

Year 8 Curriculum Overview [2026-2027]

Mathematics

Autumn Term	Knowledge & Understanding			Literacy Skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval			
HT1	Angles and Polygons	- Step 1 Draw and measure lines and angles - Step 2 Understand and use geometric notation - Step 3 Angles around a point - Step 4 Angles on a straight line - Step 5 Vertically opposite angles - Step 6 Recognise and name polygons - Step 7 Angles in a triangle - Step 8 Angles in a quadrilateral - Step 9 Solve problems with angles - Step 10 Parallel and perpendicular lines - Step 11 Angles in parallel lines (E) - Step 12 Angles in a polygon (E) - Step 13 Simple proofs (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	- Baseline Assessment - Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests - End of Term Test
	Ratio	- Step 1 Understand ratio - Step 2 Ratio problems (whole given) - Step 3 Ratio problems (part given) - Step 4 Ratio problems (difference given) - Step 5 Simplify ratios - Step 6 Express ratios in the form 1:n and n:1 (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	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests

		• Step 7 Compare ratios and fractions • Step 8 Solve problems with ratio			- Using language effectively - Using a calculator effectively. • Chef • Working in the catering industry • Business • Architecture • Surveyor • Financial • Currency exchange • Hair dressers • Medical •Business • Construction work • Retail • Hotel and catering	
	Proportion and Scale	• Step 1 Understand ratio • Step 2 Ratio problems (whole given) • Step 3 Ratio problems (part given) • Step 4 Ratio problems (difference given) • Step 5 Simplify ratios • Step 6 Express ratios in the form 1:n and n:1 (E) • Step 7 Compare ratios and fractions • Step 8 Solve problems with ratio	• 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
	Algebraic Manipulation	• Step 1 Form algebraic expressions • Step 2 Identify and use formulae, expressions, identities and equations • Step 3 Simplify expressions • Step 4 Use directed number with algebra • Step 5 Substitution with directed number	• 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	• 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 - End of Topic Tests

		- Step 6 Expand a single bracket - Step 7 Factorise into a single bracket - Step 8 Expand single brackets and simplify - Step 9 Expand double brackets of the form $(x \pm a)(x \pm b)$ (E) - Step 10 Factorise quadratic expressions (E) - Step 11 Expand double brackets (E)		Problem Solving Tasks	effectively - Using language effectively - Using a calculator effectively.	
HT2	Coordinates and Graphs	- Step 1 Coordinates in all four quadrants - Step 2 Lines parallel to the axes - Step 3 Table of values - Step 4 Recognise and use the line $y=x$ - Step 5 Lines of the form $y=mx$ - Step 6 Link $y=mx$ to direct proportion (E) - Step 7 Introduce gradient ($y=mx$) - Step 8 Lines with a negative gradient - Step 9 Lines of the form $y=x+c$ - Step 10 Lines of the form $y=mx+c$ - Step 11 Find the midpoint of a line segment (E) - Step 12 Solve problems with coordinates and graphs (E) - Step 13 Quadratic graphs (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
	Multiply and divide fractions	- Step 1 Divide a fraction by an integer - Step 2 Multiply a fraction by an integer - Step 3 Multiply fractions - Step 4 Understand reciprocals - Step 5 Divide an integer by a fraction - Step 6 Divide a fraction by a unit fraction - Step 7 Divide fractions	- 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	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests

		- Step 8 Multiply and divide mixed numbers - Step 9 Multiply and divide algebraic fractions (E)			- Using a calculator effectively. - Jobs that require a statistics background - Data Analyst.	
	Symmetry and reflection	- Step 1 Line symmetry - Step 2 Rotational symmetry - Step 3 Reflect a shape in a horizontal or vertical line - Step 4 Reflect a shape in a diagonal line - Step 5 Reflect a shape given equation of a line (E) - Step 6 Describe a reflection (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

Catholicity across the curriculum:

Ratio and scale: The development of proportional thinking allows pupils to develop a strong skillset required for their future career paths. Using scales for measurement for example, and how this applies to real life where they can contribute as valuable members of society and work towards the common good.

Algebraic manipulation: Pupils encounter many challenges when attempting to understand the abstract concepts of algebra. From this, they build resilience and growth mindset which corresponds with human dignity and how pupils view themselves. Students are encouraged to explore different strategies to help them solve problems promoting independence.

