Curriculum Policy for Mathematics	
DATE OF REVIEW: Autumn 2024	
DATE OF NEXT REVIEW: Autumn 2026	
TO BE REVIEWED BY: Teaching and Learning committee	

Introduction

All pupils are entitled to a broad and balanced curriculum regardless of race, gender, religion or ability.

Maths is a Core Subject in the National Curriculum. As a Core Subject, it is compulsory and remains at the heart of teaching and learning throughout the EYFS and each key stage. This policy outlines the Intent, Implementation and Impact of the Maths taught in our school. The Implementation of this policy is the responsibility of all teaching staff. The school policy for Maths reflects the consensus of opinion of the whole teaching staff and has the full agreement of the Governing Body.

Intent

We aspire for our pupils to be competent, creative mathematicians who, within their learning, develop the skills of perseverance and resilience and are confident to take risks. Alongside their mathematical skills and knowledge, they will come to understand and appreciate the significance and power of mathematics across subjects, within their daily lives and in the context of the wider world. The National Curriculum 2014 states, "Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems." We therefore believe that every child deserves the opportunity to develop ease, confidence and curiosity within mathematics.

With this comes an appreciation of the beauty and power of a subject which is critical to the technological and scientific advancement of their world. Mathematics is therefore a fundamental part of our pupils' development throughout school.

From an early age, we strive to ensure that our pupils have access to high-quality mathematics provision and resources that, whilst being closely aligned with the National Curriculum, promote an understanding of the world, provide challenge as well as success, and result in a sense of enjoyment. The basic skills of number recognition and subitising are introduced in EYFS and the children gain a deep understanding of what the numbers mean and what they look like. As an Early adopter school understanding the importance of the

basics has been emphasised. This learning continues throughout the school if they are not working at ARE.

Mathematics is crucial and integral to everyday life. At Hatherleigh, the teaching of mathematics is creative and engaging, providing pupils with many opportunities to explore and develop their mathematical understanding via a Mastery approach, where blocks of new learning build directly upon previous learning, term on term and year on year.

The result being cumulative, deeply embedded learning that invites pupils to make connections, both between different mathematical areas and, significantly, across the curriculum.

As a direct result of high-quality teaching, and the very best resources, our independent learners become fluent in the fundamentals of mathematics, can reason mathematically and solve-problems through the application of skills across a range of subject areas.

Implementation

A Mastery approach breaks down subject matter and learning content into units with clearly specified objectives which are pursued until they are achieved. Learners work through each block of content in a series of sequential small steps, aiming to demonstrate high levels of success throughout a range of tasks, before progressing to the next unit. Those finding it more difficult to grasp particular mathematical concepts are aided through additional support; including, preteaching, small group discussions, 1 to 1 or homework. To support the children retaining the skills taught Early work sheets, Flashback 4, quick recaps or Maths jotters are used to revisit recently taught skills. A Retrieval programme has been implemented to support classes revisiting previous learning for key skills and areas that are planned in once a year following the Whiterose scheme. This is linked to the Prioritisation Curriculum published by NCETM. Using this and The Ready to Progress documents our aim is to fill the gaps in previous learning caused by the interrupted school years. Our curriculum is designed to develop pupil's knowledge and understanding of mathematical concepts from the EYFS through to the end of Year 6. In order to facilitate this, all teaching is planned in line with the 'White Rose Sequence of Learning' for each year group. Within this document, the National Curriculum objectives are chunked into mathematical areas e.g. 'Fractions', 'Place Value', 'Multiplication and Division' etc. Each area is broken down into small steps to support the development of pupil's learning and understanding within the unit. Maths Talk is a key part in all lessons and children are encouraged to explain their thinking as well as their answers. Opportunities for reasoning activities are clearly shown on the planning and recorded in their books either by the children or scribed by the adults working in the class. Alongside this, the school's Calculation Policy is followed by all members of staff within school to ensure a consistent approach to teaching the four operations (addition, subtraction, multiplication and division) over time.

