



OAKWORTH PRIMARY SCHOOL
“committed to the safety and welfare of its pupils”

MATHEMATICS POLICY

Introduction

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 Oakworth Primary curriculum for mathematics aims to ensure that all pupils:

1. Are proficient in their use of maths **vocabulary**
2. Become **fluent** 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
3. **Reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
4. Can **solve problems** by applying their mathematics to a variety of routine and non-routine problems across the curriculum with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The purpose of mathematics in our school is to develop:

- positive attitudes towards the subject and awareness of the relevance of mathematics in the real world
- competence and confidence in using and applying mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and motivation to work both independently and in cooperation with others
- confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes
- an ability to use and apply mathematics across the curriculum and in real life



- an understanding of mathematics through a process of enquiry and investigation

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching & learning. The school is committed to achieving high standards so that pupils can attain their full potential. We endeavour to build resilience and embrace challenge through an inclusive environment that is both flexible and responsive.

Breadth of study

Careful planning and preparation ensures that throughout the school children engage in:

- practical activities and games using a variety of resources
- problem solving to challenge thinking
- individual, paired, group and whole class learning and reasoning discussions
- purposeful practise where time is given to apply their learning
- open and closed tasks
- a range of methods for calculating
- working with computers as a mathematical tool

Through our creative approach to teaching and learning, we also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas.

Teachers planning and organisation

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 West Yorkshire Maths Hub schemes of learning as their medium term planning documents. These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving. They support a mastery approach to teaching and learning and allow teachers to implement depth before breadth within their planning. The 'concrete – pictorial – abstract' approach to mathematics and the use of models and images, support children in both Key Stages. Teachers also follow the White Rose Maths Calculation Policy (**see Appendix 1**) to ensure that children develop **efficient** methods of calculation and progression is clear throughout Key Stages. Opportunities are provided for children to work independently and collaboratively, with teacher/teaching assistant support available for all children in lessons as necessary. Conceptual understanding is integrated into lessons alongside procedural and factual fluency.



Short term planning

The above schemes of learning support flipchart planning in formats agreed by the school. All classes have a daily mental arithmetic and mathematics lesson, where possible. EYFS planning is based on the medium term plans. Teachers of the EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom. Mathematics is taught through an integrated approach.

Assessment

This section details the various assessment methods and practices used at Oakworth through which we ensure that children are making appropriate progress and that the activities they take part in are suitably matched to their ability and level of development.

Formative Assessment (AfL) - (monitoring children's learning)

Assessment is an integral and continuous part of the teaching and learning process at Oakworth and much of it is done informally as part of each teacher's day-to-day work. Teachers integrate the use of formative assessment strategies such as: the use of non-negotiables, effective questioning, clear objectives, the use of success criteria, effective feedback and response in their teaching and marking and observing children participating in activities. Teacher assessment milestones are recorded electronically using Target Tracker. Findings from these types of assessment are used to inform future planning.

Summative Assessment – (evaluating children's learning)

More formal methods are used to determine the levels of achievement of children at various times during the school year:

Assessment Weeks: We use termly assessments as a way of recording children's progress in objectives covered across that specific term.

Statutory End of Key Stage Assessment: The National Curriculum requires that each child is assessed, and assigned a stage of attainment. This is to be carried out at the end of Key Stage One and at the end of Key Stage Two.

Early Years Foundation Stage (EYFS)

We follow EYFS curriculum guidance for Mathematics. We are committed to ensuring the confident development of number sense and put emphasis on mastery of key early Number concepts in a practical and play based way. Children are assessed against the Early Learning Goals (ELG) at the end of the Reception year. Throughout Nursery and Reception we use 'Developmental Matters' document to assess children and plan for next steps.

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 children are able to fulfil their potential regardless of race, religion, disability or gender.

Roles and Responsibilities:

At Oakworth Primary School the Mathematics leaders are Mrs Malik, Miss Summerfield and Miss Layfield.

The Maths leaders work in collaboration with the Headteacher, Assistant Headteachers and Governing Body, and take responsibility for the operation of the Mathematics policy and co-ordination of Numeracy provision, working closely with staff, parents/carers and other schools. The leaders provide professional guidance to colleagues to secure high quality teaching for pupils.

Other roles include:

- Ensuring a core of material is available
- Review and monitor planning
- Monitor maths teaching and evaluate pupils work
- Arrange liaison with outside consultants
- Work alongside staff to support if required
- Attend relevant courses to be aware of new ideas and disseminate these to all staff and to arrange appropriate inset for colleagues
- Be responsible for ordering all maths resources
- Carry out a curriculum review and relay findings to the Governors and staff
- Update the policy document and schemes of work as necessary

Equality

All staff at Oakworth Primary School promote equality and good community relations and avoid discrimination against anyone for reasons of race, colour, nationality, ethnic or national origins, gender, disability, religion or belief, sexual orientation, or socio-economic circumstances.

This policy will be reviewed every two years, or earlier if necessary.

Signed Date: 7 March 2019
Chair of Governors