



Curriculum Overview

Subject: Maths

Year: 9

Rationale: Providing students with a transition year to support them progress from ks3 –ks4, offering a grounding in some Y11 concepts that have historically proven more challenging for learners. Starting the GCSE course in Year 9 enables us to go in to the topics in more detail. Some topics will build upon units covered in Y7/Y8, providing an opportunity for interleaving.

Units of Work	
1	Algebra
2	Number
3	Data Handling
4	Transformations and constructions
5	Area and volume 1
6	Inequalities and graphs
7	Area and volume 2

Key Knowledge development:

- Calculating with fractions – multiply and dividing, fractions of amounts, improper and mixed fractions
- Calculating with percentages – percentages of amounts, increase and decrease, percentage change
- Ratio and proportion – sharing in a ratio, best buy, recipes.
- FDP conversions
- Manipulating algebraic expressions – simplifying, expanding and factorising
- Laws of indices
- Solving equations and inequalities – including set notation and using graphs to solve equations
- Substitution
- Sequences.
- Linear graphs and linear inequalities – including shading regions and $y = mx + c$
- Rearranging equations
- Area and perimeter of 2D shapes – circles, compound shapes trapeziums and parallelograms
- Compound units – speed-distance-time; density-mass-volume
- Representing and interpreting data – bar charts, two-way tables, pie charts, stem and leaf, scatter graphs
- Calculating averages - including averages from tables
- Finding quartiles and the interquartile range
- Constructing angles and bisectors
- Congruence and similarity
- Transformations – rotations, reflections, enlargements and translations
- Properties of 3D shapes
- Volume and surface area
- Upper and lower bounds
- Plans and elevations

Key Skills development:

- Mathematical reasoning – being able to explain 'why' in words.
- Problem solving in context – being able to select the right skill to solve a problem.
- Applications of maths to real life situations
- Drawing charts and graphs – pie charts
- Interpreting solutions in context – selecting the best statistic to use.
- Identifying and explaining outliers.
- Measuring using a ruler and protractor.
- Constructions with compasses.
- Structuring a proof

Literacy/Numeracy:

- Subject specific key words
- Command words
- Graph skills

Assessment

Each topic has an end of topic test.

Exit tickets will also be created through the course to gather a snapshot of students' learning.

Exit tickets and end of topic tests will be followed up with IMW.

Curriculum enrichment:

Potential idea

- Invite ex-students in to talk to Year 9s about options

SMSC/British Values/Careers:

- Highlight links to careers where appropriate
- Discussion tasks to promote cooperation and appreciation for the views of others.
- Group work activities.

