

Year 9 Curriculum Overview [2026-2027]

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	Sequences	- Step 1 Generate and describe a sequence given a rule in words - Step 2 Generate a sequence given a simple algebraic rule - Step 3 nth term of a linear sequence - Step 4 Generate a sequence given a complex algebraic rule (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - Encourage use of subject language - Questioning - Pupil explanations and reasoning - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively - Using a calculator effectively.	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests
	Properties of Number	- Step 1 Factors, multiples and primes - Step 2 Write a number as a product of prime factors - Step 3 Use prime factors (E) - Step 4 Highest common factor (HCF) and lowest common multiple (LCM) - Step 5 Venn diagrams - Step 6 Use a Venn diagram to calculate the HCF and LCM	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise

		- Step 7 Integers, real numbers and rational numbers - Step 8 Introduction to surds (E)			effectively - Using language effectively	- End of Topic Tests - End of Term Tests
	Percentages	- Step 1 Percentage increase and decrease - Step 2 Express a change as a percentage - Step 3 Find the original value after a percentage change - Step 4 Solve problems with percentages (non-calculator) - Step 5 Solve problems with percentages (calculator) - Step 6 Repeated percentage change - Step 7 Understand interest - Step 8 Simple interest - Step 9 Compound interest	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests End of Term Tests
	Area and Volume	- Step 1 Nets - Step 2 Area of a 2-D shape - Step 3 Area and circumference of a circle - Step 4 Surface area of cubes and cuboids - Step 5 Surface area of a triangular prism (E) - Step 6 Surface area of a cylinder (E) - Step 7 Volume of a prism - Step 8 Volume of a cylinder - Step 9 Volume of cones, pyramids and spheres (E) - Step 10 Convert metric units of area and volume (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests End of Term Tests

	Fractions	• Step 1 Add and subtract fractions • Step 2 Multiply and divide fractions • Step 3 Fraction of an amount	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests
HT2	Equations, Inequalities and Formulae	• Step 1 Solve equations and inequalities • Step 2 Solve equations and inequalities with brackets • Step 3 Inequalities with negative numbers (E) • Step 4 Solve equations and inequalities with unknowns on both sides • Step 5 Solve problems with equations and inequalities • Step 6 Substitute into formulae and equations • Step 7 Change the subject of a formula (one-step) • Step 8 Change the subject of a formula (two-step) • Step 9 Change the subject of complex formula (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests

	Rates	• Step 1 Speed, distance and time • Step 2 Distance-time graphs • Step 3 Solve flow problems and their graphs • Step 4 Rates of change and their units • Step 5 Convert compound units (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests
	Standard Form	• Step 1 Numbers in standard form • Step 2 Compare and order numbers in standard form • Step 3 Multiply and divide numbers in standard form • Step 4 Add and subtract numbers in standard form	• Retrieval in class starterPrior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests
	Straight Line Graphs	• Step 1 Lines, parallel to the axes, $y=x$ and $y=-x$ • Step 2 Explore gradients	• Retrieval in class starter	• Key Vocabulary in Retrieval starters	• Personal skills - Thinking and problem	• Plenary True and False Tasks

		• Step 3 Explore intercepts • Step 4 $y=mx+c$ • Step 5 Rearrange equations to the form $y=mx+c$ (E) • Step 6 Find the equation of a line from a graph • Step 7 Interpret gradient and intercepts of real-life graphs • Step 8 Graph inequalities (E)	• Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• True and False Tasks • Problem Solving Tasks	solving - Working together and communicating Fundamental skills - Using numbers effectively - Using language effectively	• Peer and self-assessment • Feedback and reflective practise • End of Topic Tests End of Term Tests
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Catholicity across the curriculum:

Forming and Solving Equations: Students are required to balance equations and come to a solution. Within this topic, pupils explore Math problems that are relevant to fairness and equality.

Three-dimensional shapes: Throughout this topic students are encouraged to see the beauty and order in mathematical shapes. Students relate shapes they learn to the real world. This reflects the Catholic view that creation is orderly and purposeful.

