

BROUGHTON PRIMARY SCHOOL

Mathematics Policy



Introduction:

Mathematics is a core subject within the National Curriculum. This policy outlines the purpose, nature and management of mathematics taught in our school.

The National Curriculum for mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our Calculation Policy, this ensures continuity, progression and high expectations for attainment in mathematics. At Broughton Primary School we use the White Rose Hub scheme of learning as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education.

This policy reflects the consensus of opinion of the whole teaching staff and was drawn up after discussion among staff.

The implementation of this policy is the responsibility of all teaching staff.

The Nature of Mathematics:

Mathematics is essential in everything we construct, everything we calculate and almost every problem we have to solve in our daily lives. In school, mathematical knowledge, skills and understanding are required in most other areas of the curriculum.

Children's knowledge, skills and understanding in mathematics develop as they use it in practical activities, to solve relevant and meaningful problems, and to explore the patterns and relationships on which mathematical concepts depend.

Our chief aim is that all our children will develop a 'We Can' attitude to Mathematics and use it with confidence and understanding.

Aims of The National Curriculum:

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

- become fluent in the fundamentals of mathematics through varied and frequent practice with complexity, increasing over time
- develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately
- reason mathematically; follow a line of enquiry, conjecture relationships and generalisations
- develop an argument, justification and proof by using mathematical language.
- problem solve by applying knowledge to a variety of routine and non-routine problems
- breaking down problems into simpler steps and persevering in answering

The EYFS Statutory Framework 2021 sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development matters' non statutory guidance. The EYFS Framework in relation to mathematics aims for our pupils to:

- develop and improve their skills in counting
- understand and use numbers
- calculate simple addition and subtraction problems
- describe shapes, spaces, and measures

The purpose of mathematics in our school is to develop:

- positive attitudes towards the subject and awareness of the relevance of mathematics in the real world
- competence and confidence in using and applying mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and motivation to work both independently and in cooperation with others
- confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes
- an ability to use and apply mathematics across the curriculum and in real life
- reflect on the learning process by identifying and addressing strengths and weaknesses
- an understanding of mathematics through a process of enquiry and investigation

- we aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching & learning

Implementation:

Mathematics is planned and delivered by each class teacher. A variety of resources are used by teachers to plan their lessons but the core scheme is White Rose. Broughton Primary School is starting to follow the CONCRETE-PICTORIAL-ABSTRACT teaching style to ensure children have a true understanding of a concept. Teachers also ensure that knowledge, reasoning and problem solving are incorporated in all weekly planning. Mathematics activities are planned to encourage full and active participation and enjoyment by all children. Differentiated work exists by way of activities and expected outcomes. There is a central store of resources for all staff to use, alongside a bank of key essential resources constantly available, for both teachers and in every class

Teachers planning and organisation

Long term planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long term planning for mathematics taught in the school.

Medium term planning

Years 1-6 use the White Rose Maths Hub schemes of learning as their medium term planning documents. These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, key aims of the National Curriculum. They support a mastery approach to teaching. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They ensure small steps are taken to deepen understanding. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short term planning

The above schemes of learning support daily lesson planning. Lessons are planned using the teacher's own planning format and are monitored at intervals by the mathematics subject leader. EYFS planning is based on the medium term plans and delivered as appropriate to individual children with thought to where the children are now and what steps they need to take next.

All classes have a daily mathematics lesson where possible. In key stage one lessons are 45-60 minutes and in key stage two at least 60 minutes. Teachers of the EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom.

Lessons

In all lessons learning objects should be made explicit.

All lessons should contain elements of:

- 'quality first' teaching; tailored to meet the needs of the learners in each class, and immediate intervention to address gaps in learning where necessary
- resilient learners with a 'We Can' attitude to Mathematics, whatever their previous level of attainment

- reflective learners, children looking back at previous work to address misconceptions or deepen their understanding
- teachers making use of misconceptions to further understanding of key concepts,
- teachers using a range of methods to explore key Mathematical concepts which appeal to pupils' different styles of learning, employing concrete/pictorial/abstract representations of Mathematical concepts,
- pupils learning together
- development of fluency, reasoning and solving.

Pupils' Records of work

Children are taught a variety of methods for recording their work and are encouraged and helped to use the most appropriate and convenient. Children are encouraged to use mental strategies and their own jottings before resorting to more formal written methods. Children will also have a 'digital portfolio' where photographs and videos of practical learning will be stored as evidence.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked against success criteria, in line with the school marking policy. Live marking is encouraged so teachers and teaching assistants can provide this high quality feedback instantly and address any misconceptions before children get too far into the work. It also allows for teachers to give class feedback to any commonly made mistakes. Some pieces of work in mathematics can be marked by children themselves, exercises involving routine practice with support and guidance from the teacher – particularly in years 5 & 6.

Assessment

Assessment is an integral part of teaching and learning and is a continuous process.

Teachers will keep records of children's attainment in maths in accordance with the school's policy for recording N.C. Attainment.

Teachers make assessments of children daily through;

- regular marking of work
- analysing errors and picking up on misconceptions
- asking questions and listening to answers
- facilitating and listening to discussions
- making observations

These ongoing assessments inform future planning and teaching. Lessons are adapted readily and short term planning evaluated in light of these assessments.

Termly assessments are carried out across the school using the assessment materials for each year group provided by NFER. These materials, used alongside judgements made from class work, support teachers in making a judgement against the end of year expectations as to where each child is currently performing.

Teachers in years 1-6 track then put the details of this judgement into our online tracking system, FFT, where progress is closely monitored by class teachers.

Pupil Progress meetings are timetabled each term for all classes. Progress of pupils is discussed and appropriate intervention considered and put in place where appropriate. Intervention is run in addition to the school day using different methods. We have chosen to do this as it means children are receiving help alongside their normal maths lessons so they are not missing out on any learning and aren't falling further behind.

Year 2 and Year 6 complete the national tests (SATs) in May.

Year 4 complete the times tables check in June.

Role of the subject leader

The role of the subject leader is to raise and maintain standards, secure and sustain improvement within it and be a point of content for other staff members and the SLT within school.

Review:

Written by Kelly Lightfoot

Implementation: September 2022

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