

Thackley Primary School

Mathematics Policy



Introduction

Mathematics is a fundamental part of the language we use to make sense of the world around us. Teaching children mathematics empowers them so that they can function in the numerate world and use their mathematical skills to enhance experience and solve problems. The implementation of this policy is the responsibility of all the teaching staff.

Aims

To prepare pupils for the future, and in accordance with the New Curriculum Year Group Expectations, in our planning and teaching we encourage all pupils to become independent learners who are able:

- To develop positive and enthusiastic attitudes towards mathematics.
- To use the language of mathematics to communicate their ideas and talk about mathematical skills and concepts.
- To use a range of mental strategies and mental recall of facts as well as formal and informal written calculations.
- To solve problems in a range of meaningful real life contexts including other curriculum areas.
- To work co-operatively.
- To explore, investigate acquire and apply mathematical skills, concepts and understanding
- Understand the ways in which information is gathered by counting, measuring and is presented in graphs, diagrams, charts and tables

Guidelines

1. The New National Curriculum for Mathematics sets out the curriculum content based year group expectations for children from year 1 to year 6. There are 2 Strands of Objectives which are organised into Number and Geometry and Measures. These objectives will form what is taught to the children. Teachers match their children's next steps to appropriate an unit of work and create short term plans by choosing appropriate Learning Foci from the list of Objectives present in each Unit.

In addition to the year group expectations, there are year group non-negotiables. These non-negotiables are the minimum requirements that each child must meet in order to ensure continued progress through the following year. All the objectives will be worked on throughout the year and will be the focus of direct teaching.

2. The co-ordinator will be responsible for the monitoring of, planning teaching, and resources. Training needs will be identified through an audit of staff skills and information gathered through the school's cycle of monitoring learning and teaching.
3. Individual teachers are responsible for drawing up and evaluating the weekly plans for delivery of the daily Mathematics lesson. These plans will be kept (for one academic year) by individual teachers and may be monitored by the head, SLT, the assessment co-ordinator or the mathematics co-ordinator.
4. Class teachers will be responsible for keeping formal and informal records. Formal records of pupil's achievement against the Curriculum Objectives will be kept as a permanent part of a pupil's record and will follow them through school.
5. In order to motivate pupils' teachers will display learning objectives and success criteria during lessons, use interactive Mathematics displays and set targets for individuals and cohorts of pupils. Targets are set, monitored and reviewed regularly.
6. In accordance with the policy for ICT and the Numeracy Curriculum Objectives, pupils will be given appropriate opportunities to use Information and Communication Technologies to enable them to explore, investigate and acquire mathematical skills, concepts and understanding.

Teaching time

To provide adequate time for developing numeracy skills each class teacher will provide a daily mathematics lesson. This may vary in length but will usually last for about 45 minutes in Key Stage 1 and 50 to 60 minutes in Key Stage 2. In Reception children will have a daily mathematics input developing mental/oral ability and be encouraged to complete focused maths activities each week. Links will also be made to mathematics within other subjects so pupils can develop and apply their mathematical skills.

A typical lesson

A typical lesson in Year 1 to 6 will be structured like this:

- Time to look at previous work and respond to wishes
- Rapid recall (5 minutes)
This will involve whole-class work to rehearse, sharpen and develop mental and oral skills.
- The main teaching activity
This will include both teaching input and pupil activities and a balance between whole class, grouped, paired and individual work.
- A plenary - if appropriate
This will involve work with the whole class to sort out misconceptions, identify progress, to summarise key facts and ideas and what to remember, to make links to other work and to discuss next steps.

Homework

The daily mathematics lessons will provide opportunities for children to practice and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These will be extended through homework activities/tasks. These activities will be short and focused and will be referred to and valued in future lessons. *(See Homework Policy for specific details)*

Links between mathematics and other subjects

Mathematics contributes too many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

School and Class Organisation

How we cater for pupils who are more able

Where possible more able pupils will be taught with their own class and stretched through differentiated group work and extra challenges. When working with the whole class, teachers will direct some questions towards the more able to maintain their involvement. Very occasionally special arrangements will be made for an exceptionally gifted pupil e.g. they may be taught with children from a higher age range or may follow an individualised programme with more challenging problems to tackle, taking the Learning Objectives from the next year group.

