



# Maths Policy

The Vision: To nurture a love of mathematics by developing creative, happy and resilient mathematicians who relish a challenge! Highfield pupils become independent, reflective thinkers, whose skills and knowledge support them across the curriculum, helping to build our positive maths culture.

To achieve this, Highfield staff will be passionate about learning in maths, prepared for the needs of all pupils and positive in approach, seeking opportunities to improve their practice. We believe that our maths curriculum design and delivery leads to excellent teaching and learning, which impacts positively on children's life chances. Highfield pupils leave our school confident in their ability in mathematics, ready to move to the next stage in their education. They will help to change the national cultural perception of maths, to one of a 'can do' attitude.

## The Highfield Maths Curriculum

Our curriculum follows the Programme of Study and Aims of the National Curriculum 2014. 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 develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- 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.

## A Flexible Mastery Approach to Teaching...

The fundamental idea behind our curriculum design is to foster a culture of deep understanding, confidence and competence in maths by supporting all pupils to access and enjoy every lesson, no matter what their starting points. We take an approach to teaching maths which is consistent with the principles of teaching for mastery. Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject. Pupils are equipped to master a subject by understanding its fundamental concepts in sufficient depth so that they can apply subject knowledge in unfamiliar contexts. We follow many of the principles of maths mastery, such as:

- whole class maths teaching and an inclusive approach where all children achieve at a slower pace designed to result in greater progress
- exploiting the power of talk by allowing discussion in every lesson, focusing on mathematical language to strengthen conceptual understanding by enabling pupils to explain and reason
- spending longer on topics to help gain deeper understanding
- differentiate through depth rather than acceleration
- utilising the concrete, pictorial, abstract approach to develop a deep and sustainable understanding

The White Rose Maths Scheme of Work is used to support the design of our medium term plans as it follows a mastery approach. However, teachers recognise that although topics are taught at greater length, through slower paced lessons, there is a secure understanding of children's mathematical cognition and that some may require further tuition. So our teachers have the flexibility to revisit topics and deliver them again in later year groups to help pupils progress.



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## Reception

Reception develop and nurture a positive attitude towards number and Maths, to increase confidence amongst all pupils. We give children varied opportunities to work mathematically through active participation, hands on learning and purposeful cross curricular links within whole class situations and continuous provision. We use a variety of concrete, pictorial and abstract strategies to give our pupils the best chance of mastering maths, allowing them to make connections between different representations. Emphasis is placed on mathematical language and key vocabulary is specifically taught. Work is recorded through photographic evidence on Tapestry and within workbooks as well as Teacher's knowledge of each child.

## Textbook Support and Work Books

Evidence strongly advocates the use of high quality textbooks delivered alongside high quality teaching to support the successful implementation of teaching for mastery. A good textbook is an aid both for the teacher in planning lessons, and for the pupil during lessons and working independently. In Key Stage One, Maths No Problem! textbooks and workbooks support learning. These are used alongside a significant number of concrete materials which are vital to support learning at this stage of their development. Children are given greater opportunities to explore and communicate their understanding. Work is recorded using journals and Maths No Problem work books. "In journals, children can record their responses in different ways. They can use pictures, diagrams, and writing. Expressing themselves like this develops their mathematical language and helps them verbalise their thinking. They can start to make deep connections between areas of learning." (Maths No Problem, 5 types of maths journals and how to use them, 2019) In Key Stage 2, Maths No Problem! teacher guides are used to support pedagogy and Busy Ants and Target Your Maths textbooks are used to support pupil learning. All year groups also use the White Rose Maths resources and the small steps in particular, where each step builds carefully from the previous step, building on pupils' prior knowledge to develop new skills. Work is recorded in work books containing 10mm squares.

## Assessment

In the Early Years, assessment starts with Statutory and Non Statutory Baseline in September/October. Assessments are then repeated in March and June (statutory). These assessments are based on descriptors in 'Development Matters'. In Years 1-6, Children's work is marked in accordance with our Marking Policy, and feedback given with next steps when appropriate. In November and May, formal assessments take place, supported by the White Rose Assessment materials for Arithmetic, Reasoning and Problem Solving. Combined with the teachers own ongoing personal assessments, observations of verbal responses and written evidence, these provide appropriate judgements on progress across the year.