



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 Angles and shapes Angles and parallel lines Triangles Quadrilaterals Polygons | HT4 Decimals Ordering, Rounding Adding and subtracting decimals Multiplying, Dividing Fractions, decimals and percentages FINANCE: Working with percentages Equations Solving one-step equations Solving two-step equations More complex equations Trial and improvement | HT5 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 Sequences and graphs Sequences The nth term Pattern sequences Coordinates and line segments Graphs | HT6 Multiplicative reasoning STEM: Metric and imperial units Writing ratios, Sharing in a given ratio Proportion, Proportional reasoning Using the unitary method |
| 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. | | | |



Subject Curriculum – Year 7 Theta

Big Ideas & Purpose

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Programme of Study

| HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
|--|--|---|--|--|---|
| 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 | Analysing and displaying data Mode, median and range Displaying data Grouping data Averages and comparing data Line graphs and more bar charts | 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 | Probability The language of probability Calculating probability Experimental probability FINANCE: Expected outcomes 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 | Ratio and proportion Direct proportion Writing ratios Using ratios Scales and measures Proportions and fractions Proportions and percentages |

Key Assessments

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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 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 | HT2 | HT3 | HT4 | HT5 | HT6 |
|------------------------|---|---|--|---|--|---|
| | 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 | 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 | 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 | 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 | Measuring and shapes Shapes Symmetry in shapes Regular polygons Perimeter Area | Transformations Reflection Translation Rotation STEM: Congruency |
| 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. | | |