Crowmoor Primary School

MATHS POLICY

THE NATURE OF MATHEMATICS

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 purpose of mathematics in our school is to develop:

- a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world
- 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 experiment

BREADTH OF STUDY

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 eg. mental, pencil and paper and using a calculator
- working with computers as a mathematical tool

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

TEACHERS PLANNING AND ORGANISATION

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics subject leader.

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

- a mathematics lesson every day
- a clear focus on direct, instructional teaching and interactive oral work with the whole class and targeted groups
- an emphasis on mental calculation to aid the speed and efficiency when completing arithmetic questions

Each class organises a daily lesson of between 45 and 60 minutes for mathematics. 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.

Long-term planning

The White Rose Termly Overviews and 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. A copy of each class's Long Term Planning can be found in the Meeting Room.

Medium-term planning

Years 1-6 use the 2017-18 White Rose Medium Term Mathematics Planning Documents as its medium-term planning. EYFS planning is based on Development Matters and the Early Learning Goals (Number, Shape, Space & Measure).

Short-term planning

Lessons are planned using a format of the teacher's choosing and are stored on Office 365. EYFS planning is based on the medium-term plans and delivered as appropriate to individual children with thought to where the children are now and what steps they need to take next. Staff predominantly use Classroom Secret resources as a first point of contact for differentiated work. These resources include fluency, reasoning and problem solving activities. Staff (from Y1 to Y6) also use the Badger resource and approach to problem solving.

SPECIAL EDUCATIONAL NEEDS

The daily mathematics lessons are inclusive to pupils with special educational needs. Where required, children's PCPs incorporate suitable objectives from the New National Curriculum for Mathematics or Development Matters and teachers keep these objectives 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 programmes are available in school to help children with gaps in their learning and mathematical understanding; however, where appropriate children will remain in class and receive a 'Quality First Teaching' approach. Intervention can be delivered on a 1:1 basis or by a 'Tardis' approach which is led by trained support staff; this intervention will be overseen by the class teacher and can take place outside the usual maths lesson timings.

Within the daily mathematics lesson teachers must not only provide differentiated activities to support children with special educational needs but also activities that provide appropriate challenges for children who are high achievers in mathematics. It is vital that all children are challenged at a level appropriate to their ability.

EQUAL OPPORTUNITIES

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of mathematics. We ensure that all children are able to fulfil their potential regardless of race, religion, disability or gender.

MORE ABLE

We endeavour to give all children opportunities that match their ability and work is differentiated to reflect this. The Class Teacher, in conjunction with the Head Teacher at Pupil Progress Meetings and the Subject Leader ensure children are identified as More Able. If a child is considered to be 'More Able' opportunities are sought and offered to ensure they are stretched; an example of this would be representing the school within the yearly Inter-school Maths Competition, opportunities to attend 'More Able' sessions with visiting experts, external school visits or attendance at sessions run with other schools (i.e. Coleham 'More Able' Day in November 2017).

PUPILS' RECORDS OF WORK

Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. Children are encouraged to use mental strategies before resorting to a written method. All children are encouraged to work tidily and neatly when recording their work. When using squares one square should be used for each digit.

At KS1 plain exercise books are to be used. This changes to 1cm square exercise books in Year 3 and 4 progressing to 7mm squares at Year 5 and 6.

EYFS are expected to record formally; but it is usual to record informally within the setting. For example:

- on the playground
- on whiteboards
- using jigsaws
- physically ordering numbers

Staff in Foundation use photos to ensure records of each child's achievements are maintained and Tapestry is used to record and inform

parents. They also have files whereby they save recorded work for scrutiny or as a means of collecting evidence.

MARKING

Marking of children's work is essential to ensure they make further progress. All work is marked against success criteria, in line with the school marking policy, and includes next steps. Work is to be marked once completed before a child starts the next piece of work in accordance with the school marking policy. Children are encouraged to self-assess their work and given time to read teachers' comments and make corrections. Work in mathematics can generate a great deal of marking and it is recognised that it is not always desirable to mark every piece of work. The children themselves can mark exercises which involve routine practice with support and guidance from the teacher – particularly in Year 5 and 6.

The quality of marking is crucial. A simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong.

For further information see the school marking and feedback policy.

ASSESSMENT AND RECORD KEEPING

Teachers make regular assessments of each child's progress and record these systematically. A record of each child's attainment against the key objectives for the appropriate year group is recorded.

Short term

Children's class work is assessed frequently through
-regular marking
-analysing errors
-questioning
-discussion
-plenaries

This is used to inform future planning and teaching. Lessons are adapted readily and short term planning is evaluated and annotated in light of these assessments.

Medium term

Termly assessments are to be carried out across the school using the Rising Star/PUMA/White Rose and Cathryn Hardy assessment materials for each year group. These materials are to be used alongside judgements from class work to form a teacher assessment for each child. These judgements are then fed into the whole school tracking system.

