Year 11 Foundation Big Picture – Maths

Autumn 1 7 weeks	Autumn 2 7 weeks	Spring 1 7 weeks
Content 11.01F Pythagoras 11.02F Right angled Trigonometry 11.02*F Ratio 11.03*F Equations and Inequalities	**Content** 11.03F Bearings and Scale drawings 11.04F Transformations 11.05F Ratio and Proportion <mark>Mock PPE exams- revision and preparation</mark> <mark>Feedforward lessons based on QLAs</mark>	**Content** 11.06F Vectors 11.08F Similar Shapes 11.09F Constructions and Loci
Assessment Objectives This is the knowledge, application and skills assessed by the Big Test: **Calculate with roots, and with integer indices** **Leave answers in surd form** **Given 3 sides of a triangle, justify if it is right-angled or not** **Apply Pythagoras' Theorem with a triangle drawn on a coordinate grid** **Calculate the length of a line segment AB given pairs of points** **Trigonometry in right angled triangles** **Know the exact values of sinθ and cosθ for θ = 0°, 30°, 45°, 60° and 90°. Know the exact value of tanθ for θ = 0°, 30°, 45° and 60°** **Find angles of elevation and depression** - Simplify ratios - Divide a quantity into a given ratio - Write ratios as fractions - Compare lengths, areas and volumes using ratio notation and scale factors **Solve ratio problems involving the change of a ratio within a question** **Relate ratios to fractions and to linear functions** - Solve linear equations which contain brackets, fractional coefficients, negative signs, negative	**Assessment Objectives** This is the knowledge, application and skills assessed by the Big Test: - Interpret maps and scale drawings - Estimate lengths using a scale diagram - Make an accurate scale drawing from a diagram - Know and use compass directions - Use three-figure bearings to specify direction - Mark on a diagram the position of point B given its bearing from point A - Give a bearing between the points on a map or scaled plan - Use accurate drawing to solve bearings problems - Solve locus problems including bearings - Reflection and rotation symmetry - Transformations - rotation, reflection, translation, enlargement (with a positive scale factor) - Identify the equation of a line of symmetry - Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides, simple integer scale factors, or simple fractions **Enlargements with a fractional scale factors** - Divide a given quantity into two parts in a given *part:part* or *part:whole ratio*; - To express the division of a quantity into two parts	**Assessment Objectives** This is the knowledge, application and skills assessed by the Big Test: **Addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors** **Be able to represent information graphically given column vectors** **Identify two column vectors which are parallel** - Understand that similar shapes are enlargements of each other and angles are preserved- – define similar in this unit - Identify shapes which are similar; including all circles or all regular polygons with equal number of sides **Apply the concepts similarity, including the relationships between lengths in similar figures** **Understand similarity of triangles and of other plane shapes, use this to make geometric inferences, and solve angle problems using similarity** **Understand the effect of enlargement on perimeter of shapes** **Solve problems to find missing lengths in similar shapes** - Draw circles and arcs to a given radius or given the diameter - Measure and draw lines, to the nearest mm

solutions. Solving linear equations in one unknown with unknowns on both sides, solving equations that require fraction manipulation
- Solve linear inequalities in one variable, represent and interpret solutions sets on a number line, solve two inequalities in one variable and compare to see which value(s) satisfy both

Mini test (marked by teacher)
UNIT test 11.01F

UNIT tests (Self-assessment)
UNIT tests 11.02*F, 11.03*F

Feedforward and Intervention
Students to complete the questions where they made errors (in purple pen)

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as a ratio
- **Solve ratio problems involving the change of a ratio within a question**
- **Relate ratios to fractions and to linear functions**

Mini test (marked by teacher)
UNIT test 11.04F

UNIT tests (Self-assessment)
UNIT tests 11.03F, 11.05F

Feedforward and Intervention
Students to complete the questions where they made errors (in purple pen)

- Measure and draw angles, to the nearest degree
- **Use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle)**
- **Construct angles of 90°, 45°**
- **Use constructions to construct given figures and solve loci problems; know that the perpendicular distance from a point to a line is the shortest distance to the line**
- **Construct: a region bounded by a circle and an intersecting line; a given distance from a point and a given distance from a line; equal distances from two points or two line segments; regions which may be defined by 'nearer to' or 'greater than'**

Mini test (marked by teacher)
UNIT test 11.06F

UNIT tests (Self-assessment)
UNIT tests 11.07F, 11.08F

Feedforward and Intervention
Students to complete the questions where they made errors (in purple pen)

Progress test in class; fluency tests ATL data and Progress test %	PPE exams, fluency tests PPE and ATL data	Tests in class, fluency tests ATL data
Spring 2 **5 weeks**	**Summer 1** **6 weeks**	**Summer 2** **7 weeks**
Content • Revision programme for GCSE exams 2024	**Content** • Revision programme GCSE exams 2024 • GCSE exams	**Content** • Revision programme for GCSE exams 2024 • GCSE exams
Assessment Objectives This is the knowledge, application and skills assessed by the Big Test:	**Assessment Objectives** This is the knowledge, application and skills assessed by the Big Test:	**Assessment Objectives** This is the knowledge, application and skills assessed by the

• Revision of key topics- bespoke plan for each Year 11 Maths class • Preparation for GCSE exams- practice and exam papers **Mini test (marked by teacher)** GCSE practice papers **UNIT tests (Self-assessment)** GCSE practice papers **Feedforward and Intervention** Students to complete the questions where they made errors (in purple pen)	• Revision of key topics- bespoke plan for each Year 11 Maths class • Preparation for GCSE exams- practice and exam papers **Mini test (marked by teacher)** GCSE practice papers **UNIT tests (Self-assessment)** GCSE practice papers **Feedforward and Intervention** Students to complete the questions where they made errors (in purple pen)	Big Test: • Revision of key topics- bespoke plan for each Year 11 Maths class • Preparation for GCSE exams- practice and exam papers **Mini test (marked by teacher)** n/a **UNIT tests (Self-assessment)** n/a **Feedforward and Intervention** Students to complete the questions where they made errors (in purple pen)
PPE exams, fluency tests **PPE and ATL data**	**GCSE exams 2024**	**GCSE exams 2024**