



Chantry Community Primary School

Mathematics Subject Policy

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.

Through mathematics in our school we aim to develop;

- a fascination and enjoyment of mathematics as a subject in which all children can achieve and be successful;
- the children's abilities to use and apply mathematics with confidence in everyday situations – using mathematical vocabulary;
- an ability for children to communicate their ideas both orally and in written form;
- independent, as well as co-operative, ways of working, encouraging children to explore ideas and activities in a variety of group settings;
- the children's ability to recall number facts quickly and accurately and use appropriate mental and/or written calculation strategies;
- the confidence of our pupils and their ability to apply their mathematical knowledge and skills in a variety of challenging real life situations;
- children's logical thinking, reasoning and ability to problem solve as transferable life skills;
- the children's awareness of mathematics as a powerful tool that has applications both inside and outside of the classroom;
- a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world.

Principles of Teaching and Learning

We adopt a positive approach to mathematics and recognise the importance of motivating the children through the teacher's attitudes, the challenges the children are given and recognitions of their efforts and achievements. Mathematical displays and working walls are also used to support this. When the mathematics curriculum focuses on the broader areas of maths, for example shape, space and measure, we aim to include one lesson per week where the focus of the learning is on number skills, this could be the number system or a focus on calculations.

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- practical activities and mathematical games;
- problem solving;
- individual, talking partner, group and whole class discussions and activities;
- open and closed investigations;
- a range of methods of calculating e.g. mental, pencil and paper and using a calculator;
- using ICT as a mathematical tool;
- using and manipulating a wide range of practical apparatus and resources;
- Open and closed tasks.

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics coordinator.

The approach to the teaching of mathematics within the school is based on four key principles:

- a mathematics lesson every day;
- a clear focus on encouraging children to explain their thinking and develop justifications for answers and decisions;
- an emphasis on mental calculation and arithmetic, particularly knowledge of multiplication tables;
- regular opportunities to use and apply the mathematics they have learned, both within maths lessons and across the curriculum.

Mathematics Curriculum Planning

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.

We carry out the curriculum planning in mathematics in three phases (long-term/yearly, medium-term/termly and short-term/weekly). The National Curriculum gives an outline of what the children need to know in the long term, while our yearly teaching programme identifies the key objectives in mathematics that we teach in each year.

Our medium-term mathematics plans, which are adopted from the new curriculum and give details of the main teaching objectives for each unit, define what we teach. They ensure an appropriate balance and distribution of work across each unit. These plans are kept and reviewed by the Mathematics Subject Leader and the rest of SLT.

It is the class teacher who has the responsibility of the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson, together with appropriate steps to success and give details of how the lessons are to be taught. The class teacher puts plans onto the planning drive on the cloud. Teaching assistants also have the plans shared with them on a weekly (Monday briefing) or on a daily basis if there are amendments to the lesson sequence. Included in our weekly planning is a daily mental maths or arithmetic lesson where a range of mental strategies are explored each week. On weeks where number is not the focused topic a separate number lesson will be taught to help maintain the child's skill set.

At Chantry the focus for the Autumn term is number as this is now interwoven throughout the Mathematics curriculum and it is important that children have a strong number base to build upon. Incorporated into the number teaching is:

- 4 basic operations;
- Place value;
- Multiplication tables knowledge;
- Fractions.

Although the focus of this term is number – it is still taught in the Spring and Summer terms which in turn will help keep the children's skills up to date.

Please see Appendix A for our written calculations policy.

Breadth and Balance

The curriculum will include a full range of mathematical activities covering all aspects of the subject:

- Number facts;

- Number (4 main operations);
- Geometry;
- Measure;
- Statistics.

Using and applying mathematics will be integrated throughout the scheme of work as lessons include practical, investigational, problem-solving and oral activities.

