

Unit 1: Numbers and the Number System

T1 WK 1 to 4

Topic	Success Criteria	MATHS WATCH CLIP
Time – Set 4 Only	<ul style="list-style-type: none"> Tell time using an analogue and/or a digital clock; am and pm and 24hr 	Clip 6
Order Numbers	<ul style="list-style-type: none"> Understand place value in numbers with up to <u>three decimal places</u> Understand (order, write, read) place value in numbers with up to <u>eight digits</u> Place a set of negative numbers in order Place a set of mixed positive and negative numbers in order 	Clip 1 Clip 3 Clip 2
The Four Operations	<ul style="list-style-type: none"> Add and subtract positive and negative numbers mentally and using written methods <u>Multiply and divide positive and negative numbers mentally and using written methods and use written division methods in cases where the answer has up to two decimal places</u> Solve multi-step problems involving addition, subtraction and/or multiplication and division Understand and use negative numbers when working with temperature and other contexts 	Clip 17 Clip 18 Clip 68a Clip 19 Clip 20 Clip 68b Clip 21 Clip 23
BIDMAS	<ul style="list-style-type: none"> Know that addition and subtraction have equal priority Know that multiplication and division have equal priority Know that multiplication and division take priority over addition and subtraction <u>Use brackets in problem involving the order of operations</u> 	Clip 75
Factors, Primes and Multiples	<ul style="list-style-type: none"> Recall prime numbers up to 20; <u>up to 50</u> Know the meaning of a common multiple (factor) of two numbers Identify common multiples (factors) of two numbers <u>Know the meaning of 'highest common factor' and 'lowest common multiple' and use these to solve problems</u> 	Clip 28 Clip 79 Clip 80
Squares and Cubes	<ul style="list-style-type: none"> Understand the use of notation for powers and the square root symbol Use a scientific calculator to calculate powers and roots Recall the first 10, <u>15 square numbers and recall the first 5 cube numbers</u> Calculate with squares and cubes 	Clip 29 Clip 81 Clip 82
Keywords	Integer, Decimal, Positive, Negative, Sum, Product, Factor, Multiple, Operations, Prime, Highest Common Factor, Lowest Common Multiple, Square number, Powers, Roots, Cube Number	

Unit 2: Algebraic Manipulation

T1 WK 4 to 7

Topic	Success Criteria	MATHS WATCH CLIP
Concepts and Vocabulary	<ul style="list-style-type: none"> Know the meaning of expression, term, formula, equation, function Know the basic algebraic notation (rules of algebra) 	Clip 7
Manipulate and Simplify expressions	<ul style="list-style-type: none"> Simplify an expression by collecting like terms Simplify an expression involving multiplication and division 	Clip 33 Clip 34 Clip 35
Laws of Indices	<ul style="list-style-type: none"> <u>Know and use the laws of Indices (multiplication, division and brackets)</u> 	Clip 29 Clip 131 Clip 82
Expanding and factorising	<ul style="list-style-type: none"> <u>Expand an expression involving a single bracket</u> <u>Factorise an expression into a single bracket</u> <u>Expand an expression involving double brackets</u> 	Clip 134a Clip 94 Clip 134b Clip 93
Substitution	<ul style="list-style-type: none"> Substitute positive numbers into expressions and formulae <u>Substitute negative numbers into expressions and formulae</u> 	Clip 95
Keywords	Expression, Term, Formula, Equation, Function, Simplify, Indices, Expand, Factorise, Substitute, Input, Output	

Unit 3: Decimals, Estimating and Measures

T2 WK 1 to 3

Topic	Success Criteria	MATHS WATCH CLIP
Decimal Calculations	<ul style="list-style-type: none"> Add and subtract decimals Multiply and divide whole numbers and decimals by 10, 100 and <u>1000</u> <u>Multiply and divide whole numbers and decimals by 0.1, 0.01 etc</u> <u>Multiply and divide decimals</u> Solve problems involving decimals 	Clip 17 Clip 18 Clip 30 Clip 66 Clip 67
Rounding	<ul style="list-style-type: none"> Round to the nearest whole number, 10, 100 and 1000 Round numbers to 1 decimal places (<u>2dp and 3dp</u>) <u>Round numbers to a specified number of significant figures</u> 	Clip 31 Clip 32 Clip 90
Estimating	<ul style="list-style-type: none"> Estimate answers to calculations by rounding to the nearest 10, 100 or 1000 <u>Estimate answers to calculations by rounding to 1 significant figure</u> 	Clip 91
Standard form	<ul style="list-style-type: none"> <u>Write really big numbers in standard form</u> <u>Write really small numbers in standard form</u> Add and subtract numbers in standard form Multiply and divide numbers in standard form 	Clip 83
Units of measure	<ul style="list-style-type: none"> Identify appropriate units of measure for different objects - length, mass, volume 	Clip 112
Convert between units	<ul style="list-style-type: none"> Convert between different units of measurement 	Clip 112
Time	<ul style="list-style-type: none"> Tell time using an analogue and/or a digital clock; am and pm and 24hr Reading bus timetables 	Clip 6
Keywords	<ul style="list-style-type: none"> Analogue, Digital, Timetable, Round, Significant, Estimate 	

