

## Maths Year 11 Foundation Learning Journey 2024-2025

Week	Date	Key Constructs	Component Knowledge	Assessment
1 (Thurs)	05.09.24	<b>Probability</b>	<ul style="list-style-type: none"> <li>Calculate probabilities from equally likely events</li> <li>Calculate probabilities of mutually exclusive and exhaustive events</li> <li>Solve probability problems</li> <li>Work out probabilities from sample space diagrams</li> <li>Draw and use sample space diagrams to solve probability problems</li> <li>Estimate and interpret probabilities based on experimental data</li> <li>Make predictions from experimental data</li> <li>Understand the language of sets and Venn diagrams</li> <li>Use Venn diagrams to solve probability problems</li> <li>Solve problems using frequency trees and tree diagrams</li> <li>Understand independent events</li> <li>Understand when events are not independent</li> <li>Solve probability problems involving events that are not independent</li> </ul>	<b>Unit 13 – Probability</b>
2	09.09.24			
3	16.09.24			
4	23.09.24	<b>Percentages</b> <b>Proportional reasoning</b> <b>Measures</b>	<ul style="list-style-type: none"> <li>Calculate percentage profit or loss</li> <li>Express a given number as a percentage of another in more complex situations</li> <li>Find the original amount given the final amount after a percentage increase or decrease</li> <li>Find an amount after repeated percentage changes</li> <li>Solve growth and decay problems</li> <li>Solve problems involving compound measures</li> <li>Convert between metric measures of speed</li> <li>Calculate average speed, distance and time</li> <li>Use formulae to calculate speed and acceleration</li> <li>Use ratio and proportion in measures and conversions</li> <li>Use inverse proportion</li> </ul>	<b>Unit 14 – Multiplicative Reasoning</b>
5	30.09.24			
6	07.10.24	<b>Measures</b> <b>Constructions</b> <b>Polyhedra</b> <b>Angles</b>	<ul style="list-style-type: none"> <li>Recognise 3D shapes and their properties</li> <li>Describe 3D shapes using the correct mathematical words</li> <li>Understand the 2D shapes that make up 3D objects</li> <li>Identify and sketch planes of symmetry of 3D shapes</li> <li>Draw and interpret plans and elevations of 3D shapes</li> <li>Make accurate drawings of triangles using a ruler, protractor and compasses</li> <li>Identify SSS, ASA, SAS and RHS triangles as unique from given description</li> <li>Identify congruent triangles</li> <li>Draw diagrams to scale</li> <li>Use scales on maps and diagrams to work out lengths and distances</li> <li>Solve problems involving scales</li> <li>Accurately draw angles and 2D shapes using a ruler, protractor and compasses</li> <li>Construct a polygon inside a circle</li> <li>Draw accurate nets</li> <li>Bisect angles and lines using rulers and compasses</li> <li>Find the shortest distance from a point to a line</li> <li>Draw loci for the path of points that follow a given rule</li> <li>Identify regions bounded by loci to solve practical problems</li> </ul>	<b>Unit 15 – Constructions, loci and bearings</b>
7	14.10.24			