Foundation Stage

- Mathematics in the foundation stage
- Developing mathematical thinking and early vocabulary through
- Observation
- Communication
- Listening
- Reading
- Recording
- Manipulating
- Comparing / Classifying
- Estimating / Measuring
- Prediction
- Choosing / Testing
- Drawing conclusions

Inclusion

Through formal and informal assessments we identify the needs of all children and use appropriate organisational strategies, resources and multi-sensory teaching methods to cater for these needs - see Special Needs and Gifted and Talented policies.

Where applicable children's IEPs incorporate suitable objectives from the Framework for Mathematics and teachers keep these objectives in mind when planning work. Additional support staff are made available where necessary to support groups or individual children, working collaboratively with the class teacher.

Within the daily mathematics lesson teachers also provide activities to support and challenge those children who are high achievers in mathematics to help them work in depth. Teachers are encouraged to provide opportunities for the 'most able' children to stretch and deepen their thinking in a variety of ways.

Equal Opportunities

All children, regardless of their race, sex, religious belief or ability will be given equal opportunities to develop their knowledge, skills and understanding of mathematics. We recognise the wide cultural origins of our mathematics and illustrate this in our teaching so that children gain affirmation of their very varied cultural backgrounds. Additionally, mathematics is incorporated into a wide range of cross-curricular subjects and we seek to take advantage of the many multi-cultural aspects of mathematics.

Children with English as an additional language are supported in a variety of ways, including reading of questions, repeating of instructions, opportunities to talk the language of mathematics, mathematical games, etc - see Equal Opportunities Policy and Racial Equality Policy.

Assessment for learning

Assessment for learning underpins all teaching and learning at Chantry, recognising and raising pupils' achievements through appropriate, ambitious targets. Rigorous assessment (in line with the *Assessment for Learning Policy*) gathered from a variety of sources, including APP assessment criteria, is used to plan inspiring lessons to develop identified learning needs. Assessment is used throughout the lesson to adjust any learning in light of pupils' knowledge.

Parental involvement

We recognise and value the interest, support and involvement of the parents in their children's mathematical development and keep them up to date with any developments in this area. We actively encourage parents to help their children in learning mathematical facts and skills, through formal and informal meetings as well as leaflets and booklets. Homework is also set to consolidate schoolwork and encourage involvement of parents. The parents have an opportunity at the beginning of each academic year and during parent consultations to learn and discuss how homework can help their involvement in their child's mathematical development.

Resources

There is a range of resources in every classroom to support the teaching of mathematics across the school. All classrooms have a wide range of mathematic apparatus and resources such as numicon, number rods, number lines, place value cards, digit cards. Mathematical dictionaries are available throughout the school. Calculators are also available in all classes. All classes are expected to encourage the use of models, images and practical apparatus. A range of software is available to support work with the computers.

Classroom displays

Each classroom should have their own display and working wall. The maths which should be on display should match the topic being taught that week in class. A working wall should also include an interactive activity for the children to be involved with.

Roles and Responsibilities

Maths subject leaders will be expected to:

- teach demonstration lessons;
- ensure teachers and trainee teachers are familiar with the renewed Framework and support them to plan lessons;
- lead by example in the way they plan, teach and assess in their own classroom;
- prepare, organise and lead INSET, with support of the head teacher;
- support the head teacher in carrying out the audit and setting targets for the future;
- work co-operatively with the SENCO in providing advice and support for staff;
- monitor, track and evaluate standards in maths across the school;
- analyse results to identify weak areas of teaching and learning;
- support staff in making provision for all pupils, considering use of resources and allocation of time;
- monitor and observe colleagues teaching and plans from time to time, with a view to identifying the support they need;
- attend cluster meetings provided by LEA Mathematics consultants;

- provide information for parents in the form of booklets/leaflets and meetings;
- discuss regularly with the head teacher, phase leaders and Governors Achievement Committee the progress of mathematics;
- lead parent/children maths events;
- update the policy and guidelines.

Signed(Chair of Governors) Date

Signed(Headteacher) Date