



## **Mathematics Policy 2024**

### **1. Aims and objectives**

**1.1** 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.

**1.2** The aims of mathematics are:

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- To develop logical thinking and reasoning skills through a natural curiosity and investigative approach
- To promote confidence and competence so that children are 'proud to shine' about their achievements
- To develop a thorough knowledge and understanding of numbers and the number system
- To develop the ability to solve problems through decision-making and reasoning in a range of contexts
- To develop a practical understanding of the ways in which information is gathered and presented
- To explore features of shape and space, and develop measuring skills in a range of contexts
- To understand the importance of mathematical skills in everyday life

### **2. Teaching and learning style**

**2.1** 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. 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 their learning, and to assist with modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

**2.2** Organisation of classes differ between year groups. Where possible, year groups consist of one higher ability group (based upon KS1 entry scores) and other parallel groups. In some year groups where children are working significantly behind year group expectations, they will be supported through smaller classes with work adapted to their level. This is always dependent on the children and the cohort; assessments alongside class work and attainment are used to assess how best to arrange classes to support and challenge all children.

**2.3** 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. Opportunities to support and extend learning are planned into all sessions. Throughout lessons, a range of strategies are used to ensure appropriate levelled learning. Children are asked to undertake independent work but other strategies are also utilised. In some lessons, group work is undertaken, and in other lessons, children are organised to work in pairs on open-ended problems or games. Teaching assistants are



deployed effectively to both support and challenge particular groups within a class. Where children have specific needs, support the individual.

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**2.4** Online home learning activities are set for children to access at home. These feature game style activities based on revising what they have learnt in class. They are differentiated and can be set based on an individual's ability. Teacher's are able to monitor who accesses these resources and who does not and the activities report back on the child's success in answering questions. Children can be set paper homework tasks in order to strengthen their learning in mathematics if the teacher feels this is more appropriate. Abacus provides paper homework covering the strands taught in lessons. Children across the whole school have access to Times Table Rockstars at home. Children should be practising times tables regularly to develop mathematical fluency.

### **3. Mathematics curriculum planning**

**3.1** Mathematics is a core subject in the National Curriculum and we use an Abacus scheme as the basis for implementing the statutory requirements of the programme of study for mathematics. This scheme provides a helix of learning; allowing children to build their knowledge from previous sessions and aid retention. The programme allows for challenge for all abilities. Additional resources, such as White Rose, are used to provide further extensions and challenge.

**3.2** Year groups produce daily 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. Planning can be adapted to suit the children's needs. and The class teacher keeps these individual plans, and the class teacher and subject leader can discuss these on an informal basis.

**3.3** To minimise any gaps that occurred due and following Covid, the Maths Lead has developed bridging units to be taught in Autumn 1. These reflect the learning which needs to be embedded to successfully progress with the curriculum detailed above. These plans are regularly monitored and are designed to allow each year group to progress in their current academic curriculum successfully.

**3.4** Curriculum mapping has been put into place from the academic year 2020-2021. This is designed to show each class teacher the journey their maths teaching must take and the prerequisites needed to get their successfully. These documents consist of the Abacus curriculum progress map which our school curriculum is built upon, and allow teachers to identify gaps within objectives that can then be added into their daily planning. Teachers provide transition documents to their class's next teacher to outline weaknesses, gaps and strengths within the curriculum.

**3.5** Further to the above, SHINE interventions now feature in our curriculum. These interventions are in response to potential gaps in individual cohorts. SHINE interventions are linked to PUMA assessments, highlighting potential gaps and weaknesses. These activities are planned to take part in whole class teaching and small group interventions.

**3.6** Year 4 prepare for the Multiplication Timestables Check – we have two mock checks run through TT Rockstars that allow us to compare with National and the LEA. Data compiled here lets us see which children need additional time, need to practise their timestables more or are at/near to the 25/25 score.

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

#### **4.1 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 involved. We explain and encourage

order to identify the mathematics children to learn new vocabulary.

#### 4.2 Science and Topic

Maths is encouraged across the curriculum with key skills being incorporated within appropriate topic and science lessons. These maths skills are often practical, such as measures, or focus on statistic and data handling.

#### 4.3 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.

#### 4.4 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.

### 5. The teaching mathematics to children with special needs

5.1 We enjoy teaching mathematics to all children, whatever their ability. It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning difficulties.

### 6 Assessment and recording

6.1 PUMA assessments are administered termly for years 3-5. These are tracked to monitor progression. The test informs teachers whether the children are below, at or above the expected standard for their year group. It also provides analysis of the pupils/classes strengths and weaknesses in the different strands to enable teachers to adjust planning and inform intervention groups and activities.

6.11 PUMA assessments generate SHINE programmes of intervention sessions. These interventions are in response to potential gaps and lost learning during lockdown. Based upon the data gathered within PUMA assessments, SHINE generates intervention lessons to target areas of weakness. These feature in whole class lessons as well as smaller intervention sessions. SHINE is used to support transition interventions for Year 6 pupils before SATs mock data is collected.

6.2 Year 6 use past SATs papers to assess pupil's achievement and needs. Their progress is tracked over the year and discussed in pupil progress meetings. Intervention groups and activities are created based on this information.

6.3 The school's maths assessment statements are taken from the abacus assessment objectives; children have these and use them to choose their own target splats.

6.4 Children self-assess the work completed in class. This is consistent across all other subjects:

Year Group	Instruction	Example
Year 3	draw a happy, neutral or sad face	😊 😐 😞
Year 4	draw a happy, neutral or sad face with accompanying comment	😊 I've got it. 😐 I'm nearly there. 😞 I need more practice.



Year 5	create their own sentence to show their learning using sentence starters as a scaffold depending on the lesson.	I am able to... I am starting to... I need more support in order to...
Year 6	create their own sentence to show their learning. They will complete this using a green pens	

## 7. Resources

**7.1** The school has a wide range of resources to support the teaching of mathematics across the school. All classrooms have maths resource boxes differentiated by year group. Within these are common resources that support each particular year group's objectives. These allow for children to independently access resources to support their own learning. Additional resources are available in the maths resources cupboard for all teachers to access. The Abacus mathematics scheme has interactive resources to assist the children's learning.

**7.2** Geometry books are used in class to promote retention of geometry, measure and position curriculum objectives.

**7.3** Times Tables Rock Stars is used across the school to promote times tables automaticity. Children have daily 3-minute paper tests and have an online platform to access both in and out of school to practise times tables. Teachers are able to set specific times tables for their class based on their year group. Competitive 12 x 12 games are also available.

## 8. Monitoring and review

Monitoring of the standards of children's work and of the quality teaching in mathematics is the responsibility of the mathematics subject leader. The monitoring of mathematics consists of the following actions:

- *Pupil progress, assessment and data*
- *Learning walks*
- *Coaching/setting up peer observations*
- *Provision of mathematics*
- *Purchasing and organising resources*
- *Keeping up to date with recent developments in mathematics*
- *Supporting colleagues in their CPD*
- *Supporting colleagues through identified needs.*

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. Termly reports are created by the subject leader and presented to SLT; these overview current school practice and data. SLT allocate 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.

**Melissa Bird – Maths Lead**

**Current Policy Date: November 2024**

**Review: Every 3 years**  
**Date of Next Review: November 2027**