8	21.10.24		<ul style="list-style-type: none"> <li>Find and use three-figure bearings</li> <li>Use angles on parallel lines to work out bearings</li> <li>Solve problems involving bearings and scale diagrams</li> </ul>	
<b>Half term</b>				
9	04.11.24		<b>Mock Prep</b>	<b>GCSE Mock Paper</b>
10	11.11.24		<b>Mock Prep</b>	
11	18.11.24		<b>Mocks</b>	
12	25.11.24		<b>Mocks</b>	
13	02.12.24		<b>Mocks</b>	
14	09.12.24		<b>RAP/ addressing misconceptions</b>	
15	16.12.24		<b>RAP/ addressing misconceptions</b>	
<b>CHRISTMAS</b>				
16	06.01.25	<b>Algebraic manipulation</b>	<ul style="list-style-type: none"> <li>Multiply double brackets</li> <li>Recognise quadratic expressions</li> <li>Square single brackets</li> <li>Plot graphs of quadratic functions</li> <li>Recognise a quadratic function</li> <li>Use quadratic graphs to solve problems</li> <li>Solve quadratic equations <math>ax^2 + bx + c = 0</math> using a graph</li> <li>Solve quadratic equations <math>ax^2 + bx + c = k</math> using a graph</li> <li>Factorise quadratic expressions</li> <li>Solve quadratic equations algebraically</li> </ul>	<b>GCSE Past Paper</b>
17	13.01.25	<b>Graphs</b>		
18	20.01.25	<b>Equations</b>		
19	27.01.25	<b>Area</b>	<ul style="list-style-type: none"> <li>Calculate the circumference of a circle</li> <li>Solve problems involving the circumference of a circle</li> <li>Calculate the circumference and radius of a circle</li> <li>Write error intervals for rounded and truncated values</li> <li>Work out the area of a circle</li> <li>Work out the radius or diameter of a circle</li> <li>Solve problems involving the area of a circle</li> <li>Give answers in terms of pi</li> <li>Understand and use maths language for circles and perimeters</li> <li>Work out areas and perimeters of sectors of circles</li> <li>Solve problems involving areas and perimeters of 2D shapes</li> <li>Work out the volume and surface area of cylinders</li> <li>Work out the volume of a pyramid</li> <li>Work out the surface area of a pyramid</li> <li>Work out the volume of a cone</li> <li>Work out the surface area of a cone</li> <li>Work out the volume and surface area of a sphere</li> <li>Work out the volume and surface area of composite solids</li> </ul>	<b>GCSE Past Paper</b>
20	03.01.25	<b>Perimeter</b>		
		<b>Volume</b>		
		<b>Pythagoras</b>		
21	10.02.25	<b>Trigonometry</b>		
<b>Half term</b>				
22	24.02.25	<b>Indices and standard form</b>	<ul style="list-style-type: none"> <li>Multiply and divide mixed numbers and fractions</li> <li>Know and use the laws of indices</li> <li>Write large numbers in standard form</li> <li>Convert numbers from standard form into ordinary numbers</li> <li>Write small numbers in standard form</li> <li>Convert numbers from standard form with negative powers into ordinary numbers</li> <li>Multiply and divide numbers in standard form</li> <li>Add and subtract numbers in standard form</li> </ul>	<b>GCSE Past Paper</b>
23	03.03.25	<b>Fractions</b>		
24	10.03.25	<b>Proportional reasoning</b>	<ul style="list-style-type: none"> <li>Understand similarity</li> <li>Use similarity to solve angle problems</li> <li>Find the scale factor of an enlargement</li> <li>Use similarity to solve problems</li> <li>Determine when two shapes are definitely not (or may not be) similar</li> <li>Understand the similarity of regular polygons</li> </ul>	<b>GCSE Past Paper</b>

25	17.03.25	<b>Area and volume</b>  <b>Measures</b>  <b>Co-ordinates and transformations</b>	<ul style="list-style-type: none"> <li>• Calculate perimeters of similar shapes</li> <li>• Recognise congruent shapes</li> <li>• Use congruence to work out unknown angles</li> <li>• Use congruence to work out unknown sides and angles in triangles and shapes made of triangles</li> <li>• Add vectors</li> <li>• Find the resultant of two vectors</li> <li>• Subtract vectors</li> <li>• Find multiples of a vector</li> <li>• Identify two column vectors that are parallel</li> <li>• Solve problems using vectors</li> </ul>	<b>GCSE Past Paper</b>
26	24.03.25	<b>Graphs</b>	<ul style="list-style-type: none"> <li>• Draw and interpret graphs of cubic functions</li> <li>• Draw and interpret the graph of <math>y = 1/x</math></li> <li>• Draw and interpret non-linear graphs to solve problems</li> <li>• Solve simultaneous equations by drawing a graph</li> <li>• Write and solve simultaneous equations</li> <li>• Solve simultaneous equations algebraically</li> <li>• Change the subject of a formula</li> <li>• Identify expressions, equations, formulae and identities</li> <li>• Prove results using algebra</li> </ul>	
27	31.03.25			
<b>EASTER</b>				
28(BH)	21.04.25		<b>Exam Prep</b>	
29	28.04.25		<b>Exam Prep</b>	
30(BH)	06.05.25		<b>Exams</b>	
31	12.05.25		<b>Exams</b>	
32	19.05.25		<b>Exams</b>	
<b>Half term</b>				
33	02.06.25		<b>Exams</b>	
34	09.06.25		<b>Exams</b>	
35	16.06.25		<b>Exams</b>	
36	23.06.25			
37	30.06.25			
38	07.07.25			
39	14.07.25			



