

Foljambe Primary School

MATHEMATICS POLICY

Introduction

This policy outlines the aims, organisation and management for the teaching and learning of mathematics at Foljambe Primary School.

It is based on the 2014 National Curriculum (NC) programmes of study (PoS). The EYFS profile is used for children at foundation stage.

Purpose and Aims

The purpose of this policy is to ensure that all staff members are able to implement the teaching of maths to a high standard in order for all pupils to achieve the best of their ability. Consequently, it is fundamental that all basic skills are embedded, before advancing onto more complex objectives, in order for children to successfully develop and progress in their Numeracy learning. Nevertheless, the expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. Decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. When children are accessing their next steps for learning, teachers assess readiness to move or review objectives using a pre assessment tool. Pupils who grasp concepts more rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice (in lesson and as additional booster support) before moving on.

Mathematics is a life skill. It is an essential element of communication, widely used in society, both in everyday situations and in the world of work. Mathematics teaches children how to make sense of the world by developing their ability to calculate, reason and solve problems fluently.

Our aims in teaching mathematics are:

- To equip pupils with the basic mathematical skills they need in order to become fluent in number.
- To develop children's ability to accurately apply the fundamentals of mathematics when solving problems.
- To enable pupils to express themselves and their ideas using the language of mathematics with assurance.
- To develop children's ability to reason mathematically.
- To promote enjoyment of learning through practical activity, exploration and discussion.
- To develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.
- To nurture a fascination and excitement of mathematics.
- To promote confidence and competence with numbers and the number system.
- To be able to use and apply the skills in other curricular areas.
- To help children understand the importance of mathematics in everyday life.

Leadership and Management

The subject leader's role is to empower colleagues to teach maths to a high standard and support staff in the following ways:

- By keeping up to date on current issues; disseminating relevant information and providing training for staff members (either directly or through other professionals)
- Leading by example / modelling lessons or styles of teaching
- Having a knowledge of the quality of mathematics provision across the school
- Identifying and acting on development needs of staff members
- Monitoring expectations, provision and attainment across the school and providing feedback to develop practice further in order to raise standards.

- Providing necessary equipment and maintaining it to a high standard. Resources are kept both centrally (topic based work) and within the classroom in clearly labelled trays (for more regular use).

Teaching Mathematics

Organisation

- The EYFS profile is used for children at foundation stage. At this age, pupils experience mathematics on a daily basis. This early introduction to mathematics will generally be undertaken orally and often in the context of a class theme, e.g. a particular story. Opportunities for mathematics should be developed through daily routines and all areas of learning.
- In mixed classes (KS1 and KS2), children are accessing year group objectives through split teaching sessions or during whole class lessons and differentiated activities.
- Throughout school, we develop cross-curricular teaching and learning of Numeracy wherever possible (when this is valuable and enhances knowledge and understanding), however we understand that often, sessions need to be taught discretely.
- A typical/daily mathematics lesson of 60 minutes is taught from Year 1 to Year 6.
- Classes in KS2 have an additional 10 minute Times Tables Rockstars session at least 3 times a week which aims to develop fluency of times tables facts. This can take place at the beginning of a Maths lesson or as a separate session within the school day.
- Maths sessions regularly involve reasoning problems, problems in context or test-style questions to improve skills. In KS1, this takes place at least once weekly, and in KS2, at least twice weekly.

Teaching strategies

In order to provide the children with active and stimulating learning experiences, a variety of teaching and learning opportunities are adopted:-

- Wherever possible practical 'real' activities are used to introduce concepts and reinforce learning objectives.
- Opportunities to transfer skills learnt, to real situations, are used whenever possible.
- Activities are planned to encourage the full and active participation of all pupils.
- Teachers differentiate tasks throughout the lesson in order to meet the needs of all abilities.
- Teachers place a strong emphasis on correct use of mathematical language; this is supported by key vocabulary being displayed.
- Teachers develop the balance in lessons between calculation and problem solving or using and applying, linking this, where possible, to test-style outcomes.
- Teachers build children's conceptual understanding allowing fluency between different objectives, using resources where appropriate to support this.
- Teachers value pupils' oral contributions and create an ethos in which all children feel they can contribute.
- Children may work individually on a task, in pairs or in a small group, depending on the nature of the activity.

Curriculum Planning

Medium Term Planning

Teachers use the National Curriculum framework alongside White Rose Hub Planning documents to plan progressive teaching sequences that build upon learning over time. The emphasis is to develop a sequence of teaching and learning that encompasses the cycle of: assess, plan, teach, practise, apply, and review through every strand. Children at Foljambe Primary School spend time on each strand of maths teaching to ensure skills are built upon and embedded. A strong emphasis on 'Using and Applying' mathematics is embedded within the curriculum. We begin each year group with a focus on NUMBER to ensure these skills are fluent in order to accurately apply them to increasingly difficult problems. To ensure gaps are plugged, we adopt a 'look to the left' policy as teachers will ensure the previous year's objectives are secure before moving on. We are always asking our children to tell us what they already know/ have retained to ensure more able children are moving on and accessing mastery skills.

