

**MATHEMATICS POLICY DOCUMENT**

*This policy is overarched and subject to the agreed contents and conditions of the Safeguarding Children and E-Safety Policies*

**THE NATURE OF MATHEMATICS**

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 purpose of mathematics in our school is to develop:

- A positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world.
- Competence and confidence in mathematical knowledge, concepts and skills
- An ability to solve problems, to reason, to think logically and to work systematically and accurately.
- Initiative and an ability to work both independently and in cooperation with others
- An ability to communicate mathematics
- An ability to use and apply mathematics across the curriculum and in real life
- An understanding of mathematics through a process of enquiry and experiment

**Breadth of Study**

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- Practical activities and mathematical games
- Problem solving
- Individual, group and whole class discussions and activities
- Open and closed tasks - a range of methods of calculating e.g. mental, pencil and paper
- Working with technology as a mathematical tool

Through our creative curriculum approach we also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas.

## Planning

### Long term planning

The long term planning is broken down into 7 distinct domains which identify the programmes of study for each area:

1. Number: Number and place value
2. Number: Addition and subtraction
3. Number: Multiplication and division
4. Number: Fractions
5. Measurement
6. Geometry
7. Statistics (from Year 2 onwards)

The long term planning provides a suggested order in which to scaffold the learning in each year group. Each of these 7 distinct areas of mathematics will be studied on a weekly basis; approximately one per week of a half term (planning for half terms with more or less than 7 weeks will be adjusted appropriately).

### Medium term planning

A medium term plan is devised each half term which outlines the learning objectives taught during each weekly unit of maths (as identified in the long term plan). It is developed using a Focus Education planning document called 'Focus on Mathematics.' This document takes each year group's programmes of study and breaks them down into objectives, also providing a framework so that each learning objective has its own teaching sequence in order to differentiate the learning.

Learning objectives that are not met in a previous half term are repeated and, where pupils are secure, additional objectives are added. Over the academic year, it is expected that all objectives for that year group are taught.

### Short term planning

The short term planning takes the form of weekly plans identifying objectives to be taught, mental starters, teacher modelling, key questions, key vocabulary and differentiated activities.

Short term planning must ensure that:

- Pupils become **fluent** in the fundamentals of mathematics
- Pupils have opportunities to **reason** mathematically by following a line of enquiry
- Pupils **solve problems** by applying mathematics to a variety of routine and non-routine problems with increasing sophistication

All planning will reflect the school's equal opportunities policy and take account of children with SEND, including gifted and talented.

Teachers of the EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom.

## **Recording and Assessment**

### **Short term assessments**

Teachers make regular assessments of each child's progress and record these systematically. A record of each child's attainment against the key objectives for the appropriate year group is recorded on a tracker.

Children's class work is assessed frequently through:

- regular marking
- analysing errors
- questioning
- discussion
- plenaries

This is used to inform future planning and teaching. Lessons are adapted readily and short term planning is evaluated and annotated in light of these assessments.

### **Medium term assessments**

Termly assessments are to be carried out across the school using the PUMA assessment materials for each year group. These materials are to be used alongside judgements from class work to form a teacher assessment for each child.

### **Long term assessments**

Each child's attainment against the key objectives for the appropriate year group is recorded. This data is collected by the principal and recorded on the school tracking system.

## **Monitoring and Evaluation**

The mathematics subject leader monitors and evaluates the teaching of mathematics. The monitoring and evaluation of maths will be undertaken in line with the Action Plan and Academy Development Plan, linking it to quality of teaching, learning and achievement.

Updated: 17.07.18

Signed: \_\_\_\_\_

Date: \_\_\_\_\_