Long term

Y2 and Y6 complete SATs assessments every May. Y3, 4 and 5 use optional year group appropriate papers/Rising Star/PUMA/White Rose Test Papers and Cathryn Hardy Assessments during termly assessment weeks.

REPORTING TO PARENTS AND PARENTAL INVOLVEMENT

Reports are completed before the end of the Summer term and parents are given opportunity to formally discuss their child's progress at two parents' evenings in the Autumn and Spring terms. Parents can make an informal appointment to discuss their child's progress at any time over the school year.

Parents are encouraged and offered support and guidance to support their children's learning of mathematics.

MONITORING AND EVALUATION

The mathematics subject leader monitors and evaluates the teaching of mathematics. Time to trawl the books is set aside each half term and the Subject Leader is given half a day each fortnight to enable the monitoring and evaluating of teaching across the school. Any observations are undertaken in line with the School Improvement Plan. Opportunities for teachers to review the scheme, policy and published materials are given during staff meetings.

STAFF RESPONSIBILITIES

Head Teacher/Deputy Head Teacher:

- lead, manage and monitor the development of mathematics in the school

- support the mathematics subject leader in taking mathematics forward
- carry out annual audits, set targets, review the action plan and monitor its progress
- ensure that arrangements are made to meet the training needs of teachers and other adults involved
- manage the school's allocation of resource funding, including leadership time
- ensure parents are informed and involved

Mathematics Subject leader:

- Assist the Head Teacher/Deputy Head Teacher in carrying out the audit, reviewing and amending of the action plan
- Prepare, organise and provide school based INSET meetings, workshops and staff meetings
- Assist with the monitoring of teaching and planning and the analysis of SATs results
- Preparation, review and implementation of school policy documents and guidelines taking into account the recommendations of the New National Curriculum and EYFSP
- Liaison with staff in school
- Working alongside them giving guidance and support
- Introduce, organise and maintain the school's mathematics resources
- Take responsibility for own professional development by attending courses and keeping up-to-date with current developments within mathematics education
- Liaison with mathematics subject leaders in other schools through attendance of local network meetings
- To provide an example to the school by taking a lead in teaching mathematics and classroom organisation
- Maintaining contacts beyond school with Numeracy Consultants, Advisory Staff and other outside agencies
- Ensuring equality of opportunity for all pupils

SENCO

- Supporting and working co-operatively with the mathematics subject leader to implement and develop mathematics throughout school
- Organising and providing INSET for staff special needs mathematics issues

- Advising staff how best to support children with varying needs during mathematics lessons so that they meet the expectations of the yearly teaching programmes where possible
- Advising staff on the inclusion of mathematical objectives in PCPs for children with SEN in mathematics
- Helping to ensure that children who are capable of catching up their peer group do so as quickly as possible
- Advising staff on the effective use of teaching assistants and helping support staff to develop their role
- The SENCO and Maths Lead will also monitor the 'more able' children and ensure they are given suitable challenges.

Class Teachers:

Class teachers are responsible for the planning, teaching and assessment of the daily mathematics lesson and the organisation of additional adults in the classroom. They are also responsible for implementing the contents of this policy within their classroom.

Support Staff

HLTAs and TAs that work with the children support the teaching of mathematics under the direction of the class teacher.

Governing Body

We have an identified Maths Governor (Mr Tim Wasdell). He is invited to attend relevant school INSET. The Maths Governor visits school termly to talk with the subject leader and when possible, observes some daily maths lessons. The Maths Governor reports back to the curriculum committee on a regular basis.

STAFF DEVELOPMENT

All staff are encouraged to develop, assess and improve their teaching of mathematics.

Whenever possible we:

- encourage staff to attend mathematics courses
- make provision for the mathematics subject leader to work alongside colleagues in the classroom or shared areas
- provide school based INSET

- involve staff with policy and decision making
- provide the opportunity to learn from colleagues expertise
- encourage parental involvement at home and in school based workshops with their children

RESOURCES

All teachers should organise an area within the classroom dedicated to mathematics resources. This area is easily accessible to all children and allows them to become familiar with all resources. There should also be a working wall area within every classroom that the children can access. This needs to be updated regularly in accordance with the area of maths being taught at the time. Resources which are not used or required regularly are stored centrally in the maths area at the end of the Boys' Corridor.

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 to children in years 1 to 6 on a weekly basis as part of our home learning 'Maths Challenge'. These can take the form of games, activities or quick written tasks.

Date Formally Approved by Governors: November 2019

Date Policy became effective: November 2019

Review Date: November 2021

Other Relevant Policies:

- Marking & Feedback Policy
- Calculations Policy
- SEN policy