



## **Mordiford C of E Primary School**

### **Mathematics Policy**

#### **Introduction;**

‘Numeracy is a fundamental life skill. Being numerate involves developing confidence and competence in using number that allows individuals to solve problems, interpret and analyse information, make informed decisions, function responsibly in everyday life and contribute effectively to society. It gives increased opportunities within the world of work and sets down foundations which can be built upon through life-long learning. Whilst numeracy is part of mathematics, it is also a core skill, which permeates all areas of learning, allowing pupils the opportunity to access the wider curriculum.’

‘A high-quality mathematics education 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)

We endeavour to provide opportunities for children to develop and apply numeracy and mathematics skills both in discreet Mathematics teaching and through cross curricular projects and wider learning environments and experiences (e.g. workshops and visits, curricular weeks, Forest School) allowing our children to say, write, make and do. They are able to develop their mathematical potential through a rich, engaging curriculum. We want our children to feel confident in using and applying mathematics in a wide range of situations. We believe that mathematics is uniquely powerful in helping us to make sense of, and describe, our world and in enabling us to solve problems, reason logically and think in abstract ways. It is an exciting subject, dealing with the nature of number, space, pattern and relationships. Useful and creative, it requires not only facts and skills, but also understanding gained through exploration, application and discussion. In mathematics we aim to develop lively, enquiring minds encouraging pupils to become self-motivated, confident and capable in order to solve problems that will become an integral part of their future. It is this belief in the pervasiveness of mathematics that is at the heart of what we do here at Mordiford.

This document should be read in conjunction with our School Development Plan for Numeracy and Marking.

#### **Aims;**

At Mordiford we strive to offer pupils intellectual excitement and challenge in Mathematics; to provide them with a sense of delight and wonder; to equip them with knowledge and skills and the ability and confidence to use and apply these to meet the needs of present and future society. We aim to ensure that all pupils, irrespective of gender, race and culture, have access to a wide range of stimulating problems and activities which will include the appropriate Programmes of Study of the



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National Curriculum 2014 and the EYFS curriculum enabling them to become competent and confident young mathematicians

#### **Teaching and Learning;**

We aim for all our pupils to experience success in mathematics, develop the confidence to take risks, ask questions and explore alternative solutions without fear of being wrong. They have opportunities to explore and apply mathematical concepts to understand and solve problems, explain their thinking and present their solutions to others showing this in a variety of ways.

At all stages, the use of collaborative learning encourages children to reason logically and creatively through discussion of mathematical ideas and concepts. Misconceptions and wrong answers are used as opportunities to improve and deepen children's understanding of mathematical concepts, through use of effective questioning and discussion.

Teachers work to ensure that the fundamental numeracy skills are established and consolidated through imaginative and interactive approaches, to enable children to develop a sound understanding of number. Individual, group or class teaching, using direct or indirect methods, are used as appropriate to the circumstances of the class or group. Practical experience and use of number and maths equipment is integral to our approach to facilitate learning and promote better understanding.

#### **The Foundation stage;**

Mathematical thinking and early vocabulary are developed through observation – profile information, communication, listening, reading, recording, manipulating, comparing and classifying, estimating and measuring, prediction, choosing and testing and drawing conclusions. Pupils have opportunities to initiate their own mathematical learning through carefully planned play based opportunities and by using engaging resources both inside and outside of the classroom. A balance of directed time activity and detailed observations inform class teachers of the next steps for learning for individual Reception pupils.

#### **Key Stages 1 and 2;**

We ensure that the statutory requirements of the National Curriculum 2014 are planned for and delivered, and so too are their aims, thereby enabling children to:

Become **fluent** in the fundamentals of mathematics, including the varied and regular practice of increasingly complex problems over time.

**Reason mathematically** by following a line of enquiry, understanding relationships and generalisations, and developing an argument, justification or proof using mathematical language.



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**Solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

#### **Planning;**

We operate the planning procedures agreed by the whole teaching staff based upon the National Curriculum Programmes of Study 2014 and the EYFS, in the context of our wider creative curriculum. Classrooms are rich in discussion between pupils and between teacher and pupils. Underpinning all of this will be the development of mathematical reasoning and understanding through exploration, problem solving and investigation. Our medium and long term planning is informed by these documents which map out the mathematics curriculum for each year group as well as extension and reinforcement objectives from prior and successive year groups where necessary. We then develop weekly plans which give specific detail of learning objectives and appropriate differentiated activities furnishing children with the power to solve real and challenging problems.

#### **Basic Skills;**

We recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. In addition to daily Numeracy lessons we also deliver fifteen minute differentiated Basic Skills sessions in all classes to further support the development of fluency of fundamental mathematical knowledge and skills.

#### **Marking**

All work is marked. Written feedback provides pupils with guidance on how to improve their work. Written feedback sets challenges.

See Marking Policy and Marking Action plans for further details.

#### **The Environment**

At Mordiford, we aim to provide a mathematically stimulating environment:

- through displays that promote mathematical language, thinking and discussion
- through displays of pupils' work that celebrate achievement
- by providing a good range of resources for teacher and pupil use. In every classroom, resources such as number lines, hundred square, place value charts and multiplication squares are displayed as appropriate and used as resources for whole class or individual work, for children to become confident in their use and understanding of the number system



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#### **Homework**

Homework is set to support mathematical work undertaken in class, at home and also serves to help develop parental involvement in pupils learning and enjoyment of the subject. This can take the form of written activities, games, investigations or online activities which aim to stimulate interest and reinforce understanding of topics.

#### **Intervention**

Interventions are provided to boost children's progression in maths and are tightly planned, with success criteria set and assessments made frequently to ensure progress is being made. There are also opportunities for Gifted and Talented children to exceed and achieve their full potential e.g through Numeracy Booster Sessions, entry to the UK Maths Challenge, Games 24 etc.

Data analysis of School Tracking is used to identify children and groups who require additional support in specific areas and ensure at least good levels of attainment and progress.

We offer a range of additional maths intervention resources including:

- The Power of One/Two
- Mathletics
- Springboard
- Talking maths

#### **Assessment, Recording and Reporting**

Formative assessment is used in the learning & teaching process in order to:

- Share learning intentions and success criteria, clearly differentiated to meet the needs of all learners.
- Assess understanding through skillful questioning.
- Give pupils high quality, clear and regular feedback both orally and written (also see Marking Policy).
- Assist learners and teachers to identify the next steps in the learning process, which ensures progression

Summative assessments are completed by class teachers at least twice termly. Teacher Assessment information is recorded onto the schools tracking system and then used to inform future planning, and to identify children for intervention and support. The Class Teacher, Assessment Co-ordinator, Mathematics Co-ordinator, SENCO review and analyse records of assessments.



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In the EYFS, pupils are observed and assessed against the Early Learning Goals throughout the Reception Year. Records are kept in each child's Learning Journey and The Foundation Stage Profiles.

In KS1 and KS2 Statutory Assessment Tasks (SATs) are administered in accordance with current DFE guidance at the end of KS1 and KS2. Pupil, group and class targets are set and reviewed regularly. Parent's consultations are held twice yearly where the teacher discusses children's targets and progress in mathematics. In accordance with statutory requirements an Annual Report is sent to parents towards the end of the Summer Term and an interim report in the Spring Term. These reports cover progress and achievements in mathematics, setting targets for future improvement and include the level achieved in the SATs if appropriate.

#### **Subject Management**

Class Teachers have the responsibility for:

- effective planning, delivery and assessment of maths and numeracy work
- developing a variety of motivating and challenging activities
- creating a maths rich environment
- promoting maths across the curriculum
- disseminating good practice to colleagues

The Maths Co-ordinator has responsibility for:

- Reviewing and monitoring planning
- Monitoring teaching and evaluating pupils work
- Work alongside staff to support when 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 curriculum review and relay findings to the Governors and staff
- Update the policy document and schemes of work as necessary
- Provide workshops for parents
- Evaluation of The mathematics policy will be reflected in our practice. This will also be monitored and evaluated by the Head Teacher, the Senior Leadership Team and the Maths Co-ordinator in the form of lesson observations, discussion and regular scrutiny of planning and of pupil's work.

Link Governor;

A named member of the Governing Body has responsibility for meeting regularly with the Numeracy Co-ordinator to discuss and monitor teaching and standards in the subject.