinder (E) • Surface area of a pyramid (E) • Surface area of cones (E) • Convert metric units of area (E) • Convert metric units of volume (E)	• End of topic unit test intervention	• Key words: plan, front elevation, side elevation, dimensions, auxiliary line, volume, radius, diameter, hemisphere, cone, pyramid, perpendicular height, slant height, sphere, surface area, similar shapes, metric, units	together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: construction, engineering, landscape and interior design, healthcare, science, manufacturing, trades, transportation, agriculture, food, hospitality, retail, real estate	• Feedback and reflective practise • End of topic tests • End of term tests
	Similarity and congruence	• Identify similar shapes • Find unknown lengths and angles in similar shapes • Identify similar triangles • Solve problems with similar shapes • Prove a pair of triangles are similar (E) • Similarity and congruence	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: scale factor, corresponding,	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise

		• Congruent triangles • Prove a pair of triangles are congruent (E)		alternate, co-interior, proportion, similar, length scale factor, area scale factor, volume scale factor, congruent, condition, proof	numbers effectively - Using language effectively • Careers: architecture, construction, engineering, art, design, technology, manufacturing, science, maths, medical, dental, everyday trades – carpenter, tiler	• End of topic tests • End of term tests
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MOCKS

	Sequences & Proof	• Describe and continue arithmetic and geometric sequences • Explore other sequences • Generate a sequence given an algebraic rule • Nth term of a linear sequence • Nth term of a linear sequence • Represent numbers algebraically (E) • Arguments and counterexamples (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning tasks • Keywords: arithmetic, geometric, quadratic, Fibonacci, triangular number, surd, simplify, term, term-to-	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests
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				term rule, nth term rule, substitute, second difference, consecutive, integer, expression, multiple, proof, identity	language effectively Careers: maths, science, technology, computing, engineering, finance, business, law, education, architecture, design	
HT2	Standard form	- Numbers greater than 1 in standard form - Numbers between 0 and 1 in standard form - Adjust a number to standard form - Multiply and divide numbers in standard form (E) - Add and subtract numbers in standard form (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of topic unit test intervention	- Key Vocabulary in Retrieval starter - True and False Tasks - Problem Solving Tasks - oms Questioning Tasks - Key words: Base, index, standard form, ordinary number, significant figures	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively - Careers: science, medicine, engineering, technology, astronomy,	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of topic tests - End of term tests

					space, finance, economics, environmental and earth sciences, education, research	
	Work with circles	• Area and circumference of a circle • Fractional parts of a circle (area) • Area of a sector (E) • Fractional parts of a circle (perimeter) • Arc length and perimeter (E) • Area and perimeter of compound shapes with circles • Solve problems with circles	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: circumference, radius, diameter, pi, in terms of pi, sector, area, theta, perimeter, arc, minor sector, major sector, compound shape, semicircle	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: engineering, architecture, design, construction, technology, science, maths, trades, manufacturing, art, creative	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests

	Set notation and Venn diagrams	• Venn diagrams • Set notation • Probabilities from Venn diagrams	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: set, element, universal set, complement, intersection, union, Venn diagram, mutually exclusive	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: technology, computing, maths science, business, marketing, healthcare, education, law, project management	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests
	Functions and graphs	• Function machines • Write an expression or formula from a function machine • Quadratic graphs • Cubic graphs • Reciprocal graphs • Recognise and sketch graphs	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: function, input, output, inverse, variable,	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise

				quadratic, roots, turning point, intercept, cubic, reciprocal, reciprocal graph, infinity, asymptote	numbers effectively - Using language effectively • Careers: science, engineering, technology, computing, finance, business, healthcare, medicine, transportation, aviation, education, research, social sciences, media	• End of topic tests • End of term tests
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Spring term

