

Statement of Intent for Maths at Thorplands Primary Maths

Intent

Mathematics is important in everyday life and, with this in mind, the purpose of Mathematics at Thorplands Primary School is to develop an ability to solve problems, to reason, to think logically and to work systematically and accurately. 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 organised into topics (such as place value), but pupils should make 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. Progress of our students is always based on the security of their understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly are to be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material consolidate their understanding, including through additional practice. All children are challenged and encouraged to excel in Mathematics.

When teaching mathematics at Thorplands, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their future adventures. We aim to prepare them for a successful working life. We incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving. Pupils are required to explore mathematics in depth, using mathematical vocabulary to reason and explain their workings. A wide range of mathematical resources are used, and pupils are taught to show their workings in a concrete, pictorial and abstract form wherever suitable. They are encouraged to explain their choice of methods and develop their mathematical reasoning skills even when they have made mistakes so that we can identify where we went wrong and how we can fix it. We develop resilience and acceptance that struggle is often a necessary step in learning. Our curriculum allows children to better make sense of the world around them by relating the pattern between mathematics and everyday life.

Implementation

Thorplands Primary School implements maths in a variety of different ways. We ensure that fluency of mathematic skills is prioritised. Basic skills are taught explicitly and frequently returned to, particularly place value, number facts, times tables and the formal methods through number sense and multiplication and division strategy. Once key skills are taught, children are then challenged at all levels with reasoning questions where they apply these early skills. This also happens, where possible, in other subjects across the curriculum. Children are taught through a mixture of targeted, differentiated small groups and mixed ability whole class lessons. We also ensure children get the opportunity to learn outside the classroom.

We implement our approach through high quality teaching delivering appropriately challenging work for all individuals. To support us we have a range of mathematical resources available such as Numicon, Base10 and counters. We also use a range of planning resources including those provided by the White Rose Hubs, NCETM, NRICH and Gareth Metcalfe's 'I see reasoning'. We continuously strive to better ourselves and frequently share ideas and

things that have been particularly effective. Through our teaching we continuously monitor pupils' progress against expected attainment for their age through daily AFL, retrieval opportunities, end of unit tests, making formative assessment notes where appropriate and using these to inform our discussions in termly Pupil Progress Meetings and form our NTS Tests every long term. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child. Interventions are used when possible to catch up, extend and consolidate children's knowledge of upcoming or previous lessons.

We use number sense to develop fluency in Early Years, Key Stage 1 and in Key stage 2. It supports children with strategies which develop confidence and flexibility with number and fluency in addition and subtraction facts.

Homework is set regularly in KS2 to support or extend mathematical learning. This is done through a variety of different online spaces such as MyMaths and Times Table Rockstars.

Impact

The impact of our mathematics curriculum is that our children, across all abilities, are challenged and engaged in maths across the curriculum. Children at Thorplands Primary School enjoy their maths lessons, understand its uses in the wider world and therefore, understand the importance of the subject.

Our teachers are encouraged to use their professional judgement at all times, meaning that children are given sufficient time to learn and practise each area of maths, mastering concepts, before they commence learning about a different area of maths. This means that children are able to develop a deeper understanding of each area of maths.

Children are encouraged to talk mathematically and reason constantly. Our maths books show a range of activities, providing evidence of fluency, reasoning and problem solving. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a greater proportion of children are on track to make at least the expected progress. Assessments, such as NTS, White Rose and previous SATs papers, along with teacher assessment are used to measure the impact of teaching on children's progression.