

Maths Skills and Content Coverage for KS3:

Year 7	Term 1 (7 weeks)	Term 2 (7 weeks) 1 Assessment week	Term 3 (6 weeks)	Term 4 (6 weeks)	Term 5 (5 weeks)	Term 6 (7 weeks) 1 Assessment week
Topic	Place value and ordering Reading scales Addition and subtraction using formal written methods	Multiplication and division Decimals and money	Properties of shape Tessellation, translation, reflection Lines of symmetry	Bar charts and pictograms Probability scale; simple events	Mean, Median, Mode and Range	Fractions – comparative Fractions – add and subtract Powers of 10 Simple conversions
Knowledge	Place value to 1,000,000; positive and negative numbers; column addition and subtraction; inverse operations; rounding and estimation; times-table fluency (2, 5, 10)	Decimal place value; money notation; multiplication structure; grid multiplication; division structure and formal division; inverse operations; decimal equivalence; rounding rules; times-table fluency (3, 4, 8)	<i>Properties of 2D shapes</i> <i>Symmetry vocabulary</i> <i>Transformation vocabulary</i> <i>Angle awareness</i> <i>Coordinates in first quadrant</i> Times table fluency (3, 4, 8)	<i>Frequency and tally charts</i> <i>Scales and intervals</i> <i>Discrete data</i> <i>Types of charts</i> <i>Reading graphical information.</i> Times table fluency (6, 7, 9)	<i>Mean, median, mode and range</i> <i>Ordered data</i> <i>Outliers</i> <i>Interpreting data</i> Times table fluency (6, 7, 9)	<i>Numerator and denominator meaning</i> <i>Equivalent fractions</i> <i>Fraction and decimal links</i> <i>Powers of 10</i> <i>Square numbers</i> <i>Cm → m g → kg</i> Times table fluency (all tables)
Skills	Order numbers; read scales accurately; use negative numbers in context; use column addition and subtraction; round whole numbers; estimate and check answers; solve missing-number problems; explain calculation methods	Multiply using grid method; divide using formal methods; interpret remainders; add and subtract decimals; multiply/divide decimals as appropriate; calculate totals and change; round decimals and integers; estimate and check answers; solve contextual problems	Identify shape properties Complete reflections and translations Describe transformations Create tessellations Identify lines of symmetry	Read and create charts Interpret data Compare datasets Choose appropriate graph types Use scales accurately.	Calculate averages Compare datasets Interpret results Explain which average is most useful Check reasonableness of answers	Compare fractions Add and subtract simple fractions Convert simple FDP Use powers of 10 Recognise equivalent fractions Use square numbers in calculation.

Year 8	Term 1 (7 weeks)	Term 2 (7 weeks) 1 Assessment week	Term 3 (6 weeks)	Term 4 (6 weeks)	Term 5 (5 weeks)	Term 6 (7 weeks) 1 Assessment week
Topic	Powers and indices Square roots BIDMAS Factors and multiples Negatives	Algebra – substitute, one- and two-step Equations and inequalities	Area, perimeter, volume Scale factor Conversions and SDT	Fractions – of an amount Ratio	Percentages Decimals FDP	Angle rules Pie charts Time
Knowledge	<i>Square and cube numbers</i> <i>Index notation</i> <i>Square roots as inverse operations</i> <i>Order of operations</i> <i>Factors, multiples, primes, HCF and LCM</i> <i>Positive and negative number rules</i> <i>Times table fluency and multiplicative reasoning</i>	<i>Algebraic notation</i> <i>Variables and substitution</i> <i>Inverse operations</i> <i>Equality and balancing</i> <i>Inequality symbols</i> <i>Coordinates and graph vocabulary</i>	<i>Formulae for area, perimeter and volume</i> <i>Units of measure</i> <i>Scale factors</i> <i>Multiplicative scaling</i> <i>Compound measures introduction</i> <i>Cm → km cl → l</i> <i>Speed/distance/time</i>	<i>Fraction equivalence</i> <i>Ratio notation and sharing</i> <i>Proportional reasoning</i> <i>Links between fractions and ratio</i> <i>Multiplicative methods</i>	<i>FDP equivalence</i> <i>Percentage meaning</i> <i>Decimal place value</i> <i>Percentage increase/decrease</i> <i>Recurring decimal awareness</i>	<i>Angles on a line, around a point and in triangles</i> <i>Parallel line angle rules</i> <i>Pie chart structure and sectors</i> <i>Circle vocabulary</i> <i>Interpreting proportional data</i>
Skills	Use BIDMAS correctly Calculate squares and roots Find HCF and LCM Use negative numbers in calculations Identify prime numbers and factors Explain calculation strategies	Substitute into expressions Solve one- and two-step equations Solve simple inequalities Represent inequalities on number lines Plot coordinates Interpret simple graphs	Calculate area, perimeter and volume Use scale drawings Convert measures where needed Estimate measurements Solve practical measure problems Conversions including distance/length Speed, distance and time	Find fractions of amounts Simplify ratios Share into ratios Solve ratio problems Explain proportional relationships	Convert between fractions, decimals and percentages Calculate percentages of amounts Use decimal multipliers Compare FDP representations Solve percentage problems	Calculate missing angles Use angle rules to justify answers Create and interpret pie charts Measure angles accurately Compare data visually

Year 9	Term 1 (7 weeks)	Term 2 (7 weeks) 1 Assessment week	Term 3 (6 weeks)	Term 4 (6 weeks)	Term 5 (5 weeks)	Term 6 (7 weeks) 1 Assessment week Entry Level/FS Exam
Topic	Patterns and sequencing Co-ordinates Plotting graphs	Fractions – operations Percentage increase/decrease Proportion/best buys Money and finance	Standard form Algebra – expand/factorise	Averages (revisited) Probability Relative frequency Scatter graphs	Pythagoras Enlargement and rotation Circles – area and circumference	Simultaneous equations Inequalities Mixed FDP – calculator use
Knowledge	<i>Linear sequences</i> <i>Nth term patterns</i> <i>Coordinates in four quadrants</i> <i>Graph vocabulary</i> <i>Gradient awareness</i> <i>Linear relationships</i>	<i>Fraction operations</i> <i>Percentage multipliers</i> <i>Proportion and scaling</i> <i>Best value calculations</i> <i>Rates and ratio links</i> <i>Multiplicative reasoning</i>	<i>Standard form notation</i> <i>Powers of 10</i> <i>Expanding expressions</i> <i>Factorising expressions</i> <i>Algebraic notation and equivalence</i>	<i>Mean, median, mode and range revisited</i> <i>Probability scales</i> <i>Relative frequency</i> <i>Scatter graph interpretation</i> <i>Correlation vocabulary</i>	<i>Pythagoras' theorem</i> <i>Rotation and enlargement vocabulary</i> <i>Scale factor</i> <i>Circle parts and terminology</i> <i>Spatial reasoning</i>	<i>Simultaneous equations</i> <i>Inequality notation</i> <i>FDP equivalence</i> <i>Multi-step problem solving</i> <i>Reasoning and justification</i>
Skills	Generate and continue sequences Find nth terms of linear sequences Plot and interpret graphs Use coordinates accurately Describe graphical patterns	Add, subtract, multiply and divide fractions Calculate percentage increase and decrease Repeated percentages Solve proportion problems Compare best buys Use multiplicative methods fluently	Convert numbers into standard form Calculate with standard form Expand single brackets Factorise simple expressions Simplify algebraic expressions	Calculate and compare averages Calculate probabilities Use relative frequency Interpret scatter graphs Describe correlation	Use Pythagoras' theorem Perform rotations and enlargements Use scale factors Calculate circumference and area of circles Solve spatial reasoning problems	Solve simultaneous equations Solve and represent inequalities Apply FDP knowledge in mixed problems Explain mathematical reasoning Solve multi-step GCSE-style problems

Maths Skills and Content Coverage for KS4:

Year 10	Term 1 (7 weeks) Entry level EXAM	Term 2 (7 weeks) 1 Assessment week	Term 3 (6 weeks)	Term 4 (6 weeks) Easter Mock Exam	Term 5 (5 weeks)	Term 6 (7 weeks) Functional Skills EXAM
Topic	FDP and ratio Estimation and calculator skills Algebra basics	Equations and graphs Probability and tree diagrams	Non-calculator Methods Measures and scale Trigonometry	Algebraic manipulation (including surds) Quadratics Mock preparation	Statistics Vectors and geometry	Simultaneous equations Higher problem solving
Knowledge	FDP equivalence Percentage calculations Ratio notation and scaling Estimation strategies Calculator methods Algebraic vocabulary	Linear equations Straight line graphs Coordinates and gradients Probability scales and outcomes Graph interpretation	Perimeter, area and volume formulae Scale factors Unit conversions Trigonometric ratios SOHCAHTOA vocabulary	Expanding and factorising Quadratic expressions Substitution and rearranging Index laws Algebraic equivalence	Averages and data representation Scatter graphs and correlation Vector notation Geometric reasoning Angle relationships	Simultaneous equations Inequality notation Multi-step reasoning Mixed-topic problem solving Exam strategies
Skills	Convert FDP fluently Calculate percentages and ratio problems Estimate and check answers Use calculators efficiently Simplify algebraic expressions	Solve equations Plot and interpret graphs Calculate probability Interpret graphical information Use algebra in context	Calculate perimeter, area and volume Use scale drawings Convert units accurately Apply trigonometry to right-angled triangles	Expand and factorise expressions Solve quadratic equations Manipulate algebraic expressions Apply index laws	Interpret statistical diagrams Calculate averages Use vectors Solve geometric problems Interpret correlation	Solve simultaneous equations Solve inequalities Apply knowledge across mixed topics Explain mathematical reasoning Solve GCSE-style problems
Retrieval Focus	Times tables fluency Arithmetic accuracy Fraction basics	FDP fluency Algebra retrieval Negative numbers	Ratio and graphs Conversions Formula recall	Equation solving Graphs FDP fluency	Algebra manipulation Trigonometry recall Probability	Full interleaving Exam-style mixed retrieval Weak-gap revision

Year 11	Term 1 (7 weeks)	Term 2 (7 weeks) 1 Assessment week Christmas Mock Exam	Term 3 (6 weeks)	Term 4 (6 weeks) Functional Skills EXAM	Term 5 (5 weeks)	Term 6 (7 weeks) GCSE EXAMS
Topic	Angles, bearings and trigonometry Higher Algebra	Geometry Circles Construction and loci	Graphs cumulative frequency functions transformations	Mixed exam application and weak-gap intervention	Revision and consolidation	Examinations
Knowledge	Angle rules and bearings SOHCAHTOA and exact trig values Scale factors and similarity Algebraic proof Surds and exact forms Quadratic graphs and functions	Circle theorems Circumference and area revisited Construction vocabulary Loci and regions Geometric reasoning and formal proof Transformational geometry	Cumulative frequency Linear, quadratic and non-linear graphs Functions and mappings Gradient and rate of change Graph interpretation Transformations of graphs Histograms, box plots	Exam command words Multi-step problem solving Mixed-topic reasoning Calculator and non-calculator strategies Personal weak-gap targets	Formula recall Exam techniques Reasoning structures Functional applications Interleaved retrieval	Examination preparation Revision strategies Confidence and independence
Skills	Calculate bearings and trig problems Apply exact trig values Simplify surds Manipulate algebraic expressions Interpret quadratic graphs Use formal mathematical reasoning	Apply circle theorems Construct loci accurately Use compasses and rulers precisely Solve geometric proof problems Apply transformational reasoning	Plot and interpret functions Transform graphs Interpret gradients and intercepts Solve graphical problems Link graphs to real-life contexts	Solve mixed GCSE questions Apply knowledge across domains Identify efficient methods Improve exam fluency Develop independent problem solving	Complete full papers Analyse mistakes Target weak areas Improve timing and accuracy Use retrieval strategies independently PLUS - - - - - → → →	Apply exam techniques confidently Manage exam timing Select efficient methods independently
Retrieval Focus	FDP fluency Algebra manipulation Ratio and scale Negative numbers	Trigonometry recall Graphs Constructions Formula recall	Algebra retrieval Geometry facts Probability and statistics Mixed FDP	Full interleaving Weak-gap intervention Exam-style retrieval	Personalised retrieval Full paper practice Calculator fluency	Light-touch retrieval Confidence and readiness

