Our Lady and St. Bede Catholic Academy

Subject Curriculum – Year 7 Theta

Big Ideas & Purpose

The aims of teaching and learning mathematics are to encourage and enable students to: recognise that mathematics permeates the world around us; appreciate the usefulness, power and beauty of mathematics and enjoy mathematics and develop patience and persistence when solving problems.

Programme of Study

HT1	HT2	HT3	HT4	HT5	HT6
Analysing and displaying data Mode, median and range Displaying data Grouping data Averages and comparing data Line graphs and more bar charts Spreadsheets **Number skills** Mental maths Addition and subtraction Multiplication Division Finance: Time and money Negative numbers Factors, multiples and primes Square and triangle numbers	**Expressions, functions and formulae** Functions Simplifying expressions STEM: Substituting into formulae Writing formulae **Decimals and measures** Decimals and rounding Length, mass and capacity Scales and coordinates Working with decimals mentally Working with decimals Perimeter Area STEM: More units	**Fractions** Comparing fractions Simplifying fractions Working with fractions Fractions and decimals Understanding percentages Percentages of amounts **Probability** The language of probability Calculating probability Experimental probability FINANCE: Expected outcomes	**Ratio and proportion** Direct proportion Writing ratios Using ratios Scales and measures Proportions and fractions Proportions and percentages	**Lines and angles** Lines, angles and triangles Estimating, measuring and drawing angles Drawing triangles accurately STEM: Calculating angles Angles in a triangle Quadrilaterals **Sequences and graphs** Sequences Pattern sequences Coordinates Straight-line graphs Position-to-term rules	**Transformations** Congruency and enlargements Symmetry Reflection Rotation Translations and combined transformations

Key Assessments

- Assessments take place after every unit.
- Usually 2 per half term.

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- Year 7 will also take an end of year examination in the summer term.

Key Skills

- To provide opportunities for learner to demonstrate their knowledge of mathematics across a whole range of topic areas.
- To allow learners to develop their problem-solving strategies and provide the confidence and skills required to tackle unfamiliar challenges.

Links to Careers

- Mathematics teaches accuracy and precision in work. The analytical and problem-solving skills you learn are valuable in many different careers, for example Accountancy, Finance, Teaching, Business, Medicine, Engineering, Architecture and Computer Studies.

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Subject Curriculum – Year 7 Delta

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Programme of Study

HT1

Analysing and displaying data
Two-way tables and bar charts
Averages and range
Grouped data
More graphs
Pie charts
STEM: Scatter graphs and correlation
Number skills
Factors, primes and multiples
Using negative numbers
Multiplying and dividing
Squares and square roots
More powers and roots
Calculations

HT2

Equations, functions and formulae
Simplifying algebraic expressions
Writing algebraic expressions
STEM: Using formulae
Writing formulae
Brackets and powers
Factorising expressions
Fractions
Working with fractions
Adding and subtracting
Fractions, decimals and percentages
Multiplying and dividing
Working with mixed numbers

HT3

Angles and shapes
Angles and parallel lines
Triangles
Quadrilaterals
Polygons
Decimals
Ordering
Rounding
Adding and subtracting decimals
Multiplying
Dividing
Fractions, decimals and percentages
FINANCE: Working with percentages

HT4

Equations
Solving one-step equations
Solving two-step equations
More complex equations
Trial and improvement

HT5

Multiplicative reasoning
STEM: Metric and imperial units
Writing ratios
Sharing in a given ratio
Proportion
Proportional reasoning
Using the unitary method
Perimeter, area and volume
Triangles, parallelograms and trapeziums
Perimeter and area of compound shapes
Properties of 3D solids
Surface area
Volume
STEM: Measures of area and volume

HT6

Sequences and graphs
Sequences
The nth term
Pattern sequences
Coordinates and line segments
Graphs

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Subject Curriculum – Year 7 Pi

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	HT1	HT2	HT3	HT4	HT5	HT6
Programme of Study	**Analysing and displaying data** Tables and pictograms Bar charts Grouped data Mode and modal class Range and median Mean **Calculating** Adding Subtracting Multiplying Dividing Multiplying and dividing by 10, 100 and 1000 Using the four operations Positive and negative numbers	**Expressions, functions and formulae** Using functions Function machines Simplify expressions Writing expressions STEM: Using formulae Writing formulae **Graphs** Real-life graphs Coordinates Graphs of functions STEM: Scientific graphs	**Factors and multiples** Number rules and relationships Multiples Multiplication Division Solving problems Factors and primes Common factors and multiples **Decimals and measures** Estimates and measures Decimal numbers Metric units Adding and subtracting decimals Rounding Multiplying and dividing decimals FINANCE: Calculating with money	**Angles and lines** Right angles and lines Measuring angles Drawing and estimating angles Putting angles together **8Measuring and shapes** Shapes Symmetry in shapes Regular polygons Perimeter Area	**Fractions, decimals and percentages** Comparing fractions Equivalent fractions Calculating with fractions Adding and subtracting fractions Introducing percentages FINANCE: Finding percentages	**Transformations** Reflection Translation Rotation STEM: Congruency
Key Assessments	• Assessments take place after every unit. • Usually 2 per half term.		• Assessments take place after every unit. • Usually 2 per half term.		• Year 7 will also take an end of year examination in the summer term.	

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Links to Careers

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