

Bridgewater Primary School
Bridgewater Street
Little Hulton
Salford
M38 9WD

Mathematics
Policy

April 2024

(To be reviewed by R Thornley April 2025)



Intent

At Bridgewater, our intent for mathematics is to teach a rich, balanced and progressive curriculum using maths to reason, problem solve and develop fluent conceptual understanding in each area. Our curriculum allows children to better make sense of the world around them by making connections between mathematics and everyday life. It is a desire to secure fluency with number and high standards through effective learning and teaching across the school.

Aims

- 1) To develop a positive attitude, which will lead to persistence and perseverance where children will find mathematics enjoyable.
- 2) To produce numerate pupils who are confident to tackle mathematical challenges.
- 3) To ensure children are able to understand and use mathematical language to enable them to explain their thinking and share ideas.
- 4) To enable children to calculate accurately and efficiently, drawing on a range of calculation strategies.
- 5) To enable children to have a sense of number size and recognise where it fits into a system.
- 6) To sustain a partnership with parents to support children's progress to inform future planning.
- 7) To use assessment of children's progress to inform future planning.
- 8) Our aim should always be to meet children's needs and move learning on.

Intent

Our school uses the White Rose mastery scheme of learning. Every resource has been carefully designed to ensure it addresses the three key aims of fluency, reasoning and problem solving and follows the principles of teaching for mastery. It is designed to support pupils to be able to perform simpler tasks so they can then move on to perform more complex tasks. The programme is carefully planned to allow progression of knowledge across different objectives and year groups.

All teachers in KS1 and KS2 use a common format for planning, which identifies learning objectives, main activities, plenary which is reviewed at the end of each lesson in order to inform future planning.

In order to address the needs of our children a separate fluency lesson is taught each week in classes across KS1 and KS2. These lessons focus on number facts and key skills for Mental Arithmetic.

To support planning, teachers are actively encouraged to use a range of resources and support materials. We appreciate the need to be flexible and reflective with our planning.

Equal Opportunities

All children are entitled to receive a wide range of learning opportunities in this subject appropriate to their knowledge, understanding and capabilities irrespective of their gender and race in line with Bridgewater's equal opportunities policy.

Mathematics and inclusion

At our school, we teach mathematics to all children, whatever their ability and individual needs. Maths forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Maths teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see separate policies: Special Educational Needs; Disability Discrimination; Gifted and Talented Children; English as an Additional Language (EAL).

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child's attainment and progress against year group expectations. This ensures that our teaching is matched to the child's needs. For further details, see separate policy: Special Educational Needs.

We enable all pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Cognition and Learning	
Barriers	Provision
Information may not be understood or retained Accessing and understanding multi-step problems	<ul style="list-style-type: none"> • Retrieval practice to support through mental oral starters (nothing new just review). • Explicit link and reactivation of prior learning as 'way in' to new learning. • Pre-teach new concepts and key knowledge.
Memory- consolidation skills	<ul style="list-style-type: none"> • Use the working walls and whiteboard to show the focus of each lesson. How do lessons link together to develop knowledge? • Use symbols, images or objects to make it more accessible. • Referring to working/enquiry wall. • Use of concrete, pictorial and abstract learning. • Adapt pace of delivery to processing speeds. • Mixed-ability pairings to support discussion where identified. • Worked examples used to support and remind pupils. • Encourage the use of mind maps/pictures/flow charts. • Opportunities to apply maths skills and knowledge in other areas of the curriculum.
Communication and interaction	
Barriers	Provision
Understanding mathematical language Understanding mathematical concepts Understanding abstract concepts Processing multistep problems	<ul style="list-style-type: none"> • Recognise that the language of Maths may be challenging for many children – for example: The specific scientific use of everyday words such as 'square', or terms specific to maths, such as 'fraction'. • Pre-teach key vocabulary, then ensure multiple and regular exposure to these words and make them clearly visual in the classroom environment. • Label equipment with a symbol and word (dual coding) • Explicitly teach the meaning of key mathematical vocabulary in lessons. • Provide flashcards with key vocabulary – with visual cues. • Check children's understanding by inviting them to reformulate reasoning in their own words or in other ways. For example, after articulating $3 \times 5 = 15$, reference to repeated addition, use of number line etc • Use real objects as a starting point for developing the concepts and the language needed to describe, discuss and explain what pupils have observed or experienced. • Give children time to process and formulate their answers to questions before responding. • Use of manipulatives. • Use of worked examples and sharing these with pupils as a frame.

