



Birches First School

Believe, Grow, Succeed



Maths Intent Statement

At Birches First school we provide a high quality education in mathematics through quality teaching and learning in a 'maths rich' environment which allows every child to explore their potential and achieve their very best. We intend to create confident problem solvers of the future who can collaborate within a team, as well as independently, and at length, on increasingly difficult tasks. We support every child to be curious about the subject and develop a positive attitude towards mathematics from their earliest days at school, acknowledging the mathematical journey built over time on solid foundations. We encourage children to become independent learners with inquisitive minds who make sense of their world around them by developing their ability to calculate, reason and solve problems.

We aim to:

- Help children understand the importance of mathematics in everyday life and equip them with the skills needed for their future role in society.
- Make mathematics fun and challenging with a wide range of activities and investigations to capture the children's interest through a high quality maths curriculum.
- Ensure a breadth and depth of coverage and skills which allow children to take risks, problem solve and reason in a range of contexts.
- Provide our children with a variety of mathematical opportunities to enable them to make connections in learning and think logically and clearly, developing their problem solving capabilities and to communicate their thinking and reasoning with others.
- Develop confidence and competence with numbers and the number system through rapid recall.

Maths Implementation:

Mathematics at Birches First School is taught following the National Curriculum alongside our own Long Term Plan which has been adapted from the White Rose Scheme of Learning. This adaptation ensures that mathematics is relevant and applicable to the needs of our children. Through the mastery approach, it allows children time to explore concepts and become fluent in a number of ways rather than just recite number facts. Our long term plan is adapted throughout the year and lessons are structured to meet the needs of the children.

Our children's learning starts in Early Years where a maths focus is taught each day through adult-led tasks and continuous provision. This is then built upon in KS1 and KS2 where maths is taught daily for one hour sessions. Children are frequently given a mental maths focus to secure children's understanding, recall and application including understanding of key vocabulary.

When introduced to a new concept, all children have the opportunity to build competency in the topic through fluency tasks and they are given time to practise and embed new learning. To ensure children become secure with concepts and are able to apply to a range of contexts, we ensure that our children experience mixed representations. Likewise, learning is presented in a range of ways (i.e.. missing numbers, balance problems, equal signs at the beginning of a number sentence as well as the end). Through the CPA (Concrete, pictorial, abstract) approach, children are given the opportunity to understand a concept in depth. The initial use of concrete manipulatives are key to developing a good conceptual understanding. We believe that children need lots of opportunities to explore a variety of manipulatives and talk about mathematics before progressing to pictorial and abstract methods. This is supported by our school Calculations Policy which has been written to reflect CPA approaches and progression of skills. Each lesson enables children to think for themselves and support each other with their mathematical development. Children are given the opportunity to work in small groups, pairs and independently to allow learning discussions to take place and sharing and modelling of knowledge, understanding and skills. To avoid children becoming limited by perceived abilities, tasks are designed to allow all children to access the learning and challenge themselves within a lesson. This is achieved in a number of ways. For example, teachers may provide tasks with increasing levels of challenge so children have the opportunity to select their own task based on assessment their own level of confidence with guidance where appropriate. Similarly, teachers may plan a sequence of tasks providing children the opportunity to demonstrate their fluency before moving on to reasoning and problem solving tasks or open-ended investigations.

Following this, Reasoning and problem solving skills are planned for all children throughout the week to support the children to develop a deeper understanding. This encourages our children to always be ready to ask themselves - what if? At Birches we recognise that in order for children to realise the importance and usefulness of maths in everyday life, maths skills should be utilised whenever appropriate in other areas of the curriculum i.e. Science, History, PE etc. Our children are encouraged to make connections in the classroom, in the outdoor environment and at home.

Assessment:

Teachers use a wide range of assessment to ensure that learning addresses any misconceptions and is relevant to the children. Teachers give quality verbal feedback during the lessons to address any misconceptions, support their learning and move their learning on. Quality marking also forms a vital part of the learning progress. This is then used to inform planning and next steps, including any interventions as needed. Before a learning sequence, a 'cold task' is given to the children to inform planning and our medium term plan is adapted in light of this. Termly, a PUMA assessment is carried out to demonstrate progress and provide an age-related indication of attainment.

British Values:

Through mathematical teaching, children are encouraged to develop resilience, tolerance and perseverance which we believe are key values required to enable success in the wider society. We encourage a balance of independence in learning blended with opportunities for children to work collaboratively in a range of groupings. This requires them to take account of, and show respect for, other people's opinions and points of view whilst promoting the skills of turn taking, teamwork and working towards a shared goal. Understanding of democratic

approaches are embedded within the subject. For example, when teaching statistics children are given opportunities to conduct surveys and class votes.

SMSC:

Links are made to the wider context of mathematics within society. Wherever possible, children are given opportunities to apply their mathematical skills and understanding to real life contexts such as telling the time, reading measurements, using money and interpreting tables of information. We provide children with a variety of question types including challenges where they may be more than one possible solution. Every individual learner is encouraged to be confident to share their mathematical ideas within a safe, secure context. This helps to nurture their self-esteem. We encourage children to realise how our mathematical changes have occurred over time and the impact this has had. For example, roman numerals, units of measure and money.

Impact:

- The percentage of children achieving the expected standard at the end of EYFS and KS1 is above national.
- The percentage of children achieving the expected standard for the Year 4 Multiplication Check is above national.
- 80% of children in all cohorts are achieving age related expectations in mathematics.
- Children demonstrate positive attitudes towards mathematics and understand the role it plays within wider life.