



Subject: Mathematics

Intent

A love of learning and the success of every child at the heart of all we do
The aim of our Curriculum is for all our pupils to leave The Topsham School as citizens of the future, with the skills needed to succeed in every part of their lives.
<p>At The Topsham School, we view mathematics as a fundamental, core understanding in our rapidly changing world; an important creative discipline that is essential for our pupils to become citizens of the future, and perhaps even world changers. We want all pupils to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding.</p> <p>At The Topsham School we foster positive can do attitudes and see mistakes, misconceptions and challenges as part of the process of learning. We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through small, manageable steps. We support each other through our learning journey to allow all children to make progress and all children to be challenged. At The Topsham School, we are all mathematicians.</p> <p>Our mathematics curriculum allows opportunities for all children to:</p> <ul style="list-style-type: none"> ● raise their confidence in talking mathematically, applying their knowledge and understanding, reasoning and justifying, explaining their thinking and challenging each others' thinking ● become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately ● be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios ● reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language ● have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

Implementation:

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The aim of our Curriculum is for all our pupils to leave The Topsham School as citizens of the future, with the skills needed to succeed in every part of their lives.
High Quality Planning
<p>Substantive Knowledge and Experiences in Mathematics</p> <p>Our mathematics curriculum is shaped by our school vision which aims to enable all children, regardless of background, and individual needs, to flourish and become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear progression of skills of knowledge and skills. These core aspects are built on year by year and sequenced appropriately to maximise learning for all children. We achieve this Mastery model through the Power Maths scheme.</p> <p>Our intention is that the children in the class will learn the same aspect of maths together at the same time. Outcomes are adapted in each lesson to best support the needs of each child, and children are given the opportunity to work individually and in mixed ability peer groups. The range</p>

and styles of questions allows opportunities for all children to be challenged and continue to deepen their mathematical understanding. Through the Power Maths scheme, misconceptions are considered before teaching begins, and continue to be addressed throughout the teaching. Mathematical Pedagogy is clearly understood by staff to ensure long term concepts are embedded. Pauses are taken in the scheme where learning needs to be further embedded and this is down to professional judgement.

Teachers use live, daily planning assessment and feedback to systematically identify and address misconceptions before teaching the next steps. As well as regular monitoring of progress during lessons, end of unit assessments are completed through mixed ability group discussions and more formal end of term tests from year 1 onwards.

Children can communicate mathematical understanding through high quality resources, drawings and representations, use of IT as well as recording in their Power Maths workbooks. Children from year 1 upwards also have a maths journal for embedding concepts further, extending their thinking or recording their ideas in different ways.

The content of learning environments, including the use of concrete resources throughout the school, will be consistent in promoting and supporting maths but relevant to the age and stage the children are at.

Disciplinary knowledge and Critical thinking skills in Mathematics

In mathematics, to supplement the planning of Power Maths, we use Bloom’s Taxonomy to support the development of these two characteristics of learning. This approach ensures consistency of practice, language across the school, and high-level questioning for assessment for learning. Through the planning and teaching of mathematics, the children will be provided with opportunities to reflect and critically analyse how they think, evaluate their maths work against agreed success criteria and learning intentions, and use their knowledge and skills to tackle progressively more complex problems and challenges. Not only does this way of working inform assessment but enables children to work ‘like a mathematician’.

Metacognition: Developing and supporting Positive Attitudes to Learning in Mathematics

Teachers ensure our Learning Powers are explicitly planned for in every subject area. The overarching Learning Powers that are threaded through every Maths lesson and sequence are: Making Links, Practising, Noticing, Curiosity and Questioning, Perseverance, Risk-Taking and Resourcefulness. Time is planned for children to be able to reflect on how their Learning Powers are supporting them in the learning process and which ones they may need to develop or access to support them to succeed.

Through this we provide a consistent approach to planning for our curriculum which builds on prior learning, supports children see connections, challenges and facilitates higher level thinking skills and supports children understand how they learn and what they need to do themselves to achieve and succeed.

