

Maths Policy

Hebburn Lakes Primary is a happy, successful, supportive school where *Everyone Cares* and *Everyone Matters*. We take pride in our children learning in a positive, safe and welcoming environment, and through the delivery of a rich and varied curriculum we:

Work Together setting the highest expectations and levels of respect for each other,

Learn Together by having the courage and confidence to take risks and

Achieve Together through aspiring to be the best we can be throughout our journey to become independent lifelong learners.

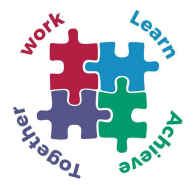
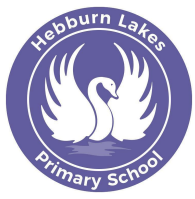
Policy Approved by Governing Body:

Chair of governors:

Date Nov 20

Head Teacher:

Date: Nov 20



Review Date: November 2023

Intent

At Hebburn Lakes Primary School, we believe that Mathematics is an important part of children's development from an early age and should continue throughout school. We believe that children are far more confident, successful, and resilient learners, if they have a deep and lasting understanding of the building blocks of the number system. As such, we have introduced a mastery based curriculum, drawing insight, training, and support from a Maths Hub specialist. We have introduced the White Rose Maths scheme, designed for all children from Reception to Year 6.

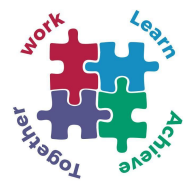
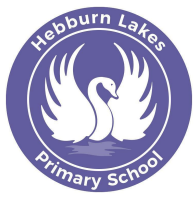
We intend to deliver a curriculum which will:

- Allow children to be part of creative and engaging lessons that will give them a range of opportunities to EXPLORE mathematics using the White Rose Maths mastery curriculum approach.
- Support each pupil by giving them a chance to BELIEVE in themselves as mathematicians and to develop the power of resilience and perseverance when faced with mathematical challenges.
- Reject the idea that some people just "can't do maths," as it is too difficult.

At Hebburn Lakes Primary, we recognise that mathematics underpins much of our daily lives and therefore is of paramount importance so that children ASPIRE to become successful in the next stages of their learning. We encourage and engage all children, entitling them to the same quality of teaching and learning opportunities across our school community.

We aim for all pupils to:

- Become fluent in the fundamentals of mathematics, making rich conceptual connections across mathematical ideas, developing



understanding and the ability to rapidly recall and apply an ever increasing bank of known number facts.

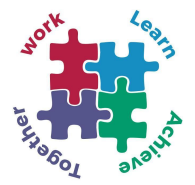
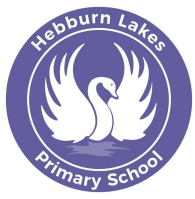
- Be able to solve increasingly sophisticated problems, applying mathematical reasoning and competency when doing so.
- Reason mathematically by following a line of enquiry and developing and presenting a justification, argument or proof using mathematical language.
- Have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently, and accurately, in order to be successful in mathematics.

At Hebburn Lakes Primary we provide equal opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular links), ensuring that this learning is in line with the expectations of the National Curriculum 2014.

Implementation

At Hebburn Lakes, it is our belief that all children can become confident mathematicians, with a deep understanding of mathematical reasoning. We use mistakes and misconceptions as an essential part of learning and provide challenges through rich and sophisticated problems. In order for this to be implemented successfully, we will ensure that we follow the National Curriculum and use White Rose Maths overviews and progression grids, which are aligned to the outcomes of the NCETM. Problem solving, fluency and relational understanding, which are at the heart of the scheme, encourages the teachers to use the Concrete, Pictorial, Abstract (CPA) approach and allows pupils to spend enough time to fully explore a topic, reinforcing it with practice, before moving onto the next one. All ideas are built on previous knowledge and pupils have ample opportunity to develop connections between topics. When teaching a new unit, we consider key questions and mathematical vocabulary relevant to each lesson and across the unit; using working walls to display and reinforce these.

