



Hatherley
INFANT SCHOOL

Mathematics Policy

Agreed: May 2021

Review: May 2023

We want to ensure your needs are met. If you would like this document in any other format, please contact us:
admin@hatherley-inf.gloucs.sch.uk

Vision statement

Mathematics is an important creative discipline that helps us to understand and change the world. We want all pupils at Hatherley Infant School to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject.

Believe + Enjoy + Achieve = Yes You Can!

Aims

We aim for **all** pupils to:

- become **fluent** in the fundamentals of mathematics so that they develop conceptual understanding and are able to apply knowledge and skills rapidly and accurately. (Do it)
- **reason** mathematically by applying the concept to unfamiliar contexts, presenting a justification, using sophisticated and accurate mathematical vocabulary. (Challenge it)
- **solve** problems by applying their knowledge to a variety of problems with increasing sophistication, including unfamiliar contexts and real-life scenarios. (Solve it)

Maths Mastery

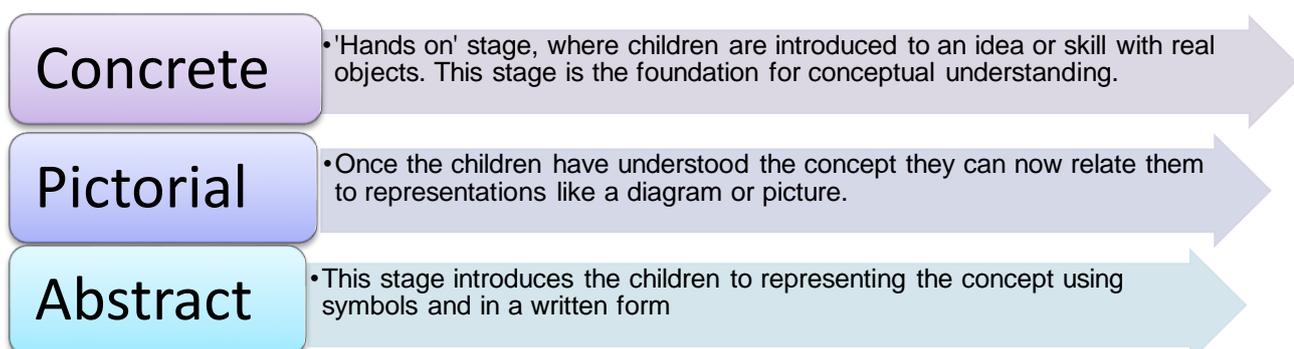
“The essential idea behind ‘mastery in mathematics’ is that all pupils need a deep understanding of the mathematics they are learning so that future mathematical learning is built on solid foundations which do not need to be retaught. Key ideas and building blocks are important for everyone and the class work together on the same key point, whilst at the same time pupils are supported or accelerated to gain depth of understanding and proficiency. Acceleration to higher content is avoided. Instead, the reasoning behind mathematical processes is emphasised. Teacher/pupil interaction explores in detail how answers were obtained, why the method/strategy worked, and what might be the most efficient method/strategy.”

– (NCETM website)

At Hatherley Infant School, we foster positive ‘**can do**’ attitudes, believe all children can achieve in mathematics and teach for secure and deep understanding of mathematical concepts. We use mistakes as an essential part of learning and provide challenge through rich and sophisticated problems before acceleration through new content.

For the children, achieving mastery means acquiring a solid enough understanding of the maths that has been taught to enable pupils to move on to more advanced material. ‘Mastering’ maths means children acquire a deep, long-term, secure and, most importantly, adaptable understanding of the subject.

At Hatherley Infants, we use Concrete, Pictorial and Abstract (CPA) techniques to ensure children have a deep understanding of the concept. This can be seen throughout year groups in planning, teaching and in children’s books.



Planning for teaching of maths

Planning and the Curriculum

Teachers use a long term plan to ensure that the entire curriculum is covered over the course of a school year. Long term plans are broken down in to area specific 'S Plans'. These set out the small steps lesson objectives which are sampled from the GLOW Maths Nav website. The planning takes it's form in daily powerpoints which act as a prompt and guide for the children. The sequence of slides is set out below.

In addition, each day children revisit and practise previous knowledge and skills in daily 'Maths Meeting'.



Questioning is the key to success in all our mathematics sessions and children are always asked to 'prove it' and higher order questions in order to develop their mathematical fluency, oracy and vocabulary.

Use of teaching assistant support is planned for in every part of the mathematics lesson to ensure they are used effectively to support, develop or assess pupils' progress. During the tasks, teaching assistants and teachers adopt the 'helicopter marking' technique. This ensures that children are having instant, clear and direct feedback to intervene when misconception arises.

Calculation Policy

We have a policy for progression in calculations methods. Our policy also links in with our concrete, pictorial and abstract approach.

Differentiation and Support

At Hatherley Infants we follow a mastery curriculum and in line with the National Curriculum document ensure that most children move at broadly the same pace. However, there can still be a wide range of attainment in the class. We aim to:

- Establish a classroom climate where all pupils feel that they can contribute, and which secures their motivation and concentration
- Develop an "I can do it!" attitude
- Rapid graspers are challenged through more demanding problems which deepen their knowledge of the same content rather than being moved onto content from future year groups (Differentiation by depth)
- Pupils' difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention

Examples of strategies include:

- Questioning – targeting individuals or groups, open questions, encouraging pupils to explain strategies and methods to each other.
- Providing resources to support or extend pupils.
- Open-ended tasks – investigations, problems.
- Pre teaching.
- Same day interventions.

Learning Environment

Classroom resources are well organised and easily accessible. Teacher will select the best, high quality resources linked to the learning to support the concrete element of mastery. In classrooms, you will see our Maths working walls. Math's working walls are changed regularly and provide a showcase of learning strategies, previous learning, key vocabulary and the current S Plan of lessons.

Foundation Stage

Work undertaken within the Foundation stage is guided by the requirements and recommendations set out in the Early Years document. Lessons in the early years also follow the mastery approach and use concrete and pictorial representations to develop an understanding of mathematics. Children are encouraged to use, enjoy, explore, practice and talk confidently about mathematics using reasoning and correct vocabulary. The children are exposed to a variety of problems, use practical resources like Numicon, ten frames and other concrete material to master the key concepts.

Assessment, marking and feedback

All learning is continually assessed throughout the lesson in order to identify gaps in learning, identify next steps and set targets, acknowledge and celebrate achievements and to inform future planning. (See Assessment Policy) Maths work is marked during the lesson, in line with our marking policy and feedback provided immediately.

Equal Opportunities

At Hatherley Infant School, every child is provided with equal access to the Maths curriculum and all children move forward at the same pace. We aim to provide suitable learning opportunities that enable all children to make good progress regardless of gender, ethnic background, E.A.L. (English as an Additional Language), learning ability, disability, religion or belief.

Monitoring and Review

Monitoring the standards of children's work and the quality of teaching in Maths is the responsibility of the Maths subject lead in conjunction with the SLT.

The role of the subject leader also involves:

- supporting colleagues in their planning and teaching
- modelling good practice
- being informed about current developments in the subject
- organising resources and events/opportunities to promote and enhance maths e.g. maths workshops, maths open morning
- providing a strategic lead and direction for Maths in the school

The maths subject lead produces an action plan indicating areas for further improvement each year.

If you have any further questions about Maths at Hatherley Infant School, please contact Grace Piper, Maths Subject Lead – grace.piper@hatherley-inf.gloucs.sch.uk