



# Mathematics Policy

# St Anne's Fulshaw CE Primary School

## Mathematics Policy

### Introduction:

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will endure.

The National Curriculum order for mathematics describes what must be taught in each Key Stage. This ensures continuity and progression in the teaching of mathematics. In early years the curriculum is guided by the Early Learning Goals.

This policy follows a whole school format and rationale.

### Rationale:

At St. Anne's Fulshaw School we believe that mathematics is an essential element of communication, individually, nationally and internationally.

Mathematics can be used to present information in so many different ways, figures, letters, tables, charts, diagrams, graphs drawings and symbols. It provides a means of communicating information concisely and unambiguously. It is a powerful tool as it is fundamental to the study of other subjects, science, engineering, medicine, economics and management studies; fields in which children may become involved in their adult life.

Mathematics contributes to the development of powers of logical thinking, accuracy and spatial awareness, at the same time giving children the opportunity to understand the creative achievements of the human mind, through the observation of pattern, shape, line and texture. It enables the child more easily to understand the behaviour of the natural world, through shape, space, symmetry and time.

We believe that for many children mathematics has an inherent interest and appeal and it is our duty and pleasure to develop such latent talent.

Children should be encouraged to appreciate the relevance of the power of mathematics and be aware of its occurrence in the environment and be persuaded to seek it out.

### Aims:

In the seven years children study mathematics at St. Anne's Fulshaw it is our aim that they will learn:-

- to become numerate (proficient and confident with numbers and measures)
- to develop a mental approach to calculations
- to attain high standards through effective teaching
- to have a positive and enjoyable attitude to mathematics
- to think and reason logically with confidence
- to use mathematics as a tool to solve problems
- to have a sense of the size of a number
- to know by heart number facts such as number bonds, multiplication tables, doubles and halves
- to use mathematical language appropriately and with confidence
- to calculate accurately and efficiently, both mentally and in writing on paper, drawing on a range of calculation strategies
- to recognise when it is appropriate to use a calculator and be able to do so effectively

- to make sense of number problems, including complex problems and recognise the operations needed to solve them
- to explain their methods and reasoning using correct mathematical terms
- to judge if their answers are reasonable and have strategies for checking them where necessary
- to suggest suitable units for measuring and make sensible estimates of measurement
- to explain and make predictions from the numbers in graphs, diagrams, charts and tables
- to develop spatial awareness and an understanding of the properties of 2d and 3d shapes

### **Purpose:**

It is our intention that each child should proceed from their individual starting points in Reception to the ELG (exceeding where possible) through to a minimum of Level 2 in Year 2, to a minimum of Level 4 in Year 6, and provision will be made for children to continue through Level 5 and possibly to Level 6 where appropriate.

### **Provision:**

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education.

The teaching of mathematics at St. Anne's Fulshaw provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of number skills and basic facts

### **Approach:**

Individuals learn in different ways, therefore provision is made for a flexible and varied delivery of the mathematics curriculum. In particular, at the early years, the emphasis is on learning through play and child initiated activities. Each child will experience a teacher led introduction to lessons followed by group work and a plenary session. Where children are organised into ability groups, these are flexible and movement between groups occurs when necessary.

The organisation of the teaching of maths topics in the school varies with the needs of the children but in general a strand of number progresses continually. Topics from other areas of the maths curriculum are introduced and developed alongside.

For all the mathematical topics children will be encouraged with:-

- ♦ clear, progressive development of maths knowledge, skills and understanding
- ♦ concrete experiences to acquire sound maths concepts
- ♦ a mental approach to calculations
- ♦ investigations and making their own discoveries
- ♦ talking about their own thinking and explanation of what they have done
- ♦ a rich and wide variety of experiences
- ♦ personal methods of working
- ♦ conventions of maths when children are confident in their own knowledge, concepts and skills

- ♦ calculators and computers to ensure they can function effectively
- ♦ opportunities to apply what they have learnt and to relate their maths work to other areas of the curriculum and to their lives in general
- ♦ seeing relevance and enjoyment in what they are doing.