White Rose Maths in Reception supports us in delivering teaching for mastery and covers the Early Learning Goals, ensuring a smooth transition to KS1 and a



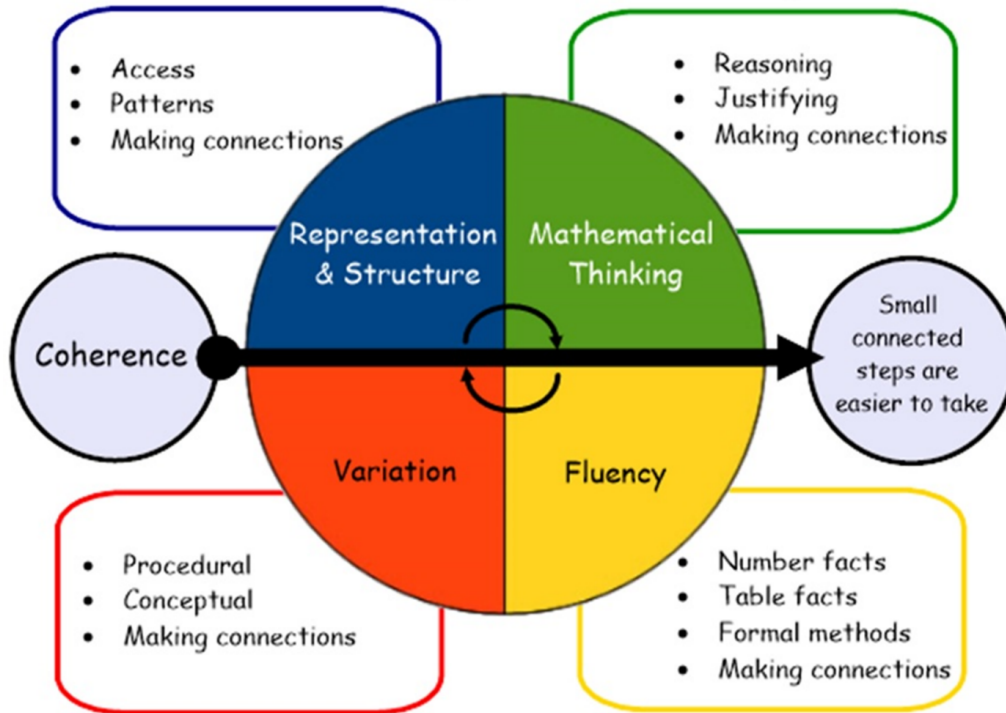
consistent approach across the whole school. It combines short ten-minute bursts of maths teaching each day with plenty of practice through guided activities and independent play through the provision.

Within some lessons, we expect to see evidence of written 'reasoning', in order to strengthen or deepen understanding. This mastery technique is used to help children openly reflect on their own ideas, develop a sense of metacognition (the ability to understand how they learn as individuals) and develop higher level thinking skills.

Children begin this technique from Reception, demonstrating their understanding in the way that they choose e.g. drawing, placing objects on a page or through discussion with an adult. At Hebburn Lakes Primary School, teachers use the White Rose Maths resources, to demonstrate the models, images and abstract learning that will take place within the lesson. Children are further supported, when misconceptions, or lack of understanding is discovered via means of rapid intervention, or "fix-its." These will give children targeted support from teaching staff, which will occur on the same day as the lesson was taught, (or as soon as possible), after the lesson.

As part of their maths lessons, children will follow the five overarching principles set out by the NCETM. They will look at different representations and structures using the CPA approach, to access the lesson in a meaningful way that makes connections using a variety of models and images. We encourage children to explore and play with the knowledge they have received, and through websites such as TTRockstars and Hit the button; both at school and at home.

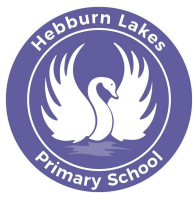
Teaching for Mastery



For those children who show a depth and breadth of understanding, children will be encouraged to reflect on the learning by finding a rule that fits all permutations; or are asked to explain why any given explanation is correct or incorrect. Further questions/problems may be given where children will be expected to design or reason through a set of parameters in order to complete the challenge.

Children who have been identified as having additional educational needs, or those who may have a disability, are included in whole class lessons where class teachers provide scaffolding and relevant support as necessary.

Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts, until they are secure. The mastery approach incorporates the use of concrete resources, pictures, words, and numbers to help children explore and demonstrate mathematical ideas, which then enrich children's learning experiences and deepens understanding at all levels. Pupils are taught in Small Steps, with key concepts taught systematically through a 'back-and-forth',



rapid interaction between teacher and learners. During lessons, teachers will circulate during the independent task, addressing misconceptions and providing immediate input during learning, to ensure every child keeps up and doesn't fall behind. Through the use of effective, child-friendly assessment questions during the input, teachers can identify which children need support to strengthen their understanding and target these children during the lesson. Additional intervention in the form of pre-teaching and after-lesson sessions, is put in place for those children who need extra support in order to close the gap.

Children can ACQUIRE the skill, APPLY the skill, or DEEPEN the skill within the lesson, through the careful selection of resources, tasks, and key concepts, fluency will be developed over time. Children have additional, "quick-fire" arithmetic sessions, that further reinforce the basics of calculation, in the first instance, and to deepen understanding in the second. Due thought will be given as key concepts and fluency should complement one another; it must have the specific purpose of moving children's understanding on, in order to see the interconnectedness of mathematics that will then lead to generalisations, rules, and patterns.

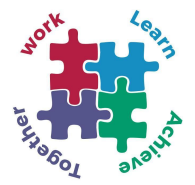
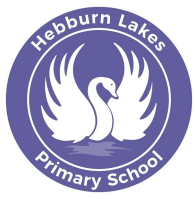
At Hebburn Lakes, we explore the foundation subjects through our "Learning Means the World" curriculum. Thematic units include maths links that address specific mathematical skills. This is an opportunity for pupils to apply learning through discrete maths lessons into different theme-related contexts. These are linked to other areas of the curriculum, to provide rich learning experiences.

Global Dimensions Primary Phase provision map:

  									
Curriculum Subject Overview Maths									
Learning Pathways									
 Explorers	Tell Us a Story	Happy to Be Me	Under the Sea	Come Fly With Me! Asia	Let's Play	Help is at Hand	No Place Like Home	What on Earth...?	
	Number Shape Positional language	Number Numerical Patterns	Number Shape Pattern Measure	Number Numerical Patterns	Number Shape positional language	Number Numerical Patterns	Number Measure Shape Position	Number Numerical Patterns	
 Pathfinders	Happily Ever After	Inter-Nation Media Station	Come Fly With Me! Arctic Circle	Zero to Hero	Unity in the Community	Land Ahoy!	Light Up the World	Going Wild	
	Shape Pattern Time	Statistics Time	Time	Fractions Money	Time Position and Direction	Length Shape Number Problems	Length Fractions	Number	
 Adventurers	That's All Folks!	Lightening Speed	Cry Freedom!	Come Fly With Me! Africa	Athens V Sparta	Law and Order	Under the Canopy	Picture Our Planet	
	Statistics Time	Measure	Measure Statistics	Measure Number	Statistics Shape and Angles	Number	Mayan Maths	Number Statistics	
 Navigators	Mission Control	A World of Bright Ideas	Come Fly With Me! America	I Have a Dream...	You're Not Invited	Wars of the World	Full of Beans	Global Warning	
	Measure Time	Measure	Statistics Number	Maths Game Time	Roman Numerals Number Problems	Measure	Statistics Number	Measure	

At Hebburn Lakes Primary, a love of maths is encouraged throughout school via links with other subjects and through the application of an ever growing range of skills with increasing confidence and independence, no matter the starting point. Assessment informs the teaching and learning sequence, and children work on the objectives they are assessed as being at, with fluid boosting available within a “keep up” not a “catch up” culture. Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in mathematics takes place daily using a range of strategies such as feedback, use of questioning to encourage children to explore and make connections with their previous learning, marking work and verbal discussions with children.

At Hebburn Lakes Primary School maths books are used to show any recorded answers, or other mathematical experiences that may be used to support the learning, for example; reasoning work, fix-its used to correct any



misconceptions and errors that may have arisen from the daily lessons. These will then be tracked and assessed in order for progress to be unimpeded. Errors and misconceptions identified will be discussed with children and intervention put in place if needed to ensure gaps in learning are addressed. Feedback is given on children's learning in line with our feedback policy, but is usually done in one of the following ways:

- Verbal feedback in live marking scenarios using questioning to encourage children to explore and make connections with their previous learning
- Peer or self-marking – followed by a review by the teacher to assess the overall success of the lesson
- Same, or next day teacher marking, with few written comments

Formative assessment is built into every lesson, and helps teachers to identify the children who need more support to achieve the intended outcome, and who are ready for greater stretch and challenge through planned questioning or additional activities.

