

# MATHS POLICY

## Rationale

We believe that '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 in most forms of employment. A high-quality mathematics education, therefore, provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject.' (The National Curriculum in England (DfE) 2013)

Maths is a core subject of the national curriculum and is therefore an essential and integral part of a child's education. It is the study of numbers, patterns and associated relationships using defined literal, numerical and operational symbols. Maths plays a large part in all aspects of our everyday lives and, as a result, children need to be confident and secure in their mathematical abilities at whatever level. In addition, the study of maths, its investigations and logic, gives the child a better insight and understanding of the world about them.

## Aims

Through our teaching of maths, we aim to:

- ensure that all pupils become fluent in the fundamentals of mathematics so that they have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems;
- ensure that all pupils reason mathematically by following a line of enquiry, conjecturing relationships and generalisations and developing an argument, justification or proof using mathematical language;
- ensure that all pupils can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. (The National Curriculum in England (DfE) 2013);
- develop an enthusiasm for and fascination with mathematics;
- increase the confidence of each pupil in mathematics to enable them to apply their knowledge and skills with assurance;
- promote the teaching of numeracy and literacy within all subjects.
- share good practice within the school;
- work with other schools to share good practice in order to improve this policy.

## **The National Curriculum programmes of study and attainment targets**

We base our teaching on the programmes of study for EYFS, KS1 and KS2 and the revised National Curriculum (2014). We use specific year group targets to ensure that children are on track to attain end of year expectations.

## **Role of the Subject Leader**

The Subject Leader will:

- lead the development of this policy throughout the school;
- work closely with the Principal, the nominated governor and SENCO;
- be accountable for standards in this subject area;
- monitor standards by auditing the subject area; reviewing the scheme of work; monitoring teachers' planning; observing lessons; scrutinising children's work; and discussions with pupils;
- ensure continuity and progression throughout the school;
- devise a subject improvement plan;
- provide guidance and support to all staff;
- provide training for all staff on induction and when the need arises;
- attend appropriate and relevant INSET;
- keep up to date with new developments;
- undertake an annual audit and stock take of resources;
- purchase new resources when required and in preparation for the new academic year;
- manage the subject budget effectively;
- review and monitor;
- annually report to the Governing Body on the success and development of this policy.

## **How we plan maths**

We plan using a common format (for long and medium-term planning), which is taken from the revised National Curriculum (2014), and EYFS for each year group, built on progression and skills, taught and learnt. Short-term planning is at the professional discretion of individual teachers, but needs to be available for senior management moderation and subject leader monitoring. Additional support is given at staff meetings and Key Stage meetings.

## **Continuity and progression**

Each year group has specific key objectives to cover, built on previous experiences. For those pupils who may need extra provision, material is selected from earlier or later stages as appropriate. Continuity and progression is ensured by passing whole class records on to the next teacher or stage, along with the records for each individual child. The KS1 and KS2 SATs results, termly assessments for years 3, 4, & 5 and the EYFS profile all provide extra information.

## Teaching methods

Children will be taught maths using a variety of teaching methods appropriate to the skill or concept being taught and the needs of the children. Direct, class teaching will play an important part in this. Group and partner work, as well as children learning by themselves, are also an integral part of maths teaching.

Children's first steps in mathematics will be of a practical and oral nature through first hand experiences. Recording will come later when the skills of writing are sufficiently developed to allow it; however, all children will be given the opportunity to learn mathematics from practical experiences throughout both KS1 and KS2. This practical work may take the form of contextualised investigations, including role play.

Where appropriate, reinforcement and extension work will also be provided. The children will be taught and encouraged to develop their mental skills and strategies throughout the school. Children should become aware that one reason for studying maths is to acquire a tool that can help to solve problems encountered in everyday life. They will be given opportunities to solve problems using their maths skills. They should also be able to discuss possible solutions and devise their own means of recording results. The children will also be helped to make sense of their experiences, skills and knowledge through discussion and application of their learning to new situations.

## Calculations

Guidelines have been produced to inform and support teachers on how to teach the formal, written methods of calculations in KS2. Most written calculations (where appropriate) should start with the units or digits from the right hand side. A calculation policy is used throughout school and is shared with parents at parents' evenings. Additional copies are available by request.

## Resources for maths

A selection of basic resources relevant to each year group is kept within each classroom. Each teacher has responsibility for the storage and upkeep of this equipment. Specific or general resources are then kept centrally in the maths stockroom. The maths subject leader has overall responsibility for all central equipment.

## Safety in maths

Each teacher accepts responsibility for planning safe activities, using equipment safely and maintaining the upkeep of resources.

## Maths and I.C.T.

I.C.T. is now a fundamental, core skill at all key stages and therefore will be used to support the maths teaching throughout the school. Interactive whiteboards will provide up to date technology to support and enhance the teaching of mathematics. Various computer programmes, specific to each year group or key stages will also support all aspects of the teaching of maths.

### **Cross-curricular links**

Maths contributes to other learning experiences across many areas of the curriculum and has important links with science, technology, P.E. and geography. This is particularly true when teaching data handling, patterns and logo. The language development within mathematics is of equal importance.

### **Spirituality**

This is promoted through mathematics by exploring the world through numbers, predicting and exploring ideas of time and place and size, seeking and explaining, looking for pattern and order, cause and effect.

### **Assessment for learning**

Teachers will:

- carry out continuous assessment;
- use short-term assessments matched to the teaching objectives to adjust their planning;
- make comments in pupils' books related to the teaching objective;
- carry out medium-term assessments to measure progress against key objectives to adjust planning;
- carry out long-term assessment to assess progress against school and national targets;
- administer national tests and assessment in Y2 and Y6;
- use long-term assessments to help them plan for the next academic year;
- inform parents and carers of their child's progress and targets.

### **Record-keeping**

Records of each pupil's progress will be kept by their teachers and passed on at the end of each year. At the end of each school year, reports on the child's progress will be sent home to parents. At the end of each key stage the relevant SATS results will also be reported to the parents and the next teacher.