High Quality Teaching and Learning in EVERY subject

Assessment for Learning	Appropriate Pitch: age and stage appropriate for all children	Appropriate Match including high expectations and challenge for all	Subject Knowledge including modelling and teaching subject specific vocabulary and promoting READING	Promotes and develops Metacognition
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A successful Mathematics lesson will include:

- A clear intention of learning,

<ul style="list-style-type: none"> • The explicit and consistent teaching of mathematical vocabulary, and the expectation of its use by the children when communicating their maths, • Opportunities for rehearsal of prior learning and fluency, making connections to prior learning, problem solving and reasoning, • Opportunities for talking and thinking, independence and collaboration, • A threading of our learning powers throughout, • Key questions planned to develop critical thinking skills, • Opportunities for use of a broad range of mathematical resources and representation, consistent throughout the school, • Recording of learning will be evidenced in the Power Maths workbooks and Journals in KS2, on SeeSaw and in the Power Maths workbooks and Journals in KS1, and Tapestry in the Early Years. Working walls at all stages are integral to supporting the children's understanding and helping develop their fluency, vocabulary and recall. 						
<p style="text-align: center;">Through this we create a supportive learning ethos for both teachers and children and enable all stakeholders to have a clear and consistent understanding of how we teach and support children achieve and succeed in our curriculum intent.</p>						
T	O	P	S	H	A	M
Trust and Respect	Opportunities for all	Partnerships	Success	Health and Happiness	Aspiration and Attitudes to learning	Motivated
<p>SMSC underpins our school values. These values have been devised and defined by the whole school community and underpin the behaviour choices we make and how we choose to work together in EVERY area of learning in our school. In Mathematics we provide daily opportunities to learn in Partnership, support each other and celebrate all successes. Motivation to embrace challenge is at the heart of our Maths curriculum.</p>						
<p style="text-align: center;">Through this, we create a safe, secure learning environment where all stakeholders have a shared and consistent understanding of our Values and positive behaviours expected within our school that support everyone learn, succeed and achieve.</p>						
High Quality, Enabling Environment						
Working wall showing progression of sequence	Precise and consistent vocabulary used as part of display	Learning Powers clearly linked to learning sequence of Working Wall	Children independently access high quality resources			
<p>Recording of learning will be evident in Maths Journals and the Power Maths workbooks. Further evidence gathered may include some of the following: written, photographic, video and audio, drawings, diagrams. Concrete resources and a variety of representations will be on display and accessible to the children.</p>						
<p style="text-align: center;">Through this we provide an exciting, inclusive learning environment that promotes and makes learning visible to both teachers and children, enables independence and celebrates the learning process</p>						

Impact:

<p>Monitoring and Supporting High Quality Planning and Timetabling</p> <p>Mathematics is planned by teachers using the Power Maths scheme, and adapted where necessary to make the learning relevant to the needs of the children. The Maths Lead monitors the flow and progression of planning throughout the year through whole staff meetings, pupil progress discussions and termly monitoring of planning documents.</p> <p>In KS1 and 2, mathematics is timetabled as one full lesson each day, then further 'mini-sessions' that are age appropriate: counting and numbers, times tables, early morning fluency development, In the Early Years, mathematics is timetabled as one discreet lesson each day, followed by small group guided learning and opportunities to develop mathematics skills is provided for through continuous provision.</p> <p style="text-align: center;">Through this we aim for planning to be consistent across the school, at the appropriate pitch for each stage and phase and offers equal opportunities for ALL children to make progress through the year.</p>

Monitoring and supporting High Quality Teaching and Learning

- Termly book looks/evidence looks alongside pupil voice
- Drop-ins to observe teaching
- Opportunities for staff CPD through subject and pedagogy led staff meetings
- Opportunities for staff to observe good practise, or be supported with mathematics in another class in school.

Through this we aim to ensure teachers have the skills, subject knowledge and confidence to teach all areas of the curriculum and so ensure the progress and success of ALL children in every area of their learning

Monitoring and Measuring Progress through assessment and published data

In maths we measure progress within units of teaching, using end of unit checks. We assess termly using more formal written assessments. We use assessment to inform and adapt our future planning.

Through this, we understand the needs of ALL of our children and use this information to identify next steps and match learning need to ensure children make progress

School Improvement Priorities

All subject leaders create an action plan at the start of the year that is linked to the School Improvement plan and is reviewed and updated throughout the year. It is a working document and designed to reflect the needs of the children. Reading, the teaching of vocabulary and opportunities to apply mathematical knowledge and skills are threaded through all subjects planning and teaching.