How we cater for pupils with particular needs

The daily mathematics lesson is appropriate for almost all pupils. Teachers will involve all pupils through differentiation. Children with EAL have 1:1 support and outside agency help when necessary to allow them to access the curriculum alongside their peers.

Pupils with special educational needs and individual education plans

Teachers will aim to include all pupils fully in their daily mathematics lessons. All children benefit from the emphasis on oral and mental work and participating in watching and listening to other children demonstrating and explaining their methods. However a pupil whose difficulties are severe or complex may need to be supported with an individualised programme in the main part of the lesson.

How we work in the Early Years Foundation Stage

In Nursery and Reception the classes will be organised to promote social skills and the development of mathematical language and understanding.

All adults working in the Foundation Stage will support children in developing their understanding of problem solving, reasoning and numeracy in a broad range of contexts in which they can explore, enjoy,

learn, practise and talk about their developing understanding. They will provide opportunities for practice to develop children's confidence and competence.

Resources

Every classroom has a variety of maths equipment and resources to support the teacher and pupils in maths. Whole school resources are located in the cloakroom of the Hub.

Information and Communication Technology

ICT will be used in various ways to support teaching and motivate children's learning. ICT will involve the computer, calculators, and audio-visual aids. They will however only be used in a daily mathematics lesson when it is the most efficient and effective way of meeting the lesson objectives.

Assessment

Assessment in Mathematics takes place on a daily basis through a variety of different methods. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

- Marking of children's work allows teachers to see if children have understood the topic being covered
- Teachers annotate weekly lesson plans on a daily basis to inform weeks teaching
- Children are tested during termly assessment weeks: end of the Autumn, Spring and Summer terms
- At the end of each half term teachers complete assessments, giving each child a level and plot all children on Numeracy Tracking sheet
- At the end of Y2-Y6 optional and statutory SATs provide further evidence of attainment and give a definitive National Curriculum Level.
- Teachers will also draw upon their class record of attainment against key objectives and supplementary notes and knowledge about their class to produce a summative record. Accurate information will then be reported to parents and the child's next teacher.
- APP will support teachers in assessing target groups of children throughout the year as identified from half termly trackers.

D Management of Mathematics

Role of the Coordinator

- Ensure teachers are familiar with the Framework and help them to plan lessons
- Lead by example in the way they teach in their own classroom
- Monitor planning, teaching and work produced by children
- Prepare, organise and lead INSET, with the support of the Headteacher
- Work co-operatively with the SENCO as needed
- Observe colleagues from time to time with a view to identifying the support they need
- Attend INSET provided by LEA numeracy consultants

- Inform parents
- Discuss regularly with the headteacher the progress of implementing the Strategy in the school.

Role of the Headteacher

- Lead, manage and monitor the implementation of the Strategy, including monitoring teaching plans and the quality of teaching in classrooms
- Keep the governing body informed about the progress of the Strategy
- Ensure that mathematics remains a high profile in the school's development work
- Deploy support staff to maximise support for the Strategy

Conclusion

Mathematics is a hierarchical subject that builds on previous learning as it extends knowledge, therefore the provision of good teaching and learning opportunities is vital at every stage of a pupil's progress through school.

Mathematical education should equip children for life beyond the bounds of school therefore, we will endeavour to give all our pupils the widest possible range of mathematical experience in order to prepare them for their future.

Rebecca Mountain
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Date ratified by Governors: May 2014
Review date: May 2017

Related policies:

Special Educational Needs Policy
Assessment Policy
Homework Policy
ICT Policy
Teaching and Learning policy
Gifted and Talented Policy

Appendices:

1. Agreed planning forms
2. Calculations methods