**Subject:** Mathematics

# Kay Stage 3 Curriculum Plan

**Year:** 9 Higher

## Department Information:

Year 9 Higher, Pearson Edexcel GCSE Mathematics, 8 lessons a fortnight, home learning expectation 60 minutes per week.

Maths Teachers:
Mr Morris - Associate Senior Leader of Mathematics and Computing/ Mrs Randeree - Subject Lead of Mathematics.
Mrs Bhushan, Mr Boot, Mr Haghazali, Mr Addo, Mrs Akram, Mr Banerji, Mrs Lipscombe Holmes.

## Curriculum aims and intent:

In Year 9, students follow the Pearson Edexcel GCSE Mathematics (9 – 1) specification, building upon the mathematical knowledge, skills and understanding developed throughout Key Stage 3.
The Year 9 curriculum builds directly upon Key Stage 3 learning.
Students revisit and extend concepts such as:
Fractions, decimals and percentages
Algebraic manipulation and equations
Graphs and coordinates
Geometry, angle facts and constructions
Probability and statistical analysis
The curriculum develops the three key strands identified within the National Curriculum: Fluency/ Mathematical Reasoning/ Problem Solving.
Mathematics contributes to whole-school literacy by developing students ability to: Use and understand precise mathematical vocabulary/ Interpret and analyse written information/ Construct clear mathematical explanations and justifications.

## Assessment:

Assessments are completed at the end of each chapter and include retrieval questions to revisit and reinforce prior learning from Year 8 and earlier topics within the GCSE course.
Assessment scores are averaged across the academic year to support decisions regarding set movements, ensuring students are placed in the most appropriate learning environment. Grades are reported using accurate grade boundaries aligned to the GCSE 1 – 9 grading system. promptly.

## Resources used to support learning:

https://activehub.pearson.com/#/login
Students can log in using their school email. Passwords students have created and have written down in their Maths books.
If a student has forgotten their password this can be refreshed by presssing the forget password troubleshoot. Students will be sent an email to their school gmail account.

https://corbettmaths.com/contents/
https://yesgenie.com/

## Home Learning:

Homework can be online worksheets sent on students Edulink. It also can be online work completed on Active Hub.
Students are expected to complete one 60 minute homework weekly. Homework is an essential part of the learning process, helping students to consolidate and extend their understanding of topics taught in lessons. Regular completion of homework provides valuable retrieval practice, strengthening long-term retention.

## How parents can help their child:

All students need to have the correct equipment every Maths lesson from the following: protractor, ruler, pencil, pen, compass, scientifice calculator such as: http://tiny.cc/czm4101
Parents can support their child's progress by encouraging them to complete their home learning each week. Establishing a regular routine of two 30-minute homework sessions per week helps to reinforce learning, develop good study habits and maximise progress both in and beyond the classroom.

| Term | Summary of work being covered | Knowledge, Understanding and skills assessed | How the work is assessed | Career Links |
|---|---|---|---|---|
| 1 | Chapter 1 Number | Number Problems and Reasoning/ Place Value and Estimating/ HCF and LCM/ Calculating with Powers (Indicies) / Zerio, Negative and Fractional Indicies/ Powers of 10 and Standard Form/ Surds | Chapter 1 Test out of 50 marks | Finance and banking (calculations, percentages, interest)<br>Engineering (measurements, precision, and scaling)<br>Data analysis (working with large datasets and numbers) |
| 2 | Chapter 2 Algebra | Algebraic Indicies/ Expanding and Factorising/ Equations/ Formulae/ Linear Sequences/ Non Linear Sequences/ More Expanding and Factorising | Chapter 2 Test out of 50 marks<br><br>End of Term Test summarising Chapter 1 and 2. | Engineering (using formulae to design and test systems)<br>Science (modelling relationships between variables)<br>Finance (calculating costs, profit, and trends) |
| 3 | Chapter 3 Graphs Tables and Charts<br>Chapter 4 Fractions and Percentages | Statistical Diagrams/ Time Series/ Scatter Graphs/ Line of Best Fit /Averages and Range/ Statistical Diagrams/ Fractions/ Ratios/ Ratio and Proportions/ Percentages/ Fractions, Decimals and Percentages | Chapter 3 Test out of 50 marks<br>Chapter 4 Test out of 50 marks | Engineering (solving equations to design systems)<br>Computer science (algorithms, logic, and conditions)<br>Finance (modelling costs, profits, and constraints) |
| 4 | C5 Angles and Trigonometry | Angles Properties of Triangles and Quadrilaterals/ Interior Angles of a Polygon/ Exterior Angles of a Polygon/ Pythagoras Theorem/ Trigonometry | Chapter 5 Test out of 50 marks | Architecture (designing accurate structures and layouts)<br>Engineering (structural design and stress analysis)<br>Surveying (measuring land and boundaries) |
| 5 | C6 Graphs<br>C7 Area and Volume | Linear Graphs/ More Linear Graphs/ Graphing Rates of Change/ Real-Life Graphs/ Line Segments/ Quadratic Graphs/ Cubic and Reciprocal Graphs/ More Graphs/ Perimeter and Area/ Units of Accuracy/ Prisms/ Circles/ Sectors of Circles/ Cylinders and Spheres/ Pyramids and Cones | Chapter 6 Test out of 50 marks<br>Chapter 7 Test out of 50 marks | Architecture (measuring spaces and designing buildings)<br>Engineering (calculating volume, area, and structural efficiency)<br>Construction (materials, planning, and accuracy) |
| 6 | C8 Transformations and Constructions | 3D Solids/ Reflections and Rotations/ Enlargement/ Translation and Combinations of Transformations/ Scale Drawings and Bearings/ Constructions/ Loci | Chapter 8 Test out of 50 marks<br>End of Year exam covering C1-8 | Surveying (bearings, maps, and land measurement)<br>Construction (accurate layouts and technical drawings)<br>Game design & animation (transformations and 3D modelling) |