HOWE DELL PRIMARY SCHOOL
Maths Policy
Autumn 2025
Next review: Autumn 2027

Intent

At Howe Dell, we use the Herts for Learning Essential Maths v2 resources to help us deliver the Maths curriculum. Maths teaching is progressive and sequential inspiring children to reflect on previous knowledge to support their new learning. Teachers will use the associated destination questions, diagnostics and assessment tests to ensure children's Maths knowledge is robust. For example in Early Years, children are taught to count up to and then beyond 10. This is then used as the foundation when moving into Year 1, where children will count up to and across 100, as well as counting in groups of 2, 5 and 10. This is developed further in Year 2 with counting forward and backward in 10s from any given number. The HfL Essential Maths resources incorporate tracking back and forwards for each year group across all domains.

Aims of the National Curriculum

Philosophy

The National Curriculum states that:

"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."

At Howe Dell we see Maths very much as a multi-discipline, cross curricular, interconnected subject which should encourage creativity. This philosophy sits well with our ESD ethos. As much revolves around the discussion about Maths between talk partners as it does the completion of calculations. We want the children to see Mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment. To that end, a high-quality, inter-related and creative Maths experience should be one that develops the children's ability to think mathematically and one which allows them to apply the tools to which they have been exposed in a variety of ways.

Following the introduction of the National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become **FLUENT**
- **REASON** and **EXPLAIN** mathematically
- Can **SOLVE PROBLEMS**

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Maths knowledge. In doing so they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

We want Maths to be taught in a way that:

- delivers Maths in line with the National Curriculum guidelines
- ensures the delivery of Maths is filled with cross curricular opportunities
- creates a lively, exciting and stimulating environment
- promotes the concept that acquiring Maths knowledge and skills provides the foundation for understanding the world around the children
- develops mental strategies
- encourages children to use mathematical vocabulary to reason and explain
- allows time for partner talk in order to stimulate and develop a curiosity for Maths
- challenges children to stretch themselves and take risks in their learning
- creates a sense of awe and wonder surrounding Maths
- ensures children across the school are secure in their understanding of number and number relationships
- helps children to become fluent
- provides children with the opportunity for low entry-high ceiling challenges

Early Years

In order to support the transition from Early Years to Key Stage 1, we also use the Herts for Learning Essential Maths resources in Early Years, for which staff have received training.

The sequences are written as a spiral curriculum in which learning is built upon step by step, sequence by sequence, providing a progression in the children's conceptual understanding: it emphasises the necessity for repetition and rich variation in context that is essential for all good practice. The sequencing of the learning is intended to inform the direct teaching and adult roles when responding to the children's learning with mathematical modelling and highly effective language included, that will provide strong teaching points for further exploration across the environment. Mathematical modelling is used throughout. Reliable manipulatives and models are deliberately

repeated in order to become familiar and reinforce the conceptual understanding of the children. This will develop firm foundations for children to move on to maths in Year 1. The HfL Learning Outcomes have been designed to develop understanding over time working towards meeting the end of year objectives in the Early Learning Goals.

Key Stage One

The principal focus of mathematics teaching in Key Stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources (e.g. concrete objects and measuring tools).

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of Year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.

Key Stage Two

The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. This is supported by our MTC Action Plan, which provides detailed guidance of the teaching practices and resources used from Yr 2 upwards.

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

Implementation

Planning

Teachers will work in pairs within each year group to plan and deliver lessons that suit the particular learning styles of the children within the year group, using the HfL Essential Maths resources.

This will include using destination questions to check that knowledge has been retained, as well as diagnostics and end-of-term tests to identify gaps in learning and inform next steps for quality first teaching. They will use their own judgement and formative assessment to ensure a flexible approach is adopted which recognises the pace of learning within the classroom.

Individual, paired and group work will be used across a series of lessons and children will be provided with challenges or open-ended problem-solving tasks to demonstrate their understanding. Across a range of lessons children should be allowed to engage in mathematical discussion (talk partner or group work), investigations, problem solving, practical experiences and written methods, as well as allowing for time to demonstrate their understanding through gap tasks.

Vocabulary

Teaching and learning mathematical language are key to developing deep mathematical understanding. The ability to use words to explain, justify and communicate mathematically is important to help pupils clarify and organise their mathematical schema. Fluency in mathematical language not only allows a pupil to communicate their understanding accurately but also relieves cognitive load, permitting more focus on the lengthier tasks. For example, procedural computations or multi-step problems.

To help teachers introduce the correct vocabulary at the appropriate time, ESSENTIALmaths: Vocabulary index is organised firstly into year group focuses and then into strand focuses.

Professional Development

All staff at Howe Dell attend staff PD sessions, which provide updates for the subject and introduce them to new teaching methodologies and ideas. The school has been involved with HfL Education and benefits from the support of the Mathematics Adviser, who provide support and training on the use of manipulatives, introduced the new Practice and Reasoning sheets and provided continuous support with the use of Essential Maths v2.

We have provided training for teaching assistants for the confident and accurate use of times table teaching methodology and resources, the use of manipulatives and scaffolding.

Impact

Pupil Book Study

Senior leaders and subject leaders regularly undertake book studies to monitor the effectiveness of teaching and learning. This includes sessions with small groups of pupils using questioning to check and ensure information and knowledge is acquired and understood with increasing confidence. Feedback is given to teaching staff to inform future planning.

Ongoing Teacher Assessment

Teachers assess pupils throughout each session to monitor pupils and inform planning for subsequent sessions. Analyse – Prepare – Achieve Diagnostics are used at the beginning of the spring and summer term to identify gaps and to inform planning in the short to medium term, while an end of summer term Diagnostic cycle is used to support transition and the planning of next steps for the new year groups. Summative assessment is undertaken at the end of the summer term in order to support teacher assessment and for leadership to determine the profile of the school. Pupil Outcome Meetings are held with all teachers following the publication of data and each child discussed in terms of progress and required interventions.