



# Haberdashers' Abraham Darby

## Year 10 Foundation Maths Learning Journey



← This way to Year 11 



### Exam Preparation

Build a portfolio of revision material, to help remember Powerful Knowledge and commit key information to long term memory. You will be tested on all the content learned over the course of the year ready to build on in Year 11.



### Exam Preparation

#### Unit 16 Quadratic equations and graphs

Expand double brackets. Plot quadratic functions. Factorise quadratic expressions. Solve quadratic equations  $ax^2 + bx + c = 0$ , using a graph and algebraically.

#### Exam Preparation

Revise the Core and Powerful Knowledge, committing key information to long term memory. You will be tested on all content covered so far this year.

### Quadratic Equations and Exam Preparation

Summer Term 2



#### 14 Multiplicative Reasoning

Calculate percentages. Express one number as a percentage of another. Calculate repeated percentage change, growth and decay. Calculate speed, distance, time and acceleration.

#### Unit 15 Construction, Loci and Bearings

Draw loci for the path of points that follow a given rule. Identify regions bounded by loci to solve practical problems. Find and use three-figure bearings. Use angles at parallel lines to work out bearings. Solve bearings problems.



### Multiplicative Reasoning and Constructions

Summer Term 1

#### Unit 12 Right-Angled Triangles

Understand and use Pythagoras and Trigonometry to find lengths and angles. Know the exact trigonometry values for sine, cosine and tangent for some angles.

#### Unit 13 Probability

Calculate probabilities, including experimental probability. Understand probability language. Create and use two-way tables and Venn diagrams.



### Right Angled Triangles and Probability

Spring Term 2



#### Unit 10 Transformations

Draw and describe translations, reflections, rotations and enlargements. Transform shapes using more than one transformation. Describe combined transformations.

#### Unit 11 Ratio and Proportion

Understand and use ratio for unit conversion, enlargement, sharing quantities and comparing. Use direct and inverse proportion to solve problems. Recognise and use proportion on a graph, including understanding the gradient.

#### Exam Preparation

Revise the Core and Powerful Knowledge, committing key information to long term memory. You will be tested on all content covered so far this year.



### Transformations, Ratio, Proportion and Exam Preparation

Spring Term 1



#### Unit 8 Perimeter, area and volume

Calculate perimeter and area of shapes. Calculate volume and surface area of cuboids and prisms. Convert between various units of measure.

#### Unit 9 Graphs

Find midpoint of a line segment. Generate and plot co-ordinates from a rule. Find gradients. Understand  $y = mx + c$ . Find the equations of straight-line graphs. Draw and interpret real and distance-time graphs.



### Area, Volume and Graphs

Autumn Term 2



#### Unit 5 Equations, inequalities and sequences

Use inverse. Rearrange equations. Solve two-step equations and equation with unknowns on both sides and including brackets. Solve inequalities. Recognise and use sequences, including nth term.

#### Unit 6 Angles

Use side and angle properties of quadrilaterals. Identify congruence. Use angle properties between parallel lines. Solve angle problems in triangles. Calculate interior and exterior angles.

#### Unit 7 Averages and range

Calculate mean, mode, median and range, including estimating averages from grouped data. Identify outliers. Understand the need for sampling and how to avoid bias.



### Equations, Angles and Averages

Autumn Term 1

#### KS4

Students will enter KS4 having worked through a comprehensive maths curriculum in KS3; comprising elements of number, geometry, algebra, ratio and statistics.



Start here



# Haberdashers' Abraham Darby

## Year 11 Foundation Maths Learning Journey



← This way to Year 12

Ready to build on for Year 12 sixth form or college.

GCSE Exams



### Exam Preparation

Build a portfolio of revision material, to help remember Powerful Knowledge and commit key information to long term memory. You will be tested on all the content learned over the GCSE.



### Revision

Summer Term 2



**Revision Exam Preparation**  
Bespoke revision programme.



### Revision

Summer Term 1



**Revision Exam Preparation**  
Bespoke revision programme.



### Revision

Spring Term 2



### Mock Exam Preparation

Revise the Core and Powerful Knowledge and commit key information to long term memory. You will be tested on all content covered for the GCSE course.



### Mock Exam Preparation

Spring Term 1



**Unit 19 Congruence, similarity, and vectors**  
Understand similarity. Use scale factor for enlargement and to calculate perimeter. Recognise congruency. Work out angles and sides using congruency. Undertake calculations with vectors.

**Unit 20 More algebra**  
Draw and interpret cubic graphs and graphs of  $y = 1/x$ . Solve simultaneous equations graphically and algebraically. Change the subject of formulae. Identify expressions, equations, formulae and identities. Prove results using algebra.



### Shape and More algebra

Autumn Term 2

**Unit 16 Quadratic equations and graphs**  
Expand double brackets. Plot quadratic functions. Factorise quadratic expressions. Solve quadratic equations  $ax^2 + bx + c = 0$ , using a graph and algebraically.



**Unit 17 Perimeter, area, and volume 2**  
Find circumference and area of circles. Find perimeter and area of semi-circles, sectors and compound shapes. Work out volume and surface area of cylinders, pyramids, cones, and composite solids.

**Unit 18 Fractions, indices, and standard form**  
Multiply and divide mixed numbers. Use the laws of indices. Write and do calculations in standard form.

### Quadratics, Shape, and Number

Autumn Term 1

### KS4

Students will have worked through a comprehensive maths curriculum in Year 10 comprising elements of number, geometry, algebra, ratio and statistics



Start here