Unit 4: Lines, Angles and Shapes

T2 WK 4 to 6

Topic	Success Criteria	MATHS WATCH CLIP
Vocabulary	<ul style="list-style-type: none"> Understand and identify points, lines, vertices, edges, planes, parallel lines, perpendicular lines, angles, right angles and polygons. <u>Draw on diagrams from written description, e.g. labelling parallel lines</u> 	Clip 13
Measuring Angles	<ul style="list-style-type: none"> To be able to use a protractor Draw an angle that is; acute; right-angled; obtuse; and <u>reflex</u> 	Clip 46a Clip 46b
Angle facts	<ul style="list-style-type: none"> Identify angles at a point, angles at a point on a line and vertically opposite angles <u>Identify alternate and corresponding angles and find missing angles in parallel lines</u> 	Clip 45 Clip 120
Angles in triangles	<ul style="list-style-type: none"> Know that angles in a triangles total 180° Find missing angles in triangles <u>Find missing angles in isosceles triangles</u> 	Clip 121 Clip 122
Angles in quadrilaterals	<ul style="list-style-type: none"> Know properties of quadrilaterals (inc. square, rectangle, <u>parallelogram, trapezium, kite and rhombus</u>) Know that angles in quadrilaterals total to 360° Find missing angles in quadrilaterals 	Clip 9
Keywords	Point, Line, Vertices, Edges, Planes, Parallel, Perpendicular, Angle, Polygon, Protractor, Acute, Obtuse, Reflex, Identify, Alternate, Corresponding, Isosceles, Quadrilateral	

Unit 5: Converting between FDP and Calculating with Fractions T3 WK 1-2

Topic	Success Criteria	MATHS WATCH CLIP
Equivalent fractions	<ul style="list-style-type: none"> • Understand equivalence and find equivalent fractions • Write fractions in their simplest form • Order fractions 	Clip 24 Clip 25 Clip 26
Calculations with fractions	<ul style="list-style-type: none"> • Change between mixed numbers and top heavy fractions • Add and subtract fractions when the denominator is different • Find fractions of amounts • <u>Multiply and divide fractions</u> 	Clip 71a Clip 71b Clip 73 Clip 74 Clip 72
Fractions, decimals and Percentages	<ul style="list-style-type: none"> • Convert between fractions, decimals and percentages • Order fractions, decimals and percentages 	Clip 84 Clip 85
Keywords	<ul style="list-style-type: none"> • Equivalent, Numerator, Denominator, Mixed Number, Improper, Express, Quantity 	

Unit 6: Calculating with Percentages

T3 WK 2 to 3

Percentages of amounts	<ul style="list-style-type: none"> • Express a quantity as a percentage of another • Find 10%, 25% and 50% of a number • <u>Find any percentage of an amount with and without a calculator</u> 	Clip 40 Clip 86 Clip 87
Percentage change	<ul style="list-style-type: none"> • <u>Increase/decrease an amount by a given percentage</u> • <u>Introduce multipliers</u> • <u>Use calculators to find a percentage of an amount using multipliers</u> 	Clip 108
Keywords	Percentage, Multiplier, Increase, Decrease	

Unit 7: Perimeter, Area and Volume

T3 WK 4 to 6

Topic	Success Criteria	MATHS WATCH CLIP
Measures	<ul style="list-style-type: none"> Use standard units of length, mass, volume, money and other measures 	Clip 112
Converting between units	<ul style="list-style-type: none"> Convert between related units (time, length, <u>area</u>, <u>volume/capacity</u>, mass) 	Clip 112
Area and Perimeter	<ul style="list-style-type: none"> Calculate the area and perimeter of rectangles, triangles, <u>parallelograms and trapezia</u> Calculate the area and perimeter of compound shapes made from rectangles and triangles 	Clip 52 Clip 53 Clip 54 Clip 55 Clip 56
Circumference and Area of Circles	<ul style="list-style-type: none"> Know the formulae for calculating the circumference and area of a circle Calculate the circumference of a circle when given diameter or radius Calculate the area of a circle when given diameter or radius 	Clip 117 Clip 118
3D solids	<ul style="list-style-type: none"> Know the number of faces, edges and vertices for solids Know the names and properties of solids (cubes, cuboids, prisms, cylinders, pyramids, cones and spheres) 	Clip 43
Volume and surface area	<ul style="list-style-type: none"> <u>Calculate the volume of cuboids and other prisms</u> Calculate the surface area of cuboids <u>and other prisms</u> 	Clip 115 Clip 119 Clip 114a Clip 114b
Keywords	Capacity, Mass, Area, Perimeter, Compound, Circumference, Diameter, Radius, Surface Area, Volume,	

