



Houghton School

Mathematics Policy

Updated: September 2018

Review Date: September 2019

Aims

*The mathematics teaching at Houghton School is geared towards enabling each child to develop within his/her capabilities; not only the mathematics skills and understanding required in later life, but also an enthusiasm and fascination about maths itself. We aim to increase each child's confidence in maths so they are able to express themselves and their ideas using the language of maths with assurance.*

Delivering the Mathematics Curriculum

*The "Mathematics Programmes of Study" National Curriculum in England 2014 describes in detail what pupils must learn in each year group. At Houghton all of our children work accessing the curriculum at a lower year group than their chronological age due to their increasingly complex needs. This is taken into account when planning to ensure we meet the specific needs of children, with the expectation that pupils make the expected progress during the year and that gaps in their learning are also reduced. This ensures continuity and progression and high expectations for attainment in mathematics.*

*In Badgers class children follow the Early Years Foundation Stage curriculum, working on Problem Solving, Reasoning and Numeracy activities. Activities are practical and multi-sensory to provide opportunities to explore, enjoy, practise and consolidate skills and talk about their developing mathematical understanding.*

Planning

Planning is undertaken at three levels:

*Long term planning is based on the appropriate yearly teaching programme set out in the "Mathematics Programme of Study"*

Medium term planning identifies the key objectives that we teach to each year group, but offers the opportunity to track backwards and forwards depending on the abilities of individuals and groups of children in each class.

Short term planning is carried out weekly. These plans include learning objectives for the main activity and differentiated groups, activities for the mental/oral starter, whole class, group work and plenary and resources needed.

### *Cross-Curricular Links*

Mathematics is taught as a stand-alone lesson but is also fully integrated across the curriculum as much as possible, enabling links to be made within other subjects so that children can develop and apply their mathematical skills. "Functional" (practical/applied) mathematics will be used wherever possible as this approach best suits our children's' needs.

### *Organisation*

In Key Stage 1, mathematics lessons are held four times a week and last for approximately 45 minutes each.

In Key Stage 2, the lessons are held four times a week and last for approximately 55 minutes.

In Badgers, the organisation is more flexible building up to a 40 minute lesson by the end of the summer term.

### *A Typical Lesson*

A typical lesson in years 1-6 will be planned to meet the needs of the pupils in that class. However, lessons have the following components:

- Oral and mental work across the range of mathematics.

This involves work to rehearse, sharpen and develop mental and oral skills.

- Main teaching activity

This is teacher-led. Sometimes the focus for this session is new learning, at other times children may be practising to master the application of a concept they have learned earlier.

- Group activity

The work is linked to the main teaching activity but is differentiated and offers appropriate challenge.

- Plenary

This will involve work with the whole class to sort out misconceptions, identify progress, and to summarise key facts and ideas.

Within lessons and over sequences of lessons teachers plan a coherent teaching and learning programme based on the model:

Revisit ➡ Review ➡ Teach ➡ Practise ➡ Apply

At times there may be opportunities to develop skills and understanding of mathematics through additional activities, some of which may take place at home.

Teachers plan learning that is differentiated to meet the needs of all pupils. When scrutinizing work in maths books senior staff expect to see work from any one lesson on a similar theme, differentiated for high, middle and low attaining pupils.

### Assessment and Record-Keeping

At Haughton we are continually assessing our children and recording their progress. We see assessment as an integral part of the teaching process and endeavour to make our assessment purposeful, allowing us to match the correct level of work to the needs of each pupil, thus benefitting the pupil and ensuring progress. Assessment is carried out on three levels:

Short term assessments are an informal part of every lesson and are closely matched to the teaching objectives. These are recorded by the teacher and by the adult leading the group work on the weekly planning sheets and on marking slips. They are for the teacher's immediate attention and will affect what is planned for the next lesson.

Medium term assessments are carried out at least half-termly. Each child is working towards individual targets and their progress is recorded on iASEND.

Long term assessments are carried out towards the end of the school year. The purpose of these assessments is to review and record the progress the pupils have made in relation to age related expectations and iASEND profiles.

### Reporting

All parents and carers receive an annual written report on which there is a summary of their child's effort and progress in mathematics over the year.

At the end of each term pupil progress in the iASEND profiles is reported to Governors.

In addition, the individual pupil targets set as part of the child's Statement of Educational Needs or Education and Health Care Plan meeting are discussed with parents and carers at the Annual Review meeting and at the Parent's Evenings.

### Resources

Resources for the delivery of the maths curriculum are stored both centrally and in classrooms. All classes use Numicon. Numicon is a multi-sensory approach to maths, built on a proven pedagogy that raises achievement across all mathematics ability levels. Numicon exemplifies the principles of maths mastery with concrete apparatus and imagery to embed a deep understanding. It also embodies the aims of the 2014 National Curriculum by developing conversation, reasoning and problem-solving. Additional equipment and topic-specific items are stored centrally in the Resources Room. Spending is determined by the priorities of the teaching staff and those set by the School Development Plan. The teaching staff approves spending and members of the SLT monitor it. Houghton School uses a variety of published and on-line materials to facilitate the teaching of mathematics but recognises the need for the teaching of maths to be "scheme assisted, not scheme driven". Many materials are produced and adapted by individual teachers. Materials are constantly updated, as new and relevant items become available.

### Information and Communication Technology

ICT is used in various ways to support and motivate children's learning. Each classroom has a PC connected to an interactive whiteboard and the school is introducing a tablet for each teacher to support their planning and provision. Staff are encouraged to use ICT to enhance teaching and learning in mathematics where appropriate. One tablet per two children will shortly be available to further develop children's progress. The school subscribes to "Busy Things" which facilitates further practice of key skills, accessible both at school and at home.

### Monitoring and Review

The monitoring of the standards of children's work and of the quality of teaching in maths is the responsibility of the SLT. The SLT supports colleagues in their teaching, informs staff about current developments in maths, and provides a strategic lead and direction for this subject in school.

