



## Mathematics Rationale

At Cheadle Catholic Infant School our aim is to ensure that all children have a strong grounding in number, we believe that this is essential so that all children develop the necessary building blocks to excel mathematically. Through Mathematics, we actively aim to provide a relevant, challenging and enjoyable mathematics curriculum for all children. Children develop the use of mathematical language through speaking and listening, including reasoning and explanations. Mathematics will enable all children to understand the value of mathematics in everyday situations

## Curriculum Intent

At Cheadle Catholic Infant School, it is our intent to provide children with a high-quality, broad and challenging Mathematics curriculum. The exciting learning journey will allow for all children to become **fluent** in the fundamentals of maths, developing their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Children will be able to **reason mathematically** by justifying, making links to known facts, or providing proof using mathematical language. Understanding of concepts will be challenged through **solving problems** by applying their mathematic knowledge. **Links** within other subjects will be highlighted and skills and mathematical knowledge

will be applied. We will equip children with the foundations of mathematics that are essential to everyday life.

## Curriculum Implementation

At Cheadle Catholic Infant School, we belong to a Maths Hub which is the NCETM "Mastery Readiness Programme". This year we are at the sustaining phase. It provides support in training the whole school to develop the "Mastery Approach" of teaching Mathematics.

In the **Foundation Stage**, our young mathematicians will be provided with many exciting opportunities, through planned purposeful play and a mix of adult-led and child-initiated activities, to develop and improve their skills in counting, understanding and using **numbers**, calculating simple **addition** and **subtraction problems**; and to describe **shapes, spaces, and measure**.

Throughout **Key Stage 1**, we follow the White Rose Maths Schemes of Learning and supplement this with resources from NCETM Mastery Documents to teach a broad and challenging curriculum. Our Mathematics curriculum will provide many opportunities for children to develop confidence and fluency with whole numbers, counting and place value. The use of practical equipment, such as concrete objects and measuring tools, will support the children to gain a deeper conceptual understanding before being challenged through tasks and questions to explain their reasoning and solve a range of problems. The children are equipped with the skills to recognise shapes and their properties and measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

In addition to daily Mathematics lessons, children take part in a "Mastering Number" session following the planning provided by the NCETM. Fluency and accuracy of key mathematics number skills are developed during these sessions and provide an opportunity to revisit and review misconceptions and deepen previously taught content. Stem sentences form an important part of the mastery lessons and support children in making links throughout the lesson. Children are encouraged to speak about their learning throughout the lessons and use stem sentences as a scaffold for their learning. Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts. The mastery approach incorporates using objects, pictures, words and numbers to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding at all levels.

## Curriculum Impact

A variety of methods are used to find out what the children know and understand. Lesson activities are **scaffolded** to suit the different **abilities** and **learning styles**. Mathematics lessons allow for collaborative learning and thus encourage children to talk in pairs, small groups or through class discussions, to share learning. For those children who grasp concepts rapidly, they will be challenged through a range of problems, whilst those not sufficiently fluent will be provided with opportunities to consolidate their understanding through additional practice and teacher support. Children's understanding of taught concepts will be assessed using end of block assessment tasks which provide opportunities for children to demonstrate their understanding fully. Evidence of the children's learning journey through each Mathematics topic will be recorded in Maths books, Prove it books, working walls and class floor books.

As each unit of work is covered, we consider the related intended learning, recognise children who are working at or beyond the expected level for Key Stage 1, as well as identifying the children who need and who will therefore receive support and extra practice. Children in the Foundation Stage will be assessed against the **Early Years Learning Goal**. Children in Year 2 will be assessed against the **End of Year 2 Teacher Assessment Framework**.

Mathematics monitoring includes work scrutinises, lesson observations and /or learning walks, pupil voice interviews/questionnaires in order to ascertain correct curriculum coverage, the quality of teaching and learning as well as the children's attitudes to and retention of maths learning. This information is then used to inform further curriculum developments and provision is adapted accordingly.

## Impact of Mastering Number Programme

- Children demonstrate a quick recall of facts and procedures.
- Children are excellent at subtilizing.
- Children show confidence in believing that they will achieve.
- A high number of children achieve objectives (expected standard) for year group.
- The children show flexibility and fluidity when moving between different contexts and representations of maths.
- It offers the chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

- The children can use the 'rekenrek' as another visual model to support their learning.
- Children show a high level of pride in the presentation and understanding of the work.

## Progress and Assessment

A variety of methods are used to find out what the children know and understand. Lesson activities are **scaffolded** to suit the different **abilities** and **learning styles**. Mathematics lessons allow for collaborative learning and thus encourage children to talk in pairs, small groups or through class discussion, to share learning. For those children who grasp concepts rapidly, they will be challenged through a range of ' **prove it problems**' , whilst those not sufficiently fluent will be provided with opportunities to consolidate their understanding through additional practice and adult support. Summative assessments are completed three times a year and reported to parents in October, March and at the end of a year in the form of a report. Children's understanding of taught concepts will be assessed using end of block assessment tasks which provide opportunities for children to demonstrate their understanding fully. These are taken from the White Rose Maths Scheme of Work. Evidence of the children's learning journey through each Mathematics topic will be recorded in Maths books, working walls, prove it books and class floor books. Children in the Foundation Stage will be assessed against the **Early Years Learning Goal**.

Mathematics monitoring includes work scrutinises, lesson observations and/or learning walks, pupil voice interviews/questionnaires in order to ascertain correct curriculum coverage, the quality of teaching and learning as well as the children's attitudes to and retention of maths learning. This information is then used to inform further curriculum developments and provision is adapted accordingly.

Signed: Elizabeth Allwright

Date: July 2023