MATHS CURRICULUM STATEMENT

SUMMARY

This sets out how Holly House plans to cover its National Curriculum obligations with regard to Maths. All pupils will develop their number skills throughout the school and hopefully improve their problem-solving skills along the way.

Robin Rhodes
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CURRICULUM STATEMENT FOR MATHS

Overview

Pupils at Holly House School follow the National Curriculum in Mathematics at a level that is appropriate their needs. Pupils' ability is assessed on entry and learning objectives are set to bring them up to an age-appropriate level. At Key Stage 2 there are specific Programmes of Study for each year group with an expectation that they have mastered this content at the end of the Key Stage. Likewise there is an expectation that pupils have mastered the Key Stage 1 content by the time they arrive in Year 3. This is not the case with our pupils so the Key Stage 2 Maths curriculum is adapted accordingly, using some content from Early Years/Key Stage 1. Pupils who arrive well below age related expectations or are not making sufficient progress are identified by the assessment system by the Maths Co-ordinator (Mr Rhodes) and are put on programmes of additional support to try and catch up. This is overseen by the SENCO teacher, Mr Wheat. At Key Stage 3, pupils follow the A route of the 'My Maths' scheme with some pupils working on the B books if required. KS3 pupils still working below their age related expectation will still follow the My Maths scheme, but with differentiated work from the Abacus learning resources.

Aims & Objectives

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.

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.

Our objectives at Holly House are

- To ensure that all pupils make progress in maths, year on year.
- To give all pupils the basic mathematical skills and knowledge for life.
- To give year 9 pupils the mathematical skills and knowledge required to move on to GCSE courses.
- To encourage all pupils to see the relevance and importance of having basic maths skills.
- To equip all pupils with the necessary mathematical vocabulary along with the skills to spell mathematical words correctly.
- To have an understanding of measures and units that will be required in future working life.
- To have an understanding of money and finance that they can take forward into working/adult life.

School curriculum – The National Curriculum

The programmes of study for mathematics are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage, if appropriate.

At Key Stage 3 decisions about progression should be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content in preparation for key stage 4. Those who are not sufficiently fluent should consolidate their understanding, including through additional practice, before moving on.

All schools are also required to set out their school curriculum for mathematics on a year-by-year basis and make this information available online.

School curriculum – As applied at Holly House

At KS2 – Some pupils arrive in Year 3 and have a full 4 years of maths, but most pupils arrive part-way through the Key Stage. This can lead to difficulties if following a scheme of work through a full 4 years. The National Curriculum document for KS2 sets out a programme of study for year 3, year 4, year 5 and year 6 stating exactly what pupils should be taught in each year group. At Holly House we do not have classes set in year groups. Classes are mixed. Also many pupils are functioning at a numeracy level far below their chronological age. With this in mind, progression through the maths curriculum has to tailored to each pupil's individual needs and the programme of study is followed through common topics, but differentiated levels. The assumption that just because they are year 4 they should be taught the year 4 programme of study is not applicable at Holly House. Planning shows what each class is doing in maths over the year with an overview of teaching and learning statements to show progression. Key stage 2 classes are now following the Abacus Scheme, which is differentiated to meet individual needs. Weaker pupils at Key stage 3 are also using some of the Abacus learning resources.

At KS3 – Some pupils arrive having not done KS2 at Holly House. Some of these pupils have been out of mainstream education and have not done their SAT's – arriving with no assessment data at all. Other pupils have come through from year 6 with SAT's results and assessments that allow staff to move them on to an appropriate KS3 programme of study. The National Curriculum Document for Maths is not as prescriptive at KS3. The subject content specifies what they should be taught over 3 years, but does not specify an order. At the end of Year 9 there is a list of skills and knowledge they should have, ready to move on to GCSE. At Holly House we follow the 'My Maths' scheme at KS3. Most pupils follow the A route through the course, but some of the more talented pupils supplement this with work from the B books. If we ever have any particularly talented mathematicians we have the option of the C books to stretch their learning.

Assessment

At Key Stage 2, pupils are assessed against their learning targets and records are kept of the skills and knowledge they have gained in relation to the programme of study descriptors. These descriptors are used as targets on our Rainbow Assessment System, which records what they have achieved at three levels – Emerging (can do something with help), Embedded (has got the idea and can do it without help on the day) and Exceeded (can remember how to do something in a test some weeks or months later). These are recorded as RED, ORANGE and GREEN on the spreadsheet and are given a numerical value that is then used to show progress. The Rainbow colours are linked to each of the National Curriculum years starting with RED at Year 1 and working through ORANGE, YELLOW, GREEN and BLUE finishing with PURPLE at Year 6. Staff will be continually assessing the mathematical abilities of pupils, lesson by lesson and update the Rainbow system 3 times a year in December, April and July.

At Key Stage 3, pupils will be assessed on a lesson by lesson basis in terms of what they have achieved. It too will be assessed according to the 3 E's and record sheets will be updated periodically to keep track of where they are. Each topic has an end of topic test along with a self-assessment and self-help guidance. They also have the opportunity to spend one lesson a week on the My Maths website working through exercises on their own personal login. There work on this can be tracked by staff. Key Stage 3 pupils are also assessed on the Rainbow System.

Attainment targets

By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. The full details of where pupils should be at the end of KS2 can be found in the N.C. Programme of Study.

By the end of key stage 3, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. The details of this can be found in the KS3 scheme of work.

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Main signed copy of this policy/procedure kept in Governors folder in main office
(as detailed in the Holly House Policies Policy)