Trimley St Mary Primary School - Maths Policy

National Curriculum Purpose of Study

The 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.

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 Requirements for Subject Content at KS1.

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 1.

Pupils should be taught to:

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

read and write numbers from 1 to 20 in numerals and words.

National Curriculum Requirements for Subject Content at KS2.

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.

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.

<u>Curriculum Implementation</u>

Mathematics is a core subject in the National Curriculum. Our school uses the objectives from the curriculum along with our Inspire maths scheme. Planning is progressive and begins with basic skills which are applied and practised in a range of contexts to increase children's fluency, ability to reason mathematically which enables them to solve a variety of challenging problems.

In Key Stage 1 children will develop their fluency and confidence using numbers both mentally and will show their thinking verbally and in writing.

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.

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.

On a daily basis children will practice their calculation skills and will be challenged at an appropriate level.

Teaching and Learning

We teach and promote an understanding along with enjoyment of mathematics throughout the school. Children are taught to understand number and numeracy skills in a variety of ways moving from concrete examples to pictorial and examples and on to the abstract. This allows children to receive an appropriate level of challenge for them.

Children are taught maths on a daily basis and will also practise their skills at other times during the day, either at the beginning of the day or in the afternoon. Their learning will also be supplemented by one

to one sessions in year 6 and links to maths in other subjects such as science.

The 8 Cs – Our curriculum is underpinned by core learning skills that all children need in order to be effective learners. Children use these skills to evaluate themselves as learners, in addition to their knowledge and understanding of concepts within Maths.

Curriculum Drivers – At the heart of Trimley St Mary School, lies clearly defined and understood "curriculum drivers" that are the guiding principles that accurately shape the personality of our curriculum. These drivers underpin our curriculum and drive the teaching and learning in our school and therefore the pupil's experiences.

Mastery Statement Enrichment Policy	Trimley St Mary School – Curriculum Drivers		The 8 Cs The Language of BAD
Community Our school is a friendly and welcoming setting, with a strong sense of belonging, care and support. We recognise parents and the wider community as active partners in the education process and life of the school. By fostering strong community links, and working closely with families, local business and other agencies, we support, motivate and inspire all children to achieve and be successful in their own right.	**Initiative** We demonstrate that we can think for ourselves, take action when necessary and have the drive to achieve. We welcome the challenge of doing things without being asked, solve problems; we have the desire to continually learn and grow. We recognise the importance of leading our own learning, carrying out research, asking questions and seeking help when needed. We show resilience and determination and know that these skills will be essential in our next stages of education and the workplace.	**Mindfulness** As a THRIVE school, we provide a powerful way of working with children to support optimal social and emotional development. We work with children who may have struggled with difficult life events to help them re-engage with life and learning. The way we interact with our children has a huge impact on the way they think about themselves and their levels of personal resilience. We improve empathy or the ability to understand what another person is thinking or feeling, which improves children's awareness of others and helps them to build positive relationships. We develop happy, healthy confident children who are ready and open to learning.	**Diversity** We serve to support the rounded development of children and promote diversity. We show support for diversity by talking with people to find out how best to include them and respect their beliefs. By valuing and respecting diversity, we encourage everyone to respect others' right to their own beliefs, values and opinions. Children's connection to diversity develops through their experiences. Having a strong sense of their own cultural history and traditions helps children build a positive identity for themselves, as well as supporting children's sense of belonging and self-esteem. When their mental health and wellbeing is supported, so is their learning.

Special Educational Needs

All numeracy opportunities are tailored to the needs of the children in the class or group. The teacher and other adults will model activities

as well as providing different levels of support to those less able, activities are adapted to be inclusive of physical disabilities.

CURRICULUM IMPACT

Assessment and Recording

Core subjects are assessed as per the school policy (see individual subjects). Teachers update Numeracy data on Target Tracker half termly, and these levels are also included in progress reports sent home to parents. Monitoring takes place on a regular basis by the Maths subject lead, through lesson observations, pupil perceptions and the scrutinising of books. The Maths Governors also takes part in pupil perceptions and learning walks on a regular basis to assess the impact and consistency of maths work across the school. Photographic evidence is stored on Seesaw.

External Verification

Pupils in year 2 and year 6 will take part in SaTS tests to provide a measure of attainment and progress for pupils in the school.