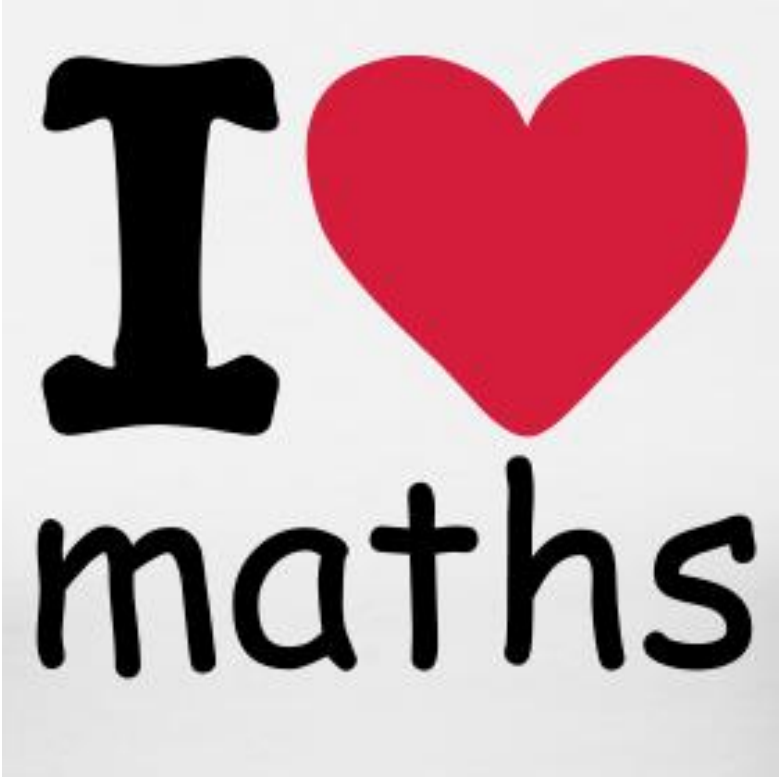
Heyhouses CE Primary School



Mathematics Policy March 2018

Heyhouses School Mathematics Policy

Our Philosophy for Mathematics in Heyhouses School

We believe that Mathematics is an essential tool needed for everyday life, in childhood and in the adult world. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and to tackle a range of practical tasks and real life problems. We believe that mathematics should be taught in all years throughout our school at levels of difficulty appropriate to the age and stage of each individual child.

Using the New National Curriculum for Mathematics and the Lancashire planning, it is our aim to develop:

Positive attitudes towards mathematics and an awareness of how fascinating mathematics can be.

Competence and confidence in mathematical knowledge, concepts and skills.

An ability to solve problems, to think logically and to work systematically and accurately.

Initiative and the ability to work independently and in co-operation with others.

An ability to use and apply mathematics across the curriculum and in real life.
An ability to understand concepts through inquiry and experiment.

School Policy and the National Curriculum

At Key Stage One and Two teachers use the Lancashire planning to guide their own plans in order to make sure that all parts of the New National Curriculum is taught.

Foundation Stage follow the Early Learning Goals.

Breadth of Study

Opportunities are offered for children to develop their mathematical knowledge and skills through tackling problems and through purely mathematical activities.

Activities are balanced in terms of time, some of longer, some of shorter duration.

Children will work as individuals and in groups.

Children will experience open ended as well as closed tasks.

Children will be taught a range of methods of calculating. For example, mental methods, pencil and paper and formal methods.

Children will be helped to develop skills in using a wide range of mathematical tools (e.g. numicon, rulers, tape measures, protractors, timers, measuring cylinders, multi link, etc.) through practical work, including laptops, i-pads and tablets.

Children will be able to develop their personal qualities and a positive attitude to mathematics through the experiences offered to them.

Range of Activities

Through careful planning and preparation we aim to ensure that during each year children are given opportunities for:

Practical activities and mathematical games.

Problem solving.

Individual and group work and whole class discussions and activities.

Open and closed tasks.

A range of methods of calculating.

Working with ICT as a mathematical tool.

Scheme of Work

Our scheme of work is a working document and is composed of on going plans produced on a week by week basis.

Our scheme of work is based on the New National Curriculum. We follow the Lancashire overview guidance and use the planning CD to aid our weekly planning. We have taken the decision, as a staff, not to

exclusively use a published scheme. Staff can use the Abacus, materials from our previous scheme when appropriate, but should also dip in to the wealth of resources available at school (including Headstart, On Target Maths, MyMaths, Maths of the Day, and Testbase), on the internet and of their own making.

