



Abberley Parochial V.C. Primary School

Inspiring Hearts & Minds

Mathematics Policy

Mathematics makes a considerable contribution to the overall school curriculum and is constantly used in everyday life, business and industry; the ability to apply it effectively to unfamiliar problems is therefore very important. A broad mathematical education is essential for all pupils to equip them to meet the responsibilities of adult life in the world today. Mathematics will provide children with intellectual challenges and contribute to each child's social, personal and intellectual development.

Aims

The 2014 national curriculum for Mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of Mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason Mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their Mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

The National Curriculum for Mathematics

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The 2014 National Curriculum programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Cross curricular

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It is a core subject with a range of cross-curricular links but most often, is best taught discretely, using opportunities from other subjects to rehearse skills in a context. Numeracy involves developing confidence and competence in number work; shape, space and measure; handling data and the using and applying of these skills.

Teaching and learning style

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. Mathematical dictionaries are available in all classrooms.

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 in everyday situations. We ask the children to explain which strategy they used to achieve their answer, emphasising that there can be many different ways to solve a problem.

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 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.

Planning

Teachers plan for deep coverage of the National Curriculum for Mathematics through daily maths lessons and additional opportunities to develop mental maths skills.

Plans for daily maths lessons include teaching, practicing, applying and reviewing and cater for all learning styles (Visual, Aural and Kinaesthetic). Lessons include opportunities for:

- practical activities and mathematical games
- problem solving
- individual, small group and whole class discussions
- open and closed tasks
- a range of methods of calculating (e.g. mental, paper and pencil)
- working with Computing

Plans should follow Abberley Parochial V. C. Primary School's Calculation Policy which gives an overview of the development of addition, subtraction, multiplication and division from Y1 to Y6. Teachers should use this detailed information on progression through each strand and how to use practical resources and models to develop understanding at each stage.

Classes are mixed ability and the groups within classes are fluid. Teacher will use a range of grouping methods when planning. Use of teaching assistants will be planned for to ensure they are used effectively in supporting, developing and assessing pupil progress throughout.

Assessment and recording

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in Mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children. This information informs subsequent planning and next steps in teaching and learning. Planning is annotated to demonstrate adaptations and provide feedback about children's individual/group progress.

Teachers make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. We then update our pupil tracking grids accordingly.

Teachers make long-term assessments towards the end of the school year, and they use these to assess progress against school and national targets. They can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. This information is passed on to the next teacher at the end of the year, so that s/he can plan for the new school year.

Formal assessments specific to year groups:

Year	Assessment
Foundation stage	Attainment on entry Attainment on exit
Year 1	Teacher assessment
Year 2	KS1 SATs
Years 3, 4, 5	Teacher assessment
Year 6	KS2 SATs

Early Years Foundation Stage (EYFS)

Teachers support children in developing their understanding of numeracy in a broad range of contexts in which they can explore, enjoy, learn, practice and talk about their developing understanding. Teachers offer opportunities for these skills to be practiced, in order to give children confidence and competence in their use.

This Area of Learning and Development includes seeking patterns, making connections, recognizing relationships, working with numbers, shapes, space and measures, and counting, sorting and matching. Children use their knowledge and skills in these areas to solve problems, generate new questions and make connections across other Areas of Learning and Development. Mathematical understanding will be developed through stories, songs, games and imaginative play

Special Needs

Our school curriculum policy is 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, those that have their own Individual Education Plans (IEPs) and those who are Gifted and Talented.

Inclusion

We aim to meet the needs of all, taking into account gender, ethnicity, culture, religion, language, disability, sexual orientation, age and social circumstances. Opportunities for differentiation will be planned for both more able and less able pupils at the short term planning stage.

Resources

There is a range of resources to support the teaching of mathematics across the school. All classrooms have a wide range of appropriate small apparatus. Mathematical dictionaries are available in all classrooms. Calculators and a range of audio visual aids are available. The library contains a range of books to support children's individual research. Topic specific resources (such as weights and scales) are located in a central storage area.

Monitoring and review

Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics subject leader and the Headteacher. The work of the mathematics subject leader 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.

Signed:**Date:** 16/11/15