Coordinates and graphs: Constructing tables and analysing data from these tables can help to understand social issues and make informed decisions. By analysing data through tables, pupils can better address inequalities and promote justice within society, aligning with the principles of solidarity and the dignity of every person.

Symmetry and reflection: Fairness and equality is a core concept of Catholicity, and this can be strongly applied to line symmetry. Within this topic, shapes are mirrored to create balance. When applied to society, such values of balance help to ensure everyone is treated with respect and dignity, reflecting the values of justice and community.

Catholicity across the curriculum:

Ratio and scale: The development of proportional thinking allows pupils to develop a strong skillset required for their future career paths. Using scales for measurement for example, and how this applies to real life where they can contribute as valuable members of society and work towards the common good.

Algebraic manipulation: Pupils encounter many challenges when attempting to understand the abstract concepts of algebra. From this, they build resilience and growth mindset which corresponds with human dignity and how pupils view themselves. Students are encouraged to explore different strategies to help them solve problems promoting independence.

Coordinates and graphs: Constructing tables and analysing data from these tables can help to understand social issues and make informed decisions. By analysing data through tables, pupils can better address inequalities and promote justice within society, aligning with the principles of solidarity and the dignity of every person.

Symmetry and reflection: Fairness and equality is a core concept of Catholicity, and this can be strongly applied to line symmetry. Within this topic, shapes are mirrored to create balance. When applied to society, such values of balance help to ensure everyone is treated with respect and dignity, reflecting the values of justice and community.

Year 8 Curriculum Overview [2026-2027]

Mathematics

Spring Term	Knowledge & Understanding			Literacy Skills Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT3	Area, volume and density	- Step 1 Name 2-D and 3-D shapes - Step 2 Area of a 2-D shape - Step 3 Area of a compound shape - Step 4 Recognise prisms (including language of edges and vertices) - Step 5 Volume of cubes and cuboids - Step 6 Convert metric units of mass and capacity - Step 7 Understand the units of mass/density/volume - Step 8 Solve problems with density, mass and volume - Step 9 Area and volume in similar shapes (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
	Equations and Inequalities	- Step 1 Solve simple 1 and 2-step equations - Step 2 Solve more complex equations - Step 3 Solve fractional equations	- Retrieval in class starter - Prior knowledge whiteboard questions - End of Topic Unit Test Intervention lessons using	- Key Vocabulary in Retrieval starters - Encourage use of subject language - Questioning	- Personal skills - Thinking and problem solving - Working together and	- Plenary True and False Tasks - Peer and self-assessment

		• Step 4 Form and solve equations • Step 5 Solve equations with unknowns on both sides • Step 6 Understand and use inequalities • Step 7 Inequalities on a number line • Step 8 Solve simple inequalities • Step 9 Form and solve inequalities • Step 10 Solve inequalities with unknowns on both sides (E)	knowledge organiser material	• Pupil explanations and reasoning • True and False Tasks • Problem Solving Tasks	communicating • Fundamental skills - Using numbers effectively - Using language effectively - Using a calculator effectively.	• Feedback and reflective practise • End of Topic Tests
HT4	Percentages	• Step 1 Percentage of an amount • Step 2 Convert between percentages and decimals • Step 3 Use multipliers to find percentages • Step 4 Convert between decimals and percentages greater than 1 • Step 5 Percentage increase using a multiplier • Step 6 Percentage decrease using a multiplier • Step 7 Percentage increase and decrease using a multiplier • Step 8 Express one number as a fraction or a percentage of another (calculator) • Step 9 Express one number as a fraction or a percentage of another (non-calculator) • Step 10 Percentage change • Step 11 Find the original value given a percentage • Step 12 Choose appropriate methods to solve percentage problems	• 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

	Indices	• Step 1 Add and subtract expressions with indices • Step 2 Multiply and divide expressions with indices • Step 3 Addition law for indices • Step 4 Subtraction law for indices • Step 5 Addition and subtraction laws for indices • Step 6 Powers of powers (E) • Step 7 Negative indices (E) • Step 8 Fractional indices (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. • Business • Retails • Computing • Textiles	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests
	Standard Index Form	• Step 1 Positive and negative powers of 10 • Step 2 Numbers greater than 1 in standard form • Step 3 Numbers between 0 and 1 in standard form • Step 4 Standard form on a calculator	• 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. • Construction • Surveyor • Architecture • Carpet fitter • Decorator	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests

Catholicity across the curriculum:

Indices: Using standard index form, pupils are taught to express large numbers and better understand how to manage quantities. This relates to the distribution of resources and responsible stewardship in regard to this, ensuring we promote equity and sustainability in our communities.