Short term planning

- Staff use a planning format of their choice to plan a series of developmental lessons, where skills are built upon, secured and transferred into a variety of contexts. Students/ NQTs follow a specific planning document.
- These plans include learning objectives, outline activities for the mental and oral starter, whole class teaching focus, focus children, independent tasks, differentiation, key vocabulary and key questions. It may also include success criteria, learning outcomes and targets.
- Planning shows which group the teacher will be focusing on each day and which group will be supported by any additional adults. It is a working document which will likely change throughout the week to respond to the needs of the children and may determine where adult support is placed to extend all learners.
- Teachers evaluate units of work, making notes on pupils who have exceeded or not achieved expectations. This formative assessment will form a basis for future planning.
- Planning is informally monitored and shared with the Maths Leader when/if required.

Environment

It is important that the classroom environment supports both the learning and teaching of mathematics. The school aims to provide a mathematically stimulating environment:

- through accessible mathematical vocabulary displayed in and around the classroom
- through the use of maths within role play areas
- through interactive displays that promote mathematical thinking and discussion
- through displays of pupils' work that celebrate achievement
- by providing a good range of resources for teacher and pupil use
- Whiteboard/ working wall displays for children to use and for teachers to update daily

Every class has access to shared resources which are audited and replenished/updated when necessary.

Monitoring and Evaluation

The quality of teaching and learning is monitored –by SLT and the Maths coordinator- as part of the appraisal process through lesson observations and monitoring progress and attainment towards end of year targets. In addition, continuity and progression across the school is monitored by the maths subject leader as is the implementation and impact of Assessment for Learning. Actions identified in the Maths Action Plan, intended to raise standards, are also monitored for implementation and, when appropriate, impact.

Assessment, Recording and Reporting

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

Formative assessments

'Assessment for Learning' is fundamental to raising standards and enabling children to reach their potential. Assessment in mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children. This information informs subsequent planning and next steps in teaching and learning. Planning is annotated to demonstrate adaptations and provide feedback about children's individual/group progress.

In book pre-assessments are used for each child for each new strand of maths teaching. Every child completes a 'cold' pre assessment to inform their next steps for learning, and to ensure that the pitch of learning in the classroom is correct and child – led.

WPT have also introduced formative assessment grids which can be found at the back of every child's Maths book. These detail the 'key' objectives for each area of Maths which a child needs to be secure in to be working at age related expectations; teachers check objectives off each time it has been achieved independently by a child. The grids will help identify gaps in learning and will support teachers' assessment of children in their class to determine if a child is working at ARE.

Summative assessments

These take place every term. Each class is using Puma termly assessments. These assessment results are used to monitor and track progress for each child and identify any gaps in learning. These assessments are also used to support teacher judgement as to whether children are working at Age Related Expectations (ARE).

Transitional assessments

These are carried out towards the end of the school year to assess and review pupils' progress and attainment. This enables attainment to be tracked year on year and will inform groupings and intervention programmes.

These are made through compulsory National Curriculum mathematics tests for pupils in Years 2 and 6 (following National directives) and supplemented by the optional test papers. Teachers also draw upon their class records of attainment (trackers, previous test results) and supplementary notes and knowledge about their class to produce a summative record. Accurate information is then reported to parents and the child's next teacher. This information is supported by the Puma assessments.

Targets

Targets are set at the beginning of each year and progress towards them is regularly reviewed and updated throughout each term to reflect and cater for the changing needs of each child. Targets for children change weekly to ensure that they are achievable.

Targets are shared with parents at Parents Evenings (October and March annually), in summative reports and are taken home when existing targets have been achieved and new ones have been set.

Computing

Computing can enhance the teaching and learning of mathematics significantly. It has ways of impacting on learning that are not possible with conventional methods. Teachers can use software to present information visually, dynamically and interactively, so that children understand concepts more quickly. Children in KS2 also have individual online accounts to be able to access Times Tables Rock Stars, which supports their fluency in times tables facts through games and quizzes.

Equal Opportunities/Inclusion

All pupils will have equal opportunity to reach their full potential across the mathematics curriculum regardless of their race, gender, cultural background, ability or physical disability.

The school's inclusion policy applies to the teaching of mathematics as to all other subjects. All children will have their specific needs met through differentiated work in conjunction with targets on PIVATS, and this will support teachers' planning for and assessment of children with SEND.

Homework

We recognise the importance of making links between home and school and encouraging parental involvement with the learning of mathematics.

Homework provides opportunities for children to:

- Practise and consolidate their skills and knowledge
- Develop and extend their techniques and strategies
- Share and communicate their mathematical thinking/learning with their family
- Prepare for their future learning

In FS2, maths homework is not set regularly but will follow some work done in class. It will be practical and relate to experiences in real life.

In KS1 and KS2 (Y1 to Y6), homework is set once a week. (My Maths)