Constructions and Congruency: Show how math is used to address social issues and relating this to career pathways with clear focus on careers and diversity. This connects with Catholic social teachings on justice, stewardship, and the responsibility to care for others.

Algebraic notation a universal language: Mirrors the concept of catholicity by fostering inclusivity and enabling people from diverse backgrounds to engage with mathematical ideas on a global scale. Just as catholicity unites individuals in faith across cultures and regions, algebraic notation connects learners worldwide in their pursuit of knowledge and problem-solving.

Place ordering integers and decimals : Helping students develop a clear understanding of numerical relationships, a concept that can be applied universally, much like catholicity's call for unity across diverse communities. In real life, this skill allows individuals to make precise decisions in areas such as finance and measurement, reflecting how the inclusive nature of catholicity promotes careful attention to detail in both spiritual and practical matters.

Spring term				
	Knowledge & Understanding		Literacy Skills	

Spring Term	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]	Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
HT3	Ratio and Proportion	- Step 1 Direct proportion - Step 2 Direct proportion and conversion graphs - Step 3 Inverse proportion - Step 4 Inverse proportion graphs (E) - Step 5 Ratio problems (whole or part given) - Step 6 Solve problems with ratio and algebra (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Tests
	Congruence	- Step 8 Identify congruent figures - Step 9 Congruent triangles	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Tests

	Similarity	- Step 1 Recognise enlargement and similarity - Step 2 Work out unknown lengths and angles in similar shapes - Step 3 Solve problems with similar triangles (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Tests
	Algebraic Manipulation	- Step 1 Expand single brackets and simplify - Step 2 Factorise into a single bracket - Step 3 Expand double brackets - Step 4 Use identities - Step 5 Factorise quadratic expressions (E) - Step 6 Solve quadratic equations (E) - Step 7 Expand triple brackets (E)	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Tests
HT4	Pythagoras' Theorem	- Step 1 Solve equations with squares and square roots - Step 2 Identify the hypotenuse - Step 3 Determine whether a triangle is right-angled		- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and	- Plenary True and False Tasks - Peer and self-assessment

		• Step 4 Pythagoras theorem (find the hypotenuse) • Step 5 Pythagoras theorem (find any side) • Step 6 Use Pythagoras theorem on coordinate axes • Step 7 Proofs of Pythagoras theorem (E) • Step 8 Pythagoras theorem in 3-D shapes (E)			communicating Fundamental skills - Using numbers effectively - Using language effectively	• Feedback and reflective practise • End of Topic Tests - End of Term Tests
	Non-Linear Graphs	• Step 1 Substitute into quadratic expressions • Step 2 Draw simple quadratic graphs • Step 3 Draw more complex quadratic graphs • Step 4 Interpret quadratic graphs • Step 5 Interpret reciprocal and exponential graphs • Step 6 Draw cubic graphs (E) • Step 7 Interpret cubic graphs (E) • Step 8 Interpret roots, intercepts and turning points (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests

Catholicity across the curriculum:

Using percentages: Teaching pupils how using percentages can ensure equitable distribution of resources, reflecting values of fairness and justice. Calculating what percentage each member contributes promotes responsible stewardship and supports the common good.

Maths and money: Using money skills to promote the common good and equitable distribution of resources. The values of justice and human dignity can be applied.

Enlargement and similarity: Applying enlargement and similarity to the concept of Catholicity involves understanding how proportions and ratios can represent equality and fairness. All aspects being enlarged proportionately promotes balance and harmony, reflecting the values of justice and responsible stewardship.

Pythagoras Theorem: Pupils are encouraged to build resilience and persevere through learning this challenging topic. From this, they gain the experience of humility of learning.

