

**ST NEOT SCHOOL**  
**Maths Rationale**

At St Neot School, we believe that maths is an essential skill that is used throughout our daily lives. We offer an enriched progressive curriculum whereby maths is developed and enjoyed in all aspects of school life.

We aim to provide our children with an exciting, relevant and challenging curriculum. We strive to ensure that all children develop a positive attitude towards maths and become confident, life-long mathematicians.

Our teaching of mathematics is based on the mastery approach – the belief that every child is capable of success. Our carefully designed maths curriculum endeavours to reflect this, providing a foundation for understanding the world, the ability to reason mathematically and a sense of enjoyment and curiosity about the subject.

**Intent**

The intent of our mathematics curriculum is to provide children with a foundation for understanding number, reasoning, thinking logically and problem solving with resilience so that they are fully prepared for the future. It is essential that these keystones of Mathematics are embedded throughout all strands of the National Curriculum. By adopting a Mastery approach, it is also intended that all children, regardless of their starting point, will maximise their academic achievement and leave St Neot Primary School with an appreciation and enthusiasm for Maths, resulting in a lifelong positive relationship with number.

- We ensure that we deliver a high quality progressive maths curriculum that is both challenging and enjoyable.
- We want children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- We intend for our pupils to be able to apply their mathematical knowledge to science and other subjects.
- We want them to know that maths is essential to everyday life to be confident mathematicians who are not afraid to take risks.
- We want children to be fully developed independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement.

**British Values**

Mathematics provides many opportunities for children to learn about British Values. Children learn to follow rules and structures and apply this to a range of problem solving scenarios. They develop an appreciation of the importance of rules in keeping order and structure in Maths and can apply this to their day to day lives. In Mathematics at St Neot School, children work collaboratively to solve open-ended problems working through their errors to improve their learning. This not only teaches them collaboration and problem solving skills but they learn to mutually respect one another and other people's opinions and methods.

**Implementation**

Our implementation is developed through secure understanding of the curriculum and subject area.

Teaching and Learning, Content and Sequence

- For maths, our long term planning follows the National Curriculum 2014. Weekly and daily lessons follow the Abacus support framework, including mastery.
- By using a variety of planning resources we believe that we provide a bespoke teaching and learning experience that is designed to interest, inform and inspire our children.
- Using prior knowledge as a starting point for all future planning and teaching, we plan lessons, which allow for all pupils to make good progress.
- Lessons are engaging and follow a cycle of planning, to ensure that we can evidence progress over short and long periods of time.
- Maths lessons are designed with a concrete, pictorial and abstract (CPA) approach, providing our pupils with the scaffolding required to access the learning at all levels.
- We place a large emphasis on pupil engagement and design lessons which involve all pupils using questioning and modelling at the centre of every lesson.

- To implement our intent, we ensure that our children are invested in their learning and are making a positive contribution to their lessons.
- Assessment informs the teaching and learning sequence, and children work on the objectives they are assessed as being at.
- Children who are not making the required progress are given extra support through booster sessions and support in class in order to meet our intent of developing pupils academically.
- Feedback is given on children's learning as part of pupil conferencing. Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities.
- In order to support teacher judgments, children are assessed using current and reliable tests in line with the national curriculum for maths.
- Analysis of any tests that the children complete is undertaken and fed into future planning.
- Summative assessments are completed at the end of the academic year and help influence the overall judgement reported to parents in the end of year report.
- The maths leader has a clear role and overall responsibility for the progress of all children in maths throughout school. Working with SLT, key data is analysed and regular feedback is provided and discussed at pupil progress meetings to inform on progress and future actions.

**Impact:** to be reviewed at the end of each year

A mathematical concept or skill has been mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

- Children demonstrate quick recall of facts and procedures. This includes the recollection of the times tables.
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics.
- Children show confidence in believing that they will achieve.
- Children show a high level of pride in the presentation and understanding of the work.

Expected Standards	Key Stage 1 Maths			
Year	Pupils	School	LA	Nat
2017	10	90.0%	65%	68%
2018	12	91.7%	66%	70%
2019	14	78.6%	65%	69%

Greater Depth	Key Stage 1 Maths			
Year	Pupils	School	LA	Nat
2017	10	0.0%	16%	16%
2018	12	16.7%	14%	16%
2019	14	7.1%	13%	15%

Expected Standards	Key Stage 2 Maths			
Year	Pupils	School	LA	Nat
2017	9	100%	72%	75%
2018	11	90.9%	72%	76%
2019	12	91.7%	76%	79%

Greater Depth	Key Stage 2 Maths			
Year	Pupils	School	LA	Nat
2017	9	33.3%	17%	23%
2018	11	36.4%	19%	24%
2019	12	33.3%	21%	27%

## **Parental Involvement**

It is widely recognised that parents and families are the primary educators of children and are responsible for laying down the social and intellectual foundations for their learning and development (West, Node, Edge and David 1998). There is a clear message from the literature that parental support benefits children's learning, including their numeracy development (Cairney, 200; Melhuish et al 2008)

## **SEND children and children who are working towards the expected standard**

At St Neot Primary School, we have a determined approach that all children will meet the expected or exceed the expected standard in maths unless they have a specific need. We regularly monitor and track our children's reading ability through formative assessments. We ensure that any gaps in knowledge or forgotten knowledge are timetabled in EYFS and KS1 for children who need same-day intervention to consolidate and secure gaps in their knowledge.

## **Calculation**

At St Neot Primary School we believe that children should be introduced to the processes of calculation through practical, oral and mental activities. Mathematical understanding is developed through use of representations that are first of all concrete (e.g. Dienes, apparatus), then pictorial (e.g. array, place value counters) to then facilitate abstract working (e.g. column addition, long multiplication). As children begin to understand the underlying ideas they develop ways of recording to support their thinking and calculation methods, use particular methods that apply to special cases, and learn to interpret and use the signs and symbols involved.

Choosing the appropriate strategy, recording in mathematics and in calculation in particular is an important tool both for furthering the understanding of ideas and for communicating those ideas to others. A useful written method is one that helps children carry out a calculation and can be understood by others.

Written methods are complementary to mental methods and should not be seen as separate from them. The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use an efficient written method accurately and with confidence. It is important children acquire secure mental methods of calculation and one efficient written method of calculation for addition, subtraction, multiplication and division which they know they can rely on when mental methods are not appropriate.

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 have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- 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.