	<ul style="list-style-type: none"> • Provision of x-table squares to support pupils in conducting calculations. • Chunking up word problems and supporting pupils to identify steps in multi-step problems.
Physical and Sensory	
Barriers	Provision
<p>Difficulties impacting eyesight, hearing, movement, touch etc.</p> <p>Sensory processing difficulties.</p>	<ul style="list-style-type: none"> • Label new equipment and processes to help develop vocabulary. • Use of concrete manipulatives to support e.g Numicon. • Use of dual coding (symbols and words). • Choice and size of font. • Consider ventilation and positioning of children for anything that may have an odour. • Pre-teach showing/experiencing anything that may have sensory implications. • Ask for specialist advice on equipment for children with particular SEND e.g. tactile ridges on measuring glassware for children with a visual impairment. • Consider children hard of hearing when reading aloud, sit them in front of you so they can see your face. • Use of sensory aids as part of usual provision e.g. gloves, audio/visual support. • Consider pupil sensory audits and adaptations. • Use of technology including iPads and laptops. • Use of concentration aids. • Finger-strengthening exercises and busy fingers tasks.
Social, Emotional and Mental Health	
Barriers	Provision
<p>Anxiety</p> <p>Participation/ safety/ practical work</p>	<ul style="list-style-type: none"> • Consider carefully the groupings – prepare the children by ensuring they are aware of the group they will be working in. Assign roles to each member of the group with a clear outline of job roles. • You may need to specifically teach the skills of cooperation and interaction for practical work. • Controlled choices. • Clear expectations. • Use of adult scribe, my turn your turn, paired work • Deliver task in short achievable bursts rather than all at once such as cutting-up question sheets. • Use of whiteboards/ paper for working – pupils may be anxious about committing errors to paper. • Opportunities to develop social skills including being taught these discretely to support engagement in group work and collaborative learning. • Use of PSHE to discuss healthy relationships, promote

wellbeing and explore emotive topics within learning.

- Teacher modelling of 'getting stuck' and positive attitudes towards perseverance.

Assessment, Recording and Reporting

Short Term Assessments

Short-term assessments are an informal part of every lesson. Assessment opportunities should be matched to learning objectives and can be undertaken in different ways;

During every lesson

Teachers should target groups and react to the children's responses. If difficulties or misunderstandings occur, then teachers should try to adjust the lesson and address them straight away.

At intervals

Daily lessons, observations and gaps in understanding can be supported with a homework activity or continued targeted support.

Short-term assessments do not need to be recorded, since they are immediate reactions. Informal jottings or the use of post-it notes may be kept to help the teacher clarify progress over time.

Medium-Term Assessments

Medium-term assessments should focus on what the teacher is unsure about, not what they already know. They are used to:

1. Review and record the progress that the children are making over time.
2. Identify children's progress against curricular targets and intervention objectives.
3. Help to plan work over the next half term.
4. To provide information to feed into teacher assessments.

Long Term Assessments

Long-term assessments should focus on what children have achieved at the end of the school year or phase. Often they are used to track a pupil's progress and attainment against school or national expectations.

The main ways in which long-term assessments are undertaken at Bridgewater are:

1. At the end of each term teachers report to the head teacher whether each child in their class is working towards the expected standard, at the expected standard or exceeding the expected standard for their end of year group expectations.
2. The national tests are undertaken in Y6 with the MTC completed in Y4. Results are monitored and analysed.

Passing on information about a pupil's attainment and progress

Short and medium term assessment will be reported to parents at a twice yearly parents evening (Autumn and Spring term). End of year reports will be based on long term assessments, jargon free so that parents find them easy to follow.

Class records of curricular targets should be passed on to the next teacher, as this will give an indication of the child's progress. 'Do I know my number facts' scores should be tracked throughout the year and passed on.

EYFS

Mathematical understanding in the foundation stage is developed through stories, songs, games and imaginative play. The children are given the opportunity to count, sort and match objects, look for patterns, work with numbers, investigate shapes and measure items. Nursery mathematics is provided through 'continuous provision' within the context of the classroom with some focussed tasks if appropriate. In Reception children participate in a full mathematics lesson, lasting approximately 25 minutes, they also participate in guided group sessions once a week. Children also have access to continuous provision areas and a working wall.

Curriculum Time

Approximately 20% of the national curriculum teaching time should be set aside for the teaching and learning of mathematics in each year group.

The common planning format will allow consistency in the way in which learning objectives are met and outcomes will be observed and monitored through lesson observations. Findings are fed back to the head teacher and whole school issues discussed and acted upon. Our aim is to work flexibly, in order to meet the needs of particular cohorts of children at our school.

The Role of the Mathematics Subject Leader

At Bridgewater, we acknowledge that the subject leader's role is essential in implementing the NC and supporting staff in its implementation and delivery.

The mathematics subject leader will aim to support the above in a number of ways.

Leading colleagues effectively by demonstrating good practice, knowing the subject, planning meetings, recognising the value and the contribution of others, encouraging less confident colleagues and writing and evaluating curriculum improvement plans.

Gathering information by classroom observation, discussions with staff and children, analysis of planning, looking at children's work, analysing formal test results, monitoring and organising resources and analysing/evaluating school development plans.

Organising the subject and resources effectively by cataloguing resources, identifying gaps in resources, prioritising needs, managing the budget effectively, deploying resources and arranging staff inset.

Interacting with the wider world by communicating with parents, governors, LA advisors and participating in professional development projects.

Conclusion

This policy should be read in conjunction with the following school policies:

- Teaching and Learning
- Assessment and Record Keeping

- Feedback and Marking
- Equal Opportunities
- Health and Safety
- SEND
- Computing

Bridgewater Primary Mathematics Policy
R Thornley (Mathematics Subject Leader).
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