



The Edenham CE Primary School

Maths Curriculum Policy

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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 pupils 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 technology as a mathematical tool

We also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas.

TEACHERS PLANNING AND ORGANISATION

Class teachers are 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 strategies, and written representation of calculation
- an emphasis on developing fluency in operations of addition, subtraction, multiplication and division

Each class organises a daily lesson of between 45 and 60 minutes for mathematics. Teachers in the EYFS ensure the pupils learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom.

Long Term Overview and Medium Term Planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the age-related expectations for all year groups from reception to Y6.

Teachers use the White Rose Maths resources for their longterm planning, supported by other resources as appropriate to their year group.

Short term planning

Lessons are planned for each day of a unit, at the start of a unit, by class teachers. More detail is planned in at the start of a week, and these are reviewed daily by class teachers in order to meet the needs of the pupils they are teaching. The majority of planning for Maths is informed by start of unit assessment tasks undertaken by the pupils.

SPECIAL EDUCATIONAL NEEDS and DISABILITIES

The daily mathematics lessons are inclusive to pupils with special educational needs or disabilities. Where required, pupils's IEPs incorporate 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 or small group basis outside the Mathematics lesson. Maths focused intervention groups are planned in school to help pupils with gaps in their learning and mathematical understanding where necessary. These are generally delivered by learning support staff and overseen by the class teacher.

Within the daily mathematics lesson teachers must not only provide differentiated activities to support pupils with special educational needs but also activities that provide appropriate challenges for pupils who are high achievers in mathematics. It is vital that all pupils 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 pupils are able to fulfil their potential regardless of race, religion, disability or gender.

PUPILS' WORK

Pupils are taught a variety of methods for recording their work from an early age and they are encouraged and helped to use the most appropriate and convenient method of recording.

This will include pictorial representations or concrete modelling as well as use of numbers, digits and symbols. Pupils are encouraged to use mental strategies before resorting to a written method. All pupils are encouraged to work tidily and neatly when recording their work. When using squares one square should be used for each digit. Pupils are taught to recognise the importance of clear notation in Maths.

EYFS 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.

Staff in all other year groups may also record pupil's work in different ways, such as annotation with pupil comments and photographs.

MARKING and FEEDBACK

Effective feedback is essential to ensure they are able to make further progress, consolidate their understanding or work on misconceptions.

Written marking in Maths will not look the same as written feedback in English for example, however, the principles behind it remain the same; appropriate, clear, concise, precise, specific and – as far as possible – timely.

Pupils are encouraged to self-assess their work and given time to read teachers' comments and make corrections. Pupils are also encouraged to work with their peers, in pairs of mixed ability, mixed gender, or similar ability, in order to evaluate and further develop their learning.

Further information can be found in our Marking and Feedback Policy, also available in school.

ASSESSMENT AND RECORD KEEPING

Teachers make regular assessments of each child's progress and record these systematically in our school online tracking system – Otrack. A record of each pupils attainment against age related expectations (ARE) is recorded as a minimum of 3 times per year – Autumn (End of Oct), Spring (end of Feb) and Summer (end of June).

Teacher's judgements are informed by ongoing work in the classroom, using strategies such as;

- observation during practical Maths
- marking
- questioning
- analysis of misconceptions

and further enriched by;

- regular assessment tasks planned by the teacher linked with each unit of work.
- termly assessment weeks within which White Rose Maths assessments are undertaken by all pupils in Y1,2,3,4,5 and 6.
- AQA Maths tests undertaken by Y3,4,5 in February and June (a requirement of our academy trust)
- Termly pupil progress meetings for Maths which include moderation with colleagues and scrutiny of work in Maths.

Pupils in Y2 and Y6 will undertake past SATs papers in March, and formal tests take place during Term 5 in line with national expectations.

REPORTING TO PARENTS and PARENTAL INVOLVEMENT

Annual reports for every pupil are completed and sent to parents before the end of the summer term. 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 to support their pupils' learning of mathematics at home, and are offered opportunities to develop their own understanding of Maths teaching and learning each year through Parent workshops.

MONITORING AND EVALUATION

The mathematics subject leader monitors and evaluates the teaching of mathematics. A subject week for maths is set aside each term to enable the subject leader to monitor and evaluate the teaching of mathematics across the school. Any observations are undertaken in line with the school improvement plan, the Maths subject plan or to provide information about learning for groups of pupils – for example, those with SEND or Pupil Premium. Opportunities for teachers to review the scheme, policy and published materials are given during staff meetings when required.

The governors oversee the quality of teaching and learning in Maths as part of their monitoring activities.

STAFF RESPONSIBILITIES

Headteacher

- lead, manage and monitor the development of mathematics in the school
- support the mathematics subject leader in developing provision for mathematics
- carry out annual audits with the maths leader, set whole school targets, agree cohort or group targets with teachers, review any 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 headteacher and school leadership 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 learning in maths, 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.
- Maintain contact with governors and support them in gaining a clear picture of maths in our school.
- Ensuring equality of opportunity for all pupils.

Class Teachers

Class teachers are responsible for;

- the planning, teaching and assessment of the mathematics on a daily basis
- the organisation of additional adults in the classroom
- for implementing the contents of this policy within their classroom including all aspects of assessment, tracking, SEND, inclusion.

Support Staff

TAs work with pupils with guidance and support in the teaching of maths under the direction of the class teacher. They will be offered and involved in training opportunities for maths either in-house or out of school as necessary.

Governing Body

A link governor for maths will be identified and will liaise with the school's leadership, including the maths leader, to gain an understanding of the provision for maths in school. Activities will include paired visits during maths lessons, pupil interviews, attendance at some pupil progress reviews for maths, accompanying the maths leader on subject training. They will follow-up each activity with a monitoring report which is then used as part of the school's self-evaluation process.

STAFF PROFESSIONAL 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

RESOURCES

All teachers and support staff should enable pupils to access quality maths resources independently, whenever they need them.

All classrooms hold concrete resources as appropriate for their age group, and the school has a well-stocked central resource area for maths. The subject leader is responsible for ensuring these resources are maintained and restocked when necessary, if teacher indicate resources are in short supply, broken, missing or entirely new to school.

HOMEWORK

It is our school policy to provide parents and carers with opportunities to work with their pupils at home. These activities may only be brief, but are valuable in promoting pupils' learning in mathematics. Activities are sent home to pupils in years 1 to 6 on a weekly basis as part of our home learning challenges. These can take the form of games, activities or quick written tasks.

We maintain that a key focus for parents/ carers at home to practise with their children on a regular and ongoing basis – are number facts for addition/ subtraction, multiplication and division. Homework will support this.

Other useful Policies;

Maths Calculation Policy
Marking and Feedback Policy
Teaching and Learning Policy
SEND Policy

