

Callowell 2-11 Mathematics Statement

Intent

At Callowell, our curriculum is designed to develop **independence** and **resilience** in our learners whilst improving their **oracy** skills. We provide our learners with a wide range of experiences and activities to broaden their **cultural development** beyond their own community and promote **inclusion**.

In mathematics, our aims are to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Implementation

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Our mastery approach using the White Rose Scheme, enables children to develop skills, apply skills and then explore deeper understanding of concepts. This approach also enables children to build on prior learning; progressing in both skills and in knowledge. Our areas of learning are named, 'fluency', 'reasoning' and 'problem solving'. These are taught using a practical, useful and fun (PUF) curriculum, where mathematics is enriched through cross-curricular work and where appropriate, the outdoor environment.

Lessons and activities are adapted to ensure that children with special educational needs or disabilities can access the curriculum. Pupil Premium funded children are also supported and challenged using a variety of teaching methods within the school day, as well as through extra-curricular opportunities or 'booster' sessions at mathematics clubs.

At Callowell, the mathematics provision teaches the main components of the National Curriculum:

- Number and Place Value
- Addition and Subtraction
- Multiplication and Division
- Ratio and Proportion
- Fractions (including decimals)
- Measurement
- Geometry
- Statistics
- Algebra

Where appropriate, homework is used to support learning in school and involve parents in their children's mathematical learning. Where appropriate, ICT is also used to facilitate and enhance mathematical learning in both school and homework tasks.

Reaching beyond the National Curriculum, all pupils are enrolled onto 'Times Tables Rock Stars' and 'Numbots'. These are computer programmes designed to increase fluency and proficiency in arithmetic. These programmes also provide exciting competition with other schools. In Key Stage Two, children are given the opportunity to apply their skills in real life contexts through entrepreneurial projects, themed days, sales, school events, learning trips and external professional visitors. We also provide extra-curricular clubs in which children can apply their fluency, reasoning and problem solving skills; such as Year Six Maths Club and Taskmaster Club.

Impact

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. The expectations for each year group are set out in the National Curriculum Programmes of Study.