



MATHEMATICS POLICY

Introduction

This policy is a statement of the aims, principals and strategies for the teaching and learning of mathematics at The Hyde.

What is Mathematics?

Mathematics is a body of knowledge which provides a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. Mathematics also provides the means for creating new imaginative worlds to explore, and it is through this exploration that new mathematics is created and current ideas are modified and extended.

Aims

- Become fluent in mathematics
- Develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisation, and developing an argument, justification or proof using mathematical language.
- Can solve 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.

Principles of the Teaching and Learning of Mathematics

Mathematics is a core subject in the National Curriculum and is important because:-

- It is widely used in society, both in everyday situations and in the world of work
- It can be used to represent or communicate ideas, to predict, to explain and to verify
- It is interesting and enjoyable, providing intellectual challenge and aesthetic pleasure.

Foundation Stage

In the Foundation Stage mathematics is taught using a variety of strategies, including small group and one-to-one work, as well as, planned free play activities.

The fundamental skills and knowledge of the subject are set out in the Early Years Foundation Stage Framework where they are categorised into 2 specific areas :-

1. Number
2. Shape space and measures

Each area is split into objectives in order for children to meet the relevant early learning goal (ELG).

Key Stages One & Two

The fundamental skills, knowledge and concepts of the subject are set out in "The National Curriculum" where they are categorised into areas of learning:-

Number and place value

Addition and subtraction

Multiplication and division

Fractions (from Y1)

Measurement

Geometry

Statistics (from Y2)





Strategies for the Teaching of Mathematics

Curriculum

The school follows the National Curriculum (2014)

Mathematics is taught:-

- EYFS – short 20 minutes sessions as timetabled. Children will also have the opportunity to develop mathematical understanding through free play activities.
- In both KS1 and KS2, Mathematics is timetables for one hour daily.
- Mathematics should also be taught across the curriculum where appropriate. Teachers should seek to provide opportunities for mathematical reasoning in all subjects in order that children appreciate the importance of mathematics.

Organisation of teaching

In KS1 and KS2, the one hour daily maths lesson is planned weekly. Planning should consider the needs of the class/ cohort taking note of the National Curriculum requirements. Teachers are required to differentiate their lesson so that all pupils, including SEN, EAL and AGT, are able to access the learning. Setting may also be used in Upper KS2.

Information and Communication Technology

Interactive whiteboards are available in each classroom as well as a bank of resources which can be found on the school server to support the teaching of mathematics. Whilst available across the school, calculators should not be used as a substitute for good written and mental arithmetic.

Problem Solving has a special emphasis at The Hyde, staff are expected to allow children to use and apply their mathematical knowledge to a variety of routine and non-routine investigations including real-life contexts.

Equal Opportunities

In line with our Equal Opportunities Policy we are committed to providing a teaching environment conducive to learning for all. Each child is valued, respected and challenged regardless of race, gender, religion, social background, culture or disability. Whenever possible materials and artefacts will reflect a varied cultural dimension

Special Educational Needs

It is important to note that the responsibility of the progress and attainment of all children lies with the class teacher. However, it is noted that some children will need additional support. The SENCO, in partnership with class teachers and support staff will provide appropriate intervention time in order to meet the needs of the children who are not meeting age related expectations.

Able, Gifted and Talented

The school recognises that there are children who have mathematical abilities beyond their age related expectations. In the first instance, the child is identified as able and/or gifted by the class teacher bringing it to the attention of the AG&T leader. Where necessary the class teacher should seek advice from the leader, Maths team and SLT about how to plan appropriately to best support their needs.

Homework

Please refer to homework policy.





Excellence in Mathematics is celebrated:-

- with the child verbally, stickers and through written comment
- with parents through consultations and reports
- in displayed work (class and school)
- in sharing assemblies
- completing targets and setting new ones

Strategies for Ensuring Progress and Continuity

Planning in Mathematics is a process in which all teachers are involved:-

- the National Curriculum is used throughout the school from Year 1 onwards
- the Early Learning Goals for mathematics guide the learning of the Foundation Stage.
- staff meetings are used to discuss the mathematics curriculum and ensure consistency of methods, approach and standards of teaching
- weekly plans are considered by the year group during their PPA time with support from the SLT, if required. Medium term plans are considered as part of the school wide curriculum overview.
- all planning is monitored by the Maths and Leadership Team.
- the School Improvement Plan, developed through a process of collaboration between staff, and approved by governors, drives the maths development

