Year 11 Autumn T1 - Topic: Bearings and Scale Drawings

Prior learning:

Understand congruence and identifying congruent shapes
Draw and measure lines and angles
Construct circles
Understand equidistance

Objectives

End Points	Learning Steps	Foundation	Crossover
○ Find bearings from diagrams and worded questions ○ Use and interpret scale factors, scale drawings and maps ○ (H) Bearings with Pythagoras and Trigonometry		○ Know the three rules of bearings ○ Find the bearing between two points ○ Draw a point on a fixed bearing from another point ○ Given a bearing, find the reverse bearing ○ Use and interpret map scales ○ Draw and interpret scaled diagrams in real-life contexts	○ Bearings with Pythagoras **Higher** ○ Bearings with Trigonometry

Where will we use these ideas again:
Bearings will be revisited again with trigonometry and angles in parallel lines and scale drawings as a concept is revisited within enlargement.

Higher: Bearings with sine rule and cosine rule

Year 11 Autumn T1 - Topic: Handling Data 2

Prior learning:

Average and range from a list
Averages and range from a frequency table
Frequency polygons

Objectives			
End Points		Foundation	Crossover
○ Recap: data topic ○ Recap: Frequency polygons ○ Construct cumulative frequency diagrams	**Learning Steps**	○ Recap – Year 10 Autumn term 1 – Handing Data ○ Recap – Year 9 Spring term 1 – Data Collection	Higher

Where will we use these ideas again:

Year 11 Autumn T1 - Topic: Non-Linear Graphs and Linear Graph Review - FOUNDATION

Prior learning:

Draw and interpret linear graphs
Draw quadratic graphs
Identify turning points and roots of quadratic graphs
Sketch quadratics
Substitution and solving
Completing the square

Objectives

End Points

- Recap – Linear graphs
- Recap – Plotting graphs
- Real life graphs
- Plot and recognise cubic graphs
- Plot and recognise reciprocal graphs
- Recognise exponential graphs

Learning Steps

Foundation

- Recap – year 10 autumn term 1 - drawing linear graphs and y = mx + c
- Recap – year 10 spring term 1 – plotting linear graphs including quadratic graphs
- Recognise graphs from real life scenarios (e.g. filling different flasks)
- Plot and draw a cubic graph
- Recognise and sketch simple cubic functions
- Recognise non-linear graphs and their equations
- Plot and draw a reciprocal graph
- Recognise and sketch simple reciprocal functions

Crossover

- Recognise exponential graph

Higher

Where will we use these ideas again:

Year 11 Autumn T1 - Topic: Inequalities and Algebra Review Learning Journey

Prior learning:

Re-arrange formula
Represent inequalities on a number line
Solve linear inequalities
Drawing linear and quadratic graphs

<table>
<tr><th colspan="4">Objectives</th></tr>
<tr><th>End Points</th><th rowspan="2">Learning Steps</th><th>Foundation</th><th>Crossover</th></tr>
<tr><td rowspan="3">○ Recap of inequalities and algebra</td><td rowspan="3">○ Recap – Year 9 autumn term 1 & 2 – linear expressions, equations and formulae
○ Recap – year 9 summer term 1 – quadratics
○ Recap – Year 10 autumn term 1 – linear sequences
○ Recap – Year 10 spring term 1 – simultaneous equations</td><td></td></tr>
<tr><td>Higher</td></tr>
<tr><td></td></tr>
</table>

Year 11 Autumn T2 - Topic: Combined Events and Probability Trees

Prior learning:

Express a probability as fraction, decimal or percentage
Mutually exclusive events
'OR' rule in probability
Systematic listing
Relative and theoretical probability
Estimate outcomes

Objectives

End Points

- Interpret and draw Venn diagrams
- Use set notation
- Probability and Venn diagrams
- Draw and interpret tree diagrams with replacement

Learning Steps

Foundation

- Recognise and define the universal set
- Sort data into a Venn diagram
- Find the intersection from a Venn diagram
- Find the union from a Venn diagram
- Complete and use Venn diagrams to find frequencies
- Recognise and use the notation for intersection, union and complement
- Design a Venn diagram to solve multi-step problems
- Use a Venn diagram to calculate probability
- Understand of Venn Diagrams to three regions
- Complete a probability tree diagram involving independent events
- Find probabilities of successive independent events from a tree diagram
- Understanding how probabilities change in experiments without replacement
- Complete a probability tree diagram involving dependent events (e.g. without replacement)
- Find the probability of an event occurring given information as ratios
- Understand the concept of conditional probability

