

**Brinscall St Johns C.E./
Methodist Primary School**



**Mathematics Policy
Document**

Date of policy: September 2024

Date approved by Governing Body:

Review date:

MATHEMATICS POLICY

This policy outlines the purpose, nature and management of mathematics taught at Brinscall St John's. It reflects the school's vision and mission statement where everyone is valued and encouraged to flourish, through a curriculum which is rich in opportunities to enable children to have healthy minds and bodies, to be creative and be problem solvers. Opportunities are given for everyone to 'Shine with the Light of Jesus' through our Vision and Mission Statement. We encourage everyone to let their light shine in all aspects of their life, following the example of Jesus Christ.

Mathematics - Intent

Mathematics is a crucial life skill. Within mathematics, there are opportunities to develop many aspects of problem-solving and creativity, which are important aspects of becoming a happy, healthy adult. At Brinscall St John's, we aim to create confident problem-solvers in maths. We aim to give children fluency in methods in order to inspire creative approaches to challenges and for children to have the confidence to reason mathematically. As part of this, children are taught a broad mathematical vocabulary and an emphasis is put on the importance of reading and comprehension. The curriculum will develop systematically from EYFS with children given opportunity to revisit and reinforce prior learning.

Mathematics - Implementation

Mathematics is taught through a mastery approach, where problem-solving is given priority. Mathematics is taught with the intent of pupils acquiring a deep, long-term, secure and adaptable understanding of the subject, and this is reflected in tasks and lessons planned for the children. This means that there are longer-form questions and tasks designed to test and expand children's understanding of the concept taught. Arithmetical and number skills are held as a crucial tool in children's problem-solving toolkit, and confidence and fluency in these are sought through regular practice in class. New concepts are taught through the concrete, pictorial, abstract approach to learning and linking new ideas to those previously covered and taught. Mathematics homework is set to develop and reinforce children's learning. Children's reading and vocabulary are developed throughout lessons and modelled through the use of stem sentences and ensuring that the importance of mathematical talk is recognised. Teachers will understand the start and end points for their year group and how this fits in the children's journey throughout school. Opportunities for cross-curricular mathematical learning are encouraged and help children see the practical use of the problem-solving skills they learn through maths.

Mathematics - Impact

As a result of mathematics teaching at Brinscall St John's, children will be challenged and engaged in the subject. They will have confident and quick understanding of number facts and calculation strategies and use this to engage with problem-solving

activities showing resilience and a flexible approach. Children will recognise opportunities to be creative and ‘think outside the box’, showing that they are able to reason mathematically and apply the ‘toolkit’ they have been given to differing problems. Learning is tracked through ongoing assessments, including formal end-of-term tests, to ensure that children are making good progress. Children will have a broad mathematical vocabulary and possess the ability to understand and break down problems through their reading.

Rationale

Brinscall St John’s provides a broad and varied Mathematics curriculum, through a variety of teaching approaches and learning situations, to meet the needs of all our pupils. We seek to provide this for all in accordance with our school policies on Equal Opportunities and Inclusion and in accordance with our statutory responsibilities under the SEND Code of Practice 2014.

Inclusion and aims

At Brinscall St John’s we recognise our responsibility to provide a broad and balanced curriculum for all our pupils, as recognised in the Inclusion Statement in the National Curriculum. All aspects of the curriculum reflect the three principles essential to developing a more inclusive curriculum:

- setting suitable learning challenges;
- responding to pupils’ diverse learning needs;
- overcoming potential barriers to learning and assessment for individuals and groups of pupils.

In accordance with the statutory orders for mathematics, Brinscall St John’s is committed to the following aims:

Our aim at Brinscall St John’s is to develop pupil’s confidence so that they are able to express themselves and their ideas using the language of maths with assurance. We aim to teach to support the goals stated in the 2014 National Curriculum of:

- becoming **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.
- **reasoning mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- **solving 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 mathematics teaching at Brinscall St John’s is geared towards enabling each pupil to develop within their capabilities; not only the mathematics skills and

understanding required for later life, but also an enthusiasm and fascination about mathematics itself and the art of problem solving. We want to challenge our pupils during mathematics lessons to develop the most advanced strategies to solve problems and have the ability to think in abstract ways. We are continually aiming to raise the standards of achievement of the pupils in Brinscall St John's.

Scheme of work

The National Curriculum for Mathematics describes what must be taught in each Key Stage. At Brinscall St John's, we follow the National Curriculum using a 'teaching for mastery' approach. We believe that children require depth and breadth in their learning and work using small steps of learning to support a deeper understanding of the topics taught. To do this, we develop our planning around the White Rose scheme of learning. This is adapted to suit our children and school needs. Individual teachers use the scheme and plan around the needs of their class.

The specific area of mathematics within the Early Years Foundation Stage Curriculum is developed under two strands, each of which has an Early Learning Goal attached: Number and Numerical Patterns. The Early Learning goals define the level of development children are expected to attain by the end of the Reception Year. The staff use their knowledge and expertise to plan for a high-quality learning environment which provides children with lots of opportunities to explore different aspects of number and shape, space and measures and to learn new concepts. White Rose and NCTEM Maths Hub resources are used to structure the teaching sequence. There is a balance between direct teaching and the availability of a wide range of structured play resources (this is known as 'continuous provision'). Development Matters, non-statutory guidance material, is used to support our practitioners to implement the statutory requirements of the EYFS Framework within our curriculum. The Early Years Foundation Stage Profile is completed for each child by the end of their Reception year.

Planning

Planning is undertaken at three levels:

Long term planning is based on the yearly teaching programmes set out in the new national curriculum.

