

# Mathematics

## Year 8 Curriculum Map



Woolwich Polytechnic  
School for Boys

| Unit One  | Unit Two  | Unit Three   |
|---|---|--|
| <p><b>Topic: Ratio and Scale</b></p> <p><b>Key Learning:</b><br/>Understanding and using ratio notation, in the simplest forms, in 1:n and n:1 and solving proportion problems using ratio.</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>                  | <p><b>Topic: Multiplicative Change</b></p> <p><b>Key Learning:</b><br/>Solving direct proportion problems using calculations and conversion graphs</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p> | <p><b>Topic: Multiplication and Division of Fractions</b></p> <p><b>Key Learning:</b><br/>Multiplying and dividing fractions in different contexts</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>  |
| Unit Four   | Unit Five   | Unit Six   |
| <p><b>Topic: Brackets, Equations and Inequality</b></p> <p><b>Key Learning:</b><br/>Expanding and factorising algebraic expressions, solving more complex equations and working with inequality notation</p> <p><b>Assessment:</b><br/>Topic-test and mid-year exam</p> | <p><b>Topic: Sequence</b></p> <p><b>Key Learning:</b><br/>Using rules to describe and generate sequences.</p> <p><b>Assessment:</b><br/>Topic-test and mid-year exam</p>                                      | <p><b>Topic: Working in the Cartesian Plane</b></p> <p><b>Key Learning:</b><br/>Working with co-ordinates in all four quadrants and drawing straight line graphs in the form <math>y=a</math>, <math>x=b</math>, <math>y=x</math>, <math>y=kx</math>, and <math>k=x+y</math>.</p> <p><b>Assessment:</b><br/>Topic-test and mid-year exam</p> |

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| Unit Seven   | Unit Eight  | Unit Nine  |
|--|---|--|
| <p><b>Topic: Representing Data</b></p> <p><b>Key Learning:</b><br/>Understanding the relationships between dependent and independent variables using graphs and tables</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p> | <p><b>Topic: Tables and Probability</b></p> <p><b>Key Learning:</b><br/>Constructing sample spaces, two-way tables and venn diagrams to find probabilities.</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p>   | <p><b>Topic: Indices</b></p> <p><b>Key Learning:</b><br/>Adding and subtracting expressions with indices and using addition and subtraction laws for indices</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p> |
| Unit Ten   | Unit Eleven   | Unit Twelve  |
| <p><b>Topic: Standard Form</b></p> <p><b>Key Learning:</b><br/>Writing numbers in standard form and using them in calculations</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p>   | <p><b>Topic: Fractions and Percentages</b></p> <p><b>Key Learning:</b><br/>Converting between fractions, decimals and percentages and increasing and decreasing numbers by given and unknown percentages.</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p> | <p><b>Topic: Line Symmetry and Reflection</b></p> <p><b>Key Learning:</b><br/>Reflecting shapes in lines of symmetry</p> <p><b>Assessment:</b><br/>Topic-test and end-of-year exam</p>   |

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### Unit Thirteen

**Topic: Angles in Parallel Lines and Polygons**

**Key Learning:**

Calculating angles using the rules for angles in parallel lines and angles in polygons and proving conjectures.

**Assessment:**

Topic-test and end-of-year exam

### Unit Fourteen

**Topic: Number Sense**

**Key Learning:**

Rounding to significant figures, estimating calculations and converting between units

**Assessment:**

Topic-test and end-of-year exam

### Unit Fifteen

**Topic: Area of Trapezia and Circles**

**Key Learning:**

Calculating the area and perimeter of trapezia and circles

**Assessment:**

Topic-test and end-of-year exam

### Unit Sixteen

**Topic: The Data Handling Cycle**

**Key Learning:**

Drawing and interpreting different charts and graphs

**Assessment:**

Topic-test

### Unit Seventeen

**Topic: Measures of Location**

**Key Learning:**

Understanding averages and range in both lists of data and grouped frequency tables.

**Assessment:**

Topic-test