

## Barcombe C of E Primary School Policy for Mathematics

### 1 Aims and objectives

Mathematics teaches us how to make sense of the world around us through developing the 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 cultures to the development and application of mathematics.

The objectives of mathematics are:

- To promote confidence and competence with numbers and the number system.
- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- 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;
- To equip children with a growth mindset when facing challenge;
- To encourage self-reflection and subsequent self-differentiation.

### 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-directed 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 use ICT in mathematics lessons where it will enhance or consolidate their learning, as in modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

2.2 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. We achieve this by using differentiated group work and in other lessons by organising the children to work 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 documentation relating to the 2014 National Curriculum as the basis for implementing the statutory requirements of the programme of study for mathematics. The mathematics subject leader has updated the medium term plans to reflect the expectations of National Curriculum 2014 and in line with NCETM guidance.

3.2 We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The programmes of study in the National Curriculum 2014 give a detailed outline of what we teach from YR to Y6, while our medium term plans identify the key objectives in mathematics that we teach each term.

3.3 Our medium-term mathematics plans, which are adopted from the programmes of study 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.

3.4 It is the class teacher who completes the weekly plans for the teaching of mathematics, based on the National Curriculum programmes of study. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught.

3.5 Teachers will plan to follow the CPA (Bruner) approach, encouraging pupils to use appropriate materials to build concrete experiences leading to pictorial and abstract concepts.

3.6 Children will use technology to apply their mathematical skills, knowledge and understanding to enrich their learning.

### **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 Years Foundation Stage curriculum which underpin the curriculum planning for children from birth 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.

4.2 Children are assessed against a baseline when they start in Reception. They are assessed at the end of Reception against the Early Learning Goals.

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

5.1 Mathematics contributes significantly to the teaching of other areas of the curriculum and, where appropriate, Maths is integrated into the teaching of other subjects. There are many natural links to be found into subjects such as Science, ICT, Geography, Art, Design Technology, PE, but Maths can successfully be integrated into any subject.

## **6 Teaching mathematics to children with special educational needs**

6.1 At our school we teach mathematics to all children, whatever their ability. 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 progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum levels allows us to consider each child's attainment and progress against expected levels.

6.2 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, differentiation - so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

6.3 Intervention through School Support will lead to the creation of a Support Plan for children with special educational needs. The Support Plan may include, as appropriate, specific targets relating to mathematics and may lead to individual or group interventions.

6.4 We enable pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6.5 At Barcombe C of E School we aim to identify and support all children following the guidance as laid out in the East Sussex 'Dyslexia Policy'. We have a TA who has undergone Accredited Training and another who is on the Accredited Dyslexia training waiting list.

6.6 We are committed to meeting the needs of able and gifted children also through specific differentiation and extension groups and through close links with a local secondary school.

## **7 Assessment and recording**

7.1 We assess children's work in mathematics from three aspects (long-term, medium-term and short-term). We make short-term assessments which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives and will be recorded on in-house data-bases.

7.2 At the end of each term, data is transferred onto SIMS and is then analysed to identify progress made by each pupils and groups of pupils.

7.3 We make long-term assessments towards the end of the school year, including the use of Interim SATs in Key Stage 2, and we use these to assess progress against school and national targets. We use the national tests for children in Year 2 and Year 6.

7.4 Pupil progress meetings are held with the assessment coordinator to discuss individual pupils' progress and to address any concerns which arise.

## **8 Resources**

8.1 There is a range of resources to support the teaching of mathematics across the school. All classrooms have a number line and a wide range of appropriate small apparatus. We have a range of mathematical resources on the laptops and classroom workstations.

## **9 Monitoring and review**

9.1 Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the subject leader. The work 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 subject leader monitors the planning, teaching and learning of mathematics on a regular basis with classroom observations being undertaken annually. Children's feedback and regular work scrutiny is used to inform the subject leader's action plan. The Teaching and Learning governing body is briefed to oversee the teaching of mathematics.

## **10 Mathematics Non-negotiables**

10. 1 Refer to the Federation non-negotiables (eg regularly updated displays including examples of children's work and a high expectation of children's presentation).

## **11 Auditing**

11.1 The subject leader is responsible for auditing resources and proposing acquisitions via the governing body where necessary.

## **12 Equal Opportunities**

As with all teaching at the school, mathematics is taught in such a way as to include all children irrespective of their ability, gender, race, ethnicity or socio-economic background.

Policy reviewed by RF, GR, JH November 2016

Review Date: November 2017