



Hollinhey Primary School



Maths Policy

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Hollinhey Primary School - Maths Policy

Aims

The National Curriculum for Mathematics aims to ensure that all children:

- become **fluent** in the fundamentals of mathematics,
- **reason mathematically** using mathematical language, and
- can **solve problems** by applying their mathematics and persevering in seeking solutions.

Intent

At Hollinhey, it is our intention to teach Mathematics in alignment with our core values:

Honesty – We aspire to encourage resilience, perseverance and an acceptance that mistakes are an important part of learning. We give each pupil a chance to believe in themselves as mathematicians.

Effort – We celebrate effort as much as attainment, promoting the importance of hard work to build success and the development of a growth mindset.

Achievement – We intend to provide children with a secure grasp of fundamental number facts and skills, along with the ability to reason and problem solve with these skills. In doing so, our aim is to prepare them for however they will go on to apply mathematics in their futures.

Respect – We aim to inspire a lifelong love of Maths among our children, and to challenge any cultural negativity or anxiety around Maths which children may have experienced.

Tolerance – We intend to provide effective support to pupils where they find it difficult to grasp a mathematical concept or to recall key number facts. We will teach Mathematics in an inclusive manner, with high aspirations for all our learners.

Implementation

We implement our intentions through use of a mastery approach to teaching and learning through a progression of learning which is built on small steps. We ensure most children have mastered a concept before moving onto new learning

Pupils who grasp concepts rapidly are challenged to deepen their skills and understanding through progressively challenging questions, instead of any acceleration through new content. Those who are not sufficiently fluent with earlier material consolidate their understanding, including through additional practice, before moving on.

Pupils learn from a mixture of 'concrete' resources, pictorial representations and abstract concepts to develop a detailed understanding of mathematical concepts. We use a range of representations to deepen understanding through conceptual and procedural variation.

Our teaching is informed by the pedagogical approach set out in the NCETM Curriculum Prioritisation Materials. We use these materials to support our lessons and to meet the needs of our learners. We encourage pupils to develop their fluency of key number facts and skills through providing additional opportunities to practise through regular 'Mini Maths' sessions. In Key Stage 1, these take the form of the Mastering Number programme. In Key Stage 2, these are in the form of short, arithmetic-focused series of questions.

Typical lessons will be based on the following structure from Year 1 to 6, where appropriate to the learning:

- 1) KS2 - "**Mini Maths**" (arithmetic focus) – in books
- 2) "**Bridging Back**"
- 3) "**Launch**"
- 4) "**Small Steps**" of explicit teaching
 - Repeat as required to advance pupils through small, logical steps towards achieving learning goal.
 - Conceptual and/or procedural variation through this stage.
 - Often accompanied by pupils practising with whiteboards or manipulatives.
- 5) "**Spins**" – Independent Tasks
 - Pupils may benefit from repeating aspects of step 4 between each Spin, to assess whether they're ready to move to the next small step.
 - Pupils may be able to progress through the Spins without repeating aspects of step 4, if formative assessment suggests this is appropriate.
- 6) "**Challenge**" where appropriate.
- 7) Possible formative assessment, e.g. Bridging Forward assessment or 'ticket out of the door'.
- 8) KS1 - "**Mini Maths**" (Mastering Number)

Impact

As a result of this implementation, we believe that pupils will be enthusiastic about Maths and see themselves as Mathematicians. They will display characteristics of a growth mindset, including the confidence that derives from understanding that their mistakes are a key part of their learning. They will feel that they are suitably challenged, yet also know that they will be well supported where needed.

We believe that children will develop a secure grasp of fundamental number facts and skills, along with the ability to reason and problem solve with these skills. We believe that this will lead to resilience and a willingness to tackle mathematical problems, and will inspire them to take forward their enthusiasm towards Maths into their later lives.

Teachers carry out formative assessment through AfL in each session and feedback is given to children verbally, through self/peer assessment and through marking. Teachers then use this assessment to influence their planning. In addition to ongoing, formative assessment, teachers assess the progress and

attainment of pupils on a termly basis. This data is shared with the Senior Leadership Team and Maths Subject Leader through pupil progress reviews. This data is also shared with the Governing Body.

Teachers use the NCETM Ready to Progress Assessment Materials (where relevant) to assess whether pupils are ready to move onto new learning. Based on this assessment, teachers determine whether pupils are ready to move on, or whether further teaching is required to support the class to consolidate prior learning before moving on.

Adaptation and SEN

Teachers aim to give every child the opportunity to experience success in learning and achieve as high a standard as possible.