Equations and Inequalities: Pupils encounter many challenges when attempting to understand the abstract concepts of algebra. From this, they build resilience and growth mindset which corresponds with human dignity and how pupils view themselves. Students are encouraged to explore different strategies to help them solve problems promoting independence.

Year 8 Curriculum Overview [2026-2027]**Mathematics**

Summer Term	Knowledge & Understanding			Literacy Skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT5	Interpret and represent data	- Step 1 Types of data - Step 2 Outliers and errors - Step 3 Averages and range - Step 4 Choose the most appropriate average - Step 5 Compare distributions using average and the range - Step 6 Averages from an ungrouped frequency table - Step 7 Represent and interpret grouped discrete data - Step 8 Represent and interpret continuous data grouped into equal classes - Step 9 Mean and mode from a grouped frequency table (E)	- Retrieval in class starter - Prior knowledge 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. - Construction - Surveyor - Architecture - Carpet fitter - Decorator	- Plenary True and False Tasks - Peer and self-assessment - Feedback and reflective practise - End of Topic Tests

	Angles in parallel lines and polygons	• Step 1 Basic angles rules and notation • Step 2 Angles between parallel lines and a transversal • Step 3 Alternate and corresponding angles • Step 4 Alternate, corresponding and co-interior angles • Step 5 Solve complex problems with angles in parallel lines • Step 6 Properties of special quadrilaterals and their diagonals • Step 7 Find sides and angles in special quadrilaterals • Step 8 Exterior angles of a polygon • Step 9 Interior angles of a polygon • Step 10 Interior angles in a regular polygon • Step 11 Prove simple geometric facts (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. • Construction • Surveyor • Architect • Carpet fitter • Decorator	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests
	Tables and Probability	• Step 1 Probability vocabulary • Step 2 The probability scale • Step 3 Probability of a single event • Step 4 Use the sum of probabilities being equal to 1 • Step 5 Probability experiments • Step 6 Sample spaces for 1 or more events • Step 7 Probabilities from sample space diagrams • Step 8 Two-way tables • Step 9 Probabilities from two-way tables • Step 10 Frequency trees • Step 11 Probabilities from frequency trees	• 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. • Data analysts • Statisticians	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests

HT6	Circles	• Step 1 Circle vocabulary • Step 2 Pi as a ratio • Step 3 Circumference of a circle • Step 4 Perimeter of parts of a circle • Step 5 Area of a circle • Step 6 Area of parts of a circle • Step 7 Area and circumference of a circle • Step 8 Perimeter of compound shapes with circles • Step 9 Perimeter and area of compound shapes with circles	• 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
	Graphs and charts	• Step 1 Pictograms and bar charts • Step 2 Vertical line charts • Step 3 Draw pie charts • Step 4 Interpret pie charts • Step 5 Line graphs • Step 6 Choose the most appropriate graph or chart • Step 7 Compare distributions using graphs • Step 8 Misleading graphs and charts	• 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. • Data analysts • Statistician	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests
	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	• Plenary True and False Tasks • Peer and self-assessment • Feedback and reflective practise • End of Topic Tests

					- Using language effectively - Using a calculator effectively.	
	Enrichment					
	Catholicity across the curriculum: Angles: Catholicity promotes the idea of balance and harmony within communities, which can be related to the study of angles in mathematics. Angles represent the relationships between lines and shapes, fostering cooperation and understanding among individuals helps create a more equitable and just society. Tables and Probability: Constructing tables and analysing data from these tables can help to understand social issues and make informed decisions. By analysing data through tables, pupils can better address inequalities and promote justice within society, aligning with the principles of solidarity and the dignity of every person . Sequences: Pupils are shown the importance of specific order and pattern. This is then applied to social justice, which also requires a structured approach to ensure every individual is treated fairly and that their rights are upheld consistently over time (the value of human dignity).					