

Plains Farm Academy



Maths Policy

Introduction

This policy reflects the values and philosophy of the way mathematics is taught at Plains Farm Academy.

Mathematics is both a key skill required within school and a life skill essential to everyday life.

It sets out a framework within which all staff, both teaching and non-teaching, work and gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with the National Curriculum 2014, which gives details of what children in different year groups are taught. This ensures continuity and progression in the teaching of Mathematics. In the Foundation Stage the curriculum is guided by the Early Years Foundation Stage Curriculum.

Inspire Vision

Inspire Multi Academy Trust is committed to providing the highest standards within its family of schools. It has clear aims, clarity of purpose and a vision that is shared by all stakeholders. The major aim is to create and foster a culture of high aspiration within all stakeholders and to enable and empower pupils to achieve to the highest levels regardless of their social or economic background. The Trust will strive for excellence in everything it seeks to achieve across all five of the participating schools, particularly in attainment and progress, the quality of teaching and leadership and management. Lifelong learning is at the heart of the Trust and is reflected by the engagement of all stakeholders in developing and improving learning while providing outstanding progress and achievement for all.

Aims of the Curriculum

Our aims in mathematics teaching are to:

- Enable pupils to be proficient, competent and confident mathematicians and have the ability to solve mathematical problem.
- Promote positive attitudes towards mathematics developing pupils' confidence.
- Promote enjoyment and curiosity in mathematics and understanding mathematics in the world.
- Use mathematical equipment and vocabulary to develop mental and written strategies.
- Develop the ability to communicate their mathematical thinking with confidence.
- Develop an understanding of mathematics through a process of enquiry, experiment, reason and investigation.
- Develop cross-curricular links.

The national curriculum for mathematics aims to ensure that all pupils:

- 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
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can 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

Teaching and Learning

At Plains Farm Academy pupils are entitled to a broad mathematics curriculum in which their learning needs are identified and met.

Mathematics teaching will be in line with the National Curriculum and Revised Early Years Curriculum.

Mathematics will be taught daily in Key Stages 1 and 2, with an additional daily 'maths meeting' taught in the afternoon.

EYFS classes are taught maths throughout the day using a variety of practical activities and focused maths tasks where appropriate. Maths within the EYFS is planned using Development Matters and supported with ideas, resources and planning tools from Hamilton Trust and TES. Within the setting children have access to a maths area accompanied, which is accompanied by a mixture of natural and man-made concrete resources, number lines and counting opportunities. Across the continuous provision maths is explored and links made through: effective questioning, resourcing and further application of mathematical language.

Throughout Key Stages 1 and 2 Focus Maths is used as a long term planning tool to ensure coverage of objectives and to provide an ongoing assessment tool. Staff use a variety of other resources and planning tools such as White Rose Hub Small Steps documents, to enrich lessons and plan for clear steps in learning, for fluency and application of skills within a wide range of reasoning and problem solving contexts. A CPA approach is used within all number and calculating work, in line with the Inspire Trust Calculation Policy, to ensure an in depth understanding which can be applied confidently to all areas of maths.

Children with SEND are planned for using PIVAT tools, to ensure all basic skills and understanding are addressed. Where possible these children work within the same unit/topic as the rest of the class, targeting skills with the unit/topic at their individual level of understanding.

Assessment, Recording and Reporting

In order to assess pupil progress and attainment, a number of formative and summative assessments are used throughout the year.

Daily:

During each maths lesson, class teachers and teaching assistants make use of feedback and assessment at the point of learning to constantly observe, assess and support individuals and small groups. These assessments are used to plan for afternoon 'maths meetings' and identify those children to be included with 'support' and 'challenge' groups within the next lesson.

Within each lesson, children self-assess their own work using a 'traffic light' system to inform the class teacher of their own level of confidence and ability within each skill/objective.

'Maths Meetings' are used to pre-teach and provide interventions for identified children from previous lessons and identified within current attainment. Those children not within these groups, use the 'meeting' to continue application of skills from the morning's lesson within problem solving and reasoning tasks.

Outcomes in books are used to provide dated evidence on ongoing assessment records stored in the front cover of children's maths books.

Outcomes from lessons are recorded within children's individual maths books and are represented in a number of ways, for example, annotated photographs of practical tasks, children's own written outcomes or completed printed tasks. Within EYFS children produce one outcome each week, which moves on to two pieces each week within the summer term. The children continue to produce two outcomes a week in the autumn term of year 1, moving to three then four outcomes a week by the end of the summer term. The expectation of four outcomes in books each week is then maintained throughout the rest of school to provide a robust evidence base for assessments.

Children with SEND are assessed using PIVAT assessments, which are evidenced using dated outcomes within maths books, following the same expectations as the other children within their peer group.

Weekly:

Children complete a pre-unit assessment each week, which teachers then use to inform whole class planning within each unit of work. The assessments also identify those children who would benefit from further support within lessons

and any children already working securely within specific skills who can move on to problem solving and reasoning tasks to develop a greater depth of understanding.

Termly:

All children complete termly, formal written assessments in the form of one arithmetic and one reasoning paper. These tests are used to clarify judgements on ongoing assessment records and provide a 'snap shot' attainment level for each child. Children within Years 2 and 6 also complete termly practice SAT papers to inform accurate predictions and any further interventions.

Following each termly assessment cycle, class teachers analyse progress and attainment from outcomes in books and tests to identify: gaps in learning, vulnerable groups that need further intervention, whole class gaps in learning (based on question level analysis) and those children who need further support to remain on track for their personal or end of key stage targets. These reports are then used by the leadership team to monitor teaching and learning throughout the term to ensure teachers are successfully addressing any issues identified. Areas for development are also used to inform the Maths Action Plan.

Homework

All children in Plains Farm Academy receive weekly maths homework (alongside weekly literacy homework and spellings).

Teachers provide all children with maths homework related to and to consolidate the weeks' learning. Where appropriate, homework tasks are differentiated and 'how to' guides are provided to support both the children and their adult's at home with completing their homework.

Where children need support with homework tasks, staff ensure time is available to address these needs and ensure children can complete set tasks.

Role of the Maths Leader

The Maths Curriculum Leader provides teaching and learning tools and guidance for all the staff in Mathematics to ensure the best possible mathematics education for each child within school.

This can include:

- Staff meetings/CPD to update all staff on changes and developments to the delivery or expectations within school and the trust.
- CPD to introduce and share tools and materials to support teaching and learning.
- Bespoke CPD for NQTs or any individual staff identified as needing further support with the teaching of maths.
- Monitoring attainment and progress within maths to identify vulnerable groups and areas for development across the whole school and identify improvements that can be made.
- Carrying out observations and weekly work and planning scrutinies to ensure expectations are maintained, progress is at least good across school and to identify areas for development.
- Use assessment outcomes, reports and outcomes from monitoring to form a Maths Action Plan which outlines the main areas for development to be addressed as a school and plan steps to be taken to address them.