Blanford Mere Nursery & Primary School

Maths Policy

Date adopted by governors
April 2025
To be reviewed
April 2028

Article 28: *You have the right to a good quality education. You should be encouraged to go to school to the highest level you can.*

Contents

Purpose

At Blanford Mere Primary School we believe that Mathematics is a key skill that helps us to make sense of the world around us. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to understand and apply their knowledge to solve real life problems.

At Blanford Mere Primary School we also believe that Mathematics equips children with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and development and in public decision-making. Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries, and its importance is universally recognised.

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

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.

Maths Mastery

We use a mastery approach to maths teaching. This is a research-driven teaching and learning method that meets the goals of the National Curriculum.

What does it mean in practice? In summary, a mastery approach:

- **Puts numbers first:** Our lessons have number at their heart, because we believe confidence with numbers is the first step to competency in the curriculum as a whole.
- **Puts depth before breadth:** we reinforce knowledge again and again.
- **Encourages collaboration**: children can progress through the learning as a group, supporting each other as they learn.
- **Focuses on fluency, reasoning and problem solving:** it gives children the skills they need to become competent mathematicians.

Concrete Pictorial Abstract

At the heart of our mastery approach is the Concrete Pictorial Abstract (CPA) approach. Research shows that when children are introduced to a new concept, working with concrete physical resources and pictorial representations leads to a better understanding of abstract concepts. We use CPA throughout our mathematical learning journey.

Implementation of Policy

Blanford Mere Primary School uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics.

We do this through a daily lesson that has a mix of whole-class and group teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work appropriate to their age and ability level. This supports our CPA (concrete-pictorial-abstract) approach to learning mathematics.

Blanford Mere Primary School children use technology in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by adapting teaching and matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support targeted groups and to provide in situ feedback to ensure that work is matched to the needs of individuals.

The National Curriculum

The National Curriculum order for Mathematics describes what must be taught in each key stage. Blanford Mere Primary School follows the primary mathematics framework, which provides detailed guidance for the implementation of the orders and ensures continuity and progression in the teaching of mathematics.

Every teacher in Blanford Mere Primary School has access to the framework for teaching mathematics and the curriculum map outlining progression, which has been created using the White Rose Maths scheme to meet the needs of children in our school. In early years, the curriculum is guided by the Early Learning Goals.

The three main aims of the national curriculum are for all children to be fluent, to be able to reason and problem solve. It's therefore vital that all children can access all the questions. Some children may require more support at times, but we would still expect them to be exposed to reasoning and problem-solving questions. The White Rose Maths resources that we use have varied levels of challenge in reasoning and problem-solving questions so that some are accessible to every child while others help stretch thinking and deepen understanding.

Each year group has key concepts that are linked to the National Curriculum, including relevant vocabulary. These concepts link back to the National Curriculum. We teach, repeat and practise to ensure that children know more and remember more. The White Rose Maths scheme helps set high expectations following a CPA (concrete-pictorial-abstract) approach. The scheme is progressive and extremely well sequenced to ensure small steps are taught clearly and children's understanding is deepened.

Early Years Foundation Stage

At Blanford Mere Primary School children follow the early years foundation stage curriculum. We give all children the opportunity to talk and communicate in a widening range of situation and to practise and extend their range of vocabulary and numeracy skills. They have the opportunity to explore, enjoy, learn about, and use mathematics in a range of situations. Mathematics is planned on a half termly basis and assessed using the criteria from the early learning goals. Mathematics is taught both as a discrete subject and within the whole early years curriculum to give children opportunities to use their Numeracy skills in real life situations.

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children are taught to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Key Stages 1 and 2

At Blanford Mere Primary School daily maths lessons are at least one hour depending on the age of the children. There are weekly plans, which cover the daily content of each lesson.

Key stage 1 – Years 1 and 2: What do we teach at Blanford Mere Primary School?

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools].
At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value.

An emphasis on practice at this early stage will aid fluency.
Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage.

Lower Key Stage 2 – Years 3 and 4: What do we teach at Blanford Mere Primary School?

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.
At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and

confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Upper Key Stage 2 – Years 5 and 6: What do we teach at Blanford Mere Primary School?

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.
At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.
By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.
Pupils should read, spell and pronounce mathematical vocabulary correctly.

