

St Joseph's Catholic Primary School



CRC Article 29 (goals of education)

Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment.

Mathematics Policy

Aims and Objectives

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.

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 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.

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. 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. Mathematical dictionaries are available. Children use a range of ICT in mathematics and ICT 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 in everyday situations to solve problems and carry out investigations.

In all classes there are children of differing mathematical ability. We recognise this 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 a range of strategies – in some lessons through differentiated group work, and in other lessons, for example, by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support children and to ensure that work is matched to the needs of individuals across the ability spectrum.

The contribution of Mathematics to teaching in other curriculum areas

English

Mathematics makes a significant contribution to the teaching of English in our school because it actively promotes the skills of reading, writing, and speaking and listening, including the use of appropriate subject specific mathematical vocabulary. 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 rhyme that rely on counting and sequencing. Older children encounter, graphs and charts when using non-fiction texts.

Personal, social and health education (PSHE) and citizenship

Mathematics contributes significantly to the teaching of personal, social and health education and citizenship. The subject matter lends itself to raising matters of citizenship and social welfare.

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 children with real-life situations in their work, for example, the spending of money, interpreting timetables, tables of information and the probability of events occurring.

Spiritual, moral, social and cultural development

We offer children in our school many opportunities to examine the fundamental questions in life through the medium of mathematics. For example, the teaching of mathematics supports the social development of children through the way we expect them to work, both individually and with others, to discuss their methods, ideas outcomes and to look critically at how well they are achieving. We help children to develop their knowledge and understanding of different cultures, so that they learn to avoid stereotyping other people, and acquire a positive attitude towards others. We help contribute to the children's social development by teaching them about how society works to resolve difficulties. Mathematics contributes to the children's appreciation of what is right and wrong by raising many moral questions during the programme of study.

Planning and Evaluation

We carry out the curriculum planning in Numeracy in three phases (long-term, medium-term and short-term). The National Curriculum for mathematics (2014) details what we teach in the long-term. Our yearly teaching programme identifies the key objectives in numeracy that we teach to each year.

Our medium-term plans, which we also base on the National Curriculum, give details of the main teaching objectives for each term. These plans define what we teach, and ensure an appropriate balance and distribution of work across each term. The subject leader is responsible for keeping and reviewing these plans.

Class teachers complete a weekly (short-term) plan for the teaching of Mathematics. This lists the specific learning objectives and expected outcomes for each lesson, and gives details of how the lessons are to be taught. It also includes details of what each group of children will be learning. The class teacher keeps these individual plans, and the class teacher and subject leader often discuss them on an informal basis.

Foundation Stage

Mathematics is taught and explored throughout the EYFS as 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.

All children have 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.

Mathematics in Early Years Foundation Stage is initially developed through stories, songs, games and imaginative play within the indoor and outdoor classrooms and the wider school environment. Children are encouraged to identify mathematics in these environments and how this relates to and plays a part in their everyday lives.

The curriculum also introduces children to the more formal aspects of numeracy through reading and writing numbers, counting, putting into groups, combining and sharing, putting into order, recognising patterns and shapes

Children are encouraged to find their own ways of recording what they have done (pictures, marks on paper) as well as starting to record more formally ($3 + 2 = 5$).

Children carrying out simple investigations and solve problems and develop subject specific vocabulary so they can talk about and explain what they have done and how well they have done it.

Assessment, Recording and Reporting

Assessment, recording and reporting will be carried out as identified in the whole school assessment policy.

ICT

Our school holds the ethos that ICT will be incorporated into Mathematics.

- a. as set out in ICT policy and scheme of work.
- b. with cross-curricular references made on mid-term and short-term planning.

Children use and apply mathematics in a variety of ways using ICT. For example; 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.

Equal Opportunities

All staff will plan and deliver Mathematics by taking into account the needs of all the children in their particular class, regardless of gender, race, religion and special educational needs. This will be in line with the whole school Equal Opportunity Policy.

Special Educational Needs (inc Gifted and Talented)

Provision for children with SEN / G&T is carried out in accordance with the agreed whole school policy. Children with SEN / G&T are identified by the class teachers in conjunction with the Special Educational Needs Co-ordinator. Teachers will differentiate appropriately, giving opportunities for all children to access the curriculum. Work in mathematics takes into account the targets set for individual children in their Individual Education Plans (IEPs).

Health and Safety

Reference to issues of Health and Safety are carried out in accordance with the agreed whole school policy.

Issues of safety which are specific to Mathematics include

- The appropriate use of ICT equipment, as per the ICT guidelines
- The correct use and the awareness of the dangers associated with misuse of sharp equipment such as scissors and compasses

Resources

All staff follow the Collins Busy Ant mathematics programme. The scheme provides flexible long, medium and short term planning that ensures developmental learning, building on prior knowledge.

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. Mathematical dictionaries are available in all classrooms. The upper Key Stage 2 classrooms have sets of calculators. A range of software is available to support work with the computers. Other resources are available from the central Maths resource cupboard and are audited regularly and updated as necessary.

Role of the Co-ordinator

Within the school the role of the co-ordinator may be broken down into these major areas:

- To take an active part in ensuring that the whole school improvement plan is maintained and enforced
- To liaise with the named subject governor and to report to governors as necessary
- To model good practice and provide curriculum support to all staff
- To support staff and provide INSET / CPD where appropriate
- To manage, develop, source and maintain the subject resources
- To ensure all equipment used is in good working order and is used in a safe environment

This policy will be reviewed in line with the current school policy review cycle.

Signed

Emma Cresswell
Mathematics Co-ordinator