



The Oaks Primary School
Bringing Learning to Life

Mathematics Curriculum & Policy

Intent

We live in a world dependent on numbers. All children need to develop a functional understanding of numbers, the operations and the relationship between them. Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and in public decision making.

Our aim at The Oaks is to create confident mathematicians who are able to express themselves and their ideas using mathematical vocabulary; children who are fluent with number and who can reason mathematically and apply their mathematical knowledge to solve problems.

Implementation

Maths is taught across school using the National Curriculum objectives for Mathematics (2014). A mastery approach is applied in the teaching of mathematics, ensuring that all children are given the same opportunities to acquire a deep, long-term adaptable understanding of the skills and concepts. Number is at the heart of Mathematics teaching at The Oaks, ensuring a large proportion of time is spent reinforcing number to build competency, whilst also providing plenty of opportunities to build reasoning and problem solving.

When introducing new concepts throughout school, a concrete – pictorial – abstract approach should always be followed. This involves introducing an area of maths using practical apparatus and hands on activities, moving onto visual representations and then onto a formal written method.

In Key Stage 2, Learning by Questions is used where the children access reasoning and problem solving mathematical questions through the use of tablet technology. The Learning by Questions concept allows the children to receive immediate feedback and guidance on the concepts that they are learning and staff can intervene at the point of learning. Learning by questions also follows the Pictorial – abstract approach.

Staff use a range of strategies from the ‘Teachers Toolkit’ to engage the children in their learning. A minimum of 5 lessons are planned for each week. Each lesson begins with ‘Fluency’ whereby previous objectives are revisited for the first 5 – 10 minutes of the lesson; these objectives are usually linked directly to the skill being taught in the main body of the lesson. Teachers primarily focus on arithmetic skills in Autumn term so that they can then apply this knowledge to other areas of the maths curriculum throughout the year. Mental maths strategies are taught and recapped at the beginning of each maths lesson and at appropriate times throughout the day. The Mental Math strategy calculation policy is used to ensure all strategies are taught.

Pupils engage in:

- The National Curriculum (2014)
- The development of mental strategies
- Fluency



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- Calculations (See policy)
- Practical work
- Investigational work; raising questions, predicting and making inferences
- Problem solving & Reasoning
- Learning by Questions
- Mathematical discussion using appropriate vocabulary
- Consolidation of basic skills and routines
- Application into cross curricular objectives

Assessment: As an ongoing assessment, staff use the National Curriculum objectives to assess children. All children from Years 1-6 are assessed formally after each unit of learning is taught. Children are also formally assessed three times a year using the NFER Maths Tests for Arithmetic and Reasoning. This helps to inform teacher's judgements as to which level a child is working at. Children in Years 2 and 6 are assessed at the end of the year through the national SAT's. Children in Years 2 – 5 are tested on their times tables each week. From June 2021, all children in Year 4 will be assessed on their times tables knowledge through the statutory national times tables test.

Impact

Children at The Oaks are fluent in the fundamentals of mathematics, have a conceptual understanding of mathematical facts, that can be rapidly recalled and transferred accurately. Children at The Oaks can reason mathematically and are able to solve problems by applying their mathematics to a variety of contexts and they persevere in seeking solutions.

S. Gill September 2021