

Bushfield Road Infant School



Maths Policy

Policy Reviewed: Autumn 2021

Next Review: Autumn 2022

Bushfield Infants is a school which recognises and respects difference; a calm, safe and inclusive school which celebrates the progress and achievements in all our children. A school which supports not only its pupils, but also their families.

Bushfield Infant school prides itself on integrity, values and high expectations and these qualities are what drive the school.

At the heart of the school is a broad and balanced curriculum, offering exciting challenges in a meaningful way, constantly encouraging children to learn and practice skills which will stay with them for life.

Raising standards, whilst supporting emotional well-being is a priority and the responsibility of every member of staff. An emphasis on language rich learning experiences promotes the communication skills which are fundamental to successful learning.

At the heart of the school curriculum, is an innovative and well embedded approach to teaching the key skills for future success.

Communication, Teamwork, Resilience, Problem solving, Creativity and Financial awareness.

Bushfield Infant School is a positive environment in which to work and learn, a safe place to take risks and accept challenge and most of all a community where we all strive to do the very best we can.

Communication and Interaction

We spend a huge part of our lives talking, listening and responding to people around us. We should never just expect communication to happen; we should take personal responsibility for the quality of our conversations. Almost everything we do, in and out of school, depends on talking and listening. Speech, language and communication skills are crucial for the development of a child's learning and for their social and emotional well-being.

For that reason, across all areas of our creative curriculum, we provide opportunities to talk, to listen and to respond to what we see and hear.

Curriculum Intent for Maths

At Bushfield Road Infant School, our Maths curriculum enables pupils to develop a fascination for mathematics. We strive to ensure all children become confident and capable mathematicians. Mathematics teaches us how to make sense of the world around us through developing financial awareness, the ability to calculate, to reason and to solve problems.

We promote enjoyment and enthusiasm for mathematical learning through practical activity, exploration and discussion. We promote confidence and competence with numbers and develop

fluency of key mathematical facts. Reasoning and problem solving is central to our curriculum and we ensure pupils understand the importance of mathematics in everyday life and how it links with other areas of the curriculum.

The Mathematics curriculum is planned and sequenced so that new knowledge and skills build on prior learning. Through daily mathematics lessons, teachers allow children sufficient time to practise and develop the acquired skill and to also apply these skills in a range of different situations. We ensure pupils develop mastery of key mathematical concepts by working at greater depth. We prevent gaps in learning by using appropriate teacher intervention and ensure those pupils who grasp concepts quickly are given opportunities to deepen their knowledge and improve their reasoning skills.

During their time at Bushfield Road Infant school, through our Mathematics curriculum, we enable pupils to develop an understanding of the world, have the ability to reason mathematically, have an appreciation of the power of mathematics and develop a sense of enjoyment and curiosity of the subject.

Mastery

At Bushfield Infant School we believe in the principles of the Mastery approach. Mastery aims to provide all children with full access to the curriculum, enabling them to achieve confidence and competence in mathematics. All pupils should become fluent in the fundamentals of mathematics, through varied and frequent practice of skills, so that pupils develop conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.

Effective mastery in the mathematics curriculum involves pupils taking relatively small carefully sequenced steps, which must each be mastered before pupils move to the next stage. Fundamental skills and knowledge are secured first. This often entails focusing on curriculum content in considerable depth at early stages.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. Pupils who grasp concepts rapidly should be challenged through rich and sophisticated problems before any acceleration through new content. Those pupils who are not sufficiently fluent with earlier material should consolidate their understanding, through additional practice, before moving on.

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 use modelling and demonstration in order to engage children in asking and answering mathematical questions. We ensure that children have the opportunity to learn in a variety of ways using and developing their visual, auditory and kinaesthetic skills. 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 when it will enhance their learning. Wherever possible, we encourage the children to use and apply their learning in everyday situations in order to make it relevant to their experiences.

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. Work is matched carefully to the needs of individual children offering a challenge so that they can reach their potential whether they are children with SEND or Gifted and Talented.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum, and we use this for the basis of our planning in KS1. In Foundation Stage, we relate the mathematical aspects of the children's work to the objectives set out in the Early Years Outcomes Framework, which underpins the curriculum planning.

