**Maths Curriculum 2024-2025**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Year 7** | **DATA**Mode, Median and RangeDisplaying data. Averages and comparing data.Line Graphs and Bar Charts***LINKING LEARNING:******Collecting Data******Ordering******Graph Work*****NUMBER**Mental MathsAddition, subtraction, Multiplication and divisionMoney and TimeNegative numbersFactors/multiples/primes/Square numbers***LINKING LEARNING:******Number bonds******4 Operations*** | **ALGEBRA**FunctionsSimplifyingFormingSubstitution***LINKING LEARNING:******Number Machines*****NUMBER/MEASURE**Decimals and roundingLength, mass, capacityScales and measuresAdd, subtract multiple and divide decimalsPerimeter and AreaEstimating with units of measure***LINKING LEARNING:******Metric Measures (basic conversions)******Shape Facts*** | **NUMBER**Comparing/simplifying/calculations with fractionsFractions Decimals and percentagesPercentages of an amount***LINKING LEARNING:******Factors and Multiples******Equivalence (FDP)*****PROBABILITY**Calculating with probabilitiesExperimental probabilityExpected outcomes***LINKING LEARNING:******Fractions, Decimals and Percentages*** | **RATIO/PROPORTION**Simple direct proportionWriting and using ratiosRatio, proportion, fractions and percentages***LINKING LEARNING:******Multiplication and Division*** | **MEASURE**Measure and draw anglesMeasure and draw lines with constructions (triangles)Calculating anglesTypes of quadrilaterals***LINKING LEARNING:******Basic Shape and Angle Facts*****NUMBER/MEASURE**Describing and generating sequencesCoordinates and midpointsStraight line graphsPosition to term rules***LINKING LEARNING:******Number and Shape Patterns*** | **SHAPE**CongruenceEnlargementsSymmetryReflectionsRotationsTranslationsCombined transformations***LINKING LEARNING:******Basic Shape Facts*** |
| **Assessment** | **Arrival baseline assessment** | **End of term cumulative KS3 assessment** |  | **End of term cumulative KS3 assessment** |  | **End of year KS3 cumulative assessment** |
| **Year 8** | **NUMBER**Calculations (mental and written) including divisionNegative numbersPowers and rootsMultiples and factors***LINKING LEARNING:******BIDMAS*****SHAPE**Area of shapesVolumes2D/3D ShapesSurface AreaConverting measures***LINKING LEARNING:******Basic Shape Facts*** | **DATA**Pie ChartsCreating and using tablesComparing data in various diagramsScatter DiagramsMisleading graphs***LINKING LEARNING:******Collecting Data******Basic Angle Facts (Circle)*****ALGEBRA**PowersExpressions and bracketsFactorisingOne and Two step solvingBalancing equations***LINKING LEARNING:******Powers and Roots******Factors and Multiples******Algebra Manipulation (Basic)*** | **FURTHER DATA**Conversion graphsDistance Time graphsLine graphsFurther real life graphsGraphs of curves**NUMBER**Ordering and rounding decimalsPlace value calculationsCalculations with decimalsRatio and proportion (with decimals)***LINKING LEARNING:******Rounding Numbers (Whole number, nearest 10 etc)*** | **SHAPE**Types of quadrilateralsAngles in parallel linesInterior and exterior anglesForming and solving geometric equations***LINKING LEARNING:******Basic Shape and Angle Facts******Symmetry*** | **NUMBER**Ordering fractionsCalculations with fractionsUnderstanding, using and calculations with mixed numbers***LINKING LEARNING:******Factors and Multiples*****RATIO and PROPORTION**Straight line graphs – plotting, direct proportion, gradients and equations of straight lines***LINKING LEARNING:******Axes and Scales knowledge*** | **NUMBER**Converting and comparing Fractions percentages and decimals (including recurring decimals)Percentages of an amountPercentage increase/decreaseMultiplier methods with percentages***LINKING LEARNING:******Key Percentages (10% etc)*** |
| **Assessment** |  | **End of term cumulative KS3 assessment** |  | **End of term cumulative KS3 assessment** |  | **End of year KS3 cumulative assessment** |
| **Year 9** | **NUMBER**IndicesCalculations and estimatesStandard Form***LINKING LEARNING:******Basic powers and Roots*****ALGEBRA**Solving equationsSubstitutionForming and SolvingRearranging formulaeIndex LawsExpand and simplify | **DATA**SurveysCollecting DataAveragesDisplaying and analysing dataComparing data***LINKING LEARNING:******Graph work, scales and axes*****NUMBER/SHAPE**EnlargementsPercentage changeCompound MeasuresDirect and Inverse Proportion***LINKING LEARNING:******Congruence and Similar Shapes******Basic Percentages (10%)*** | **SHAPE**ScalesBasic ConstructionsConstructing TrianglesAccurate scale diagrams***LINKING LEARNING:******Using a Compass*****NUMBER**nth term sequencesNon-linear sequencesInequalitiesSolving equationsProportion | **SHAPE**Circumference and area of circlesPythagoras’ TheoremPrisms and CylindersErrors and bounds***LINKING LEARNING:******Key Language – Circles, Triangles and 3D Shape******Rounding*** | **SHAPE/ALGEBRA**Y = mx + cStraight line graphsSimultaneous equationsQuadratic functionsFurther non-linear graphs**PROBABILITY**Mutually exclusive eventsExperimental and theoretical probabilitySample spaceTwo-way tablesVenn Diagrams***LINKING LEARNING:******Key Language******Fractions, Decimals and Percentages*** | **SHAPE**Congruent and similar shapesRatios in trianglesTrigonometrySineCosineTangentUsing Trigonometry to find anglesMixing Trigonometry with Pythagoras***LINKING LEARNING:******Shape Facts, particularly triangles*** |