Planning

Teachers draw upon excellent subject knowledge, planning astutely, setting challenging tasks based on systematic, accurate assessment of pupils' prior skills, knowledge and understanding. They use well-judged and often imaginative teaching strategies to engage and inspire learners at Blanford Mere Primary School.

1. For planning Rec –Y6, use the White Rose Maths scheme as a basis.
2. The date and title should be written neatly and underlined at the start of the lesson.
3. Children should write a D,I or G by the date to self assess.
4. Presentation - children to work neatly. 1 digit per box. Use rulers. Don't use rubbers unless it's a drawing. Stick in questions rather than writing them out.
5. Arithmetic Tests should be carried out weekly
6. Reasoning tests should be completed termly
7. Weekly homework set on Mathletics. http://uk.mathletics.com/
8. Weekly homework set on TT Rock Stars.
9. When teaching methods, staff follow the progression as set out in the White Rose Maths scheme, which should be complemented with the WRM Calculation Policy and, where appropriate, the VCP (Visual Calculation Policy). T:\MATHS AREA\Anthony Reddy Visual Calculation Policy 2014\Blanford Visual Calculation Policy.pdf

Resources

The school provides a number of quality resources for staff to deliver engaging and effective lessons.

Practical resources

Practical resources to enable staff to follow a CPA approach

Progression of calculation

We have a policy for progression in calculation to ensure continuity and consistency throughout the school. WRM Calculation Policy

Live Marking

The main purpose of our marking policy is to give children consistency in their learning – to ensure that as children progress through school they benefit from the immediate verbal and written feedback they are given through constructive guidance about how to improve.

Assessment Processes

Staff are made aware about each learner's current attainment based on the end of the last academic year's assessment and critically what each of their learners attainment target is for the coming year. Target setting: at the start of the academic year the Head teacher analyses each learners' current attainment, and where appropriate Foundation Stage profile and end of Key Stage one data. From this data individual challenging targets are set in writing, reading and numeracy. Staff have the opportunity during the autumn term to consult with the head teacher if they feel any target is inaccurate.

- Each term, staff are expected to report on the attainment and progress levels in maths and identify the pupils' next steps to learning.
- Pupil Progress Meetings: half termly meetings are held to discuss pupils' individual attainment and progress towards end of term targets, as well as the attainment and progress of subgroups such as: boys, girls, SEN and those in receipt of the Pupil Premium funding.

Formal Assessments

Year 2 complete the non-statutory end of Key Stage assessments. Year 6 complete the national SATs for mathematics in the summer term.
All children from Years 1-6 complete a termly formal assessment in maths.

Reporting to parents

- Parents receive an annual report indicating pupils' achievement at the end of the summer term.
- Parents are invited to a consultation evening termly.
- At the end of the school year, parents of our Reception children (FS children) receive their child's Foundation Stage Profile results and Learning Journey, showing progress throughout their time in the Foundation Stage Unit. Year 6 pupils receive their child's SATs results.

Website

The school website provides a range of supporting materials for parents, including links to mathematical websites.

Staff Continued Professional Development

The subject leader for mathematics attends 'subject leader' training to keep up to date with the latest mathematical pedagogy and then feedback to staff at planned staff meetings following the training. Through appraisal staff have the opportunity to identify areas of need and appropriate training is arranged. Staff meetings also provide staff information and training.

Equal Opportunities

At Blanford Mere Primary School, as a staff, we endeavour to maintain an awareness of, and to provide for equal opportunities for all our children 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 children.

Special Educational Needs

At Blanford Mere Primary School wherever possible we aim to fully include SEND children in the daily mathematics lesson 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.

Where necessary teachers will, in consultation with the SENDCO, draw up a target within an Individual Educational Plan for a child. If a child's needs are particularly severe, they will work on an individualised programme written in consultation with the appropriate staff.
When planning, teachers adapt learning to meet the pupils' needs.

Disability Equality Impact Assessment

This policy has been written with reference to and in consideration of the school's Disability Equality Scheme. Assessment will include consideration of issues identified by the involvement of disabled children, staff and parents and any information the school holds on disabled children, staff and parents.

Governance

We have an identified numeracy governor. They aim to meet with the subject leader ach academic year. The Governor delivers a subject report to the Full Governing Body. They are invited to visit school to attend any maths inset provided for staff.

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