

## Mathematics

### Intent

Thistly Meadow Primary School is committed to the engaging delivery of Mathematics across the age ranges. We aim to show the children the enjoyment in Mathematics and to foster a curiosity for the subject.

The aim of our Maths curriculum at Thistly Meadow Primary is to develop deep understanding, confidence and competence in Maths. We want to ensure that our pupils are resilient mathematicians who become independent, reflective thinkers whose skills support them across the curriculum. We aim to help all children to become fluent in Mathematics, developing a conceptual understanding of different aspects of Mathematics as well as the ability to recall and apply knowledge quickly and accurately. Pupils should reason mathematically using mathematical vocabulary and be able to solve a range of problems. At Thistly Meadow, we endeavour to build pupils who can make rich connections across a whole range of mathematical ideas and those who grasp these connections, be challenged further in their understanding.

In doing all of these things, we want to improve outcomes for all pupils across school in Maths. By the end of the academic year, we want to increase the percentage of pupils who reach age related expectations in Maths in each year group compared to the end of the previous academic year.

### Implementation

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Year 6. We teach Maths using guidance from the [White Rose](#) Maths documents throughout school (Reception to Year 6) as well as the National Curriculum. Our long term plans are created using support from the yearly overview mapped out by White Rose Maths but are personalised to meet the needs of our pupils. Alongside White Rose Maths, the planning and delivery are supplemented with [Third Space Learning](#) and the [National Centre for Excellence in the Teaching of Mathematics](#) (NCETM) materials which have been selected in Maths training. Our Calculation Policy is used across school to ensure a consistent approach to teaching the four operations over time.

Maths lessons start with a teaching input before children progress to completing solo, paired or group activities relating to the objective. During the whole class teaching session, pupils have the opportunity to develop their knowledge and understanding of mathematical concepts through fluency and reasoning questions. Homework is set to supplement the class teaching through a number of different avenues and is focussed around revisiting previous learning through the Frayer Model. Sharing learning with parents and carers has also been a highlight of the new homework models as they have been able to engage more in their children's development.

In EYFS following teacher input the children will then access enhanced provision within the areas linked to the current learning in Maths. Where appropriate, objectives would be covered using the Concrete Pictorial Abstract (CPA) approach as this allows pupils to spend enough time to explore a topic through units divided into small steps. The mud kitchen, water play, construction areas, sand pit and domestic role play are some of the areas that children can explore number, shape, space and measure.

Lessons from Year 1 – Year 6 will include examples of varied fluency before progressing to reasoning and problem solving opportunities to support conceptual understanding for mastery of objectives. Pupils complete “Flashback 4” questions which supports them to be secure in different concepts. Once secure they are taught and encouraged to practice their problem solving and reasoning skills within each lesson as appropriate. Children are encouraged to explain and show their mathematical thinking and opportunities to use the correct language are used at every opportunity. This thinking is supported by stem sentences, concrete manipulatives and pictorial representations.

Further to lessons and homework, in all years, interventions take place to ensure that children who may take longer to grasp a subject or need to go over a skill multiple times before secure, are catered for. This precise teaching, individual, grouped and tutoring style work enables gaps to be minimised whilst still delivering the expected curriculum. Appropriate interventions are put in place for those children struggling to achieve at their year group expected level and there are range of materials for use throughout the school such as Numicon and Maths Tutoring.

Year 5 and 6 have short arithmetic session on a weekly basis. Year 6 use this time for pupils to have a go at a SATs style arithmetic test, they then mark this together so pupils can make improvements. Year 4 have an additional times table session on a weekly basis in preparation for the Multiplication Tables Check. Pupils use [Times Tables Rock Stars](#) to support their learning. Self and peer marking is a particular strength of our UKS2 pupils and this feeds into having a critical eye for their own learning and mathematical problems.

Assessment informs the teaching and learning sequence in each class. Feedback is given on children’s learning in line with our Marking and Feedback Policy. In order to support teacher judgments, pupils are occasional assessed using current and reliable tests in line with the National Curriculum for Maths. At the end of each term, where appropriate gap analysis of any tests that the children complete is undertaken and the information then feeds into future planning. Year 2 and Year 6 pupils complete SATs style papers on occasions throughout the year.

Working walls, Maths incentives, challenges and reward certificates are all in place to provide information, support and supplement the hard work of the teachers in engaging children in Mathematics. These, along with opportunities for cross curricular links in the classroom gives Maths a high status and significant importance across the school day.

### **Impact**

As a result of Maths teaching at Thistly Meadow Primary we hope to raise the percentage of pupils attaining at or above expected standard in each year group (Y1-Y6) in Maths

compared to the end of the 2020-2021 academic year. Thorough data analysis throughout the academic year should show that pupils are making progress within the Maths curriculum across each year group. A greater number of pupils should therefore be assessed as working at or above the expected standard in Maths at the end of each term throughout the academic year.

Our rich and broad Maths curriculum aims to make the children enthusiastic about their learning of mathematics and gain an importance of it for everyday life. Overall, the intended impact is to prepare children for their mathematical future by making it meaningful, enjoyable and a topic of great interest for them.

### **Covid-19**

Covid-19 had a considerable impact on the teaching of Maths during the 2020-2021 academic year. During the school closures, many Maths lessons were taught remotely for pupils who were not key workers. Although in most cases there was a live teaching input, the structure of this was not as interactive as it would have been within the classroom environment. Pupils were accessing, completing and submitting work online but not benefitting from teacher support or physical resources to develop and deepen their understanding as they usually would. In the majority of year groups, the percentage of pupils achieving the expected standard was less than it was at the end of the previous academic year.

As a result of missed learning we reflected on our long term planning and focussed on the Ready to Progress criteria meaning that there would be some objectives not covered within the academic year. This information has been used to support Maths knowledge during the 2021-2022 academic year to ensure full coverage of the Maths curriculum across school.