Unit 8: Ratio and Proportion

T4 WK 1 to 3

Topic	Success Criteria	MATHS WATCH CLIP
Simplifying ratios	<ul style="list-style-type: none"> • Use ratio notation • Simplify 2 and <u>3 part</u> ratios by cancelling common factors • Simplify ratios when units are different and convert between units 	Clip 38
Dividing in a ratio	<ul style="list-style-type: none"> • Divide a quantity into a ratio 	Clip 106
Proportion problems	<ul style="list-style-type: none"> • Use ratio to solve real life problems (e.g. recipes and best buy problems) 	Clip 39 Clip 42
Currency	<ul style="list-style-type: none"> • Use an exchange rate to calculate currencies 	Clip 105
Direct and Inverse Proportion	<ul style="list-style-type: none"> • Understand the idea of direct and inverse proportion • Solving simple direct proportion problems 	
Keywords	Ratio, Exchange, Direct, Inverse, Proportion	

Unit 9: Equations and Inequalities

T5 WK 4 to 6

Topic	Success Criteria	MATHS WATCH CLIP
Function machines	<ul style="list-style-type: none"> • Find the output on a single and multi-step function machine • Use inverse operations to find the input on a function machine 	Clip 36
Solving equations	<ul style="list-style-type: none"> • Solve one step equations using inverse operations or the balancing method • Solve multi-step equations using inverse operations or the balancing method • <u>Solve equations with unknowns on both sides</u> • Form and solve equations 	Clip 135a Clip 135b Clip 137
Representing Inequalities	<ul style="list-style-type: none"> • Represent an inequality on a number line • Write a solution set for an inequality 	Clip 138
Keywords	Multi-Step, Balancing, Unknown, Form, Solve, Represent, Inequality, Solution, Inverse	

Unit 10: Analysing and Displaying Data

T6 WK 1 to 3

Topic	Success Criteria	MATHS WATCH CLIP
Types of data	<ul style="list-style-type: none"> • Discrete and continuous data. • Quantitative and qualitative data 	Clip 63
Displaying data	<ul style="list-style-type: none"> • Interpret and construct frequency tables • Draw and interpret pictograms and bar charts • Drawing and interpret simple pie charts (1/2,1/4,1/3) • <u>Draw and interpret pie charts</u> • <u>Stem and leaf</u> 	Clip 65a Clip 16 Clip 128a
Averages	<ul style="list-style-type: none"> • Calculate the mean, median, mode and range of a set of numbers. <u>Finding missing mean values.</u> 	Clip 62
Averages from a frequency table	<ul style="list-style-type: none"> • <u>Find the mean, mode and median from frequency tables</u> • Find the mean, mode and median from grouped frequency tables 	Clip 130a Clip 130b
Keywords	Averages, Mean, Mode, Median, Range, Discrete, Continuous, Quantitative, Qualitative, Frequency, Grouped, Interpret	

Topic	Success Criteria	MATHS WATCH CLIP
Generating sequences	<ul style="list-style-type: none"> Continue sequences and find missing numbers in sequences Generate a sequence from the term-to-term rule or position to term rule 	Clip 37
Special Sequences	<ul style="list-style-type: none"> Recognise special sequences (inc. triangle numbers, square and cube numbers, <u>Fibonacci</u> and <u>quadratic</u>) 	Clip 104
Nth Term	<ul style="list-style-type: none"> Generate a sequence from the nth term <u>Find the nth term of a linear sequence</u> 	Clip 102 Clip 103
Coordinates	<ul style="list-style-type: none"> Plot and write coordinates in the positive quadrant Plot and write coordinates in all four quadrants <u>Calculate mid-points and end points of a line segment</u> 	Clip 8
Linear Graphs	<ul style="list-style-type: none"> Complete a table of values Plot vertical and horizontal graphs Plot a simple straight line on a graph ($y = x + 1$) <u>Plot straight line graphs ($y = 2x - 3$)</u> Plot graphs of the form $2x + 3y = 12$ 	Clip 96
Keywords	Sequence, Generate, Triangle numbers, Fibonacci, Nth Term, Quadratic, Graph, Quadrant, Vertical, Horizontal, Axes, Midpoint, Plot	

Unit 12: Simple Transformations

T6 WK 5 to 7

Topic	Success Criteria	MATHS WATCH CLIP
Lines of symmetry	Recognise line and rotational symmetry in 2D shapes. Identify all the symmetries of 2D shapes.	Clip 11
Reflections	Recognise and carry out reflections in a mirror line.	Clip 48
Order of rotation	Find the order of rotational symmetry Use rotational symmetry	Clip 11
Enlargements	Identify congruent shapes. Use the language of enlargement. Enlarge shapes using given scale factors. Work out the scale factor given an object and its image.	Clip 148
Keywords	Symmetry, Reflection, Rotation, Enlargement	