



Hayes Meadow Primary School

Maths Policy

Spring 2017

Philosophy:

The National Curriculum states:

“Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.”

Aims and Objectives:

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.

At Hayes Meadow the teaching of maths is geared towards enabling each child to develop their learning and achieve what they are capable of. We endeavour



to not only develop the mathematics skills and understanding required for later life, but also an enthusiasm and fascination about maths itself. Where possible, we also link maths to other subject areas.

We aim to increase pupil confidence in maths so they are able to express themselves and their ideas using the language of maths with assurance.

We want the children to see mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment.

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become **FLUENT**
- Can **SOLVE PROBLEMS**
- **REASON** and **EXPLAIN** mathematically

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their maths knowledge. In doing so, they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

At Hayes Meadow we aim to teach maths in a way that:

- delivers maths in line with the National Curriculum guidelines
- ensures the delivery of maths is filled with cross curricular opportunities
- creates a lively, exciting and stimulating environment in which the children can learn maths
- promotes the concept that acquiring maths knowledge and skills provides the foundation for understanding the world around the children
- develops mental strategies
- encourages children to use mathematical vocabulary to reason and explain
- allows time for partner talk in order to stimulate and develop a curiosity for maths
- challenges children to stretch themselves and take risks in their learning
- creates a sense of awe and wonder surrounding maths
- ensures children in Key Stage 1 are secure in their understanding of number and number relationships



Approach:

At Hayes Meadow School we use a variety of curriculum resources, which ensure continuity and progression in the teaching of mathematics and meet the needs of our pupils. (See the revised Calculation Policy for methods and progression in addition, subtraction, multiplication and division).

It is important that children are allowed to explore maths and present their findings not only in a written form but also visually; to that end the school will adopt the CPA approach: concrete, pictorial, abstract. This will allow the children to experience the physical aspects of maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers.

The curriculum is delivered by class teachers. Children are taught in class groups from Foundation Stage to Year 6. In all classes children are taught in a variety of groupings; whole class, groups, pairs, one to one, relevant to the task in hand, and work is differentiated in order to make it accessible and challenging. Where appropriate these groups/individual children are supported by Teaching Assistants. In line with the curriculum, the school is moving towards a mastery approach to teaching.

Staff are kept up to date on current thinking, new teaching methodologies and ideas by the subject leader through staff meetings and Inset. CPD will be available where possible for staff who need to improve their understanding of the requirements of the national curriculum, new methodologies and assessment/testing arrangements.

It is important that parents and carers are actively involved in the children's education. In order to help keep them informed of what is happening within school, we aim to run annual information sessions which will look at current developments within the school, projects in which we are involved, new methodologies for delivering the teaching of maths and also any new statutory changes such as curriculum or assessment/testing arrangements.

The school website provides information about what each year group is covering and this is updated on a termly basis. Also, there are webinars showing the methods used to complete written calculations in addition, subtraction, multiplication and division. There are links to other websites too that parents and carers will find useful when helping support their children.



Early Years Foundation Stage (EYFS):

Teachers and practitioners support children in developing their understanding of mathematics in a broad range of contexts in which they can explore, enjoy, learn, practice and talk about their developing understanding. This area of development includes seeking patterns, making connections, recognising relationships, working with numbers, shapes and measures, and counting, sorting and matching. Children use their knowledge and skills in these areas to solve problems, generate new questions and make connections across other areas of learning and development.

Children in the EYFS learn by playing and exploring, being active, and through creative and critical thinking which takes place both indoors and outside. We recognise that children learn through routine, independent and incidental learning opportunities, as well as planned sessions and activities.

Mathematical understanding can be developed through stories, songs, games, routine, questioning, imaginative play, child initiated learning and structured teaching.

All mathematical work/activities are recorded and kept in each child's individual learning journey and/or on the teachers planning.

Staff in EYFS use photos to ensure records of each child's achievements are maintained.

Planning and Assessment:

Teachers will plan and deliver lessons that suit the particular learning styles of the children within the year group. They will use assessment for learning to ensure a flexible approach is adopted which recognises the pace of learning within the classroom and individual needs. Children will be given the opportunity to engage in fluency, reasoning and problem solving activities to demonstrate their understanding.

In order to inform planning and to assess children's progress, teachers will carry out ongoing marking and feedback within lessons, annotate planning and keep a record of the coverage of the year group objectives. Although Year 6



children do not have to take a specified mental maths paper, they still have to access tests that require quick thinking answers in a given time. Therefore, regular mental maths tests will be carried out in KS2 to improve children's mental agility. Times Tables tests will also be given weekly in the form of a tables club challenge. Termly, children will be assessed through the application of tests; this summative assessment will be used to identify next steps and therefore inform planning.

Children will be provided with feedback either verbally or through written marking, within the lesson where possible, to address misconceptions or provide further challenge. Often, in order to clarify understanding of a concept, children will be asked to respond to feedback, but not for every lesson; this should be completed by the children at the next earliest opportunity after the lesson. When marking work teachers should adhere to the school's Marking Policy.

Inclusion:

In line with the School's Inclusion Policy, each child will have equal entitlement to all aspects of the maths curriculum and to experience the full range of maths activities. Therefore, in delivering maths, care will be taken to ensure that a variety of learning styles are accessed and teaching methods adopted.

Intervention groups will take place both within the maths lesson and outside; these sessions may be delivered by the teacher or teaching assistant and may involve individual or small group work, accessing both ends of the learning spectrum.

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