

Year 7	
Topic	At the end of each topic learners will be able:
1 Whole numbers and decimals (Number)	To understand place value including decimals To multiply and divide by 10, 100 and 1000 To order negative numbers To multiply and divide integers To be able to use mental methods of addition and subtraction of integers (including negatives) and decimals To be able to use written methods of addition and subtraction of integers (including negatives) and decimals To use a calculator
2 Measures, perimeter and area (Geometry and measures)	To measure length in cm and mm To know units of measurement To know metric measures Converting between metric units To calculate perimeter of shapes To find area by counting squares To find area of a rectangle using the formula To find area of a triangle using the formula To find the area of a parallelogram using the formula
3 Expressions and formulae (Algebra)	To use letters for unknown values To simplify expressions and substitute values in to expressions To collect like terms To use the laws of indices To use a formula To write a formula
3a Negative Numbers (Number)	To understand zero pairs To add with negatives To subtract with negatives To multiply with negatives To divide with negatives
4 Fractions, decimals and percentages (Ratio and Proportion)	To use fractions to describe parts of a whole To simplify fractions and find equivalent fractions To add and subtract fractions To convert decimals and fractions To find fraction of a quantity To calculate percentage of an amount To convert fraction, decimals and percentages To know types of angles
5 Angles and 2D shapes (Geometry and measures)	To measure angles To draw angles and lines accurately To use angle facts to calculate angles To calculate angles in a triangle To know the properties of triangles To know the properties of quadrilaterals To know the properties of polygons
6 Graphs (Algebra)	To read and plot coordinates in all four quadrants To use a formula to complete a table of values To plot straight-line graphs from a table of values To draw straight-line graphs To use real life graphs
7 Whole number calculations (Number)	To round to nearest whole and decimal places To calculate using order of operations (BIDMAS) To multiply and divide by powers of 10 To do mental multiplication and division To use written methods of multiplication To use written methods of division To use calculator methods for complex calculations
8 Statistics (Statistics and probability)	To interpret and draw bar charts To read and interpret pie charts To draw pie charts To understand and draw line graphs To find mode, median and range from a data list To find the mean of a data list To find averages from frequency tables To interpret graphs and charts To plan a statistical enquiry To collect data To organise data using tally charts and frequency tables To comparing data from lists or diagrams
9 Transformations and symmetry (Geometry and measures)	To reflect a shape in a mirror line To recognise and describe reflection symmetry To rotate a shape about a point To recognise and describe rotational symmetry To translate shapes To tessellate shapes
10 Equations (Algebra)	To multiply and divide terms To find unknown values by balancing calculations To solve one step equations involving addition or subtraction To solve one step equations involving multiplication or division To solve two-step equations
11 Factors and multiples (Number)	To find factors and multiples To know and work out square numbers To know and work out square roots To recognise prime numbers To find LCM and HCF
12 3D shapes (Geometry and measures)	To know properties of 3D shapes including vertices, edges and faces To do isometric drawings To recognise nets of 3D shapes To find surface area of a cuboid To find volume of 3d shapes by counting cubes To find volume of a cuboid and use formula

Year 8	
Topic	At the end of each topic learners will be able:
13 Sequences (Algebra)	To continue a sequence To find a sequence rule To use term-to-term rules To use sequences from patterns
14 Decimal calculations (Number)	To use mental methods to multiply and divide decimals To use written methods of multiplying decimals To use written methods of dividing decimals To interpreting a calculator display of decimals
15 Ratio and proportion (Ratio and proportion)	To write a proportion as a fraction or % To increase or decrease in direct proportion To use ratio to compare two quantities To divide in a given ratio To solve ratio and proportion problems To find percentage increase and decrease
16 Probability (Statistics and probability)	To know and use the probability scale To know the vocab of probability To list outcomes To calculate theoretical probability To use experimental probability To identify sets To draw and interpret Venn diagrams
1 Whole numbers and decimals (Number)	To round numbers to Powers of 10 To round numbers to decimal places and significant figures To know factors, multiples and primes To express a number as a product of prime factors To use estimation and approximation
2 Measure, perimeter and area (Geometry and measures)	To convert between units of lengths, weights and capacity To convert between units of area and volume To convert between metric and imperial units To find area and perimeter of a 2-D shape To find circumference of a circle To find area of a circle To find compound measures - speed, pressure and density
3 Expressions and formulae (Algebra)	To collect like terms To expand a single brackets To factorise into a single bracket To simplify as algebraic fraction To substitute in to formulae in context To rearrange formulae To use a formula to draw a graph
4 Fractions, decimals and percentages (Ratio and Proportion)	To change from mixed number to improper fractions To add and subtract fractions To multiply fractions To divide fractions To convert decimals and fractions To calculate % of an amount To find % increase and decrease
5 Angles (Geometry and measures)	To use angles in parallel lines To know angle properties of a triangle To know angle properties of a quadrilateral To find interior angle of a polygon To find exterior angles of a polygon To identify congruent shapes
6 Graphs (Algebra)	To create a table of values for a given equation To draw a straight-line graph from a table of values To know and use equation of a straight line To find gradient of a straight-line graph y-intercept of a straight-line graph To use the equation $y=mx+c$ To re-arrange in to the form $y=mx+c$ To interpret real-life graphs To interpret and draw distance-time graphs To interpret and draw a time series
8 Statistics (3B only) (Handling data)	To organise data into frequency tables To represent data in charts and diagrams Plot scatter graphs and describe correlation To find averages from frequency tables To estimate averages from tables To compare data sets

Year 9	
Topic	At the end of each topic learners will be able:
10 Equations (Algebra)	To solve simple linear equations To solve multi-step equations To solve equations with brackets To solve equations with unknown on both sides To construct equations
11 Powers and roots (Number)	To use order of operations (BIDMAS) To know squares and cubes Square roots and cube roots To use the rules of indices To recognise basic surd notation To use standard form for large numbers To use standard form for small numbers
12 Constructions and Pythagoras (Geometry and measures)	To construct triangles To solve loci problems using constructions To know Pythagoras' theorem To use Pythagoras' theorem To use SOHCAHTOA
13 Sequences (Algebra)	To find term to term rule of a sequence To use position-to-term rules To find nth term To use real life sequences To recognise special sequences including triangular and geometric To use recursive sequences
14 3D shapes (Geometry and measures)	To know properties of 3-D shapes To draw plans and elevations To identify planes of symmetry of a 3-D shape To calculate surface area of a prism To calculate the volume of a prism
15 Ratio and proportion (Ratio and proportion)	To use direct proportion To compare proportions linking to FDP To simplify ratio To uses ratio for best buy problems and recipes To divide in a ratio To link ratio to scale drawings To use proportional reasoning
16 Probability (Statistics and probability)	To use the probability scale To know what mutually exclusive events and exhaustive events are To calculate probabilities To list the outcomes of two trials including two-way tables To use experimental probability To compare theoretical and experimental probabilities To identify sets To draw and interpret Venn diagrams
GCSE Scheme	

