

# Maths at Hawley

## Intent

Maths in our school aims to inspire children to love maths and gain enjoyment through a growing self-confidence in their ability. We want our children to be fluent in the fundamentals of mathematics so that they can confidently, and independently, apply their learning to problem solve and reason; equipping them to be successful with 'everyday' maths and in future careers such as engineering, architecture and business. This requires resilience and daily practice in order for children to have a conceptual understanding of maths topics and to feel confident when communicating their knowledge and approaching more challenging activities. We encourage children to be reflective; identifying their strengths and the areas they wish to develop, as well as recognising what skills they have which enable them to be successful.

We want all our pupils to have a positive attitude towards maths and to understand that maths is exciting, useful, **creative** and challenging. Furthermore, we want children to gain specific mathematical knowledge and a secure understanding of different strategies and concepts. As children move through the school, we carefully ensure that their mathematical skills progress in line with National Curriculum requirements.

Through our maths lessons, pupils will also develop the cognitive skills that they need in order to extend their learning. We focus on the Hawley Habits of curiosity, imagination, self-discipline, resilience and collaboration.

## Implementation

Maths is taught across the school everyday in every classroom. Lessons are designed to be interactive, with an emphasis on pupil dialogue. After discussing their ideas with others, children are then ready for new knowledge and understanding which teachers can then assess and use to inform next steps with relation to them making further progress. Teachers use the Power Maths programme and White Rose to support them with planning lessons which are progressive and accurately pitched. The Power Maths programme was created within the Primary Advantage Federation and directly links to the National Curriculum objectives for each year group.

Maths lessons begin with counting and chanting of relevant times tables in order to build fluency and rapid recall. They then focus on an arithmetic objective and practise mental and written methods to solve calculations accurately, before moving on to the main intention of the lesson. For each concept taught, the concrete-pictorial-abstract approach to learning is used. This enables the children to use manipulatives to represent calculations and problems so they can visualize what they are being asked, and to begin to make links between mathematical concepts and prior learning. Once the children demonstrate they are secure and efficient, they then begin to make pictorial representations before moving onto more abstract, formal strategies. Children can accelerate through this progression at different rates; therefore resources are accessible at all times for all learners. Application tasks are also provided for all learners throughout the week. These require children to problem solve

and reason in a variety of ways and are an opportunity for children to build upon their 'being a mathematician' skills, such as working systematically, spotting patterns and following lines of enquiry so generalisations can be made. Maths lessons end with a plenary which is used to challenge and extend the children through further application. This could be, for example, to apply learning in a different context, spotting an error and being able to explain it, or proving whether something is true or false and justifying why. This enables the children to communicate their understanding and build upon their mathematical vocabulary.

Self and peer assessment is used throughout the week as an opportunity for children to reflect on what they have learned, what has helped them to make progress and to explain any patterns or conjectures they have noticed.

### **Impact**

We carefully monitor how well children are learning, observing whether knowledge is embedded and used. Children are formally assessed three times throughout the year and each half term the teachers assess children against the maths topics that they have covered. Analyses are then completed in order for teachers to identify what the children are most confident with and areas which will need further consolidation. The assessment data collected is then discussed with the senior leadership team and a raising attainment plan is created to reflect the priorities and foci for each year group. This includes intervention groups to ensure that gaps are closed. Daily marking by the teacher is used to inform fluid interventions for pre and post teaching.