Crossover

- Find probabilities of successive independent events without a tree diagram

Higher

Year 11 Spring T1 - Topic: Vectors

Prior learning:

Simplify expressions
Expand expressions
Factorise expressions

Objectives

End Points

- Represent vectors in 2D
- Calculate with vectors in 2D

Learning Steps

Foundation

Crossover

- Represent a two-dimensional vector as a column vector
- Multiply and divide vectors by scalars
- Add and subtract vectors and/or multiples of vectors

Higher

Year 11 Spring T1 - Topic: Number and Accuracy Review

Prior learning:

Number
Accuracy
Calculations

Objectives			
End Points		Foundation	Crossover
○ Recap – Number ○ Recap – Accuracy and Calculations	**Learning**	○ Recap – Year 9 autumn term 1 – factors, multiples and roots ○ Recap – Year 9 spring term 2 – accuracy and calculations ○ Recap – Year 10 autumn term 1 – standard form	Higher

Year 11 Spring T1 - Topic: FDP, Percentages and Ratio Review

Prior learning:

Fraction, Decimal and Percentage
Percentages

Ratio

Objectives			
End Points		Foundation	Crossover
○ Recap – Fraction, decimal and percentage ○ Recap – Percentages ○ Recap - Ratio	**Learning**	○ Recap – Year 9 spring term 1 – fraction, decimal and percentages ○ Recap – Year 9 spring term 1 – similarity ○ Recap – Year 10 autumn term 2 – percentages and ratio	Higher

Year 11 Spring T1 - Topic: Angles, Transformations and Constructions Review

Prior learning:

Transformations
Angles

<table>
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<tr><th>End Points</th><th rowspan="2">Learning</th><th>Foundation</th><th>Crossover</th></tr>
<tr><td rowspan="2">o Recap – Angles in polygons
o Recap – Transformations
o Recap - Constructions</td><td rowspan="2">o Recap – Year 9 summer term 2 – Angles in polygons
o Recap – Year 10 spring term 1 – Transformations
o Recap – Year 10 summer term 2 - Constructions</td><td>Higher</td></tr>
<tr><td></td></tr>
</table>

Year 11 Spring T1 - Topic: Shape Review

Prior learning:

Shape in 2D
Shapes in 3D

Objectives			
End Points	**Learning Steps**	Foundation	Crossover
○ Recap – Pythagoras Theorem ○ Recap – Area in 2D Shapes ○ Recap - Circles ○ Recap – Trigonometry ○ Recap – Working in 3D		○ Recap – Year 9 autumn term 1 – Pythagoras Theorem ○ Recap – Year 9 autumn term 2 – Area of 2D Shapes ○ Recap – Year 10 autumn term 2 and spring term 1 – Circles ○ Recap – Year 10 spring term 2 – Trigonometry ○ Recap – Year 10 summer term 1 – Working in 3D	Higher

Year 11 Spring T1 - Topic: Sequences and Algebra Review

Prior learning:

Sequences
Algebra

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<tr><td rowspan="2">○ Recap – Sequences
○ Recap – Algebra</td><td rowspan="2">○ Recap – Year 9 autumn term 1 & 2 – Linear expressions, equations and formulae
○ Recap – Year 9 summer term 1 – Quadratics
○ Recap – Year 10 autumn term 1 – Linear sequences
○ Recap – Year 10 spring term 1 – Simultaneous equations</td><td>Higher</td></tr>
</table>

Year 11 Spring T1 - Topic: Compound Measure and Proportionality Review

Prior learning:

Sequences
Algebra

Objectives			
End Points		Foundation	Crossover
○ Recap – Compound Measures ○ Recap – Units and Proportionality ○ Recap – Congruence and Similarity	**Learning**	○ Recap – Year 9 spring term 2 – Compound Measures ○ Recap – Year 10 spring term 2 – Units and Proportionality ○ Recap – Year 10 summer term 1 – Congruence and Similarity	Higher

Year 11 Spring T1 - Topic: Data and Statistics Review

Prior learning:

Data
Statistics

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<tr><td rowspan="3">○ Recap – Data Collection
○ Recap – Handling Data</td><td rowspan="3">○ Recap – Year 9 spring term 1 – Data Collection
○ Recap – 10 autumn term 2 – Handling Data</td><td></td></tr>
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