

Delph Primary School



Mathematics Policy

'Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.'

(National Curriculum 2014)

Aims

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

(National Curriculum 2014)

Objectives

Our objectives are for the children to:

- have a positive and enthusiastic attitude towards mathematics
- make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems and ultimate mastery
- have an understanding of the number system, a repertoire of computational skills and a desire and ability to solve number problems in a variety of contexts such as science and other subjects
- have a practical understanding of ways in which information is gathered by counting and measuring and is presented in graphs, diagrams, charts and tables
- develop a rich and accurate mathematical vocabulary which can be used to express themselves and their ideas with assurance

Activities

The National Curriculum describes what must be taught within each year group, which provides detailed guidance for the implementation of the orders and ensures continuity and progression in the teaching of mathematics. The EYFS follows the Early Learning Goals.

The format of lessons usually includes a mental/oral starter, a main teaching activity and a plenary session. Mathematics is taught mainly as a separate subject. However, every effort is made to link it with other areas of the curriculum, where pupils are given the opportunity to apply mathematical skills and knowledge so that they can see it is not an isolated subject. We try to set work that is challenging, motivating and encourages pupils to talk about what they have been doing. The teaching of mathematics at our school provides opportunities for whole class teaching, group work, paired work and individual work.

Pupils engage in:

- the development of mental strategies
- practical work
- investigational work
- problem solving activities
- mathematical discussion
- consolidation of skills and routines

At our school we have high expectations of our pupils, regardless of race, gender or ability. We aim to set goals which are challenging but realistic.

Role of the Mathematics Leader

Working collaboratively alongside the headteacher, governors and whole staff:

- to help monitor and evaluate pupil learning and the implementation of the policy and National Curriculum objectives, giving feedback and discussing next steps as appropriate

- to keep up-to-date with current views in terms of mathematics practice via training, disseminating this to colleagues via INSET/discussion
- to demonstrate good practice within own class teaching
- to be responsible for the purchase and organisation of resources within budgetary constraints

Role of Governors

To support and participate in the development and review of this policy, monitoring its effectiveness across school.

Assessment

Assessment is an integral part of the teaching and learning process. It is the responsibility of the class teacher to assess pupils within the class. We aim to make assessment purposeful, allowing us to match teaching activities to the needs of the pupils to ensure progress. Information for assessment will be gathered in various forms:

- by talking to pupils
- by observation and marking work
- by short tests at the end of a unit of work/half term
- by informal checks e.g. rapid recall of number facts and providing opportunities for application
- by use of baseline assessment
- by SATs at the end of Key Stage 1 and 2

We teach children to assess their own progress as mathematicians, as well as their understanding of individual concepts and encourage them to consider their next steps. Every child in school tracks and records their personal progress against the year group objectives using their Pocket Progress Books.

All teachers track progress with the online assessment tool, O Track, to monitor individual and class progress.

Monitoring and evaluation

The maths leader, in consultation with the headteacher, governors and staff, will monitor the effectiveness of this policy via monitoring of planning, and teaching and learning (through lesson observations). Pupils' work may be scrutinised and pupils will be encouraged to get involved in discussion about their work.

Review

Approved by: **Governors Curriculum & Standards Committee**
Date: **January 2016**
Review Date: **Spring Term 2019**