

Level 2 Mathematics department scheme of work

Chapter	Title	Objectives	Resource links:
Autumn 1 (weeks 1 – 5)	Whole numbers and decimals	Level 1 <ul style="list-style-type: none">• NS1 Read, write, order, and compare large numbers (up to one million)• NS2 Recognise and use positive and negative numbers.• NS3 Multiply and divide whole numbers and decimals by 10, 100, 1000.• NS4 Use multiplication facts and make connections with division facts.• NS5 Use simple formulae expressed in words for one or two-step operations.• NS6 Calculate the squares of one-digit and two-digit numbers.• NS7 Follow the order of precedence of operators.• NS8 Read, write, order, and compare common fractions and mixed numbers.• NS9 Find fractions of whole number quantities or measurements.• NS10 Read, write, order, and compare decimals up to three decimal places.• NS11 Add, subtract, multiply and divide decimals up to two decimal places.	NS1, NS2 and NS3 NS4 and NS5 NS6 and NS7 NS8 and NS9 NS10 ,NS11 and NS12 NS18 and NS19

		<ul style="list-style-type: none"> • NS12 Approximate by rounding to a whole number or to one or two decimal places. <p>Level 2</p> <ul style="list-style-type: none"> • NS18 Read, write, order, and compare positive and negative numbers of any size. • NS19 Carry out calculations with numbers up to one million including strategies to check answers including estimation and approximation. • NS29 Follow the order of precedence of operators, including indices. 	
Autumn 2 (weeks 7 – 12)	Measures, perimeter, and area	<p>Level 1</p> <ul style="list-style-type: none"> • M3 Convert between units of length, weight, capacity, money, and time, in the same system. • M4 Recognise and make use of simple scales on maps and drawings. • M5 Calculate the area and perimeter of simple shapes including those that are made up of a combination of rectangles. • M6 Calculate the volumes of cubes and cuboids. <p>Level 2</p> <ul style="list-style-type: none"> • M10 Calculate amounts of money, compound interest, percentage increases, decreases and discounts including tax and simple budgeting. • M12 Calculate using compound measures including speed, density and rates of pay. • M13 Calculate perimeters and areas of 2-D shapes including triangles and circles and composite shapes including non-rectangular shapes (formulae given except for triangles and circles) 	<p>M3 and M4</p> <p>M5 and M6</p> <p>M10 and M12</p> <p>M13 and M14</p>

		<ul style="list-style-type: none"> • M14 Use formulae to find volumes and surface areas of 3-D shapes including cylinders (formulae to be given for 3-D shapes other than cylinders) • M15 Calculate actual dimensions from scale drawings and create a scale diagram given actual measurements. 	
3	Expressions and formulae	<p>Level 2</p> <ul style="list-style-type: none"> • NS20 Evaluate expressions and make substitutions in given formulae in words and symbols 	
4	Place value, ordering numbers and FDP.	<p>Level 1</p> <ul style="list-style-type: none"> • NS13 Read, write, order, and compare percentages in whole numbers. • NS14 Calculate percentages of quantities, including simple percentage increases and decreases by 5% and multiples thereof. • NS15 Estimate answers to calculations using fractions and decimals. • NS16 Recognise and calculate equivalences between common fractions, percentages, and decimals. • M1 Calculate simple interest in multiples of 5% on amounts of money. • M2 Calculate discounts in multiples of 5% on amounts of money. <p>Level 2</p> <ul style="list-style-type: none"> • NS20 Evaluate expressions and make substitutions in given formulae in words and symbols. • NS21 Identify and know the equivalence between fractions, decimals, and percentages. 	

		<ul style="list-style-type: none"> • NS22 Work out percentages of amounts and express one amount as a percentage of another. • NS23 Calculate percentage change (any size increase and decrease), and original value after percentage change. • NS24 Order, add, subtract, and compare amounts or quantities using proper and improper fractions and mixed numbers. • NS25 Express one number as a fraction of another • NS26 Order, approximate and compare decimals. • NS27 Add, subtract, multiply and divide decimals up to three decimal places. • M10 Calculate amounts of money, compound interest, percentage increases, decreases and discounts including tax and simple budgeting. 	
5	Angles and 2D shapes	<p>Level 1</p> <ul style="list-style-type: none"> • M7 Draw 2-D shapes and demonstrate an understanding of line symmetry and knowledge of the relative size of angles. • M8 Interpret plans, elevations, and nets of simple 3-D shapes. • M9 Use angles when describing position and direction, and measure angles in degrees. 	
6	Graphs	<p>Level 1</p> <ul style="list-style-type: none"> • H1 Represent discrete data in tables, diagrams and charts including pie charts, bar charts and line graphs. • H2 Group discrete data and represent grouped data graphically. 	

		<ul style="list-style-type: none"> • H3 Find the mean and range of a set of quantities. • H4 Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events. • H5 Use equally likely outcomes to find the probabilities of simple events and express them as fractions. <p>Level 2</p> <ul style="list-style-type: none"> • M16 Use coordinates in 2-D, positive and negative, to specify the positions of points. • H6 Calculate the median and mode of a set of quantities. • H7 Estimate the mean of a grouped frequency distribution from discrete data. • H8 Use the mean, median, mode and range to compare two sets of data. • H11 Draw and interpret scatter diagrams and recognise positive and negative correlation 	
7	Constructions and 3D shapes	<p>Level 2</p> <ul style="list-style-type: none"> • M17 Understand and use common 2-D representations of 3-D objects. • M18 Draw 3-D shapes including plans and elevations. • M19 Calculate values of angles and/or coordinates with 2-D and 3-D shapes 	
8	Ratio and proportion	<p>Level 2</p> <ul style="list-style-type: none"> • NS17 Work with simple ratio and direct proportions. 	

		<ul style="list-style-type: none">• NS28 Understand and calculate using ratios, direct proportion, and inverse proportion.	
9	Probability	Level 2 <ul style="list-style-type: none">• H9 Work out the probability of combined events including the use of diagrams and tables, including two-way tables.• H10 Express probabilities as fractions, decimals, and percentages.	