



ICKFORD SCHOOL

Numeracy Policy

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Rationale

“Mathematics is a creative and highly interconnected discipline that has been developed over the 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 mathematical 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.” (*The National Curriculum, 2014*)

Aims

At Ickford we aim to ensure that all pupils become **fluent** in the fundamentals of mathematics, **reason** mathematically and **solve** problems by **applying** mathematical knowledge.

Our aim is that each child has:

- An understanding of the important concepts and an ability to make connections within mathematics.
- A broad range of skills in using and applying mathematics.
- Fluent knowledge and recall of number facts and the number system.
- The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.
- The ability to think independently and to persevere when faced with challenges, showing a confidence of success.
- The ability to embrace the value of learning from mistakes and false starts.
- The ability to reason, generalise and make sense of solutions.
- Fluency in performing written and mental calculations and mathematical techniques.
- A wide range of mathematical vocabulary.
- A commitment to and passion for the subject

Assessment

We assess the children’s knowledge of maths through observations, continuous oral questioning and by evaluating written evidence in the children’s exercise books. To ensure the progress of each individual child, formative assessment (through marking and individual target setting) and termly summative assessments are carried out using standardised tests. The children are given a grade based on these test results and the class teacher’s formative assessment. Progression is tracked and recorded as the child progresses through the school.

Inclusion and Equal Opportunities.

Mathematics is taught to all of the children in our school. Rigorous differentiation ensures that children are challenged appropriately. Equal opportunities are achieved through accurate planning and by providing a range of suitable resources which stimulate and support a variety of learning styles and abilities.

Gifted and Talented

Children who are gifted at Mathematics are challenged and stretched through exposure to a wide range of rich and sophisticated mathematical problems. All gifted mathematicians are encouraged and inspired to reach their full potential; working at a level well above the national expectations.

Teaching and Learning

Key Stage 1: The principal focus of teaching in Key Stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This involves the use of practical resources and concrete objects. Pupils are encouraged to read and spell mathematical vocabulary at a level consistent with their increasing word and spelling knowledge at Key Stage 1.

Key Stage 2: By the end of Key Stage 2, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant Programme of Study. High importance is given to spoken mathematical language; children are assisted in making their thinking clear and secure foundations are built on year by year through verbal discussion.

Programmes of study_(overview)

Key Stage 1

- Count and calculate in a range of practical contexts.
- Use and apply mathematics in everyday activities and across the curriculum.
- Repeat key concepts in many different practical ways to secure retention.
- Explore numbers and place value up to at least 100.
- Add and subtract using mental and formal written methods in practical contexts.
- Multiply and divide using mental and formal written methods in practical contexts.
- Explore the properties of shapes.
- Use language to describe position, direction and movement.
- Use and apply in practical contexts a range of measures, including time.
- Handle data in practical contexts

Key Stage 2

- Count and calculate in increasingly complex contexts, including those that cannot be experienced first hand.
- Rigorously apply mathematical knowledge across the curriculum, in particular in science, technology and computing.
- Deepen conceptual understanding of mathematics by frequent repetition and extension of key concepts in a range of engaging and purposeful contexts.
- Explore numbers and place value so as to read and understand the value of all numbers.
- Add and subtract using efficient mental and formal written methods.
- Multiply and divide using efficient mental and formal written methods.
- Use the properties of shapes and angles in increasingly complex and practical contexts, including in construction and engineering contexts.
- Describe position, direction and movement in increasingly precise ways.
- Use and apply measures to increasingly complex contexts.
- Gather, organise and interrogate data.
- Understand the practical value of using algebra.

ICT

Children are given the opportunity to develop their mathematical thinking through a range of web based activities and computer based programs. Calculators are used in Years 4, 5 and 6 in order to support pupils' conceptual understanding and exploration of more complex number problems; not as a substitute for mental arithmetic and only if and when written and mental arithmetic is secure.

Cross curricular mathematics

Teachers should ensure that the children reinforce and apply their mathematical skills and understanding in other areas of the curriculum, such as in Science, Geography and ICT lessons

The role of the coordinator

- To support the Headteacher in ensuring standards of Numeracy
- To update the numeracy policy
- To carry out numeracy observations and give oral and written feedback to teachers
- To audit and keep resources used in mathematics up to date
- To be familiar with and knowledgeable about changes in the national curriculum
- To develop formative and summative assessments and have an input in the recording of data and progression throughout the school

