



MATHEMATICS POLICY

Review Date: July 2019

Introduction

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 mathematically
- 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

This policy outlines what we are aiming to achieve in respect of pupils' mathematical education. It also describes our agreed approach to the planning, delivery and assessment of the mathematics' curriculum.

It provides information and guidance for teachers, governors and other interested persons.

- PROVISION

- 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(UKS2)
- working with computers as a mathematical tool
- offering outdoor learning within maths lessons
- through our creative curriculum approach we also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas.

Numeracy is taught in teaching classes with teachers providing differentiated activities and extra support for children with SEND.

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills e.g. times tables and number facts

At Monkhouse Primary School, we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We use Rockstars multiplication tables practice on a daily basis from yr 2-6 with year 1 beginning at the start of term 5. A class interactive Rockstars display is required in each class to encourage children to perform at their best.

CLIC is taught in all KS1 and KS2 classes and assessment questions are set during most lessons to show progress within a lesson.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

AIMS

General

Although relating specifically to mathematics our aims for the subject are also in line with the school's general aims.

We aim to provide the pupils with a mathematics curriculum, which will produce individuals who are mathematically 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.

Specific

Our pupils should

- have a sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to calculate number problems mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- recognise when it is appropriate to use a calculator and be able to do so effectively
- make sense of number problems, including non routine problems, and recognise the operations needed to solve them
- explain their methods and reasoning using correct mathematical vocabulary
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2D and 3D shapes

Resources

There is a range of resources to support the teaching of mathematics across the school. All classrooms have a number line, number square and a wide range of appropriate small apparatus and games. Mathematical dictionaries, rulers, calculators (UKS2) are available in all classrooms. A range of software is available to support maths work in both classrooms and the IT suite.

Each classroom has a Maths learning zone, where resources are easily accessible and learning prompts relevant to the topic and children in the class.

PLANNING

Long term planning 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.

Medium term planning Years 1-6 use the AET planning resources. EYFS planning is based on Development Matters and the Early Learning Goals (Number, Shape Space & Measure).

Short term planning lessons are planned using a common planning format and are collected and monitored by the mathematics subject leader. EYFS planning is based on the medium term plans and delivered as appropriate to individual children with thought to where the children are and what steps they need to take next.

ASSESSMENT and RECORD KEEPING

Teachers make regular assessments (6 times per year minimum) of each child's progress and record these on Scholar Pack using the government's KPI statements as a base.

Short term children's class work is assessed frequently through

- regular marking
- analysing errors
- questioning
- discussion
- plenaries
- daily assessment questions

These are used to inform future planning and teaching. Lessons are adapted appropriately 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 Scholar Pack 6 time per year (KS1 and KS2), EYFS, 3 times per year. PPMs are carried out 3 times per year with the head teacher. These judgements are then analysed by the head teacher, assessment coordinator, maths coordinator and shared with teachers.

Long term Y2 and Y6 to complete SATs assessments every May. Y1, 3, 4 and 5 to complete an annual assessment during the summer term.

We set next steps for learning prior to Parent's Evening, sharing these with parents to allow them to be involved in their child's learning.

Teachers meet during staff meetings to review examples of pupils' work against the Scholar Pack statements.

HOMEWORK

Homework is given weekly (KS1 and KS2) through the My Maths online platform. Children without internet access should be given time within school and/or a paper copy of the work set.

EQUAL OPPORTUNITIES

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of mathematics e.g. Islamic patterns in RE.

All children have equal access to the curriculum regardless of their gender. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

SEND

The daily mathematics lessons are inclusive to pupils with special educational needs. Where required, children's IEPs/ALMs 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.

These are delivered on a 1:1 basis by trained support staff and overseen by the class teacher. 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.

PARENTAL INVOLVEMENT

At Monkshouse School, we encourage parents to be involved by:

- inviting them into school twice yearly to discuss the progress of their child
- inviting parents into school in the summer term to discuss the yearly report
- inviting parents of Year 5 pupils to a meeting in on supporting their children with SAT's and 11+ preparation
- encouraging parents to help in classrooms
- holding workshops for parents focusing on areas of mathematics
- inviting parents in to participate in lessons

GOVERNING BODY

At Monkshouse School we have a governor identified for **mathematics**.

The maths governor visits the school at times during the academic year to talk with the subject coordinator and when possible, work with groups of children. They also contribute to the SIP and feedback to the FGB.

Monitoring and review

Monitoring of the standards of children's work and of quality of teaching in mathematics is the responsibility of the headteacher and numeracy governor supported by the mathematics co-ordinator.

The work of the mathematics co-ordinator also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.

The headteacher allocates regular management time to the mathematics co-ordinator so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school.

Signed _____ Chair of Governors Date:

_____ Headteacher Date: