Hempshill Hall Primary School



Mathematics Policy

Reviewed September 2025

Introduction

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. (National Curriculum 2014).

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. The discipline is integral to all aspects of life and with this in mind, we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will continue to mature throughout their lives.

Intent, Implementation, Impact

Intent

- To build upon children's knowledge and understanding from Foundation Stage to Year 6 following the expectations of the National Curriculum 2014.
- To become fluent in the fundamentals of mathematics.
- To develop conceptual understanding and the ability to recall and apply knowledge rapidly.
- To reason and problem solve by applying mathematics to a variety of increasingly complex contexts.
- To give children understanding of how mathematics can be used in the real world.
- To enjoy and develop an appreciation for mathematics**.**

Implementation

- The school uses the 'Master the Curriculum' and 'White Rose Schemes of Learning', to ensure full topic coverage.
- Children follow a consistent approach to learning (see below).
- All children are challenged appropriately throughout the lesson.
- Children are taught consistent strategies to problem solving following a whole school model.
- Children are encouraged to explore, apply and evaluate their mathematical approach to develop a deeper understanding when solving problems, often with a real-life context.
- Children are individually assessed and rewarded for rapid recall of number bonds (KS1) and times tables (Years 2-6).
- A love of maths is encouraged throughout school via links with others subjects, applying an ever-growing range of skills with growing independence.
- Children's progress and attainment is monitored and tracked.
- Children recap learning from previous units weekly.

Impact

- Most children reach the end of year expectations in terms of attainment and progress.
- Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times tables.
- Children develop and refine their maths skills through well planned sequences of learning.
- Children are able to independently tackle real life problems by applying their maths knowledge and problem-solving strategies.
- Children explain and expand their answers using mathematical language and vocabulary, linking to the whole school oracy focus.
- Children enjoying mathematics and look forward to their lessons.

National Curriculum aims

We aim to develop lively, enquiring minds, encouraging pupils to become self-motivated, confident and capable in order to solve problems that will become an integral part of their future.

The National Curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, 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.

Our Curriculum

Long term planning:

- The National Curriculum for Mathematics 2014, Development Matters, Birth to 5 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 F2-6 use the **White Rose Maths Hub** schemes of learning as their medium-term planning guide. F1 use the **Master the Curriculum** medium term planning scheme which aligns with both Development Matters and Birth to 5 Matters as well as the White Rose maths hub to provide consistency for our children as they progress through the school.
- These schemes provide teachers with exemplification for maths objectives and taught skills are broken down into fluency, reasoning and problem solving, key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart.

Short term planning:

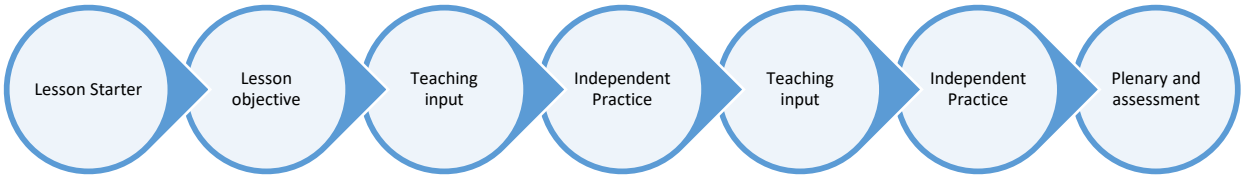
- The above schemes of learning support daily lesson planning. Lessons are planned towards achieving a common lesson structure (see below) and are monitored at intervals by the mathematics subject leader. Teachers of the EYFS ensure the children learn through a mixture of adult led activities and continuous provision both inside and outside of the classroom.

Teaching Methods

All teaching follows an approach aligned to the adopted, whole school Teaching and Learning Protocols. All classes have a daily mathematics lesson where possible. At Hempshill Hall, we follow a mastery approach to teaching mathematics which aims to teach the whole class at broadly the same pace. Each topic is studied in depth and the teacher does not move to the next stage until all children demonstrate that they have a secure understanding of mathematical concepts. All KS2 children will also access a separate times table session at least two times a week following the times table policy.

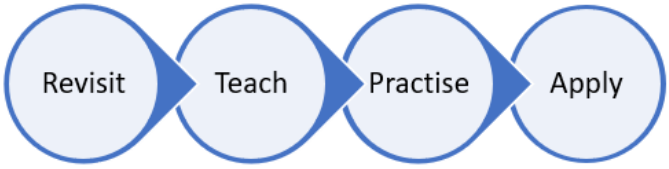
Lessons adopt a 'ping pong teaching' approach with intelligent practice at the core of their design. The emphasis in lessons is to ensure teaching and learning is interactive and lively, to engage all children and encourage them to talk about mathematics. Children will have opportunities to explore concepts through concrete, pictorial and abstract examples.

All maths lessons (KS1 and KS2) involve elements of:



Amount of teaching input will be dependent by the individual small steps in learning and teacher judgement.

EYFS lessons follow the below approach:



Focus is placed on repetition to embed key skills and children are taught through visual, auditory and kinaesthetic approaches to learning. Learning continues through continuous provision where children can use the resources independently to revisit learning in their own choosing time.

How does Maths link to other subjects?

Maths is evident across the curriculum in a variety of different subject areas. Below are some examples of where cross curricular maths occurs in school.

Science – Statistics - Venn diagrams for sorting; pictograms; tables; graphs to present scientific data and investigation results; calculating the mean average of a set of data. Number – counting. Geometry - angles of reflection in Light. Measurement - recording results; devising experiments e.g. drop ball from 1.5m.

History - Number - placing events on timelines/sequencing of events; Statistics - charts and graphs to display historical information.

Geography – Geometry - coordinates and grid references; angles of latitude and longitude. Number - negative numbers, e.g. temperatures; population sizes. Statistics - interpreting and creating graphs for human and physical geography.

Art – Patterns, fractions, estimation, measurement, symmetry, mathematical impact over time, shape, position and movement.

DT – Measurement - measurement of materials across a range of DT projects; reading scales. Ratio and proportion - choosing ingredients for recipes in cooking. Number - estimation when calculating quantities of raw materials. Statistics - creating graphs and tables to evaluate products.

Computing – Geometry - angles when coding to create shapes; using shapes to create pictures). Algebra - using Excel to create data spreadsheets.

PE - Measurement - measuring times and distances; conversion of measures. Geometry - exploring shape (e.g. gymnastics); orienteering using grid references/coordinates. Number - sequences in dance and gymnastics. Maths races/treasure hunts across a range of mathematical areas (e.g. Times tables, solving word problems).

Special educational needs & disabilities (SEND)

At Hempshill we follow a mastery approach to teaching maths. Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Adaptations, linked to our whole school focus on adaptive teaching, support all learners. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff and overseen by the SENCO and/or the class teacher. Where necessary, teachers will use B Squared to track SEND children's progress.

Assessment

- Children in the Foundation Stage are assessed in accordance with the EYFS curriculum.
- The White Rose assessment tracker is use in years 1-6. Data is collected after small steps have been taught and are highlighted red, orange, green or blue based upon evidence from the child.
- Children who are falling behind/making accelerated progress are highlighted to staff who take steps to support where necessary.
- Marking and responding to feedback– see whole school marking policy.
- SATs – These take place in Years 2 and 6
- Summative assessment – at agreed assessment points, children will undertake Standardised NTS Assessments created by Rising Stars.

Monitoring

The curriculum leader, alongside SLT and governors, is responsible for monitoring and evaluating curriculum delivery and outcomes. This is achieved through regular book scrutiny, planning scrutiny, resource audits, learning walks, pupil voice and lesson observations.

Learning at Home

Homework reinforces learning to develop fluency and reasoning skills.

UKS2 – One piece of maths homework is set on a weekly basis along with times tables practice.
LKS2 – Children in lower KS2 are expected to practise their times tables at least 3 times a week for 10 minutes.

Additional 'learning from home resources' are shared with parents and their use encouraged. These include the Times Tables Rockstars and One Minute maths materials as well as a range of resources on the school website.

Role of Subject Leader

- The subject leader, together with the head teacher, are responsible for monitoring and evaluating the quality of teaching and learning of mathematics across the school and ensuring continuity and coverage of the subject.
- The subject leader is responsible for collecting and analysing school data in consultation with the assessment co-ordinator.
- The subject leader will undertake any relevant training and keep abreast of current initiatives.
- The subject leader will co-ordinate with other leaders and work on projects to improve the teaching and learning of mathematics in all schools.
- The subject leader will liaise with the governor with responsibility for maths. They will keep them informed of standards of attainment, targets and current initiatives (meetings once per term).

How can maths help in future careers.

Maths is crucial in everyday life and is used in a range of jobs and professions. As outlined in the National Curriculum;

> It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment

Examples of professions where maths is required include:

accountant, scientist, teacher, statistician, game designer, astronomer, project manager, architect, office manager, business owner, financial advisor, writer, shop worker.

This policy was written in September 2025 and will be reviewed September 2026.