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Teacher judgements are triangulated and secured through the use of formative and summative assessment. At the end of each unit, children complete an 'End of Unit Check'. Outcomes are recorded by the class teacher and steps needed for intervention are planned for as a result. Children in Y1 – Y6 also complete termly White Rose Assessments in order to track progress and ensure standards against National Expectations. 'Insight' is used to record teacher assessments, and formal assessments and is used by teachers, the Mathematics Subject Leader and Senior Leadership team to track the progress of children against Age Related Expectations. Children who are not on track are identified for 1-1, or small group intervention. Pupils in Early Years are assessed using the Early Years Framework and EYFS profile. Progress is tracked through the provision, adult-led teaching and daily observations.



Coverage

Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Autumn	Getting to Know You			Just Like Me!			It's Me 1 2 3!			Light and Dark			Consolidation	
Spring	Alive in 5!			Growing 6, 7, 8			Building 9 and 10			Consolidation				
Summer	To 20 and Beyond			First Then Now			Find My Pattern			On The Move				

Year 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value (within 10)					Number Addition and subtraction (within 10)					Geometry Shape	Consolidation
Spring	Number Place value (within 20)			Number Addition and subtraction (within 20)			Number Place value (within 50)		Measurement Length and height		Measurement Mass and volume	
Summer	Number Multiplication and division			Number Fractions		Geometry Position and direction	Number Place value (within 100)		Measurement Money	Measurement Time		Consolidation

Year 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value				Number Addition and subtraction					Geometry Shape		
Spring	Measurement Money	Number Multiplication and division						Measurement Length and height		Measurement Mass, capacity and temperature		
Summer	Number Fractions			Measurement Time			Statistics		Geometry Position and direction	Consolidation		

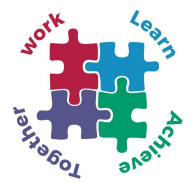
Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value			Number Addition and subtraction				Number Multiplication and division A				
Spring	Number Multiplication and division B			Measurement Length and perimeter			Number Fractions A		Measurement Mass and capacity			
Summer	Number Fractions B		Measurement Money		Measurement Time			Geometry Shape		Statistics		Consolidation

Year 4

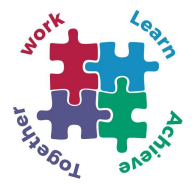
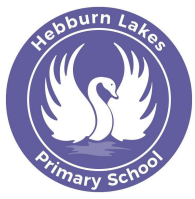
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value				Number Addition and subtraction			Measurement Area	Number Multiplication and division A			Consolidation
Spring	Number Multiplication and division B			Measurement Length and perimeter		Number Fractions			Number Decimals A			
Summer	Number Decimals B		Measurement Money		Measurement Time		Consolidation	Geometry Shape		Statistics	Geometry Position and direction	

Year 5



Year 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number Place value		Number Addition, subtraction, multiplication and division					Number Fractions A		Number Fractions B		Measurement Converting units
Spring	Ratio		Algebra		Number Decimals		Number Fractions, decimals and percentages		Measurement Area, perimeter and volume		Statistics	
Summer	Geometry Shape		Geometry Position and direction		Themed projects, consolidation and problem solving							



Impact

As a result of a clearly structured and progressive Mastery curriculum, children at Hebburn Lakes will be confident mathematicians who solve problems, generate a rich vocabulary and have a fluent and interconnected approach to Mathematics. Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject.

The quality of teaching and learning is monitored through learning walks, book looks, pupil voice interviews, talking to teachers and staff and through assessment documents. At Hebburn Lakes Primary School, the impact of our mathematics curriculum is that children understand the relevance of what they are learning in relation to real world concepts. We have fostered an environment where Maths is fun and it is OK to be 'wrong' because the journey to finding an answer is more important. As a result, we aim for our children to have a growth mind-set and make measurable progress against their own targets.