Cross Curricular Issues

Wherever possible, teachers will look for opportunities to include mathematical experiences in their teaching and learning in the wider curriculum areas. Where links occur naturally, it is expected that staff will exploit these so that mathematics can be developed and enhanced through cross-curricular topic work.

Teacher's Planning and Organisation

Each class teacher is responsible for the mathematics in their class in consultation with, and with guidance from, the co-ordinator(s).

The approach to the teaching of mathematics within the school is based on the following principles:

1. A mathematics lesson every day (between 45 and 60 minutes duration).

2. A clear focus on direct, instructional teaching and interactive oral work with a whole class or group.

3. A commitment to challenging/supporting each individual pupil, at their ability level, in order for them to achieve the very best that they can.

Our whole school planning approach in Key Stages One and Two is as follows:

Long Term: New National Curriculum requirements.

Medium Term: Lancashire Planning

Short Term: Class Teachers' weekly plans.

Teachers of the Reception classes base their teaching on objectives in the Framework for Reception, this ensures that they are working towards the Early Learning Goals for Problem Solving, Reasoning and Numeracy. Towards the end of Reception, teachers aim to draw together the elements of a daily mathematics lesson so that by Year One the children are becoming familiar with a 45 minute lesson.

Teachers' plans will include learning objectives for both the mental and oral starter and for the main activity. They will also include details of the differentiated tasks to be offered to the children. If it is useful for teachers, these plans may include details about how the teacher intends to teach the lesson and also any equipment needed. The plans will be scrutinised by the co-ordinator, however, we acknowledge, first and foremost, that these plans are working documents to aid the teachers in their

teaching and not merely for show. Lessons, should of course match up to plans. However, plans may be altered on a day to day basis to accommodate AFL.

It is expected that year group teachers work in collaboration with each other in their mathematics planning. PPA time is given each week for planning and teachers will use this time to plan their weekly lessons. Where there are job shares or part time teachers, it is expected that these teachers liaise with one another to ensure parity.

At Heyhouses, we are open to setting, but we do not set across all year groups. We choose to respond to the needs of each cohort as appropriate.

Special Educational Needs

Children with SEN are taught within the daily mathematics lesson either in a whole class or smaller group environment. The work offered to these children is matched to their individual needs and ability level. Within the maths lesson teachers provide work to support and work to challenge.
During mathematics lessons, support staff who are helping in classes are given clear guidance as to who they are supporting and what it is they are expected to do.

Equal Opportunities

At Heyhouses School we share a commitment to high achievement in mathematics by children, regardless of gender, race, social circumstance or disability.

We give extra support to those whose first language is not English in order to ensure that they have full access to our curriculum.

Pupils' Records of their Work

Children are encouraged to communicate their mathematics in a variety of ways. They are taught to use the most appropriate and convenient method of recording. These methods may include; jottings, informal methods of calculating and formal methods of calculating. Children are also encouraged to use mental calculation, where possible. We encourage the children to work neatly and tidily when recording their work.

Marking

Work in mathematics can generate a great deal of marking and it is recognised that it is not always necessary or desirable to mark every piece of work. The children themselves can mark exercises which involve routine practice, with support and guidance from the teacher. This can encourage independence in the children and provide instant feedback.

Where teachers mark the books, the quality of marking is important. If possible, the teachers should address mis-conceptions in conversation with pupils. If there is not time for this, children should be offered a written explanation of where they have gone wrong. If children show they understand the concept by the accuracy of their written work, positive praise and acknowledgement of their progress should be made.

Assessment and Record Keeping

Teachers are expected to make regular assessments of each child's progress in a variety of ways.

Firstly, informal assessment on a day to day basis, used to inform the teacher's Assessment For Learning.

Teachers will use the Lancashire assessment tests each term. They will use the results of these, along with their

on going AFL judgements, to decide an overall assessment for the autumn and spring terms. This information will be passed on to the assessment co-ordinator who will add to the tracker using this information. The Testbase tests forms the basis of the summer assessments.

Once during each half term, in Key Stage Two, all children complete a large tables test. Each year group has a decreasing amount of time to complete it.

Year 3: 25 minutes

Year 4: 20 minutes

Year 5: 15 minutes

Year 6: 10 minutes

Teachers are expected to keep records of all their assessments in their mark book and at the end of the year, to fill in all requirements in the data file, to pass on to the next class teacher.

