



MATHEMATICS POLICY

1 AIMS AND OBJECTIVES

1.1 Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

1.2 The aims of teaching mathematics are:

- to promote enjoyment of learning through practical activity, exploration and discussion;
- to promote confidence and competence with 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 mathematics in everyday life.

2 TEACHING AND LEARNING STYLE

2.1 The school uses a variety of teaching and learning styles in mathematics. Our principal aim is to develop children's knowledge, skills and understanding. During our daily 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. Mathematical dictionaries are available in the mathematics classroom. ICT is used in mathematics lessons for modelling ideas and methods. Wherever possible, we encourage the children to apply their learning to everyday situations.

2.2 In all classes children have a wide range of mathematical abilities. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task and the level of support to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games.

3 MATHEMATICS CURRICULUM PLANNING

3.1 Mathematics is a core subject in the National Curriculum, and we use the National Numeracy Strategy as the basis for implementing the statutory requirements of the programme of study for mathematics.

3.2 We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The National Numeracy Strategy Framework for Teaching gives a detailed outline of what we teach in the long term, while our yearly teaching programme identifies the key objectives we teach to in each year.

- 3.3** Our medium-term mathematics plans, which are adopted from the Framework, and give details of the main teaching objectives for each term, define what we teach. They ensure an appropriate balance and distribution of work across each term. These plans are kept and reviewed by the subject leader.
- 3.4** It is the subject teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives and expected outcomes for each lesson, and give details of how the lessons are to be taught. The subject teacher keeps these individual plans, and will often discuss them with the subject leader on an informal basis.

4 THE FOUNDATION STAGE

4.1 We teach mathematics in our reception class. As the class is part of the Foundation Stage of the National Curriculum, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space, through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

In addition to this we aim for the following targets by the end of Reception:

- To be able to count in 2s, 5s and 10s.
- To add and subtract numbers up to 1000 using the Dienes Blocks and record answers correctly on squared paper, forming the numbers correctly.
- To know the months of the year in order.
- To tell the time to O'clock, half past, quarter to and quarter past and begin to count round the clock in 5 minute intervals

5 CONTRIBUTION OF MATHEMATICS TO TEACHING IN OTHER CURRICULUM AREAS

5.1 English

- The teaching of Mathematics contributes significantly to children's understanding of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, in mathematics lessons we expect children to read and interpret problems, in order to identify the mathematics involved. They are also improving their command of English when they explain and present their work to others during plenary sessions. In English lessons, too, maths can contribute: younger children enjoy stories and rhyme that rely on counting and sequencing, while older children encounter mathematical vocabulary, graphs and charts when reading non-fiction texts.

5.2 Personal, social and health education (PSHE) and citizenship

- Mathematics contributes to the teaching of PSHE 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 mathematics work on the spending of money.

5.3 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.

6 MATHEMATICS AND ICT

6.1 Information and communication technology enhances the teaching of mathematics significantly, because ICT is particularly useful for mathematical tasks. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers can use software to present information visually, dynamically and interactively, so that children understand concepts more quickly. Younger children use ICT 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 can use both standard and non-standard measures for distance and angle. They can also use simulations to identify patterns and relationships.

7 MATHEMATICS AND INCLUSION

- 7.1** At our school we teach mathematics to all children, whatever their ability and individual needs. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our mathematics teaching we provide learning opportunities that enable all pupils to make good progress.
- 7.2** When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This ensures that our teaching is matched to the child's needs.
- 7.3** We enable all pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom (a 'maths trail', for example) we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

8 ASSESSMENT FOR LEARNING

- 8.1** Teachers will assess children's work in mathematics from three aspects (long-term, medium-term and short-term). We use short-term assessments to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives.
- 8.2** We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. We use the class record of the key objectives as the recording format for this.
- 8.3** From Summer Term 2018 pupils will be assessed twice a year using GLS Assessments. These papers cover all areas of the National curriculum in Mathematics. The scores are standardised and a written report is received for each child detailing attainment, progress, learning styles, strength and weaknesses. One of the Mathematics schemes of work we use is Headstart, it is written to match the National Curriculum. At the end of each term there is a test to assess progress and attainment in the areas of the curriculum taught during the term.

9 RESOURCES

9.1 All mathematics classrooms have a number line and a wide range of appropriate small apparatus. Mathematical dictionaries, calculators and a variety of other visual aids are also available. The library contains a number of books to support children's individual research. A range of software is available to support work with the computers.

10 MONITORING AND REVIEW

10.1 Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the Principal. The work of the subject leader also involves supporting colleagues in their teaching, being informed about current developments in the subject, and providing a strategic lead and direction for mathematics in the school. The subject leader gives the Principal an annual summary in which she evaluates strengths and weaknesses in the subject, and indicates areas for further improvement.

10.2 This policy will be reviewed at least every two years.

Principal:	Mrs Sharpe	Date:	November 2019
Subject Leader	Mrs B Lillie	Date:	November 2019

REVIEW DATE: September 2021