



## Content - Big ideas

**Huge Idea – To strengthen understanding of the core principles of Mathematics**

### Number:

*Big idea – To strengthen fundamental numeracy skills*

- Ratio
- Calculations with large and small numbers
- Powers and roots
- Rounding to a given degree of accuracy
- Standard form
- Percentage increase and decrease
- Calculations with fractions and mixed numbers

### Algebra:

*Big idea – To build upon the basic concepts of algebra*

- Solving linear equations
- Linear graphs and gradients
- Plotting quadratic graphs
- Algebraic notation
- Manipulation of algebraic expressions including expand brackets and simplifying expressions by collecting like terms

### Geometry:

*Big idea – To develop the understanding of 2D and 3D shapes*

- Symmetry
- Properties of 2D shapes
- Transformations including rotation, reflection, translation and enlargement
- Tessellations
- Congruent shapes
- Naming the parts of a circle
- Area and circumference of circles

### Data and Probability:

*Big idea – To extend the basic concepts of data handling*

- Probability scale
- Statistical diagrams including pie charts and scatter graphs
- Mutually exclusive events
- Probability diagrams

## Prior learning

Year 7 SOL

## Global/IOM/Subject Links

Links to Science, Geography, D&T, computer science. Project work and real life application.

## Subject specific skills development

- Modelling through abstract, concrete and pictorial methods.
- Use of manipulatives to secure a deeper understanding.
- Mental strategies for problem solving in context.
- Proficient use of a calculator
- Proficient use of geometrical equipment
- Logical reasoning skills