Adaptation is achieved by emphasising deep knowledge and through individual support and intervention, where appropriate. Children should not be moved onto work for later year groups; instead they should be exposed to work of a greater depth at their current year group objectives. Children working below year group expectations should be allowed to access their current year group objectives at an appropriate level. Appropriate provision will be made for children with S.E.N. based on each individual's specific needs.

Extra opportunities

Cross-curricular opportunities for pupils to consider and apply Mathematics in other subject areas will be used where appropriate.

Homework will be used to promote retention of mathematical skills and knowledge in accordance with the School's Homework Policy. The use of Times Tables Rockstars is part of weekly homework for those pupils who are learning times tables.

Roles and responsibilities

The subject leader will:

- Take the lead in policy development.
- Take the lead in implementing the Curriculum to ensure progression and continuity across the school.
- Support colleagues in assessment and record-keeping activities.
- Share resources, publications and training knowledge with staff.
- Monitor the teaching of Mathematics throughout the school.
- Consider the CPD needs of teachers and attempt to satisfy those needs.
- Order new materials and replace equipment where necessary.

When the policy will be reviewed

The policy is due to be reviewed in Autumn 2025.

Appendix – Progression document



*Curriculum Knowledge &
Skills Progression*

Mathematics

James Perry September 2021

For Reception, this Progression document is based on the Early Learning Goals in the EYFS Statutory Framework.

For Years 1 to 6, it is based on the NCETM Curriculum Prioritisation guidance for Years 1 to 6.

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Verbally count beyond 20, recognising the pattern of the counting system.	Previous Reception experiences and counting within 100	Numbers 10 to 100	Adding and subtracting across 10	Review of column addition and subtraction	Decimal fractions	Calculating using knowledge of structures (1)
Subitise (recognising quantities without counting) up to 5.	Comparison of quantities and part-whole relationships	Calculations within 20	Numbers to 1,000	Numbers to 10,000	Money	Multiples of 1,000
Link the number symbol (numeral) with its cardinal number value.	Numbers 0 to 5	Fluently add and subtract within 10	Right angles	Perimeter	Negative numbers	Numbers up to 10,000,000
Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Recognise, compose, decompose and manipulate 2D and 3D shapes	Addition and subtraction of two-digit numbers (1)	Manipulating the additive relationship and securing mental calculation	3, 6, 9 times tables	Short multiplication and short division	Draw, compose and decompose shapes
Have a deep understanding of numbers to 10, including the composition of each number.	Numbers 0 to 10	Introduction to multiplication	Column addition	7 times table and patterns	Area and scaling	Multiplication and division
Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Additive structures	Introduction to division structures	2, 4, 8 times tables	Understanding and manipulating multiplicative relationships	Calculating with decimal fractions	Area, perimeter, position and direction
Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Addition and subtraction facts within 10	Shape	Column subtraction	Coordinates	Factors, multiples and primes	Fractions and percentages
	Numbers 0 to 20	Addition and subtraction of two-digit numbers (2)	Unit fractions	Review of fractions	Fractions	Statistics
	Unitising and coin recognition	Money	Non-unit fractions	Fractions greater than 1	Converting units	KS2 tests

	Position and direction	Fractions	Parallel and perpendicular sides in polygons	Symmetry in 2D shapes	Angles and transformations	Ratio and proportion
	Time	Time	Time	Time		Calculating using knowledge of structures (2)
		Position and direction		Division with remainders		Solving problems with two unknowns
		Multiplication and division – doubling, halving, quotitive and partitive division				Order of operations
		Sense of measure – capacity, volume, mass				Mean average

For further details on the Progression of Mathematics involving specific knowledge, skills and concept, we follow the NCTEM Progression Maps <https://www.ncetm.org.uk/classroom-resources/progression-maps-for-key-stages-1-and-2/>

Each of the below categories has been divided into sub categories to illustrate progression in key areas.

All programmes of study statements are included and some appear twice. This is indicated in the text. This occurs where:

- The statement has central relevance to more than one sub category within a topic;
- The statement has central relevance to more than one mathematics topic. This is done to reflect the aims of the curriculum that *pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems* (Mathematics programmes of study: key stages 1 and 2 page 3). However, the connections made are not intended to be exhaustive and teachers should seek to support pupils in making other connections.

Progression Maps

<u>Number and Place Value</u>	<u>Ratio and Proportion</u>	<u>Statistics</u>
<u>Addition and Subtraction</u>	<u>Measurement</u>	<u>Algebra</u>
<u>Multiplication and Division</u>	<u>Geometry - properties of shapes</u>	
<u>Fractions (including decimals and percentages)</u>	<u>Geometry - position and direction</u>	