



Holly Hill
Church School

Maths Policy

As a Christian school our vision is to promote 'Life in All its Fullness.' Our ethos is based on our 12 Christian values of hope, honesty, patience, joy, forgiveness, tolerance, thankfulness, respect, kindness, friendship, gentleness and love. It is within the vision and the ethos that this policy is written and will be implemented.

Date issued: September 2017

Review date: September 2020

Signed: (Pupil support Committee Chair)

Introduction

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. (National Curriculum 2014)

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, make links and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering.

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development matters' non statutory guidance.

The EYFS Framework in relation to mathematics aims for our pupils to:

- develop and improve their skills in counting
- understand and use numbers
- calculate simple addition and subtraction problems
- describe shapes, spaces, and measures

The purpose of mathematics in at Holly Hill Infant School is to develop:

- positive attitudes towards the subject and awareness of the relevance of mathematics in the real world
- competence and confidence in using and applying mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and motivation to work both independently and in cooperation with others
- confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes
 - an ability to use and apply mathematics across the curriculum and in real life
- an understanding of mathematics through a process of enquiry and investigation

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching & learning.

Breadth of study

Careful planning and preparation ensures that throughout the school children engage in:

- practical activities and games using a variety of resources
- problem solving to challenge thinking
- individual, paired, group and whole class learning and discussions
- purposeful practise where time is given to apply their learning
- open and closed tasks
- a range of methods of calculating e.g. mental, pencil & paper and using a calculator
- working with computers as a mathematical tool

Through our creative approach to teaching and learning we also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas.

Teachers planning and the organisation long term planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long term planning for mathematics taught in the school.

Medium term planning

In the EYFS takes their Maths planning from Development Matters objects and the children work towards achieving ELG. This is done through a range of ways including focus groups, whole class teaching and continuous provision. In years one and two teachers plan from a spiral curriculum which is based on Step Up scheme of learning as their medium term planning documents. In addition to this White Rose documents provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short term planning

In EYFS planning is based on the medium term plans (taken from the Development Matters objectives) and delivered as appropriate to individual children with thought to where the children are now and what steps they need to take next. All classes have a daily mathematics lesson where possible. Teachers of the EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom. The continuous provision provides resources and provocations to enable children to practice and extend their mathematical and reasoning skills. Adults engage within the continuous provision to support children's learning as well as question and challenge their thinking.

Within Key Stage One maths lessons take place daily as follow the medium term planning. Within each lesson there is an opportunity for children to use concrete apparatus and then apply their skills independently. We encourage and understand the importance of maths talk and use specific mathematical vocabulary to encourage the children to talk using correct terminology. A high emphasis is placed upon children being able to apply maths and understand it within real life contexts. To develop children's thinking we teach reasoning and problem solving skills. Lessons are planned using a common planning format and are monitored at intervals by the mathematics subject leader.

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's ITP's incorporate suitable objectives from the National Curriculum for Mathematics or Development Matters and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by either a teacher or teaching assistant and are overseen by the Maths coordinator. Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

Equal Opportunities

Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics. We aim to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children including those for whom English is an additional language (EAL). Differentiated questions are used in lessons to help children and planned support from Teaching Assistants and other adults.

Lessons

In all lessons the learning objectives is clearly displayed and discussed. Children in Key Stage One should also be able to articulate and understand their learning objective. The emphasis in lessons is to make teaching interactive and lively, to engage all children encouraging them to talk about mathematics.

Lessons involve elements of:

- Instruction – giving information and structuring it well
 - Demonstrating – showing, describing and modelling mathematics using appropriate resources and visual displays
- Explaining and illustrating – giving accurate and well paced explanations
- Questioning and discussing
- Consolidating
- Reflecting and evaluating responses – identifying mistakes and using them as positive teaching points

- Summarising – reviewing mathematics that has been taught enabling children to focus on next steps

Pupils' Records of Work

Children are taught a variety of methods for recording their work and are encouraged and helped to use the most appropriate and convenient. Children are encouraged to use mental strategies, pictorial and concrete methods using apparatus before using their own jottings and then moving onto more formal written methods. Children's own jottings to support their work is encouraged throughout all year groups.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked in line with the school marking policy, and a highlighting system is used (green for go and amber for think). Teachers are encouraged to mark with focus groups of children throughout the lesson and allow children time to respond to this, to address gaps and misconceptions as soon as possible. Children are encouraged to self-assess their work and given time to make corrections or improvements.

Assessment

Assessment is an integral part of teaching and learning and is a continuous process. Teachers make assessments of children daily through;

- regular marking of work
- analysing errors and picking up on misconceptions
- asking questions and listening to answers
- facilitating and listening to discussions
- making observations

These ongoing assessments inform future planning and teaching. Lessons are adapted readily and short term planning evaluated in light of these assessments. Termly assessments are carried out across the school using the assessment materials for each year group provided by the White Rose Maths Hub in line with the schemes of learning. These materials used alongside judgements made from class work support teachers in making an assessment for each child which in line with the assessment policy. The information from these assessments is then discussed at termly pupil progress meetings which are attended by SLT, any children who are not making expected progress are identified, actions are put into place and the impact of these is monitored.

September 2017

Role of the Maths Subject Leader

- To lead in the development of maths throughout the school.
- To monitor the planning, teaching and learning of mathematics throughout the school.
- To help raise standards in maths.
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to maths within the confines of the budget and the School Improvement Plan
- To monitor and maintain high quality resources.
- To keep up to date with new developments in the area of mathematics

Reporting of Mathematics to Governors

The Standards Committee review and evaluate the progress and impact of Maths achievement and progress for pupils across the school. These are held termly.

This policy will be reviewed every three years.

Date agreed:

Chair of Governors

Headteacher