Priestsic Primary and Nursery School

Mathematics Policy

Why Teach Mathematics?

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.

Aims of the national curriculum

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.

(National Curriculum July 2014)

Aims of teaching maths at Priestsic

"Working together, aiming high"

The teaching of mathematics at Priestsic School is geared towards enabling each pupil to develop their learning without labelling them by ability. We endeavour to not only develop the mathematics skills and understanding required for later life, but also an enthusiasm and fascination about maths itself.

We aim to increase pupil confidence in maths so they are able to express themselves and their ideas using the language of maths with assurance.

We recognise the importance of developing factual, procedural and conceptual knowledge.

We are continually aiming to raise the standards of achievement of everyone at Priestsic and we ensure that all staff receive quality continuing professional development to meet individual teacher needs. This includes external training and in house training by the subject leader.

The New National Curriculum and Key Assessment Criteria

The national curriculum for mathematics describes what must be taught in each key stage as well as defining a programme of study for each year group. Priestsic School is also using the key performance indicators published by White Rose (adapted by Priestsic) to plan and assess the progression in the teaching of mathematics; and the end of key stage interim frameworks for assessment (ITAFs) in Years 2 and 6.

In Early Years, the curriculum is guided by the Early Learning Goals.

Planning

Planning is undertaken at three levels:

long term planning is based on the programmes of study in the curriculum and the White Rose schemes of learning.

medium term planning is carried out half-termly. Teachers select their objectives from the new national curriculum and White Rose Schemes of learning. At Priestsic School we are beginning to build on the development of mastery in maths.

short term planning is carried out weekly. These plans include key objectives, resources to be used, any differentiation, vocabulary and quality questions and key assessment criteria opportunities.

Cross-curricular links

Mathematics is taught mainly as a separate subject but every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work so children see that maths is not an isolated subjects.

Teaching methods and approaches

Subject leaders at Priestsic have worked together to develop a calculation policy that takes into account the criteria of the national curriculum.

Lessons have a flexible approach to ensure learners' needs are met daily with sufficient challenge. Teachers use their own judgement in how to approach teaching a concept and will incorporate group, paired or individual work as appropriate.

Pupils engage in:

- The development of mental strategies
- Written methods
- Practical work
- Investigational work
- Problem-solving and reasoning

- Mathematical discussion using precise mathematical language
- Consolidation of basic skills (arithmetic)

At Priestsic School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced.

We endeavour to set work that is challenging, motivating and encourages the pupils to reason and explain their knowledge, skills, understanding and learning.

Maths Learning Environment and Working Walls

We recognise the importance of displays in the teaching and learning of mathematics. Every class displays relevant mathematical information which is consistent throughout the school. This is appropriate to the age of the class. These may include number lines, number grids, vocabulary and other display materials that provide a visual support for the children's mental processes and formal written methods. Extensions provide opportunities of consolidation and for deepening learning. Maths learning environments are monitored by subject leaders. Maths working walls will show the journey of maths taught that week in each class – highlighting misconceptions, mistakes made and how these have been addressed.

Assessment

We aim to provide feedback to children through response marking, providing rapid intervention to address any misconceptions and to ensure that opportunities are provided to deepen learning in maths (mastery and greater depth). See separate marking policy for more information. Teachers also assess children against the key assessment criteria and the end of key stage interim frameworks for assessment in Years 2 and 6. The School's current assessment system for tracking progress is as follows:

- **Working below (pre key stage)**
- **Working towards the expected standard**

- Expected standard
- Greater Depth

Reporting

All parents receive an annual written report on which there is a summary of their
child's effort and progress in mathematics over the year. At the end of key stage 1 and key stage 2, each pupil's level of achievement against national standards is included as part of their annual written report.

Resources

Priestsic School uses a variety of published materials to facilitate the teaching of
mathematics but recognises the need for the teaching of maths to be 'scheme assisted not scheme driven'.

Materials are constantly updated, as new and relevant items become available. The maths subject leader order new resources after consultation with the staff.

Equal opportunities

As a school we endeavour to maintain an awareness of, and to provide for, equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and special needs, both in our teaching attitudes and in the published materials we use with our pupils.

Children with special educational needs

All children receive high quality inclusive teaching. Where possible, we aim to fully include SEND pupils in the daily mathematics lessons so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods. There are high expectations for all pupils. Resources are provided to encourage children to learn independently and support their learning. Specialist concrete resources, such

as numicon are also used, where appropriate.

Where necessary teachers will implement a programme, (in liaison with the SENCO) of support for a child. If a child's needs require it, they will work on an individualised programme written in consultation with the appropriate staff.

When planning, teachers will to address the child's needs through appropriate simplified or modified tasks. Support staff are deployed effectively to achieve maximum impact on learning and progress.

Homework

Children in key stage 1 will undertake homework based on number facts including number bonds, doubles and multiplication tables and practical number games, KIRFs and activities.

Children are expected to carry out set homework tasks as directed by the class teacher in key stage 2, with a strong focus on multiplication tables, using the four operations efficiently and reasoning and problem solving skills.

Please read this policy in conjunction with:

Maths

Calculation policy

Assessment policy

Teaching and Learning policy

Marking and Feedback policy

SEND policy

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