

Policy for Mathematics

Introduction

This document is a statement of the aims, principles and strategies for teaching Mathematics at Hawkshead Esthwaite Primary School.

What is Mathematics?

Mathematics is a vital part of our everyday lives. It provides a powerful means of communication which enables us to convey ideas and analyses information. Its methods and tools also provide us with the means to solve problems as well as the ability to think in logical and abstract ways. We acknowledge the statement in the National Curriculum 2014. 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

We aim to provide the pupils with a mathematics curriculum which will produce individuals who are literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating, environment and adequate resources so that pupils can develop their mathematical skills to their full potential.

Principles for Teaching Mathematics

In line with the new National Curriculum, we aim 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

The approach to the teaching of Mathematics at Hawkshead Esthwaite Primary School is based on:

- daily input on basic numeracy skills and recall of key facts. This is delivered in structured, well-paced and active oral and mental sessions daily in all classes from Reception to Year 6
- a Mathematics lesson every day planned from the National Curriculum year group objectives and using 'White Rose' structured medium term plans
- subsequent weekly planning matching the needs of the class which is determined by ongoing and summative assessment
- Maths is threaded through other subjects and applied within real contexts so children retain and not just attain their maths knowledge

Planning, Assessment, Recording and Reporting

Planning

The maths scheme 'White Rose' is now used from Year 1 -6 and gives a structure to the medium term plan. The children's prior learning and knowledge forms the starting point for the learning sequence. Learning sequences within the class reflect the expected level of the children with scaffolding for those who need more practice and

additional challenge facilitated for those who need it. The class teachers are responsible for both planning and implementing the plan effectively in their own class.

Each learning sequence offers practice of skills linked to real life contexts, taught session opportunities for mastery of the concept, challenge, as well as ongoing assessment.

Assessment

In our school we are continually assessing our pupils and recording progress. Assessment is purposeful, enables us to plan effectively and ensures each child makes appropriate progress. Techniques to be used include:

- initial assessment of prior learning/knowledge for each new concept
- setting challenging work so the children grapple to answer and misconceptions are clearly spotted and tackled
- movement of children across groupings in class to match need / monitoring of self differentiated tasks
- asking challenging questions ;open up the teaching dialogue
- listening to children during group work / monitoring opportunities for 'maths talk'
- observing the actions of children in mathematical activities
- ongoing marking and feedback of completed work
- Times table Rock Star tests with children
- end of Key Stage assessment procedures are adhered to in EYFS , Y2 and Y6

Then

- keeping records of entry / exit tests so progress can be monitored and teaching moves children on next time
- updating the Chris Quigley tracking system to match children to the expected level for their age
- reviewing progress in pupil progress meeting
- planning actions to match vulnerable children / groups
- monitoring the results of nationally recognised SATs
- comparing school results with national results

Records

Staff use the Chris Quigley 'Depth of Learning' tracker to keep the progress pathways for maths updated as maths sessions are taught – showing children's achievements against the expected level.

Data is collated termly and discussed with the Head Teacher and Subject Leader, groups can be identified and strengths and areas for development are agreed for the next teaching sequence .

Reporting

Parents are invited in to see the books at least once a term. These open sessions form the basis for discussions at the termly parent's evenings where progress in Maths is discussed and next steps identified.

A summative report on Mathematics is included in each child's annual report to parents. End of Key Stage test information is given to parents about their children once published in July of each year.

Special Educational Needs

All children must meet with success and not failure and should make progress in Mathematics and not remain static in their development. In order to achieve this, there must be differentiation and extension activities so that all levels of ability are catered for. Pre- teaching of concepts or catch up of basic skills may be employed to support children who are static in their development.

ICT

In line with the new curriculum we use calculators in upper KS2 and teachers will utilise other ICT tools to enhance and support children's development of mathematical concepts. A variety of interactive maths packages may be used, including Times Table Rock Star, Prodigy Maths and Sumdog.

Monitoring and Evaluating

The following techniques are used to monitor and evaluate the quality of mathematics throughout the school:

- lesson observation
- work scrutiny
- pupil interview
- planning review
- audits
- work with governors
- liaison with Maths Hub group
- use of SLE / local authority to support developments / action plans

The Role of the Mathematics Leader is to:

- inspire colleagues, provide examples of good practice
- set high expectations for all children in attainment in Maths
- maintain high standards of teaching across school
- support staff to assess and plan for the needs of their children
- ensure continuity and progression throughout the school
- identify INSET needs and offer in-house training as appropriate to develop staff skills and confidence
- identify resourcing needs and order resources
- keep up to date with current developments in mathematics and inform staff of new developments
- set future targets with the Head Teacher
- track and support progress
- work with the cluster of schools/Maths Hub to improve standards of teaching and learning
- track trends in attainment against National and Cumbria level of attainments and monitor the progress of differing groups within school.

Mrs S. A. Kirby Mathematics Leader September 2017

Review date September 2018

Linked to calculation policy

Linked to Maths Statement