

Purpose

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

Using the Programmes of Study from the National Curriculum 2014 it is our aim to develop:

- a positive attitude towards mathematics and an awareness of the fascination of mathematics
- competence and confidence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and an ability to work both independently and in cooperation with others
- an ability to communicate mathematics
- an ability to use and apply mathematics across the curriculum and in real life
- an understanding of mathematics through a process of enquiry and experimentation

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to Science and other subjects.

Decisions about when a child will progress should always 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. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Spoken Language

The national curriculum for Mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Knowledge Skills and Understanding

Through careful planning and preparation, we aim to ensure that throughout the school children are given opportunities for:

- practical activities and mathematical games
- problem solving
- individual, group and whole class discussions and activities
- open and closed tasks
- a range of methods of calculating (recalling a known fact, mental calculation, a jotting, a formal written method)
- working with computers and calculators as mathematical tools

School Curriculum

Our school scheme of work is a working document and as such is composed of ongoing plans produced on a week by week basis. This is developed from the New National Curriculum 2014 using planning front sheets prepared by the Lancashire Maths Team and takes into consideration the needs of our children. Throughout the whole curriculum opportunities exist to extend and promote Mathematics. Teachers seek for, and take advantage of, all opportunities to promote Maths across the whole curriculum.

Each class teacher is responsible for the Mathematics in their class in consultation with, and with guidance from, the Mathematics Subject Leader. The subject leader regularly attends half day updates from the Lancashire Maths Team, the information from which is passed on to staff during staff meetings.

Maths is taught daily from Year 2 to Year 6. The structure of most lessons is as follows:

9.00am-9.30am – Exploration, teacher input and guided practice

9.30am – 9.50am – Assembly for the majority of children and Maths intervention for those children who are identified in the first part of the lesson as requiring additional support to making progress with their learning

9.50am – 10.30am – A quick recap of teaching input and independent/guided work.

Children in Early Years Foundation Stage and Year 1 focus on Mathematics 3 times each week, including whole class Maths input and teacher/teaching assistant led activities. As well as focussed sessions, children also have access to quality Maths activities in their continuous provision. Staff ensure that children are targeted throughout the week when intervention is needed.

Special Educational Needs

Children with SEN are taught within the daily Mathematics lesson and are encouraged to take part when and where possible (please see the section on differentiation).

Where applicable children's IEPs incorporate suitable objectives from Pivats or KLiPs documents and teachers keep these objectives in mind when planning work.

When additional support staff are available to support groups or individual children, they work collaboratively with the class teacher. The teacher and support staff liaise in detail before and after each session.

Within the daily mathematics lesson, teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in Mathematics.

Equal Opportunities

We incorporate Mathematics into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of Mathematics.

In the daily Mathematics lesson, we support children with English as an additional language in a variety of ways. For example, repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc.

Marking

It is recognised by the school that high quality next steps marking of Maths is an essential tool to enhance children's learning. Marking should be both diagnostic and summative and school policy believes that it is best done through conversation with the child but acknowledges that constraints of time do not always allow this. All teachers employ a policy of next steps marking regularly in each child's book at an appropriate level for the child's understanding. For younger children this will more often be in the form of verbal feedback. In the older year groups, children are expected to respond to the marking themselves.

Also see the School marking policy.

Assessment

From Year 1- 6 the children are assessed on a half-termly basis with a grade given from teacher assessment and the other in each term as a test. The results of these are recorded on a spreadsheet for all staff to view and for the Maths Subject Leader and the Senior Leadership Team to monitor.

Reporting to parents

Parents are given opportunity to discuss their child's progress on two separate occasions throughout the year. Written reports are distributed half-way through and at the end of each year.

Teachers use the information gathered from their half-termly assessments to help them comment on the progress of individual children.

Parental Involvement

Sessions are held occasionally to inform parents about how to enhance their child's learning in Maths and to inform them of some of the alternative methods of calculation.

Differentiation

Children are placed in groups of similar ability for Mathematics lessons. There is flexibility within these groups so that a child may be altered to another group if their performance suggests that it would be beneficial for them.

The majority of mathematics lessons in KS1 and KS2 will be differentiated at three levels. Usually there will be a common theme with tasks being set at an appropriate level for each group. Some groups will be supported by the teacher or a teaching assistant while others will work independently. Practical resources are provided at all levels where it will enhance the learning.

Some lessons provide open ended tasks where differentiation will be by outcome.

Lessons are prepared from a variety of sources rather one particular scheme.

Monitoring and Evaluation

The Maths Subject Leader generates and follows an annual action plan. The Mathematics Subject Leader monitors standards of planning and teaching and carries out scrutinies of children's work and teachers' planning. Support is given, if necessary, to ensure all staff are adhering to the agreed calculation policies and planning format. Findings from any monitoring is discussed initially with the Senior Leadership Team and is also shared with teaching staff as appropriate.

Resources

Practical resources to support learning are stored both in individual classrooms where they are easily accessible to all children and additional resources are stored centrally in the main corridor.

Each classroom has a maths 'working wall' showing examples of the topic currently being covered and has a permanent display of mathematical symbols, numbers, times tables and vocabulary appropriate to the age range.

Homework

Homework, either written or on-line, is given out on a regular basis in Y1-Y6 by each class teacher and parents are encouraged to be involved in their child's learning. In Foundation Stage, a sheet is sent home weekly informing parents of the learning that has taken place.

The Governing Body

A governor responsible for mathematics is identified from the governing body. Governors are invited to attend any Maths workshops or training days. The subject leader reports annually to the curriculum committee of the governing body.

Policy Review

This policy will be reviewed at least every two years.

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