

Oak Farm Junior School



Maths Policy

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Person responsible: Maths coordinator (Laura Mitchell)

Mathematics Policy

INTRODUCTION

Becoming fully numerate is a proficiency that involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Mathematics also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables.

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.

Mathematics is both a key skill within school, and a life skill to be utilised throughout every person's day to day experiences. At Oak Farm Junior School we value every pupil and the contribution they have to make. As a result we aim to ensure that every child achieves success and that all are enabled to develop their skills in accordance with their level of ability.

RATIONALE

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At Oak Farm we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. This describes in detail what pupils must learn during Key Stage 2. However, although the programme of study includes suggested years in which objectives should be covered, some objectives have been moved to different year groups to fit in more cohesively with other areas of the curriculum and to fit the needs of our children. These medium term plans are available on our website (www.oakfarmjunior.co.uk).

We are committed to ensuring that pupils achieve mastery in the key concepts of mathematics (appropriate for their age group), in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving, the development of mathematical thinking and development of teacher subject knowledge are therefore essential components of our approach to this subject.

AIMS OF TEACHING MATHEMATICS

The aim of teaching mathematics is based on three key principles:

- To **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.
- To **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- To **solve problems** 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.

APPROACH TO TEACHING MATHEMATICS

The New National Curriculum 2014 is followed. The framework has six main areas of study:

- Numbers (including place value, addition, subtraction, fractions, decimals and percentages)
- Ratio and Proportion
- Algebra
- Measurement
- Geometry
- Statistics

To provide adequate time for developing numeracy skills, each class teacher will aim to deliver daily mathematics lessons each week. These may vary in length but will usually last for about 1 hour. Additional mathematics may be taught within other subject lessons when appropriate. Lessons will often include a mental/oral starter (where appropriate) and a plenary.

Lessons at Oak Farm Junior School provide opportunities for group work, paired work, individual work and whole class teaching. Within lessons, pupils will engage in:

- The development of mental strategies
- The use of written methods (see calculation policy)
- Practical and investigation work
- Problem solving and real world applications
- Mathematical discussion using a broad mathematical vocabulary
- Consolidation of basic skills and number facts

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

In the daily mathematics lesson we support children with English as an additional language in a variety of ways, e.g. repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc...

ASSESSMENT

Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

Short-term assessment will be an informal part of every lesson. The teacher will share the objectives for the lesson as appropriate with the children and make sure they are clear what is being expected of them to successfully achieve the objective. This is a necessary part of assessment for learning and helps the children take ownership for their own learning. The short term assessment will also involve the teacher checking the children's understanding at the end of the session, and via marking, to inform future planning and lessons. Teachers use target sheets in children's books to demonstrate achievement / progress

Medium-term assessment will take place at the end of a unit/block of work. Teachers may use a bought in method of assessment, such as the Rising Stars end of unit tests, or they may choose to create a more tailored test for children. These assessments inform the planning of future work. Children will also complete regular Mental Arithmetic and Written Arithmetic tests.

Long-term assessment will take place on a termly basis. These will consist of teacher assessments and a more formal assessment (a SATs style paper to inform their judgement). All year groups will complete SATs tests in the summer term (Years 3-5 completing optional papers). Teachers will update tracking data with these assessments termly. Accurate information will be reported to parents and the child's next teacher.

MARKING

Work in mathematics can generate a great deal of marking and it is recognised that it is not always necessary to mark every piece of work. The children can often mark exercises with support and guidance from the teacher and where appropriate children are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors. Occasionally, teachers may set extra challenges via marking, or ask children to check questions answered incorrectly.

SUPPORTING AND EXTENDING CHILDREN

The daily mathematics lesson in class is challenging but appropriate for most pupils. Teachers will involve all pupils in their lessons through differentiation and appropriate deployment of adult support when it is available. In some cases, children who are not making significant progress will be selected to receive intervention during Maths lessons; this support will be provided by a teacher and will be linked to the objectives being covered in class. In addition, some children may receive support at other times of the day through intervention groups run by LSAs (often following the Rapid Maths programme) or extra tuition before or after school, led by a teacher.

More able children will be taught within their own class and stretched through differentiated group work and extra challenges. When working with the whole class, teachers will direct questions towards the more able (at their ability level) to maintain their involvement.

Where possible, higher ability mathematicians will be given the opportunity to participate in regular group sessions led by a teacher or HLTA to extend and challenge them.

HOMEWORK

See homework policy.

ROLE OF THE COORDINATOR

- *Assisting with requisition and maintenance of resources required for the teaching of mathematics. This will be within the confines of the school budget*
- *Supporting colleagues in the implementation and assessment of mathematics throughout the school*
- *Monitoring, evaluating and reviewing standards of mathematics within the school via lesson observations, work and planning scrutinies and pupil voice*
- *Ensure that teachers are familiar with the framework and help them plan lessons*
- *Prepare, organise and lead INSET as appropriate*
- *Liaise with teachers from other schools within the Long Lane Collaboration*

ROLE OF THE CLASS TEACHER

- *To plan effectively for mathematics*
- *To keep appropriate records of pupil progress, highlighting children who are not making the expected amount of progress and planning for intervention where appropriate.*
- *To develop and update their skills and knowledge where necessary*
- *To inform parents of pupils' progress, achievement and attainment*

ROLE OF THE MATHS GOVERNOR

- *To visit the school regularly to talk with the teachers and when possible, observe some of the daily mathematics lessons*
- *To report back to the curriculum committee on a regular basis*
- *To attend any relevant INSET or training*