Maths

| Subject | Maths |
|---|---|
| Term | Autumn 1 |
| Duration (Approx) | 3 Weeks |
| Module | Whole Number and Decimals |

# Ridgeway Academy

**Factual knowledge to be taught and assessed, depending on progression made (including subject specific vocabulary)**

- Ordering whole numbers
- Place value and decimals
- Decimals and money
- Adding decimals
- Temperature
- Rounding and estimating
- Order of operations
- Multiply and divide by 10, 100 and 1000
- Negative numbers
- Mental and written methods of addition and subtraction
- Calculator methods

**Skills and concepts to be developed and assessed (linking to identified AOs)**

- Understand and use place value for decimals, measures and integers of any size
- Use standard units of measure
- Extend understanding of the number system and place value to include decimals, fractions, powers and roots
- Use the 4 operations with integers, decimals and fractions
- Order positive and negative integers, decimals and fractions. Recognise and use the symbols =, ≠, <, >, ≤, ≥
- Round numbers and measures to an appropriate degree of accuracy
- Use conventional including brackets, powers, roots and reciprocals

**Formative Assessment/key piece of work prior to end of unit:**

- Questioning in class
- Paired work
- Independent completion of exercises
- Use of homework

**Summative Assessment:**

One lesson written assessment at end of half term

**Building Retention: What prior learning must be built upon/revisited and how will it be assessed?**

- Knowledge of the number line including negative numbers, fractions and decimals.
- Solving problems using addition, subtraction, multiplication and division.
- Knowledge of place value

**Spelling-Punctuation-Grammar. How will you promote high standards within this module?**

- Emphasis given to key words
- Definitions provided
- Spellings corrected where necessary when marking

**Link forward: where next for the learning?**

Number topics are built upon throughout the year. Each half term a different aspect of number is revisited and extended

| Subject | Maths |
|---|---|
| Term | Autumn 1 |
| Duration (Approx) | 3 Weeks |
| Module | Measures, Perimeter, Area |

**Factual knowledge to be taught and assessed, depending on progression made (including subject specific vocabulary)**

- Measuring lines
- Reading scales
- Time
- Use and convert between metric units of measurement
- Area and perimeter of triangles and quadrilaterals
- Surface area of a cuboid
- Volume of a cuboid

**Skills and concepts to be developed and assessed (linking to identified AOs)**

- Draw and measure line segments and angles including interpreting scale drawings
- Use and convert between standard units of mass, length, time, money and other measures, including with decimal quantities
- Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures. Be able to apply formulae for area and perimeter and select the correct units
- Use language and properties precisely to analyse 2-D and 3-D shapes

**Formative Assessment/key piece of work prior to end of unit:**

- Questioning in class
- Paired work
- Independent completion of exercises
- Use of homework

**Summative Assessment:**

One lesson written assessment at end of half term.

**Building Retention: What prior learning must be built upon/revisited and how will it be assessed?**

- Use of mathematical equipment to draw and measure
- Recognising units of measure used on a daily basis
- Recognising common quadrilaterals and triangles

**Spelling-Punctuation-Grammar. How will you promote high standards within this module?**

- Emphasis given to key words
- Definitions provided
- Spellings corrected where necessary when marking

**Link forward: where next for the learning?**

Geometry and measure topics are built upon throughout the year

| Subject | Maths |
|---|---|
| Term | Autumn 2 |
| Duration (Approx) | 2 Weeks |
| Module | Expressions and Formulae |

**Factual knowledge to be taught and assessed, depending on progression made (including subject specific vocabulary)**

- Using letters and symbols
- Substitution
- Creating a formula
- Algebraic symbols
- Expressions
- Collecting like terms
- Using a formula
- Writing a formula
- Expanding brackets
- Further substitution
- Further simplification
- Simplification and division

