



MATHEMATICS POLICY

RATIONALE

Mathematics is the study of patterns and relationships in number, shape and space and their application to solve problems through investigations in a variety of situations.

Mathematics is important in everyday life, providing a means of making sense of the world in which we live.

AIMS

We aim to:

- Encourage a positive attitude to mathematics in our pupils;
- Develop in our pupils a confidence which will enable them to express ideas using appropriate mathematical language;
- Ensure that our pupils become properly numerate;
- Provide pupils with an understanding of the number system and a repertoire of mental and agreed written calculations – see Calculation Policy
- Develop their understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.

OBJECTIVES

To consistently develop the use of mathematical language and notation and encourage pupils to use it appropriately.

To teach pupils prescribed methods for calculation

To help pupils articulate their own methods for calculating, problem solving and ensure that they are aware of the range of possibilities and the most efficient methods.

To teach a range of strategies from which to choose. These should encourage logical and systematic thinking, efficiency and accuracy.

To be able to ask questions and seek satisfactory solutions.

To provide a balance of situations in which pupils will be required to work co-operatively or independently.

To encourage pupils to discuss their mathematics both with their teacher and with their peers.

PRINCIPLES OF TEACHING AND LEARNING APPROACH TO THE TEACHING OF MATHEMATICS:

The three key principles, which guide our teaching are;

- mathematics will focus on direct teaching and interactive oral work with the whole class and groups;
- there is an emphasis on mental calculation, agility and fluency with number
- there is planned appropriate challenge with all pupils engaged in mathematics relating to a common theme.

Reception pupils will receive some direct teaching and talk about mathematical ideas, exploring these ideas through structured play and practical work, sometimes recording informally what they have done with objects or drawings.

BREADTH AND BALANCE: Our curriculum provides the range and balance of work in primary mathematics to ensure that all pupils become properly numerate. Teachers use a wide variety of materials and activities to support their planning. This can through discrete teaching. Mathematics will also be taught through other curriculum areas.

CONTINUITY AND PROGRESSION: Our curriculum provides clear progression taking account of the requirements of the National Curriculum and the specified needs of the pupils to develop their mathematical knowledge, skills and concepts.

VARIETY OF APPROACH: Time is spent in teaching and questioning of the whole class, groups of pupils, or individuals. The different elements teachers use may include a balance of the following:

- directing, instructing, demonstrating, explaining and illustrating, questioning and discussing, consolidating learning, evaluating pupil responses and summarising what has been taught.

Pupils will experience mathematical concepts they are learning through a range of activities from concrete, through pictorial then into abstract that may include:

- practical activities, activity sheets, investigations, discussion, on-line activities, recorded tasks, games, self-evaluation, text books, problem generation, role play, explanation

PLANNED APPROPRIATE CHALLENGE AND SPECIAL EDUCATIONAL NEEDS: Our aim is to ensure that all pupils make progress and gain positively from each mathematics lesson.

All teachers aim to:

- plan lessons so that all pupils can be included;
- use a range of resources effectively to allow access to whole class or group work;
- differentiate tasks or activities;
- organise the class and deploy staff to support groups or individual needs.

Where learning support assistants are deployed to support pupils with special educational needs they are clearly briefed as to the key objective and the desired outcome of the activity including key vocabulary and questions.

ASSESSMENT, RECORDING AND REPORTING

ASSESSMENT: On entry into school the reception teacher conducts a Foundation Stage Profile to show accomplishment and areas for development. This is discussed with parents.

Teachers make formative assessments regularly during mathematics lessons. These informal assessments inform their short term planning.

In addition, time is built in half termly for teachers to assess and review pupils' progress. These assessments are made through informal observations and questioning, regular mental tests. They are closely linked to the planned activities and are used to inform teachers' future planning and to judge individual pupil progress.

Teachers refer regularly to the Calculation Policy and exemplars on-line. Standards achieved by the school's pupils are also compared at whole staff meetings to ensure continuity and progression through the school.

RECORDING: Class teachers keep a record of pupils' progress against the key learning objectives for each year.

In addition, numerical targets are set as follows:

- for the proportion of pupils expected to achieve the expected level and above in the National Curriculum Tests at the end of Key Stages 1 & 2;
- for the end of each school year and each term

REPORTING: Parents receive bi-annual feedback verbally as to their child's targets and progress in mathematics through Parent's Evenings. In addition parents receive an annual written report detailing their child's progress in relation to their numerical targets and identifying areas of strength and weakness. Where appropriate i.e. at the end of Years 2 and 6, pupils' level of achievement will be reported.

MONITORING

In order to monitor standards and progress the following systems are in place:

- Teachers scrutinise completed mathematics assessments and test papers to identify errors and common difficulties, these problems are addressed through adjustments to planning;
- Key Stage 1 & 2 test results are analysed with a view to identifying differences according to gender and ethnic group; groups and/or individual pupils below or above their targets are identified and action taken where appropriate;
- The Headteacher and/or Mathematics Co-ordinator observe lessons, with an agreed focus, regularly and give feedback;

STAFF DEVELOPMENT

Staff development is provided to ensure increased expertise and subject knowledge for all staff and to impact on the quality of teaching in the school.

Staff who have attended any mathematics training are given opportunities to disseminate what they have learned to other staff. The Head or Mathematics Co-ordinator are responsible for

ensuring that each member of staff who has received any training is able to put agreed aspects of it into practice in their own classrooms.

Teaching staff have access to the following:

- regular help and advice about the planning and teaching on the daily mathematics lesson;
- demonstration lessons provided by the mathematics co-ordinator or a leading mathematics teacher, with follow up;
- external support where appropriate

THE ROLE OF THE MATHEMATICS CO-ORDINATOR

Please refer to the post holder's Job Description for details.

The Mathematics Co-ordinator is responsible with the Headteacher, for the monitoring of mathematics standards in the school.

The Mathematics Co-ordinator:

- identifies staff development needs and arranges appropriate in-service training;
- ensures that resources are available and appropriately deployed;
- keeps abreast of relevant publications and information relating to the subject;
- assists the Headteacher with lesson observations and feedback;
- maintains links with the Numeracy link Governor;
- works with the Headteacher to develop the mathematics action plan and audit, and provides support to colleagues.

EQUAL OPPORTUNITIES

We will ensure that all pupils have equal access to the full mathematics curriculum.

RESOURCES

The Mathematics Co-ordinator is responsible for the ordering, costing and allocation of resources to support the teaching of mathematics.

A review of resources is carried out annually. This leads to a prioritised list of requirements, which is funded within the school's budget plan for the financial year.

HOME/SCHOOL LINKS

Opportunities are provided for pupils to consolidate their skills and knowledge and to develop and extend their mathematical skills. These will include number games, tasks and more formal exercises for older children, learning multiplication tables and quick recall of number bonds. This work should be linked to the numeracy being taught in class.

CONCLUSION

This policy is written in accordance with the Aims of the School and has been agreed by all members of staff. It forms one part of the Curricular Policies of the school and should be read alongside other relevant policy statements.

Proposed: October 2019

Adopted: October 2019 by teaching staff