



Milverton Community Primary School
Mathematics Policy
2017

Philosophy

The new National Curriculum states that:

“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.”

At Milverton we see mathematics very much as a multi-discipline, cross curricular, interconnected subject which should encourage creativity. We want the children to see mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment. To that end, a high-quality, inter-related and creative mathematics experience should be one that develops the children’s ability to think mathematically and one which allows them to apply the tools to which they have been exposed in a variety of ways.

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- become **FLUENT**
- **REASON** and **EXPLAIN** mathematically
- can **SOLVE PROBLEMS**

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Mathematics knowledge. In doing so they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.



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Aims and Objectives

We want to teach mathematics in a way that:

- delivers mathematics in line with new National Curriculum guidelines and the current curriculum for the EYFS (Early Years Foundation Stage)
- ensures the delivery of mathematics is filled with cross curricular opportunities
- creates a lively, exciting and stimulating environment in which the children can learn mathematics
- promotes the concept that acquiring mathematics knowledge and skills provides the foundation for understanding the world around the children
- develops mental strategies
- encourages children to use mathematical vocabulary to reason and explain both verbally and in writing
- allows time for partner talk in order to stimulate and develop a curiosity for mathematics
- challenges children to stretch themselves and take risks in their learning
- creates a sense of awe and wonder surrounding mathematics
- ensures the EYFS children are given opportunity to develop sound mathematical understanding within their appropriate developmental milestone
- ensures children in Key Stage 1 are secure in their understanding of number and number relationships
- provides children with the opportunity for low entry-high ceiling challenges

Approach

At Milverton, we use the [scheme of work provided by the 'White Rose Maths Hub'](#) that covers all aspects of the requirements of Curriculum 2014 for mathematics and the EYFS curriculum. The reception class also adheres to the [2017 EYFS curriculum](#).

It is important that children are allowed to explore mathematics and present their findings not only in a written form but also visually; to that end the school has adopted the CPA approach: concrete, pictorial, abstract. This will allow the children to experience the physical aspects of mathematics before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers. [We have adopted a calculation policy to support this.](#)



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All teaching staff at Milverton attend staff meetings that regularly have a 10 minute mathematics focus, which provides a drip-feed of information on current thinking and introduces them to new teaching methodologies and ideas. As a result, the [Singapore Bar Method approach to support calculations and problem solving has been adopted](#).

Planning and Assessment

Teachers plan using the [White Rose Maths Hub scheme of work](#) for year groups. A variety of teaching methods is used across the school and within classes throughout the year. This includes whole class mastery lessons. This is demonstrated in the [medium term planning](#). Staff also have access to a variety of extra resources to engage children in mathematics at a greater depth ([see NCTEM folder](#)).

Across a range of lessons, children will engage in mathematical discussion (talk partner or group work), investigations, problem solving, practical experiences and written methods.

In order to inform planning, teachers in the EYFS maintain their daily objective led planning form and KS1 and 2 will regularly maintain a [coloured assessment grid](#) which tracks the children's progress. Formative assessment is used together with children's self-assessment to decide who is ready to move to the next concept and who needs to visit the concept again in another way. This can then be used to update tracking information on School Pupil Tracker Online (SPTO).

Termly, children in KS1 and KS2 will be assessed through the application of tests supplied by the White Rose Maths Hub. This summative assessment will be used in conjunction with all other formative assessment to track progress, identify next steps and therefore inform future planning.

Children will be provided with feedback in accordance with the school's [EYFS/KS1](#) and [KS2](#) Marking Policies.



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Resources and Displays

Each classroom is resourced with materials to support the delivery of mathematics with some larger, shared resources being kept in the resource room.

Each class has a designated yellow maths box that has everyday practical support resources that children are encouraged to use whenever they need to.

Each classroom has a display dedicated to mathematics; this is in the form of a working wall, strategy board or problem solving area.

Inclusion

In line with the School's Inclusion Policy, each child will have an equal entitlement to all aspects of the mathematics curriculum and to experience the full range of activities. Therefore, in delivering mathematics, care will be taken to ensure that a variety of learning styles are accessed and teaching methods adopted.

Intervention groups take place both within the lesson and outside of timetabled sessions. Intervention may be delivered by the teacher or teaching assistant and may involve individual or small group work. Intervention is for any learner that is deemed in need of support in a particular concept whether in order to 'catch up' or extend learning to a greater depth.

CPD

The mathematics coordinator has termly update meetings with 'Mathstopia' – a local mathematics advisory service. The coordinator also has termly meetings with the Tone Valley Partnership of Schools in order to collaborate, moderate and share best practice. All teaching staff have the opportunity to attend CPD in line with school policy and attend all in-house training. HLTAs and TAs are trained in house but also have access to external training where there is a need to do so.

Updated:

Next Review: