North Gosforth Academy

MATHEMATICS: Curriculum plan 2023 – 2024 (FOUNDATION PATHWAY)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Number • Factors, multiple and primes • Powers and roots • Fractions, decimals and percentages: equivalence and ordering • Negative numbers in context • Place value and rounding	Number • Four operations: fluency and problem solving • Order of operations Probability • Probability scale • Theoretical probability Shape, Space and Measure • Geometric notation • Properties of 2D and 3D shapes	Number • Ratio: writing, comparing and simplifying • Proportional reasoning: scale factors Algebra • Notation • Simplifying expressions Shape, Space and Measure • Angles in lines/at a point* • Angles in triangles* **including reasoning*	Number • Calculating with fractions • Percentage of an amount Algebra • Solving equations Shape, Space and Measure • Units of measure	Shape, Space and Measure • Area of triangles and parallelograms • Volume of a cuboid Statistics • Types of data • Charts and Graphs • Averages Algebra • Types of sequences	Algebra • Identify and plot straight lines graphs Shape, Space and Measure • Transformations: simple reflection, rotation and translation
8	Number • HCF/LCM, prime factors • Powers and roots, index laws • FDP equivalence and ordering (incl. >1) • Rounding and estimation • Negative numbers (four operations)	Number • Calculating with decimals Algebra • Simplifying expressions • Expanding brackets • Solving equations • Rearranging formulae Shape, Space and Measure • Properties of 2D and 3D shapes • Constructing triangles	Shape, Space and Measure • Angles in triangles and quadrilaterals (reasoning/multi-step) Number • Ratio: comparing and sharing into a ratio • Proportional reasoning: ratio/proportion comparisons, enlargement and scale factors	Number • Calculating with fractions and mixed numbers • Percentages (change, multipliers) Shape, Space and Measure • Unit conversions • Area of compound shapes and trapezia • Surface area • Volume of right prisms	Algebra • Linear sequences • Equations of straight lines Shape, Space and Measure • Transformations: reflection, rotation and translation	Probability • Listing outcomes/sample space • Experimental probability Statistics • Averages from frequency tables • Pie charts • Scatter Graphs
9	Number • Prime factors • Index laws • Standard Form: converting to and from • Estimation Shape, Space and Measure • Scale drawing and enlargement • Plans and elevations • Bearings	Number • FDP – recurring decimals • Calculating with fractions and mixed numbers Algebra • Simplifying expressions • Expanding single brackets and factorising • Rearranging formulae Number • Ratio: comparisons and mixing • Proportional reasoning: compound measures (speed)	Algebra • Linear Sequences • Solving equations Shape, Space and Measure • Area of trapezia • Area/Circumference of circles	Shape, Space and Measure • Surface area • Volume of right prisms • Volume of cylinders • Pythagoras' theorem; introduction Algebra • Equations of straight lines: introduction to y=mx+c and sketching • Plotting quadratic and cubic graphs	Number • Percentages: multipliers, profit/loss, percentage change, simple interest Statistics • Pie charts • Scatter Graphs • Mean from grouped frequency tables	Shape, Space and Measure • Angles in parallel lines • Angles in polygons Probability • Relative frequency • Probability trees • Venn diagrams

10	Number • Standard Form: calculations • Index laws; negative and fractional • Bounds and error intervals • Shape, Space and Measure • Constructions • Loci • Plans and elevations Algebra • Rearranging fomulae	Algebra • Expanding single brackets and simplifying • Expand double brackets • Factorise quadratic expressions • Sequences; Fibonacci, quadratic, geometric Number • Direct and inverse proportion • Best buys • Compound measures • Percentages; reverse percentages, multipliers	Algebra • Inequalities; number lines, solving, solution sets Shape, Space and Measure • Area/Circumference of circles; exact values • Sector area and arc length • Surface area and cvlume of cylinders • Pythagoras' theorem; problem solving • Transformations	Algebra • y=mx+c • Equations of parallel lines • Equation of line through a point/two points • Plotting non-linear graphs Shape, Space and Measure • Angles problems and reasoning • Similarity and congruence in 2D shapes • Similar triangles	Algebra • Set up and solve equations • Simultaneous equations; graphical, simple algebraic solving Probability • Venn diagrams and set notation • Tree diagrams; independent and dependent events	Statistics • Stem and leaf diagrams • Averages from frequency tables • Comparing distributions •
Year 11 are completing a previous scheme of learning						
11	Algebra • Quadratic graphs • Expanding double brackets and factorising • Solving quadratic equations Shape, Space and Measure • Area and circumference of circles and sectors • Volume of cylinders and spheres	Number • Fractions and mixed numbers • Indices • Standard form	Shape, Space and Measure • Congruence and similarity in 2D • Vectors Algebra • Cubic and reciprocal graphs • Simultaneous equations	Revision and Exam Preparation	Revision and Exam Preparation	Revision and Exam Preparation