Summer term

Summer 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]	
HT5	Probability	- Step 1 Identify and represent sets - Step 2 Intersection of a set - Step 3 Union of a set - Step 4 Complement of a set (E) - Step 5 Probability of a single event - Step 6 Use diagrams to work out probabilities - Step 7 Relative frequency - Step 8 Expected outcomes - Step 9 Independent events - Step 10 Probabilities from Venn diagrams	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	- Personal skills - Thinking and problem solving - Working together and communicating - Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Tests
	Transformations	- Step 1 Enlargement (positive scale factor) - Step 2 Enlargement from a point (positive scale factor)	- Retrieval in class starter - Prior knowledge whiteboard questions	- Key Vocabulary in Retrieval starters - True and False Tasks	- Personal skills - Thinking and problem solving - Working	Plenary True and False Tasks

		• Step 3 Enlargement (fractional scale factor) • Step 4 Enlargement (negative scale factor) (E) • Step 5 Describe an enlargement • Step 6 Rotation about a point • Step 7 Describe a rotation • Step 8 Translation • Step 9 Describe a translation • Step 10 Reflection • Step 11 Find the result of a series of transformations (E)	• End of Topic Unit Test Intervention lessons using knowledge organiser material	• Problem Solving Tasks	together and communicating Fundamental skills - Using numbers effectively - Using language effectively	• Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests
	Simultaneous Equations	• Step 1 Use one value to find another • Step 2 Introduction to simultaneous equations • Step 3 Solve simultaneous equations using graphs • Step 4 Solve simultaneous equations (no adjustments) • Step 5 Manipulating equations • Step 6 Solve simultaneous equations (adjust one) • Step 7 Solve simultaneous equations (adjust both) (E) • Step 8 Solve simultaneous equations by substitution (E)	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using knowledge organiser material	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating Fundamental skills - Using numbers effectively - Using language effectively	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests - End of Term Tests
	Trigonometry	• Step 1 Identify hypotenuse, opposite and adjacent sides • Step 2 Use the tangent ratio to find unknown side lengths • Step 3 Use sine and cosine ratios to find unknown side lengths	• Retrieval in class starter • Prior knowledge whiteboard questions • End of Topic Unit Test Intervention lessons using	• Key Vocabulary in Retrieval starters • True and False Tasks • Problem Solving Tasks	• Personal skills - Thinking and problem solving - Working together and communicating	• Plenary True and False Tasks • Peer and self-assessment • Feedback and

		- Step 4 Use sine, cosine and tangent ratios to find unknown angles - Step 5 Choose the right method - Step 6 Key angles in right-angled triangles (E) - Step 7 Trigonometry in 3-D shapes (E)	knowledge organiser material		Fundamental skills - Using numbers effectively - Using language effectively	reflective practise End of Topic Tests End of Term Tests
HT6	Constructions	- Step 1 Draw and measure angles - Step 2 Construct and interpret scale drawings - Step 3 Construct triangles using ASA, SAS and SSS - Step 4 Construct an angle bisector - Step 5 Construct a perpendicular bisector - Step 6 Construct a perpendicular from or to a point - Step 7 Construct more complex polygons	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	Personal skills - Thinking and problem solving - Working together and communicating Fundamental skills - Using numbers effectively - Using language effectively	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests End of Term Tests
	Maths and Money	- Step 1 Understand a bank account - Step 2 Spending - Step 3 Ways to pay - Step 4 Ways to save - Step 5 Jobs and pay - Step 6 Investing - Step 7 Borrowing (buying a house) - Step 8 Running a house or a business	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using knowledge organiser material	- Key Vocabulary in Retrieval starters - True and False Tasks - Problem Solving Tasks	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

		• Step 9 Budgeting • Step 10 Borrowing (loans) • Step 11 Spending overseas • Step 12 Insurance			numbers effectively - Using language effectively	• End of Topic Tests • End of Term Tests
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Revision/ Consolidation/Enrichment

Catholicity across the curriculum:

Solving ratio and proportion questions: Within this topic, fairness and equitable distribution of resources is heavily emphasised. For instance, when dividing resources among community members, using ratio ensures that everyone receives their fair share based on need, reflecting the values of social justice and the common good.

Rates: Measurements of speed/distance/time can reflect balance in pupils daily lives. Pupils are required to use logical thinking and apply maths to concepts they encounter in the real world.

Algebraic representation: Using variables and equations to model situations that promote fairness and equitable distribution of resources. Responsible stewardship is heavily emphasised during this topic. Real life examples are used to model simultaneous equations and how the distribution of resources and be explored.