Using the Small Steps taken from White Rose document, along with ongoing assessment of learning, teachers deliver lessons that are carefully crafted to meet the precise needs of pupils of all abilities. At the beginning of each new unit of work, key vocabulary is introduced and revisited regularly to develop mathematical language acquisition, which is further

embedded as the unit progresses. These words are displayed on the walking wall or at the front of the classroom so that pupils can refer to and apply these regularly throughout their learning. This is progressive year-on-year and the school's Mathematics Vocabulary Lists capture this concisely.

The skills and vocabulary, which the children are expected to have understood form the basis for elicitation tasks where appropriate. An end of sequence assessment or task is given to children where appropriate to demonstrate progress in understanding and identify key objectives understood.

Within each lesson, teachers deliver and model the skill that pupils are intended to acquire, apply and deepen throughout a range of increasingly challenging tasks. This approach enables pupils to move through the different stages of learning at a pace appropriate to their current level of understanding. Independent work challenges and encourages pupils to draw on a range of skills, new and previously taught, in order to develop their mathematical thinking and become more confident in solving more complex mathematical problems and reasoning tasks.

Teaching links mathematical concepts to real life situations wherever possible so that pupils can make connections between their learning within the classroom and the wider world. Memorable stem sentences are used to scaffold learning and support pupils as they practise and internalise important mathematical processes and knowledge. Children are expected to speak clearly and in full sentences and begin to develop a 'ping pong' style of responses during the class or group discussions.

Where appropriate, pictorial representations, such as the Bar Model and Part Whole image are used to support visualisation and therefore deepen understanding of mathematical concepts. Pupils are encouraged to use such representations as an integral feature of their learning at all levels, leading to an in-depth understanding and ability to articulate their methods.

Teaching places a high importance on the development of key facts including multiplication and division, in order to avoid cognitive overload in the working memory when learning new concepts. In a mission to have 'facts at their fingertips' pupils are encouraged to use the Times Tables Rock Stars online platform, in school and at home, to practise their multiplication tables and the derived facts, whilst increasing their recall time. Each year group has a target number of times tables to learn, leading up to year 4 being able to pass the Multiplication Tables Check in June. Once children are fluent with recalling the facts they are encouraged to become fluent with applying that knowledge. Certificates are awarded when the children demonstrate confident recall of each times table and Times Table Rock Stars is used regularly with children being encouraged to access it at home. Half termly Leaderboard certificates celebrate the top 10 Studio scores. Numbots is used across the school until they have completed all the stages to improve children's fluency of basic number skills.

Our dedication to inclusive practice means that, regardless of their ability, pupils are aided to access learning with the highest possible levels of independence, due to carefully designed tasks. Where necessary, pupils requiring extra help are sensitively supported, with minimal disruption to quality-first teaching. Our ambition is to narrow the gap between different

groups of pupils and to ensure that their life-opportunities are equal, irrespective of background or ability.

Extended Curriculum Opportunities

Some areas of the Maths curriculum are revisited in other areas such as PE, Science and Art and Music. Staff support children learning to tell the time by referring to the analogue clocks in all classes and with the understanding of the length of activities throughout the day/year. In the EYFS outdoor and covered area, and their continuous provision planning provides children with equipment and toys for the children to access Mathematical skills on a daily basis (sand tray, water tray etc).

Impact

Hatherleigh's pupils are keen and able mathematicians who demonstrate an immense thirst for learning within their work. This is tangible at all levels, whether it be their eagerness to answer mathematically related questions; the way in which pupils in the early years enjoy manipulating mathematical equipment throughout their independent activities; or the mood of excitement and anticipation in the classroom as pupils gear up to beat their personal bests in times tables and mathematical challenges.
In lessons, pupils demonstrate quick recall of facts and procedures, and as a result are able to make connections between all areas of the subject, with an understanding that what they already know will support them with what they need to find out. When problem solving, pupils exhibit resilience and persevere in order to reach their end goal; this is always accompanied by a sense of pride and achievement in their own and each other's success.

As they work collaboratively with their learning partners, our pupils are able to articulate their mathematical reasoning and support one another's understanding through their well-developed and focused discussions. Pupils enjoy proving that they have mastered a mathematical skill or concept by illustrating it in multiple ways using the appropriate mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations, across all subject areas. Our pupils complete the Primary phase of their education, as well equipped mathematicians who understand and appreciate the importance of mathematics for life.