

## St. Columba's Catholic Primary School

### Mathematics Policy

#### Introduction

This policy outlines the teaching, organisation and management of the mathematics taught at St Columba Catholic Primary School. The school's policy is based on the New National Curriculum for Mathematics. The implementation of the policy is the responsibility of all staff.

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

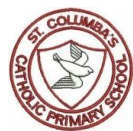
1.1 Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures 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 promote confidence and competence with numbers and the number system;
- to explore features of shape and space, and develop measuring in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to be able to work systematically, co-operatively and with perseverance;
- to be able to communicate with peers and adults, ideas, experiences, questions, clearly and fluently, using appropriate mathematical language;
- to be able to think logically and independently.
- 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 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 use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning across the curriculum and in everyday situations.

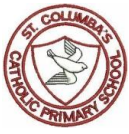
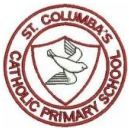
- 2.2 In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through differentiated questioning, tasks and groups work. In some lessons children are organised in pairs/ small groups 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.
- 2.3 A typical lesson at Key Stage 1 lasts 50 minutes and at Key Stage 2, 60 minutes. Homework is sent home on a weekly basis and supplemented as necessary.

### **3 Mathematics curriculum planning**

- 3.1 Mathematics is a core subject in the National Curriculum.
- 3.2 We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term).
- 3.3 Our medium-term mathematics plans give details of the main teaching objectives for each term, defining what we teach. They ensure an appropriate balance and distribution of work across each term.
- 3.4 All teachers use the 'Singapore' scheme to deliver the maths lessons. The key elements of this scheme are: Maths Mutterings, pre-learning activities, bar models and teaching children to think mathematically. Year 4-6 have been using this scheme for on academic year, year 1 -3 will be introduced to it in Sept 2017.

### **4 The Foundation Stage**

- 4.1 We teach mathematics in our reception class. As the class is part of the Early Years Foundation Stage, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals and guidance provided in the Development Matters document. 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.

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

### **5.1 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 order to identify the mathematics involved. The children explain and present their work to others during plenary sessions. Younger children enjoy stories and rhymes that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

### **5.2 Computing**

Children use and apply mathematics in a variety of ways when solving problems using ICT. 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 use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships. Children from Years 1 -6 use Mathematics as a regular part of their mathematics lessons and homework.

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

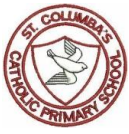
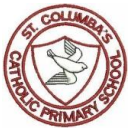
Mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within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

### **5.4 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.

### **5.5 Science**

Mathematics enhances the teaching of the Science curriculum. The children are required to apply their mathematics skills, particularly those of data handling, in a range of scientific contexts.



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

6.1 We teach 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. Work in mathematics takes into account the targets set for individual children in their Individual Education Plans (IEPs). Specific interventions such as ECC / Springboard are planned, delivered and evaluated as necessary.

## **7 Assessment and recording**

7.1 We assess children's work in mathematics from three aspects (long-term, short-term and medium-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.

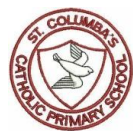
7.2 We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. Assertive Mentoring materials are used to record the progress of the children and the results of this are fed into the school tracking system at the end of each term. We cross check these assessments regularly with the 'essentials milestones.'

7.3 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 the optional national 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.

7.4 The children are encouraged to self and peer assess against learning outcomes and success criteria.

## **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 and games. Mathematical dictionaries are available. Calculators are stored in Years 5 and 6.



**9 Management, monitoring and review**

- 9.1 Mathematics is managed by the Mathematics Team. This led by the Maths Champion and Headteacher, who are supported by teachers from KS1 and KS2.
  
- 9.2 Monitoring of the standards of children’s work and of the quality of teaching in mathematics is the responsibility of the mathematics champion and headteacher. The work of the mathematics team 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 team leader gives the Headteacher / Governing Body a termly summary in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement.

Policy agreed by Governors on	<i>Sept 2017</i>
Signature of Chair of Governors	<i>Mrs J Sims</i>
Signature of Head Teacher	<i>Miss M Evans</i>
Date to be reviewed	<i>September 2018</i>