



Warwick Bridge School  
Mathematics Policy

# Mathematics Policy

## THE PURPOSE AND RATIONALE OF THIS DOCUMENT

### THE NATURE OF MATHEMATICS

Mathematics is a tool for everyday life. 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 ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

### OUR AIMS IN TEACHING MATHEMATICS

Using the Programmes of Study from the National Curriculum it is our aim to develop:

- **fluency** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Mathematical reasoning** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- **Problem solving** 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.

As a school we also aim to develop:

- a positive attitude towards mathematics and an awareness of the fascination of mathematics
- 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

## **THE STRUCTURE OF THE MATHEMATICS CURRICULUM**

### Knowledge Skills and Understanding

At KS1 and KS2, teachers use the school's long-term planning documents which have been adapted from the White Rose Hub scheme of work. Teachers follow the small steps guidance in order to aid understanding. This is to ensure that all parts of the National Curriculum Programme of Study are taught in a thorough and consistent manner.

### 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, based on topic themes and enriching challenge tasks
- individual, group and whole class discussions and activities
- open and closed tasks
- a range of methods of calculating eg. mental, pencil and paper
- working with computers as a mathematical tool, including Interactive Whiteboards,
- calculators and programmable toys.

## **PLANNING AND CROSS-CURRICULAR LINKS**

Our school scheme of work is a working document and as such is composed of ongoing plans produced on a week by week basis. These plans follow the schools long term maths planning to provide consistency and coverage across key stages and classes. These plans are adapted and developed by teachers depending on the individual needs of pupils in each cohort. These are developed from The National Curriculum 2014 and long-term plans provided by the White Rose Hub. Teachers use the planning documents to track areas taught and areas for further/future work.

### Cross-curricular issues

Throughout the whole curriculum opportunities exist to extend and promote mathematics. Teachers seek to take advantage of all opportunities.

### Teachers' planning and organisation

- Each class organises a daily lesson of between 40 -60 minutes for mathematics every day
- A clear focus on direct, instructional teaching and interactive oral work with the whole class and group opportunities for frequent investigation or problem solving tasks with an emphasis on mental calculation
- Teachers of the Foundation Stage pupils ensure that they are working towards the 'Early Learning Goals for Mathematical Development'.

### Differentiation

Differentiation takes place in lessons and tasks in various forms:

- By planning activities for different abilities, or similar activities for groups as needed

- By planning common tasks of an investigative nature, accessible to all children and which are differentiated by outcome
- By offering children support in the form of teacher/ teacher assistant support, or practical learning resources and manipulatives.

#### Special Educational Needs

- Children with SEN are taught within the daily mathematics lesson and learning objectives are differentiated to suit each individual need
- When additional support staff are available to support groups or individual children they work collaboratively with the class teacher. TA's also give feedback through comments in a child's book, verbal feedback or through discussion with the class teacher. All support is recorded in TA's file and signed by class teacher.
- Within the daily mathematics lesson teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in mathematics.

#### Equal Opportunities

- We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multi-cultural aspects of mathematics.

### **RECORDING, FEEDBACK AND MARKING**

#### Pupils' records of their work

Children are encouraged to record and communicate their mathematics in a variety of ways. They are encouraged to develop informal and personal methods of calculation, comparing and discussing different methods. They record their workings and solutions using:

- individual whiteboards
- large paper (in groups)
- maths books
- photographs
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Children are required to lay out work in books neatly, using the short date and a learning objective. Pupils work in pencil in maths books.

#### Marking and feedback

Marking is an integral part of the assessment process. Quality marking provides constructive feedback to children, focusing on success and improvement needs against learning objectives. This enables children to become reflective learners and helps them to understand how they can close the gap between what they currently do and their potential as learners.

- The marking system should be constructive and informative. With a positive comment, acknowledgement of achievements and a next learning step (if appropriate).
- Feedback may also be given by a teaching assistant, through peer review, through the plenary and in a group session.
- Key Stage 2 children regularly self-assess and are expected to respond to written comments/marking

- Feedback should include informing children about their next steps
- Targets are also used in class to inform children about their next steps.

For more details about the process of marking and offering feedback please refer to the 'Marking Policy'.

### **ASSESSMENT AND RECORD KEEPING**

Teachers are expected to make regular assessment of each child's progress and to record these systematically. The following reflects the school policy for assessment in mathematics:

#### **Ongoing Formative Assessment**

- Through observations and questioning of individuals and in groups during lesson activities
- Through marking recorded work
- Through setting tasks
- In the Foundation Stage, pupils are assessed through observation and questioning and this is recorded on the children's Tapestry accounts regularly.

#### **Informal testing**

- Teachers may test pupils' oral and mental knowledge of number skills, eg addition facts and multiplication facts, on a weekly basis, or at the end of a block of work.

#### **Formal assessment**

- We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make short term assessments which we use to help us compile our daily plans. These short-term assessments are matched to the teaching objectives.
- We carry out assessment at the end of each term to measure progress against the objectives covered in the National Curriculum.
- We make long –term assessments towards the end of the school year, and we use these to assess progress against national and school targets. We can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year. We use the national tests for children in Year 2 and Year 6.

Each term the Head Teacher and Class Teacher hold progress meetings. These meetings look in detail at individual children's progress and discuss intervention as needed. Pupils' achievements are recorded on the school's assessment tracker.

### **REPORTING TO PARENTS**

Parents are informed of their children's progress in mathematics through:

- Informal meetings with parents when deemed necessary
- Parent consultation meeting in the autumn, spring and summer terms

- Written report to parents in the spring and summer term

In the case of pupils who have SEN, through regular targets, discussed with the class teacher, SENCO and parents each term.

### **RESOURCES**

#### **Practical 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.

Resources which are not used or required daily are stored centrally.

Computer programmes are used widely along with Interactive Maths

### **THE GOVERNING BODY**

Governors visit school and the governor attached to the class teacher who is the Numeracy coordinator will discuss numeracy at Warwick Bridge together.

Visits are timetabled and the governor writes an evaluative report against an agreed focus. A focus could include:

- Monitoring of policies, plans and pupils' work
- Observation of some mathematics lessons with the agreement of the teachers
- Pupil perception of maths through informal discussions or dialogue
- Learning walks to see displays

The governor reports back to the Governing Board on a regular basis

### **MONITORING AND EVALUATION**

The monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the whole staff, with an overview of the mathematics co-ordinator. The work of the mathematics co-ordinator also involves supporting colleagues in the teaching of maths, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The head teacher or mathematics co-ordinator will report developments to the Governing Body.

Policy written and adopted by Warwick Bridge staff **November 2019**

Ratified by Governing Body .....

Date to be reviewed **November 2022**

**Signed:.....**  
**Head Teacher**

**Signed:.....**  
**Chair of Curriculum Committee**

**Signed:.....**  
**Chair of Governors**

**Date:.....**