The School's Calculation Policy is evident through all teacher's planning. Teachers planning reflects the stages of calculation laid out in the whole school policy, with specific methods of calculation being taught in each year group. Planning also clearly shows differentiation for more and less able pupils in line with the School's Calculation Policy.

The Foundation Stage

Mathematics is taught in our Nursery and Reception classes. We provide all the children with a wide range of opportunities to develop their understanding of number, measurements, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

Children's mathematical development is carefully planned for through adult-led focus activities and opportunities to learn through first-hand experience. Throughout the Foundation Stage, children are also encouraged to use and develop mathematics through play in all areas of provision.

Contribution of mathematics to teaching in other curriculum areas

Literacy

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 rhyme that rely on counting and sequencing.

Personal, Social, Health and Citizenship education (PSHCE)

Mathematics contributes to the teaching of personal, social and health education, and citizenship. The activities that children do within the classroom encourage them to work together and respect each other's views.

Information and Communication Technology (ICT)

Mathematics contributes to pupils' ICT experience through

- communicating information - graphs, charts, tables of data
- handling information - investigating, sorting and classifying information, retrieving information in different forms and interpreting information
- Mathematical software

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.

Enterprise Skills

As part of our whole school focus on Enterprise, pupils are introduced to 6 characters that represent the relevant skills. Maths skills are an integral part to these projects, with financial capability playing a vital role.

Teaching mathematics to children with SEND

At our school 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.

Effective pupil tracking enables identification of pupils who may benefit from 'early intervention'. Additional maths support is provided regularly by a teacher for those children with specific needs. Activities are personalised according to their individual targets.

Teaching mathematics to Gifted and Talented children

We use a range of strategies to identify more able and very able children. Teaching is differentiated in a variety of ways, to cater for the needs of these children:

- a common activity that allows the children to respond at their own level;
- an enrichment activity that broadens a child's learning in a particular skill or knowledge area;
- an individual activity within a common theme that reflects a greater depth of understanding and higher level of attainment;

Assessment and Recording

Mathematics is assessed within the guidance of the whole school policy. Within the long term, medium term and short term planning, learning objectives are identified and activities planned to address the Programme of Study.

The assessment of a pupil's progress is made against those learning objectives. Assessment is made by direct observation of a pupil's performance in written, oral and practical tasks. Progress is tracked termly using our individual assessment grids.

The PUMA Maths Test is used to assess progress termly in KS1. Teaching staff use the results of these tests to identify gaps in learning. Targeted teaching and intervention groups can then be established to move learning forward. Reception administer the PUMA Maths test in the Summer term in preparation for them moving into Year 1. Year 2 also complete National SATs tests in the Summer term. The children are assessed against the schools individual assessment grids at the end of each term and the information is recorded on the class Tracking Sheets. This progress is discussed in termly Pupil Progress meetings with the Head Teacher. Teaching staff identify groups such as SEND, Pupil Premium and Gender and to discuss their rates of progress and plan for future interventions.

In the Foundation stage, assessments are made using assessment grids which have been developed using the Statutory EYFS framework and Development Matters guidance. These assessments are ongoing and tracked termly. A baseline is completed within four weeks of entering FS1 and FS2 and children are assessed throughout the term using assessments from adult led activities as well as observations through continuous provision. At the end of FS2 assessments are made against the Early Learning Goals.

Resources

There are a range of resources to support the teaching of mathematics across the school, including number lines, number squares and a wide range of appropriate small apparatus. A range of practical and visual Maths resources are used for teaching maths concepts in both Foundation and KS1 including Numicon, Counters and Sweet counters. All classrooms have their own general Maths resources and more specialised equipment is stored centrally. New resources are purchased as and when needed. A range of software is available to support work with the computers. Maths Apps are used on the iPads to support the development of mathematical concepts where appropriate.

The Role of the Mathematics Coordinator

- To advise the Head teacher of action required to develop the area.
- To provide guidance and support in implementing the Mathematics Curriculum across Foundation and KS1.
- To monitor and evaluate Mathematical Teaching and Learning across the whole school through lesson observations, planning and work scrutiny.
- To encourage and assist staff in INSET
- To keep up-to-date by attending courses and feedback sessions.
- To purchase, organise and maintain teaching resources.
- To review and evaluate Policies, assessment procedures and teaching resources across the whole school.