Role of the Maths Team

The role of the leader is to:-

- take the lead in policy development and monitoring of The National Curriculum designed to ensure progression and continuity in mathematics throughout the school
- support colleagues in their development of detailed work plans and implementation of the National Curriculum and in assessment and record keeping activities
- take lead (model) lessons for staff who will benefit from observing different approaches, in particular NQT's, staff new to a key stage and experienced staff who would benefit from further development.
- monitor progress in mathematics and advise the head teacher on action needed
- keep up-to-date with developments in mathematics education, pedagogical issues and research, disseminating relevant information to colleagues as appropriate
- establish, develop and maintain contacts with: advisers, outside agencies, other schools, parents and governors
- support colleagues by leading INSET and being aware of INSET opportunities
- gather information to inform budget and planning priorities for the school improvement plan.
- provide support in the induction of new staff.

Feedback to pupils primarily takes place through written communication in books. Teachers mark work as and when recorded in books, helping to scaffold the child's understanding by pointing to 'next steps'. Children are given time to reflect upon and respond to marking as appropriate which enables them to benefit from the feedback. The child's response is acknowledged by the teacher. Verbal feedback is also understood to be an integral part of feedback, especially in EYFS and Year 1. Teachers should ensure that verbal feedback is utilised continuously, identifying children's targets as and when appropriate.





Marking

Marking must follow the school's policy. The aims of the policy is to be encouraging, supportive and diagnostic, through the use of a star and a wish. The star needs to refer to the work undertaken, identifying how successful the child was in securing the knowledge or skill taught. The wish should identify next steps/target for the child to enable progress in learning. Children must be given opportunities to respond to teacher comments in purple pen. This may take the form of a simple acknowledgment of comments or an answer to a specific question the teacher has asked.

Strategies for Recording and Reporting

The school has formulated its own APP style assessment tool to enable teachers to assess the individual child's knowledge and understanding of the National Curriculum 2014 objectives. This is an ongoing system. Teachers are required to plan for assessment opportunities in order to gauge children's ability to apply knowledge and skills previously taught. This then forms the basis of a teacher judgement as to whether the child is emerging, expected or exceeding age related expectations. These judgements are moderated half-termly in phase meeting and by the SLT using a range of evidence including learning based in books and other sources.

Suitable methods for assessment include:

- open ended tasks that promote problem solving, investigative and higher level thinking strategies.
- planned opportunities for children to use and apply taught knowledge and skills in a different and where appropriate, real-life context.
- use of whole school layered targets in each year group
- class and group discussions
- formal marking that highlights next steps
- use of ICT resources e.g. testbase

Formal Summative Assessment takes the form of statutory tests in Years 2 and 6.

Currently the school uses old style National Curriculum levels for Year 1 to 6 using the school's revised APP assessment system. From September 2015, the school will be using the 'assessing without levels' format. Whilst there is no formal requirement to test in Years 1, 3, 4 and 5, teachers are able to access current testing materials which are available from the Maths leader.

Records of Progress kept for children contain:-

- photographs of children's practical work
- evidence of children using and applying their knowledge
- records of their progress against the Early Learning Goals using Tapestry
- children's books (individual)
- termly targets shared and evaluated at Parents' Consultations
- educational plans as appropriate
- end of key stage assessments
- half termly assessments and moderation in KS1 and KS2
- end of year assessments in both key stages

Reporting to Parents is done three times a year through consultations and annually through a written report. Reporting in mathematics will focus on each child's:

- attitudes to mathematics





- competence in the National Curriculum
- progress against the Early Learning Goals
- ability to apply mathematical knowledge to new situations
- end of key stage S.A.T.s results.
- child's progress with their targets.

Strategies for the Use of Resources

Classroom resources in Mathematics include :-

- PC, projectors, laptops, I-Pads and interactive whiteboards
- A wide variety of maths ICT software, including Mathletics, Interactive Essentials and ITPs
- A learning wall and resources, including numicon, for children to independently access
- a variety of equipment for measuring and data handling activities
- a variety of equipment for work on number, shape and space
- mathematical games and puzzles
- DFE and QCA publications including CD ROMs
- QCA Testbase materials.