### **Continuity and progression:**

Planning for continuity and progression is achieved throughout the school by:-

- ♦ liaison between class teachers
- ♦ whole staff planning
- ♦ whole staff agreement of maths policy
- ♦ regular staff meetings where maths issues can be discussed
- ♦ agreed marking policy throughout the school
- ♦ availability of maths subject leader to assist in any maths problem areas
- ♦ liaison meetings with other schools when appropriate
- ♦ reports and records sent to next school of leaving pupils
- ♦ reports and records received from previous school of new pupils.

### **Monitoring:**

- ♦ Children's knowledge and understanding is continually monitored by examining their written work and through discussing and questioning orally.
- ♦ The subject leader makes visits to the classrooms to observe and offer advice on how the mathematics curriculum is being delivered.

### **Differentiation & Special Educational Needs:**

All children have needs that are individual, special and ever changing. All our classes are composed of children who have a range of ability. In our planning it is important that we include structured activities to ensure success for all children. The objectives of a lesson reflect the needs of the learners, and differentiation is introduced by either task or outcome.

### **Equal opportunities:**

At St. Anne's Fulshaw we provide equal opportunities for all children, regardless of ability, race or gender to succeed in mathematics. We aim to give all children a fair opportunity to achieve their full mathematical potential. All children have the same access to resources and the same appropriate experiences.

### **Assessment:**

Assessment is at the heart of the process of promoting children's learning. The informal assessment of a child's or group's work is necessary in deciding what the next learning experience should be. This can be ascertained by:-

- ♦ observation of the child's work
- ♦ discussion with the children
- ♦ children's written and practical work.

In the early years this will be by observations of child's understanding through class activities.

This can be used in a variety of ways for:-

- ♦ deciding if planned work is appropriate to the child's current needs before beginning
- ♦ for monitoring progress whilst the child is engaged in the work
- ♦ assessing when the child is ready to move on.

Informal assessments are recorded for the class teacher's own benefit or to be used in ensuring continuity and progression of children's learning in future classes.

Formal assessment is undertaken by termly assessments made against age related expectations.

### **Role of the subject leader:**

The mathematics subject leader is responsible for coordinating mathematics through the school. This entails:

- ensuring continuity and progression from year to year group
- advising on in-service training to staff where appropriate. This will be in line with the needs identified in the School Strategic Development Plan and within the confines of the school budget.
- advising and supporting colleagues in the implementation and assessment of mathematics throughout the school
- assisting with the requisition and maintenance of resources required for the teaching of mathematics.

### **Role of class teacher**

- to ensure progression in the acquisition of mathematical skills with due regard to the Early Years Foundation Stage curriculum and the National Curriculum for mathematics
- to develop and update skills, knowledge and understanding of mathematics
- to identify INSET needs in mathematics and take advantage of training opportunities
- to keep appropriate on-going records
- to plan effectively for mathematics, (with year group partners), liaising with subject leader when necessary.
- To inform parents of pupils' progress, achievements and attainment

### **Parental involvement**

At St. Anne's Fulshaw we encourage parents to be involved by:

- inviting them into school on a termly basis to discuss the progress of their child
- inviting them to curriculum evenings or circulating information via newsletters when significant changes have been/are made to the mathematics curriculum
- inviting parents of Year 6 children to a meeting to discuss supporting their children with SATs
- encouraging parents to help in classrooms
- holding workshops for parents focusing on areas of mathematics

### **Governing body**

At St. Anne's Fulshaw, we have an identified link governor for numeracy.

The numeracy governor visits the school regularly to talk with the subject leader and when possible undertakes appropriate monitoring activities.

The numeracy governor reports back to the FGB regularly.

### **Resources**

St. Anne's Fulshaw School is well resourced to provide mathematics for KS1 and KS2 for all children. Maths textbooks and workbooks as a supplementary resources from Abacus Maths. The school subscribes to Hamilton Trust to provide rigorous planning for mathematics and has just bought a large number of supporting resources. Each class has some maths resources within their own room. St Anne's Fulshaw is an open plan school and the maths resources are stored centrally but easily available to all KS1 children.

Each class has access to appropriate computer maths programmes.

### **Review**

This Mathematics policy is a working document.

**Revised November 2006.**

**Reviewed May 2009.**

**Reviewed 24.04.12**  
**Revised January 2015**