Spring Term	Knowledge & Understanding			Literacy Skills	Employability Skills	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]	Opportunities for developing literacy skills	Skills [if any]	
HT4	Equations and formulae	• Solve equations • Form and solve equations • Form and solve equations with unknowns on both sides (E) • Solve inequalities • Form and solve inequalities (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: equation, inverse,	• Personal skills - Thinking and problem solving - Working together and communicating	• Plenary True and False Tasks • Peer and self-assessment • Feedback and

		- Form and solve more complex equations and inequalities (E) - Solve simultaneous equations - Solve problems with simultaneous equations		unknown, solution, expression, coefficient, integer, inequality, satisfy, compound inequality, simultaneous equation	- Fundamental skills - Using numbers effectively - Using language effectively - Careers: science, engineering, finance, business, technology, computing, healthcare, medicine, construction, trades, transportation, aviation, education, research	reflective practise - End of topic tests - End of term tests
	Rates	- Convert between hours and minutes - Speed, distance, time - Interpret distance-time graphs - Draw distance-time graphs - Density and pressure - Convert compound units (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of topic unit test intervention	- Key vocabulary - True and False Tasks - Problem Solving Tasks - Questioning Tasks - Key words: constant speed, average speed, distance, time taken, speed, compound	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of topic tests

				measure, mass, volume, density, force, area, pressure, imperial, metric, convert, units	- Using language effectively • Careers: engineering, science, research, healthcare, medicine, transportation, aviation, meteorology, manufacturing, technology, sports	• End of term tests
	Angles, bearings and trigonometry	- Angles in lines and shapes - Solve problems with angles in parallel lines - Solve problems with angles and algebra (E) - Compass points and related angles - Understand and represent bearings - Measure and read bearings - Scale drawings using bearings - Calculate bearings using angle rules (E) - Choose appropriate methods to solve problems with right-angles triangles - Solve bearings problems using Pythagoras and trigonometry (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of topic unit test intervention	- Key vocabulary - True and False Tasks - Problem Solving Tasks - Questioning Tasks - Key words: direction, clockwise, bearing, angle, north line, scale, parallel, co-interior angles, trigonometric, hypotenuse, opposite, adjacent, formula, substitute, inverse, subject	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively - Careers: engineering, architecture, construction,	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of topic tests - End of term tests

					navigation, transportation, science, research, technology, computing, military, emergency services, sport, fitness	
Summer term						
Summer Term	Knowledge & Understanding			Literacy Skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT5	Constructions and loci	• Use geometrical equipment • Accurately draw triangles • Accurately draw polygons (E) • Construct an angle bisector • Construct a perpendicular bisector • Construct a perpendicular from or to a point • Locus of distance from a point or a straight line • Locus equidistant from two points and perpendicular bisectors • Locus equidistant from two lines and angle bisectors • Solving problems with loci	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: protractor, pair of compasses, construct, construction line, accurate, polygon, regular polygon, parallel, vertex, angle bisector, equidistant, perpendicular bisector, locus	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: architecture,	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests

					construction, surveying, land management, engineering, design, technology, science, research, everyday trades – plumbing, stonemasons, electricians	
	Transformations	• Enlargement (positive integer scale factor) • Enlargement (fractional scale factor) • Line symmetry and rotational symmetry • Reflection • Rotation • Translation • Describe a transformation • Find the result of a series of transformations (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of topic unit test intervention	• Key vocabulary • True and False Tasks • Problem Solving Tasks • Questioning Tasks • Key words: enlargement, scale factor of enlargement, centre of enlargement, similar shapes, orientation, rotation, centre of rotation, clockwise, anti-clockwise, reflection, mirror line, equation of a line, vertex, congruent, translation,	• Personal skills - Thinking and problem solving - Working together and communicating • Fundamental skills - Using numbers effectively - Using language effectively • Careers: architecture, construction, engineering, technology, computing, art, design, science, maths,	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of topic tests • End of term tests

				column vector, invariant point	navigation, transportation, manufacturing, trades	
HT 6	Revision & Exams					