Reporting to Parents

There are several opportunities given to the parents to be informed about and to discuss their child's progress in mathematics.

In the first half of the autumn term, we hold 'meet the teacher' sessions in which we briefly discuss pupil progress and targets.

During the spring term, we hold formal parent interviews where we discuss progress so far in the year group the child is currently in.

During the summer term, we produce detailed reports and we give parents the opportunity to discuss these reports, should they wish to.

We also give parents the opportunity to come and discuss maths issues in general as and when they need to and on one formal occasion per year.

As part of our report package, parents are informed as to whether their child is working at the age expected level, below or above.

If we do have concerns about progress throughout the year, teachers see individual parents in addition to the other meetings offered.

Parental Involvement

As mentioned in the previous section, parents are given several opportunities to look at their child's work and to discuss progress with the teacher.

An open evening is held each year at both sites.

Parents are sent details of events and activities offered including number day, puzzle day and Maths challenge workshops at various High Schools.

Differentiation

Differentiation should be incorporated in to all mathematics lessons. This can be done in a variety of ways.

1. Stepped activities which become more difficult and demanding but cater for the less able in the early sections.
2. Common tasks which are open ended activities/investigations where differentiation is by outcome.
3. Resourcing, which means the provision of a variety of equipment depending on abilities, e.g. counters, cubes, 100 squares, number lines, mirrors, calculators etc.
4. Grouping, according to ability within the same class, so that groups can be given different tasks when appropriate.

5. Grouping, according to ability, where similar abilities are taught in one class. (Setting) This enables the teacher to teach a smaller ability range.

Monitoring and Evaluation

It is the role of the mathematics co-ordinator(s) to monitor and evaluate the quality and standards of mathematics throughout the school. The co-ordinator(s) will work alongside teachers within their classrooms in order to observe standards of teaching and learning and to offer support and advice if needed. The co-ordinator(s) will also regularly scrutinise exercise books, again, to check on the quality of teaching and learning. The co-ordinators will also keep a regular check on assessment results so that children who may be slipping behind are discovered at the earliest opportunity and plans then put in place to address the areas of difficulty. It is also the role of the mathematics co-ordinator(s) to initiate regular pupil focus group sessions in order to allow the pupil voice to be heard and to answer any specific questions the co-ordinator may have.

The SLT do a round of monitoring and evaluating standards in the same way as the co-ordinator(s). The co-ordinator(s) also work with the TLRs to be aware of children who need to bridge the gap in Maths.

It is the role of the class teacher to bring to the attention of the co-ordinator(s) any issues that they feel need

addressing in the area of mathematics that have not yet been picked up.

Staffing and Resources

Staff development is vital to ensure that we keep up to date with new developments and initiatives, to improve our subject knowledge and teaching standards and to develop the skills of our newly qualified colleagues. The co-ordinator will keep up to date with available courses and, if appropriate, ask staff to attend any courses that are relevant. It is hoped that teachers would ask to attend courses if they feel they want an area of weakness strengthening or if they have a particular interest they wish to develop.

Each year, the co-ordinator(s) will review last year's action plan and create a plan for the coming year.

The co-ordinator(s) will also hold regular team meetings to discuss issues/ideas with the mathematics group.

Resources are readily available on both sites. They are stored centrally and are clearly marked and accessible. It is the responsibility of all teachers to ensure that they return resources to the central location after use so that everyone has full access to what is available.

It is the responsibility of all teachers to let the co-ordinator(s) know if there are resources needed that we do not have. The co-ordinator will find and purchase these resources if the budget allows.

The Governing Body

On the governing body there is always one governor who is linked to mathematics, as there is to all other subjects. This governor will be invited to team meetings and to any INSET events. The mathematics governor may wish to be involved in lessons from time to time. The mathematics governor will report back to the whole governing body on progress, developments, initiatives and achievements in mathematics within school.

Homework

It is our school policy to provide parents and carers with opportunities to work with their children at home. These activities may only be brief, but are valuable in promoting children's learning in mathematics.

Activities are sent home on a regular basis, beginning with shorter tasks in Key Stage One and becoming longer and more demanding as the children progress through Key Stage Two. Please see the homework policy for specific details of how much, how long and how often.

Policy Reviews and Updates

Finally, the co-ordinator(s) will review the mathematics policy annually. Any necessary changes will be made and the policy re-dated.

Checked and up dated in March 2017.