Y7 Core Scheme of Work (KS3 Maths Progress Theta One) Autumn Term

Main resource: Theta One textbook

Teachers are to use their judgement as to how long to spend on each unit; this will depend on the class being taught.

Unit 1 – Analysing and Displaying Data	Unit 2 – Number Skills	Unit 3 – Equations, functions and formulae	Functional Maths – Cost of Christmas
- describe, interpret and compare observed distributions of a single variable through: appropriate measures of central tendency (mean, mode, median) and - appropriate measures of spread (range, consideration of outliers) - construct and interpret vertical line (or bar) charts for ungrouped and grouped data	- use conventional notation for the priority of operations - round numbers and measures to an appropriate degree of accuracy - recognise and use relationships between operations including inverse operations - use the four operations, including formal written methods, with positive and negative integers - order positive and negative integers - use the concepts and vocabulary of prime numbers, factors [or divisors] and prime numbers - use integer powers and associated real roots (square, cube) - use approximation through rounding to estimate answers	- substitute numerical values into formulae and expressions, including scientific formulae - simplify and manipulate algebraic expressions to maintain equivalence: collecting like terms, multiplying a term over a bracket - use and interpret algebraic notation: 3y in place of y + y + y and 3 × y - model situations or procedures by translating them into algebraic expressions or formulae	- work within a budget - work within given constraints - calculate cooking times - make a time plan for a meal (food technology)

Y7 Core Scheme of Work (KS3 Maths Progress Theta One) Spring Term

Main resource: Theta One textbook

Unit 9 – Sequences and Graphs	Unit 4 – Decimals and Measures	Unit 5 - Fractions	Functional Maths – Easter Egg Hunt
• generate terms of a sequence from a term-to-term rule • generate terms of a sequence from a position-to-term • recognise arithmetic sequences • find the nth term • recognise geometric sequences and appreciate other sequences that arise • work with coordinates in all four quadrants • produce graphs of linear functions • interpret mathematical relationships both algebraically and graphically)	• understand and use place value for decimals • order decimals and fractions • use the symbols =, ≠, <, >, ≤, ≥ • understand and use place value for measures • work with coordinates in all four quadrants • use the four operations, including formal written methods, with positive and negative decimals • derive formulae to calculate and solve problems involving perimeter and area of parallelograms	• order decimals and fractions • use the symbols =, ≠, <, >, ≤, ≥ • use the four operations, including formal written methods, with positive and negative fractions • define percentage as 'number of parts per hundred' • interpret a percentage as a fraction or a decimal • interpret fractions and percentages as operators	• create a mathematical model • create efficient routes and pathways • refine solutions to a problem • become more familiar with the UK (link to geography)

Y7 Core Scheme of Work (KS3 Maths Progress Theta One) Summer Term

Main resource: Theta One textbook

Unit 7 – Ratio and Proportion	Unit 6 - Probability

• solve problems involving direct proportion • use ratio notation • reduce a ratio to simplest form • divide a given quantity into two parts in a given part:part ratio • use scale factors • understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction • express the division of a quantity into two parts as a ratio	• use appropriate language of probability • use the 0–1 probability scale • understand that probabilities of all possible outcomes sum to 1 • record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes

Unit 8 – Lines and Angles	Unit 10 - Transformations	Functional Maths- Build a Farm
• use the standard conventions for labelling the sides and angles of triangle ABC • draw and measure line segments and angles in geometric figures • apply the properties angles at a point and on a straight line • apply the properties vertically opposite angles • derive and use the sum of angles in a triangle • use the sum of angles in a triangle to deduce the angle sum in any polygon • use known results to obtain simple proofs	• derive properties of regular polygons • identify properties of, and describe the results of: translations • identify properties of, and describe the results of: rotations • identify properties of, and describe the results of: reflections	• create plans and diagrams • use space efficiently • consider cost/benefit analysis • increase awareness of finance and budgeting