



Subject Curriculum – Year 7 Delta

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 Number skills Factors, primes and multiples Using negative numbers Multiplying and dividing Squares and square roots More powers and roots Calculations Fractions Working with fractions Adding and subtracting Fractions, decimals and percentages Multiplying and dividing Working with mixed numbers	HT2 Analysing and displaying data Two-way tables and bar charts Averages and range Grouped data More graphs, Pie charts STEM: Scatter graphs and correlation	HT3 Equations, functions and formulae Simplifying algebraic expressions Writing algebraic expressions STEM: Using formulae Writing formulae Brackets and powers Factorising expressions Sequences and graphs Sequences The nth term Pattern sequences Coordinates and line segments Graphs	HT4 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	HT5 Equations Solving one-step equations Solving two-step equations More complex equations Multiplicative reasoning STEM: Metric and imperial units Writing ratios, Sharing in a given ratio Proportion, Proportional reasoning Using the unitary method	HT6 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 Transformations Reflection, Rotation, Translation and Enlargement Probability The language of probability Calculating probability Experimental probability FINANCE: Expected outcomes
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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.



Subject Curriculum – Year 7 Theta (middle)

Big Ideas & Purpose

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Programme of Study

HT1

Number skills

Mental maths
Addition and subtraction
Multiplication
Division
Finance: Time and money
Negative numbers
Factors, multiples and primes
Square and triangle numbers
Fractions
Comparing fractions
Simplifying fractions
Working with fractions
Fractions and decimals
Understanding percentages
Percentages of amounts

HT2

Analysing and displaying data

Mode, median and range
Displaying data
Grouping data
Averages and comparing data
Line graphs and more bar charts

HT3

Expressions, functions and formulae

Functions
Simplifying expressions
STEM: Substituting into formulae
Writing formulae
Solving simple linear equations

Sequences and graphs

Sequences
Pattern sequences
Coordinates
Straight-line graphs
Position-to-term rules

HT4

Lines and angles

Lines, angles and triangles
Estimating, measuring and drawing angles
Drawing triangles accurately
STEM: Calculating angles
Angles in a triangle
Quadrilaterals

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

HT5

Ratio and proportion

Direct proportion
Writing ratios
Using ratios
Scales and measures
Proportions and fractions
Proportions and percentages

HT6

Transformations

Congruency and enlargements
Symmetry
Reflection
Rotation
Translations and combined transformations

Probability

The language of probability
Calculating probability
Experimental probability
FINANCE: Expected outcomes

Key Assessments

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Key Skills

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- 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.



Subject Curriculum – Year 7 Pi

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 Calculating Adding Subtracting Multiplying Dividing Multiplying and dividing by 10, 100 and 1000 Using the four operations Positive and negative numbers Factors and multiples Number rules and relationships Multiples Multiplication Division Solving problems Factors and primes Common factors and multiples	HT2 Fractions, decimals and percentages Comparing fractions Equivalent fractions Calculating with fractions Adding and subtracting fractions Introducing percentages FINANCE: Finding percentages Analysing and displaying data Tables and pictograms Bar charts Grouped data Mode and modal class Range and median Mean	HT3 Expressions, functions and formulae Using functions Function machines Simplify expressions Writing expressions STEM: Using formulae Writing formulae Solving simple equations Graphs Real-life graphs Coordinates Graphs of functions STEM: Scientific graphs	HT4 Angles and lines Right angles and lines Measuring angles Drawing and estimating angles Putting angles together Decimals and measures Estimates and measures Decimal numbers Metric units Adding and subtracting decimals Rounding Multiplying and dividing decimals FINANCE: Calculating with money	HT5 Measuring and shapes Shapes Symmetry in shapes Regular polygons Perimeter Area	HT6 Transformations Reflection Translation Rotation STEM: Congruency Probability The language of probability Calculating probability Experimental probability FINANCE: Expected outcomes
Key Assessments	<ul style="list-style-type: none"> Assessments take place after every unit. Usually 2 per half term. 		<ul style="list-style-type: none"> Assessments take place after every unit. Usually 2 per half term. 		<ul style="list-style-type: none"> Year 7 will also take an end of year examination in the summer term. 	
Key Skills	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	