| **Assessment** |  | **End of term cumulative KS3 assessment** |  | **End of term cumulative KS3 assessment** |  | **End of year KS3 cumulative assessment** |
| **Year 10** | ***HIGHER*****Unit 1**Powers, decimals, HCF and LCM, positive and negative, roots, rounding, reciprocals, standard form, indices and surds***LINKING LEARNING:******Powers and Roots*****Unit 2**Expressions, substituting into simple formulae, expanding and factorising, equations, sequences and inequalities, simple proof***FOUNDATION*****Unit 1**Number, powers, decimals, HCF and LCM, roots and rounding***LINKING LEARNING:******Powers and Roots******Factors and Multiples*****Unit 2**Expressions, substituting into simple formulae, expanding and factorising | ***HIGHER*****Unit 3**Averages and range, collecting data, representing data***LINKING LEARNING:******Mean, Median, Mode and Range*****Unit 4**Fractions, percentages, ratio and proportion***LINKING LEARNING:******Key Percentages (10%)******Equivalent Fractions******FOUNDATION***Conclude Unit 2**Unit 3**Drawing and interpreting graphs, tables and charts | ***HIGHER*****Unit 5**Angles, polygons, parallel lines; Right-angled triangles: Pythagoras and trigonometry***LINKING LEARNING:******Basic Shape and Angle Facts – particularly triangles*****Unit 6**Real-life and algebraic linear graphs, quadratic and cubic graphs, the equation of a circle, plus rates of change and area under graphs made from straight lines***LINKING LEARNING:******Knowledge of axes and scales******FOUNDATION***Conclude Unit 3**Unit 4**Fractions and percentages***LINKING LEARNING:******Key Percentages (10%)******Equivalent Fractions*** | ***HIGHER*****Unit 7**Perimeter, area and volume, plane shapes and prisms, circles, cylinders, spheres, cones; Accuracy and bounds***LINKING LEARNING:******Area and Perimeters of common 2D shapes*****Unit 8**Transformations; Constructions: triangles, nets, plan and elevation, loci, scale drawings and bearings***FOUNDATION*****Unit 5**Equations, inequalities and sequences**Unit 6**Angles, polygons and parallel lines***LINKING LEARNING:******Basic Shape and Angle Facts*** | ***HIGHER*****Unit 9**Algebra: Solving quadratic equations and inequalities, solving simultaneous equations algebraically**Unit 10**Probability***FOUNDATION*****Unit 7**Statistics, sampling and the averages***LINKING LEARNING:******Mean, Median, Mode and Range*****Unit 8**Perimeter, area and volume***LINKING LEARNING:******Basic Shape Facts*** | ***HIGHER*****Unit 11**Multiplicative reasoning: direct and inverse proportion, relating to graph form for direct, compound measures, repeated proportional change**Unit 12**Similarity and congruence in 2D and 3D***LINKING LEARNING:******Enlargements******FOUNDATION*****Unit 9**Real-life and algebraic linear graphs**Unit 10**Transformations***LINKING LEARNING:******Reflections, Symmetry and Movements*** |
| **Assessment** |  | **End of term cumulative KS4 assessment** |  | **End of term cumulative KS4 assessment** |  | **End of year 10 KS4 assessment** |
| **Year 11** | ***HIGHER*****Unit 13**Sine and cosine rules, $\frac{1}{2}$*ab* sin *C*, trigonometry and Pythagoras’ Theorem in 3D, trigonometric graphs, and accuracy and bounds***LINKING LEARNING:******Triangle Facts******Trigonometry******Pythagoras*****Unit 14**Statistics and sampling, cumulative frequency and histograms***LINKING LEARNING:******Presenting Data******FOUNDATION*****Unit 11**Ratio and Proportion**Unit 12**Right-angled triangles: Pythagoras and trigonometry***LINKING LEARNING:******Triangle Facts*** | ***HIGHER*****Unit 15**Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics**Unit 16**Circle theorems and circle geometry***LINKING LEARNING:******Angle Facts******Line Facts (Parallel, Perpendicular)******FOUNDATION*****Unit 13**Probability**Unit 14**Constructions: triangles, nets, plan and elevation, loci, scale drawings and bearings***LINKING LEARNING:******Compass and Ruler Work*** | ***HIGHER*****Unit 17**Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof***LINKING LEARNING:******Algebra Skills*****Unit 18**Vectors and geometric proof***FOUNDATION*****Unit 15**Plans and elevations**Unit 16**Algebra: quadratic equations and graphs | ***HIGHER*****Unit 19**Direct and indirect proportion: using statements of proportionality, reciprocal and exponential graphs, rates of change in graphs, functions, transformations of graphs***FOUNDATION*****Unit 17**Perimeter, area and volume 2: circles, cylinders, cones and spheres**Unit 18**More fractions, reciprocals, standard form, zero and negative indices***LINKING LEARNING:******Powers and Roots*****Unit 19**Congruence, similarity and vectors***LINKING LEARNING:******Knowledge of Shape******Englargements*** | ***HIGHER*****Conclude Unit 19 and revisit key areas*****FOUNDATION*****Unit 20**Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations**Revisit key areas** |  |
| **Assessment** | **Baseline 1 x non calculator GCSE paper** | **Full GCSE Mock examinations** |  | **Full GCSE Mock examinations** | **GCSEs** |  |

**\*GCSE Content timings in years 10 and 11 can vary to allow for GCSE paper practice and revision\***

**\*\*Intervention content may be taught to certain students through Years 10 and 11\*\***