

## Maths Curriculum Statement



**Our Mission Statement:** 'Love one another'

**Our Learning Values:** 'Practice makes perfect'

**P – pride**

**R – resilience**

**A – aspiration**

**C – creativity**

**T – teamwork**

**I – independence**

**C – curiosity**

**E – engagement**

### **Curriculum Intentions**

The EYFS Framework in relation to mathematics aims for children to:

- Develop and improve skills in counting
- Understand and use numbers
- Calculate simple addition and subtraction problems
- Describe shapes, spaces and measures

The 2014 National Curriculum for Maths aims to ensure that all children:

- 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

Mental arithmetic and mathematical fact knowledge are key components in the process of achieving mastery in mathematics. Our maths lessons make the acquisition of these skills fun and engaging, enabling all children to feel successful in Maths.

Our aims in mathematics are

- To help children be confident and competent with numbers and measures. This requires an understanding of the number system, a range of computational skills and an inclination and ability to solve number problems in a variety of contexts. Mathematics also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.
- To develop an awareness of the language of maths and mathematical concepts
- To encourage children to question and reason
- To develop children's capacity for logical thinking
- To recall mathematical facts accurately and quickly
- To feel successful in Maths

At Charlton House, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

### **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.

The White Rose scheme is used as a basis for the Long and Medium Term Planning across all year groups. This not only ensures coverage of the whole curriculum but has been designed to build upon previous skills and knowledge. This is supplemented with a variety of other resources.

Website: <https://whiterosemaths.com/resources/primary-resources/primary-sols/>



The mathematics curriculum in Early Years delivers a balance between child initiated and teacher directed activities. Children access mathematics provision within both the indoor and outdoor areas. This enables children to develop interests around mathematics during child-initiated play.

#### Implementation in Early Years

Children in Reception are taught mathematical skills during small group teacher directed practical sessions. In reception teachers use White Rose Maths to support the teaching of mathematics in small group sessions. Over a week, five mathematical sessions are planned and delivered to every child. Understanding of mathematics is also developed through stories, songs and imaginative play which enables children to enjoy exploring and using number, shapes, spaces and measures.

#### Implementation in Key Stage 1 and 2

In Key Stage One and Two we provide a daily math session, of at least 60 minutes, that seeks to reinforce previous learning and allow children to take on new skills and apply these in a range of contexts. We use the White Rose Scheme as the basis of our planning.

Additionally, we believe that mental maths skills are key to allowing children to access more complex calculations and as such we ensure that each lesson has a period of time spent developing fluency. Children are encouraged to learn their number bonds and time tables and we use Doodle maths as a platform to support this

Problem solving and reasoning are also a daily feature in our lessons. It is important that children can not only recall facts but can also apply them. We use multiple representations to embed conceptual understanding.

#### Concrete, pictorial, abstract

Children engage with a wide and varied range of concrete manipulatives, pictorial representations and abstract methodologies within each session. **Cohesive** use of CPA is a fundamental part of mastery in mathematics for all learners, not just those pupils with SEND. Concrete and pictorial references scaffold and strengthen understanding and are widely used as a teaching and learning tool from Foundation Stage to Year 6. All pupils, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking this approach.

Pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.

*Concrete* – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

*Pictorial* – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

*Abstract* – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.



### Impact

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can under perform in Mathematics because they think they can't do it or are not naturally good at it. The White Rose Maths scheme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to achieve high standards, with achievement at the end of KS2 often above the national average.

### Assessment

**Formative Assessment:** Teachers carry out formative assessment through AfL in each session and feedback is given to children verbally, through self/peer assessment and through marking.

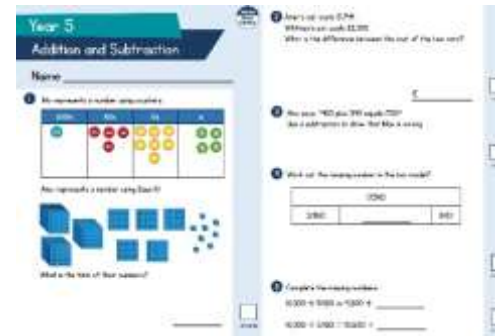
Teachers then use this assessment to influence their planning. Children are rapidly identified as needing further challenge or additional support, and we ensure that this is provided in a timely manner.

**Timely Interventions:** Teachers believe that all children can achieve in maths, and focus on whole class teaching. Where **prerequisites** are not secure, timely interventions will be carried out. We understand that catch-up does not work, and as a consequence our interventions are focused on **Pre-Teaching** and **Same Day Interventions**.

**Low Stakes Quizzing and Fluent Recall:** We use a range of low stakes testing throughout the teaching cycle to assess attainment and progress. From Year 2 to Year 6, children complete regular tests in Arithmetic and Times Tables.

**Summative Assessments:** Children complete End of Block assessments for each phase of learning. Results are used to further inform planning and allow for tailored interventions groups to take place to ensure the objectives are secured.

Our Assessment Calendar also includes 3 key dates for capturing progress and attainment against National Curriculum Objectives. Assessments are carried out in Autumn, Spring and Summer terms.



**Subject Monitoring:** We regularly monitor the quality and impact of our mathematics curriculum through targeted learning walks, book scrutiny and pupil interviews. In addition to this, we survey our staff and pupils to identify their perception of mathematics and identify CPD needs.

## Curriculum Impact

