



Ivegill
C • E S C H O O L

IVEGILL CE SCHOOL

MATHEMATICS POLICY

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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 aims of the 2014 National Curriculum are for our pupils to:

- Become **fluent** in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
 - Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- **Reason** mathematically; follow a line of enquiry, conjecture relationships and generalisations.
 - Develop an argument, justification and proof by using mathematical language.
- **Problem solve** by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering.

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development matters' non statutory guidance.

The EYFS Framework in relation to mathematics aims for our pupils to:

- Develop and improve their skills in counting.
- Understand and use numbers.
- Calculate simple addition and subtraction problems.
- Describe shapes, spaces, and measures.

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 co-operation with others
- Confident communication of maths where pupils ask and answer questions using mathematical vocabulary, 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

Curriculum

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 White Rose 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, key aims of the National Curriculum. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short term planning

The above scheme of learning support daily lesson planning using the small steps. Lessons are planned by the teacher. EYFS planning is based on the medium term plans and delivered as appropriate to the individual children with the thought to where the children are now and the next steps.

Assessment

Teachers make assessments of children daily through;

- Regular marking of work.
- Analysing errors and picking up on misconceptions.
- Asking questions and listening to answers.
- Facilitating and listening to discussions.
- Making observations
- Recording this through 'No more marking'.

These ongoing assessments inform future planning and teaching. This allows lessons to be readily adapted following these assessments.

Each year group completes a termly assessment using the Progress in understanding primary mathematics (PUMA). Year 2 and Year 6 complete national tests (SATS) in May.

Learning Environment

All classes have a daily mathematics lesson where possible. In key stage one, lessons are 45-60 minutes and in key stage two at least 60 minutes. 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.

In all lessons, learning objectives are clearly displayed and discussed.

It is important that the children are allowed to explore Maths and present their findings not only in a written form but also visually and verbally; to that end the school adopt the CPA approach: concrete, pictorial, and abstract. This will allow children to experience the physical aspects of Maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers. Each class has a stock of resources that are age appropriate which the children are encouraged to use to support this approach.

Across a range of lessons children experience;

- engagement in mathematical discussion (talk partner or group work)
- investigations
- reasoning tasks
- problem solving
- practical experiences
- written methods
- Demonstrate their understanding through spaced learning.

Inclusion

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Within daily mathematics lessons teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. Children with IEP's may work on targets within a maths lesson as well as working on these on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff or the class teacher.

Parental Involvement at school

It is important that parents and carers are actively involved in the children's education. We encourage parents to be involved by;

- Inviting them into school twice/three times yearly to discuss the progress of their child.
- Providing parents with a yearly report outlining their child's achievements.
- Sending homework activities to be completed by or with their child.