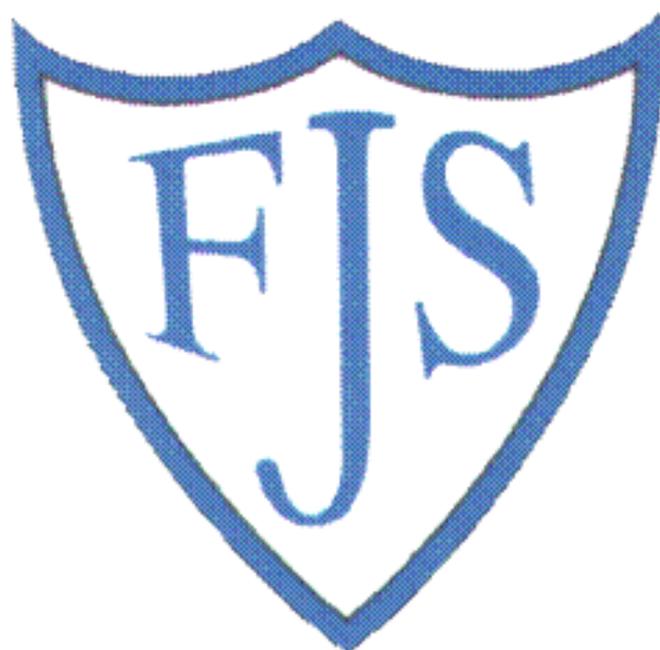


# **FOREFIELD JUNIOR SCHOOL**



## **Mathematics Policy**

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### **POLICY FOR MATHEMATICS**

**Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many people to the development and application of mathematics.**

#### **Our aims are:**

- **to provide the opportunity for children to develop the practical skills and understanding as outlined in the National Curriculum for Mathematics**
- **to develop the children's mental arithmetic skills and mental methods**
- **to help children observe the patterns and relationships of mathematics**
- **to encourage the use of mathematical language in order to discuss, explain and express ideas and to interpret results**
- **to develop the creativity and flexibility of mind to investigate and problem solve**
- **to encourage children to work both independently and collaboratively and be able to select appropriate strategies, materials and equipment for tasks set**
- **to help children develop their use of ICT within the context of mathematics**
- **to help children to experience success and enjoyment from mathematical study in order to develop a confident and positive approach to the subject.**
- **to achieve their full potential.**

### **Teaching styles and mathematical experiences:**

**The school uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole class and group-direct teaching. In years three and four children are taught in differentiated groups, in years 5 and 6, children are taught in sets, an extra teacher is available to teach a 4<sup>th</sup> group. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Children and teachers use ICT in mathematics lessons where it will enhance learning, and to assist with modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.**

**In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. Throughout lessons a range of strategies are used to ensure appropriate levelled learning. In some lessons children undertake independent work, in some lessons group work is undertaken, and in other lessons, children are organised to work in pairs. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.**

**Children are set a weekly homework task in order to strengthen their learning in mathematics. This task directly links with the current unit of learning and is differentiated for each maths group.**

### **Planning:**

**Mathematics is a core subject in the National Curriculum and we use the Programme of Study for Mathematics as the basis for implementing mathematics teaching across the school.**

**We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The Programme of Study for Mathematics gives a detailed outline of what we teach in the long term, while our yearly teaching programme identifies the key objectives in mathematics that we teach in each year.**

**Our medium-term mathematics plans give details of the main teaching objectives for each unit of work and define what is taught in each term. They ensure an appropriate balance and distribution of work. These plans are kept by both the class teachers and the subject leader.**

**It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and subject leader can discuss these on an informal basis.**

### **Contribution of mathematics to teaching in other curriculum areas**

#### **English**

**Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved. The children explain and present their work to others during plenary sessions.**

**Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.**

#### **Science**

**During science lessons, children are able to use and apply their data handling skills when creating tables and graphs of scientific measurements. Whole class discussion of data also highlights the importance of clear recording of information. Children are also able to use a wide range of measuring devices in a real-life context. Children are required to read the scales on Newton meters, measuring cylinders, weighing scales and a variety of other instruments.**

#### **Computing**

**Children use and apply mathematics in a variety of ways when solving computing problems. Younger children use computing skills to communicate results with appropriate mathematical symbols. Older children use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. When working on control, children use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships. Identified children use the structured RM Maths program.**

### **Personal, social and health education (PSHE) and citizenship**

**Mathematics contributes to the teaching of personal, social and health education and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views. We present older children with real-life situations in their work on the spending of money.**

### **Spiritual, moral, social and cultural development**

**The teaching of mathematics supports the social development of our children through the way we expect them to work with each other in lessons. We group children so that they work together, and we give them the chance to discuss their ideas and results. The study of famous mathematicians around the world contributes to the cultural development of our children.**

### **Special Needs; Gifted & Talented**

**Special needs in all areas of mathematics are recognised and children are provided with the relevant support, appropriate tasks and experiences, whether it be extension work or consolidation.**

**Work is differentiated throughout the curriculum, stretching the gifted & talented and offering support for children with special educational needs. In Years 5 & 6 sets are used to support and extend where necessary.**

### **Equal Opportunity:**

**All children have equal opportunity to develop their full potential in every area of the mathematics curriculum and their contribution is to be respected and valued.**

### **Assessment, Recording and Reporting:**

**We assess children's work in mathematics using both formative and summative assessments.**

**Formative assessments are used to inform teaching and learning on a daily basis. These short-term assessments are closely matched to the teaching objectives and are used when planning in the short term.**

**We make summative assessments to measure progress against the key objectives each term, and to help us plan the next unit of work. We use these half-termly assessments as a way of tracking children's progress. These assessments also inform a termly report to governors.**

**We make summative assessments throughout the school year, and we use these to assess progress against school and national expectations. We can then set targets and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that she/he can plan for the new school year.**

### **Organisation and Resources:**

**In Years 3 and 4 children will work in three mixed ability classes per year where work will be differentiated to meet the needs of the children. When staffing allows additional support will be provided for identified children in Years 3 & 4. In Years 5 and 6 children will work in four ability sets per year.**

**Within classrooms children may be grouped in various ways for different activities always ensuring equal opportunity. Opportunity will be provided for all children to work as a whole class, in small groups and individually for a variety of appropriate activities differentiated to meet all abilities.**

**A variety of resources are used to implement teaching and learning. These include published schemes, ICT and a wealth of practical, concrete materials and equipment.**

**I.C.T. supports teaching and learning where appropriate.**

### **Parents and Mathematics:**

**Parents have a valuable role to play in assisting their children's mathematical learning. This policy is shared with parents via our school website.**

**Comments concerning any problems are welcomed by staff in their children's diaries and parents are encouraged to ensure that children complete all set homework. Published booklets (when available) will be distributed to all parents, which will outline ideas as to how their children can be helped at home with mathematics.**

### **Monitoring and Evaluation:**

**Monitoring of the standards of children's work and of the quality teaching in mathematics is the responsibility of the mathematics subject leader. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The mathematics subject leader gives the Headteacher an annual summary in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The head teacher allocates regular management time to the mathematics subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school.**

**S Russell  
Numeracy Coordinator**

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