

Algebra

- Use simple formulae
- Generate and describe linear number sequences
- Express missing number problems algebraically
- Find pairs of numbers that satisfy an equation with two unknowns
- Enumerate possibilities of combinations of two variables

Teaching for Mastery is designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the new National Curriculum.

The overviews:

- Have number at their heart. A large proportion of time is spent reinforcing number to build competency.
- Ensure teachers stay in the required key stages and support the ideal of depth before breadth.
- Ensure students have the opportunity to stay together as they work through the schemes as a whole group.
- Provide plenty of time to build reasoning and problem solving elements into the curriculum.

Concrete – Pictorial – Abstract

As a school we believe that all students, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking this approach.

Concrete – students should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial – students should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.

Abstract – with the foundations firmly laid, students should be able to move to an abstract approach using numbers and key concepts with confidence.



Maths

Progression in Measurement, Geometry & Statistics

Year 6

If you require any examples,
please contact the class teacher.

Measurement – using measures

- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
- Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
- Convert between miles and kilometres

Measurement – time

- Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa

Measurement – perimeter, area, volume

- Recognise that shapes with the same areas can have different perimeters and vice versa
- Recognise when it is possible to use formulae for area and volume of shapes
- Calculate the area of parallelograms and triangles
- Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (e.g. mm^3 and km^3)

Geometry – 2d & 3d shapes

- Draw 2d shapes using given dimensions and angles
- Compare and classify geometric shapes based on their properties and sizes
- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- Recognise, describe and build simple 3d shapes, including making nets

Geometry – angles & lines

- Find unknown angles in any triangles, quadrilaterals, and regular polygons
- Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

Geometry – position & direction

- Describe positions on the full coordinate grid (all four quadrants)
- Draw and translate simple shapes on the coordinate plane, and reflect them in the axes

Statistics

- Interpret and construct pie charts and line graphs and use these to solve problems
- Calculate and interpret the mean as an average