**Skills and concepts to be developed and assessed (linking to identified AOs)**

- Use and interpret algebraic notation.
- Simplify and manipulate algebraic expressions to maintain equivalence by; collecting like terms, multiplying a single term over a bracket, taking out common factors and expanding products of 2 or more binomials
- Substitute numerical values into formulae and expressions, including scientific formulae
- Translating situations into algebraic expressions or formulae and using graphs

**Formative Assessment/key piece of work prior to end of unit:**

- Questioning in class
- Paired work
- Independent completion of exercises
- Use of homework

**Summative Assessment:**

One lesson written assessment at end of term

**Building Retention: What prior learning must be built upon/revisited and how will it be assessed?**

This topic will be an introduction to algebra

**Spelling-Punctuation-Grammar. How will you promote high standards within this module?**

- Emphasis given to key words
- Definitions provided
- Spellings corrected where necessary when marking

**Link forward: where next for the learning?**

Algebra topics are built upon throughout the year

| Subject | Maths |
|---------|-------|
| Term | Autumn 2 |
| Duration (Approx) | 3 Weeks |
| Module | Fractions, Decimals and % |

**Factual knowledge to be taught and assessed, depending on progression made (including subject specific vocabulary)**

- Writing fractions
- Equivalent fractions
- Improper fractions
- Finding percentages
- Fraction notation
- Adding and subtracting fractions
- Decimals and fractions
- Fraction and percentage of a quantity

**Skills and concepts to be developed and assessed (linking to identified AOs)**

- Identify, name and write equivalent fractions of a given fraction
- Recognise mixed numbers and improper
- Interpret fractions and percentages as operators
- Define percentage as number of parts per hundred
- Interpret percentages and percentage changes as a fraction or a decimal
- Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8)
- Move freely between different numerical, algebraic, graphical and diagrammatic representations

# Ridgeway Academy
Year 7 Subject Map

**Formative Assessment/key piece of work prior to end of unit:**

- Questioning in class
- Paired work
- Independent completion of exercises
- Use of homework

**Summative Assessment:**

One lesson written assessment at end of term

**Building Retention: What prior learning must be built upon/revisited and how will it be assessed?**

- Addition and subtraction skills
- Understanding of dividing an amount into smaller, equal parts

**Spelling-Punctuation-Grammar. How will you promote high standards within this module?**

- Emphasis given to key words.
- Definitions provided
- Spellings corrected where necessary when marking

**Link forward: where next for the learning?**

Number topics are built upon throughout the year. Each half term a different aspect of number is revisited and extended

| | |
|---|---|
| **Subject** | Maths |
| **Term** | Autumn 2 |
| **Duration (Approx)** | 2 Weeks |
| **Module** | Angles and 2D Shapes |

**Maths**

**Factual knowledge to be taught and assessed, depending on progression made (including subject specific vocabulary)**

- Adding angles
- Measuring angles
- Finding angles at a point
- Calculating angles
- Properties of triangles, quadrilaterals and polygons.
- Compass turns
- Drawing lines and angles
- Calculating angles
- Angles and parallel lines

**Skills and concepts to be developed and assessed (linking to identified AOs)**

- Know angles are measured in degrees: estimate and compare angles
- Apply the properties of angles
- Draw and measure line segments and angles, including interpreting scale drawings
- Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures
- Use language and properties precisely
- Use scale factors, scale diagrams and maps

**Formative Assessment/key piece of work prior to end of unit:**

- Questioning in class
- Paired work
- Independent completion of exercises
- Use of homework

**Summative Assessment:**

One lesson written assessment at end of term

**Building Retention: What prior learning must be built upon/revisited and how will it be assessed?**

- Use of mathematical equipment to draw and measure
- Recognising common quadrilaterals and triangles

**Spelling-Punctuation-Grammar. How will you promote high standards within this module?**

- Emphasis given to key words
- Definitions provided
- Spellings corrected where necessary when marking

**Link forward: where next for the learning?**

- Geometry and measure topics are built upon throughout the year
- Each half term a different aspect of geometry and measure is revisited and extended