Medium term planning is carried out half-termly. Teachers select their main teaching objectives from the yearly teaching programme and use the guidelines set in new national curriculum to ensure a balanced mathematics curriculum. This is based around the White Rose Scheme of Learning.

Short term planning is carried out a week at a time and revisited on a daily basis.

Planning is based around the White Rose Scheme of Learning and is adapted to suit the needs of each cohort. The format for this planning has been agreed within the school team. Objectives will be taken from the medium term planning document.

Cross Curricular Links

Mathematics is taught as a separate subject. However, in addition every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work so children see that maths is not an isolated subject. We provide children opportunities to communicate mathematics, to use and apply mathematics across the curriculum and in real life and an understanding of mathematics through a process of enquiry and experiment. The understanding, development and use of vocabulary is a crucial part of mathematical learning and this link to reading skills is to be developed and honed through regular teaching.

Spirituality and Christian Values

Spirituality is developed through mathematics wherever possible, following the aims of our mission statement. A sense of awe is encouraged when working with concepts such as patterns in the environment and infinity, linking these to Gods wonderful world and love for us all. Where appropriate, specific mention of our school's Christian values will be made and 'What if?' learning will be encouraged, such as solving money problems phrased around charity and giving rather than self-centered receiving.

Information and Communication Technology

At Brinscall St John's we believe that ICT is crucial in enabling children to function efficiently in any curriculum area, allowing all children to achieve and exceed expectations. The skills, and knowledge, that children develop are encompassed into everyday activities and challenges within the classroom environment.

ICT opportunities will be made available throughout the school in the mathematics curriculum as appropriate. Specific applications are available to allow individuals, groups and classes to maximise their learning and development. The network and hardware in place within the school provides good opportunity to use ICT freely and is evident in the planning of mathematics. Programming provides an additional opportunity for children to utilize mathematical knowledge and skills and links between these subjects is strongly encouraged.

Time Allocation

All children will have a daily maths session. This may be a discrete lesson or a cross-curricular approach. In Reception, the organisation is more flexible building up to a daily 45 minute lesson in the summer term. However, teachers will use their own professional judgement when alternative organisation is deemed appropriate. The learning objective is clearly stated at the beginning of each lesson.

Teaching and Learning Strategies

Mathematics will be taught in accordance with the aims and guidelines outlined in our school policy for teaching and learning established through an extended process of consultation with all teaching staff. Teachers aim to ensure that their lessons are accessible to all and paced to build on existing knowledge and prior learning. Children are encouraged to learn through concrete, pictorial and abstract stages of understanding and reasoning – see the calculation policy for more details.

Resourcing

Each classroom has its own supply of maths resources appropriate for that particular age group. These are kept in a specific maths area, clearly labelled and accessible to all members of the class. In addition there is a central supply containing teacher's resources and specific maths equipment, for example scales and weights. Following a yearly audit new resources are purchased according to year/team group needs.

Display

Mathematics is displayed within the classroom. Working walls should be used to promote understanding of current topics.

Homework

Homework has a valuable part to play as a means of reinforcing aspects of the curriculum taught. For Y1 upwards, this will be to learn key number facts and times tables appropriate to the year group/ child's individual ability. This is anticipated to take 15-30 minutes a week. Times Table Rockstars can also be used to supplement this in some classes.

Reporting to parents

A parents' evening is held in autumn term, and further meetings are arranged if required. Towards the end of the spring term a further parents evening is held to discuss progress. Annual written reports are sent home in summer term.

Progression and testing

Children are assessed against year group expectations as set in the 2014 National Curriculum. Children are judged to either be entering a year group, developing within it or secure in that year group's expectations.

Children are assessed on a continuous basis with a formal written test given once a term. This is taken from the White Rose scheme's written tests and teacher judgment is used to supplement this data. In year groups that take SATs (2 and 6), previous papers may also be used to secure judgement. Final judgements are made using teacher assessment, taking into account performance in tests and in class. This is recorded and sent to the headteacher and mathematics subject leader every half term.

All Reception Class children are informally assessed throughout their first year in school and these assessments are used to complete the Foundation Stage Profile.

All children are required to sit their SATs at the end of Key Stage 2. At the end of KS1 Teacher assessment is used and KS1 (optional) SATs mathematics tests are used to aid their judgement. The results are analysed annually and prioritise future planning, including intervention provision. At the end of KS2, formal testing takes place.

Record Keeping

A list of mathematics groups are handed up at the end of the year to the new class teacher. Teachers annotate their planning and keep their own daily assessment records including a record of those children who are exceeding the learning objectives and those who have not achieved a set objective. Children in the higher ability group have their assessments monitored by the Senior Leadership Team in order to ensure their needs are being met.

Assessment is an integral part of the teaching and learning process as emphasised in our school assessment policy. Children are involved in this process through self-assessment at the end of each lesson.

Evidence of pupil's attainment will occur in a variety of ways:

- Observing pupils working;
- Listening to and questioning pupils;
- Discussing pupil's work;
- Looking at children's books

Parents are welcome to discuss the progress of their child at any time with their teacher. At parents' evenings, held twice each year, they are informed of their child's progress in this subject and the children's work from the year is shown and

discussed. An annual written report to parents includes a mathematics section and End of Key Stage SATs results where appropriate.

Review and Staff Development

This policy is reviewed bi-annually in consultation with staff. Following this review recommendations are made for the development of the subject.

The success of this policy will be monitored and evaluated through:

- Pupil progress.
- Ongoing formative assessments of class work and homework.
- SATS results and other formal school assessments
- Achievement of mathematics targets.

E. Rounding

September 2024

Planned Review: September 2025