



Mathematics Policy

Introduction

At Roebuck Primary School and Nursery we aim to improve children's confidence and competence with Number, Shape and Space, Data Handling and Measures. This requires an understanding of the number system, a repertoire of computational skills and a willingness and ability to solve number problems in a variety of contexts. It also demands a practical understanding of the ways in which information can be gathered by counting and measuring and how it can be presented through graphs, diagrams, charts and tables.

The aims of Mathematics teaching

The overarching aim for Mathematics in the national curriculum is to promote high standards.

- To secure for every pupil an entitlement to the full range of learning experience encompassed by the attainment targets set out in the National Curriculum and the areas of learning in the Early Years Curriculum.
- That the acquisition and consolidation of knowledge and skills is in line with the new curriculum.
- To help children make sense of the world around them and to acquire the skills fundamental to everyday life.
- To promote a positive attitude towards mathematics through practical activity, exploration and discussion.
- That all pupils should be able to develop fully their mathematical potential regardless of gender ethnic origin disability or social/ educational deprivation.
- To promote confidence and competence in mathematics knowledge, concepts and skills.
- To develop the ability to solve problems through decision-making, thinking logically, working systemically, risk taking and reasoning in a range of contexts.
- To develop skills to show initiative, ability to work independently and in cooperation with others.
- To understand the importance of applying mathematics skills across the curriculum and in everyday life.

A curriculum overview

In the Foundation Stage: Mathematical understanding should be developed through stories, songs, games and imaginative play. Pupils should learn to count using numbers in familiar contexts and recognise numbers to at least 20. They should talk about creating simple patterns, begin to understand the concepts of addition and subtraction, describe the shape and size of solid and flat shapes, use everyday words to describe position and use early Maths to solve problems. This should be built upon cross-curricular links and practical activities.

In Key Stage 1: Pupils should develop their knowledge, skills and understanding through practical activity, exploration and discussion. They should learn to count, read, write and order numbers to 100 and beyond and develop a range of mental calculations strategies. They should learn about shape and space through practical activities which build on their understanding of the immediate environment. They should begin to grasp mathematical language, using it to talk about their methods and explain their reasoning.

In Key Stage 2: Pupils should use the number system more confidently. They should develop fluent calculating strategies and try to tackle problems with mental methods before using any other approach. They should explore features of shape and space and develop measuring skills in a range of contexts. They should discuss and present their methods and reasoning in a wider range of mathematical language, diagrams and charts. There is a greater emphasis on Maths investigations and challenges. Through Key Stage 1 and 2 children will experience maths through using Concrete, Visual, Pictorial resources as well as abstract ones.

Mathematics curriculum planning

Teachers at Roebuck currently use Hertfordshire County's Long term planning formats and then break these down into medium term plans that are split into different learning phases which make up the teaching sequence. The Subject Leaders monitor these plans half termly and give staff individual feedback. Staff have attended training in the new Maths curriculum and planning and teaching.

Year groups plan using a common weekly format based on the programme of objectives as set out in the Herts for Learning New National Curriculum. These plans identify the teaching sequence, the text or set of linked extracts, the class organisation and the tasks / activities through which the objectives will be achieved.

Each teacher plans daily mental maths sessions which include counting, rapid recall of facts and a weekly mental maths test. In addition the school has started to use Learn It's from Big Maths. Each child has three Learn-Its to take home and learn on a weekly basis in KS2 and KS1. All children have a weekly test. Each class plans in a weekly problem solving lesson in addition to embedded fluency and reasoning throughout lessons.

The Early Years (EY)

At the Early Years Foundation Stage, we relate the mathematical aspects of the children's work to the objectives set out in the EYFS document, which underpin the curriculum planning for children aged 0 to 5. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

Differentiation

We teach mathematics to all children, whatever their ability. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities matched to the needs of children with learning difficulties. The objective of mathematics teaching is to ensure that each pupil should obtain maximum benefit by stretching the pupil to reach their potential without making impossible demands.

Assessment and record keeping

Our assessment and record keeping builds a detailed profile of the children's attitudes, experiences and developing competencies from Nursery to Year 6. These profiles provide the evidence for reporting on children's progress annually. Every child in KS1 and KS2 has a target sheet at the front of their book. Teachers highlight targets being worked on. When a child obtains 3 ticks it means they have achieved that target. When teaching, teachers share success criteria with the class and groups. Work is then marked following success criteria. Teachers use developmental marking where depending on the need of the child they show modelling, consolidation or next steps. Alongside this, teachers use ERM marking to address misconceptions, reinforce learning from the lesson or provide enrichment opportunities. Children self and peer assess their learning.

There are a variety of levels of assessment in place.

- In Year 2 and Year 6 on-going teacher assessment are completed on the new Interim Assessment frameworks.
- In Years 1,3,4 and 5 on-going teacher assessment are completed on the new HFL Assessment criteria sheets for maths.
- In EYFS Learning Journeys are updated every half term and assessments are completed termly on the Early Years Development Matters framework.
- In EYFS on-going teacher assessment made at the end of the school year in line with the Early Years Foundation Stage Profile (EYFSP).
- In Years 1-6 teacher assessment made at the end of every school year in line with the new HFL Assessment Criteria.
- In Year 2 and Year 6 teacher assessments made at the end of every school year in line with National Curriculum age-related expectations and include Year 2 SATs and Year 6 SATs.

Resources

Each year group has a range of manipulative resources. Resources are kept mainly in classrooms with each class having a bank of similar resources to draw upon. KS1 and KS2 have problem solving resources to support their planning.

Homework

Parents have been encouraged to become involved with their children's mathematics education. Homework is regularly set in each year group and helps to build on or reinforce the objectives covered in the week. From Reception homework is regularly set which helps build on or reinforce the objectives covered during the week. Learn Its are sent home on a weekly basis. Parent workshops have been regularly held in school. The Maths Subject Leaders seeks parental feedback which is used to plan for future workshops. Parents of children in Key Stage 2 can access 'Mathletics' at home.

Monitoring and review

Monitoring the standards of children's work and the quality of teaching is the responsibility of the Mathematics Subject Leaders who are also responsible for supporting colleagues in the teaching of maths, being informed about current developments in the subject and providing a strategic lead and direction for the subject in the school. The Maths Subject Leaders are responsible for giving the Senior Leadership Team an annual summary report in which she evaluates the strengths in the subject and indicates areas for further improvement. The Subject Leaders also receive management release time to review samples of children's work, undertake lesson observations and review planning.

Date

Autumn 2017

Review Date

Autumn 2018