



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 to the teaching of mathematics ensuring that all children are given the same opportunities to reach their full mathematical potential.

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.

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. 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. In Spring and Summer term each class has an arithmetic lesson every Monday to ensure that the skills learnt previously are truly embedded. If arithmetic is being taught as a unit within a week, then a separate arithmetic lesson does not need teaching on a Monday.

Pupils engage in:

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



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- 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 each half term, using arithmetic tests. Children are also formally assessed twice 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 and the ability to recall and apply knowledge rapidly and 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.

F. Trainor & S. Gill July 2020

Covid-19 Addendum – September 2020

Overview of teaching in response to the Covid-19 pandemic

In order for children to move swiftly between face-face and remote learning, staff should follow the White Rose Maths planning sequence as a **guide**. This is so that if a child is accessing learning remotely, they can be directed towards and access the White Rose teaching videos to support them at home. Teachers should use their professional judgement as to when children need moving on in their learning.

White Rose Maths can be used for teaching inputs, resources and to direct children towards when remotely learning. **In addition to this**, in class, teachers must still make use of other resources including NCETM, LBQ, Number Fun Portal, Sense of Number (Anthony



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Reddy/Dave Godfrey resources) and any other resources that may be relevant to that topic of learning. Use of printed worksheets should be minimal.

A concrete – pictorial – abstract approach should still be followed where possible, when introducing **new concepts and where necessary to support understanding**.

Due to school closures as a result of the Covid-19 pandemic, in Autumn term, children will receive one additional Maths session on a weekly basis. They will recap on basic mathematical skills which have previously been taught, as well as areas of Shape, Space and Measures from the Mathematics Curriculum, that have not been taught due to the school closure. Gaps in progress will be narrowed through quality first teaching and by following the waves of intervention strategies in school as necessary for each individual child. Staff should highlight coverage of these additional objectives on the 'gaps in learning' overview document.

Updated 6th November 2020

Appendix

School subscriptions and Resources

Test Base

Learning By Questions

Numbots

Times Tables Rockstars

Primary Games Maths Packs

NCETM

Number Fun Portal

White Rose Maths Hub

Sense of Number

Abacus / Target Maths textbooks

Timestables me