



Discovery Primary School **Mathematics Policy**

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 and secure mental strategies;
- 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 all classrooms. 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 Children have a wide range of mathematical abilities. In KS2 children are grouped according to ability within their year group. We provide suitable learning opportunities for all children by matching the challenge of the task 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. We use classroom assistants to support some children, and to ensure that work is matched to the needs of individuals.

3 Mathematics curriculum planning

3.1 Mathematics is a core subject in the National Curriculum, and we use the National Curriculum for Mathematics 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 Curriculum for Mathematics 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 Curriculum, 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 reviewed by the subject leader.

3.4 It is the class teacher who completes the weekly plans from the Collins Busy Ant Scheme 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 class teacher keeps these individual plans.

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. To aid teachers' planning, the Collins scheme starts from Foundation Stage and is available to them.

5 Contribution of mathematics to teaching in other curriculum areas

5.1 We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of mathematics.

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. We strive hard to meet the needs of those pupils with special educational needs, LAC, those with disabilities, those with special gifts and talents and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details see separate policies:

Special Educational Needs; Disability Non-Discrimination; Gifted and Talented; English as an Additional Language (EAL).

- 7.2** When progress falls significantly below the age expected progress, the child may have special educational needs. Our assessment process looks at a range of factors . classroom organisation, teaching materials, teaching style & 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. If a child requires additional mathematical support, advice will be sought from the SENCo.
- 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 National curriculum objectives, and to help us plan the next unit of work. Children have targets at the relevant level in their maths book and these are updated by the class teacher, identifying when the objective has been met. This data is recorded on the Target Tracker system.
- 8.3** We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school year 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 s/he can plan for the new school year. We make the long-term assessments with the help of end-of-year tests and teacher assessments. We use the national tests for children in Year 2 and Year 6, plus age appropriate tests for children at the end of Years 3, 4 and 5. We also make annual assessments of children's progress measured against the level descriptions of the National Curriculum.
- 8.4** Next steps are an integral part of our marking policy and are used by the teacher to move learning forward. Children should action their next steps and make judgements about how they can improve their work through a range of self-assessment strategies. [See Marking Policy]

9 Resources

- 9.1** All classrooms have access to a number line and a wide range of appropriate small apparatus. Mathematical dictionaries are available in all classrooms. Calculators and a variety of audio visual aids are available in each year group. 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 and i-pads.

10 Monitoring and review

10.1 The monitoring of the standards of the children's work and of the quality of teaching in mathematics is the responsibility of the subject leader and SMT. 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 head teacher a termly summary in which s/he evaluates strengths and weaknesses in the subject, and indicates areas for further improvement. The headteacher allocates regular management time to the subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school (SBL). A named member of the school's governing body is briefed to oversee the subject of numeracy. This governor meets with the subject leader to review progress.

10.2 This policy will be ratified in March 2016
This policy is reviewed in Spring 2018