

Mathematics Policy

Our mission is to inspire, nurture and challenge every learner to achieve their full potential.

Introduction

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives. Mathematics offers a way of analysing and synthesising our experiences through acts of describing, organising, explaining and predicting in order to make sense of the real world. At Holbrook we follow a mastery approach to enable all children to have a deep conceptual understanding of mathematics.

Aims:

- to promote confidence and competence with mathematical concepts;
- to develop a deeper understanding of the connections between mathematical concepts;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space; develop measuring skills in a range of contexts and extend their awareness of how data can be represented in a variety of graphical forms;
- to understand the importance of mathematics in everyday life;
- to challenge and inspire pupils to the highest possible standards;
- to promote enjoyment of learning through practical activity, exploration and discussion.

Principles of Practice

There are six key principles for teaching Mathematics at Holbrook. These are:

1. There will be a dedicated Mathematics lesson every day, the majority of which will include aspects of fluency, reasoning and problem solving;
2. The whole class will experience direct teaching and interactive questioning;
3. There will be an emphasis on careful and accurate calculation and recording;
4. Learning will be personalised with all pupils engaged in Mathematics lessons related to common objectives;
5. There will be an emphasis on using a range of manipulatives and concrete resources to aid understanding;
6. Agreed Mathematical language will be used with and by pupils. (see Appendix)

Teaching and Learning

- Mathematics lessons are planned to ensure progress for every child. Assessment for learning is used alongside planning guidance to ensure all children have opportunities for success. Challenge is a key feature of mathematics at Holbrook Primary School. A range of methods are taught including mental, paper and pencil and calculator skills.
- Assessment in Mathematics is an on-going process. Teachers and Teaching Assistants work closely with children to gain an accurate picture of their attainment and progress. This is combined with termly summative assessments which are used to inform planning and progression.

- Opportunities for children to apply their learning outside of the maths lesson are sought. Cross-curricular links are made wherever possible and real life contexts are provided as appropriate.
- The specific vocabulary of mathematics is taught and modelled. Purposeful speaking and listening in maths is encouraged and sentence stems are used, (see Appendix).
- Pre and remediated teaching is used to support a mastery approach and ensure all children achieve their potential.
- Teaching and learning in Mathematics must ensure that all learning styles of the children are met, using the concrete / pictorial / abstract mastery approach, (see calculation policy) through a wide range of learning opportunities. Key concepts are thoroughly taught through guided work and supported activities. Independent activities are planned to consolidate and extend learning.

Planning

Mathematics is a core subject in the National Curriculum, and we use the National Curriculum for Maths as the basis for implementing the statutory requirements of the programme of study for Mathematics.

The National Curriculum gives a detailed outline of what we teach in the long term, while our short term and medium term planning identifies the key objectives we teach in each year and the learning objectives for each lesson.

In EYFS, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give all the children opportunities to develop their understanding of number, measurement, pattern, shape and space, through varied activities that allow them to enjoy, explore, practise and talk confidently about Mathematics.

Inclusion: Special Educational Needs and EAL

At Holbrook we teach Mathematics to all children, whatever their ability and individual needs. Mathematics forms part of the school's broad and balanced curriculum. Through our Mathematics teaching we provide learning opportunities that enable all pupils to make good progress.

We work hard to meet the needs of those pupils with special educational needs, those with disabilities, and those learning English as an additional language, and we take all reasonable steps to achieve this.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors, including classroom organisation, teaching materials, teaching style, differentiation, so that we can take some additional or different actions to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This ensures that our teaching is matched to the child's needs.

Intervention may lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to Mathematics.

More Able and Higher Attaining Pupils

The class teacher will aim to identify pupils who may be gifted in Mathematics and provide them with appropriate learning opportunities to deepen their understanding.

All pupils will be taught so that they remain in the zone of challenge. Questions, reasoning and problem solving activities which stretch and extend thinking will be used.

Equal opportunities

Teachers at Holbrook Primary School are aware of the issues related to gender and Mathematics learning and, in particular, the difference in performance by boys and girls in national tests. If boys and girls are to have equal access, teachers need to consider these in all their complexity.

Resources

In all classrooms a range of resources are available to all children. Number lines and small apparatus, including Numicon, are accessible to all.

Each teacher has a copy of Wiltshire Council's 'Bare Necessities' book and other books of Mathematical games are available.

As well as class based resources, there is a bank of materials and apparatus in the resources room to support Mathematics teaching. These include items that are needed when focusing on specific areas of Mathematics, e.g. time.

There are picture books which support understanding in Mathematics in the library.

There are resource posters in every classroom to support conceptual understanding.

Assessment and Recording

The teacher carries out formative assessment on a daily and weekly basis to inform planning. It involves identifying children's progress against learning objectives, determining what a child has already achieved and moving them on to the next stage of their learning development.

More formal assessments in Mathematics take place at the end of each block. These assessments are used by teachers to determine next steps targets and to inform planning. Progress and attainment is also reported to parents through 'pupil passports' and to governors through a data report.

Marking and feedback in Mathematics is linked to the learning objective and signs of success (success criteria). Over time, assessment should build a picture of pupils' abilities in Mathematics.

Monitoring and Evaluation

The quality of teaching in Mathematics, the standards attained by pupils, and their progress will be a regular part of the school's monitoring of learning, teaching and pupil progress. The subject leader for Mathematics will review the progress of pupils using available data and follow this up with work scrutiny, classroom visits, learning walks, lesson observations and pupil interviews.

The governing body will receive regular reports from the subject leader and may carry out their own monitoring exercises. Governors will be invited to visit classrooms to enable them to carry out their responsibilities.

Conclusion

This policy should be considered alongside other relevant policies, especially the Calculation Policy. It will be reviewed by the governing body as part of its schedule of policy review.

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