



Truro Learning Academy – Mathematics Policy



At Truro Learning Academy, we believe every child deserves to succeed in maths. To ensure that this happens, we follow a mastery curriculum for the vast majority of our pupils and carefully tailor alternative maths provision for a very small number of pupils who require a different approach to meet their individual needs.

Our vision is for our pupils to develop a love of maths and ensure that they feel successful, regardless of their starting points. By following the Number Sense programme from Reception to Year 3, pupils develop a firm foundation in essential number facts, enabling them to then become proficient in the fluency, reasoning and problem solving skills that they need in life beyond school.

We have a consistent approach to teaching maths, underpinned by following the NCETM Curriculum Prioritisation materials and supplemented with additional, high-quality materials. Our teachers plan and deliver small steps in learning, deepening and scaffolding the learning as appropriate.

In lessons, pupils receive quality inputs from teachers and answer small step questions in a paper strip format. These questions become progressively more challenging so that all of the pupils are able to access the initial questions and there is sufficient challenge to stretch the more able mathematicians. Pupils are taught how to use a variety of manipulatives, to support their mathematical understanding and to solve questions, with the use of these becoming more independent over time.

Every morning, pupils, from Year 2 to Year 6, complete a recap sheet during their 'Morning Maths' session which focuses on the fundamental elements of maths so that these core skills become automatic, increasing pupils's confidence and competence in key mathematical skills and freeing their working memory, ultimately enabling them to tackle increasingly complex problems.

At Truro Learning Academy we have a mastery approach to mathematics teaching:

- An expectation that all pupils can succeed in maths.
- Giving pupils a secure understanding of mathematical concepts by developing consistent models and images throughout, known as the concrete, pictorial and abstract approach.
- Ensuring pupils are fluent in mathematical procedures and number facts by rehearsing these in systematic ways.
- Pupils who master a concept easily are expected to deepen their understanding, for example by applying it to solve problems embedded in mathematical investigations or more complex contexts.
- Pupils who do not master an objective with the rest of the class should be supported to enable them to gain more experience and achieve mastery through a variety of supportive strategies.

Nursery and Reception

In Nursery, the pupils learn maths through a combination of adult-led sessions and carefully planned continuous provision activities. In Reception, the maths provision becomes more formal and fluency, reasoning and problem solving are taught through daily, adult-led sessions and accessed through our carefully planned continuous provision and daily routines.

Planning

The school delivers the requirements of the national curriculum primarily through the small steps of learning outlined in the NCETM Curriculum Prioritisation materials, supplemented by additional, high-quality resources. Staff are expected to follow the small steps outlined in the NCETM units in the order outlined in the school's maths long-term plan.

At Truro Learning Academy, we value providing high-quality modelling for our pupils, which follows a consistent structure and includes key visuals, in every maths session. As the NCETM Curriculum Prioritisation materials are very detailed, teachers are not required to provide written planning and instead focus on creating well-prepared lessons using a variety of resources including those from the NCETM and White Rose maths.

Daily structure

Every day, pupils in Years 2 to 6 complete a daily recap sheet in their 'Morning Maths' session so that the core mathematical skills are recapped regularly so that they become automatic. This frees the pupils' working memory to enable them to apply their knowledge and skills to increasingly complex problems. Pupils who finish this work quickly and accurately have the opportunity to go onto Sumdog. This programme uses an algorithm to set work at their appropriate level and gives pupils the opportunity to recap learning from previous lessons. Teachers are able to track the pupils' progress and reassess them, as appropriate, so that the activities remain pitched at the correct level.

Pupils in Reception, Year 1, Year 2 and Year 3 complete Number Sense sessions to develop their knowledge of essential number facts. Once the children complete the Number Sense programme, they move on to securing their times table facts. In Years 4 and 5, the first part of the pupils' maths lesson focuses on learning and increasing the speed of the recall of times tables facts, initially in preparation for the Year 4 Multiplication Times Table Check and then to encourage the pupils to continue to increase the speed at which they can recall these facts. By Year 6, this part of the maths session is focused on increasing the pupils speed in answering a range of arithmetic questions in preparation for the Key Stage 2 SATs.

During the main input, teachers recap and introduce new and useful vocabulary in order to prevent any potential barriers with the pupils' learning. This enables the pupils to broaden their mathematical vocabulary. The lesson then moves on to the teacher modelling the skills needed to achieve the lesson's learning objective and then the pupils completing guided practice. Before sending the pupils to work independently, the teachers check for the pupils' understanding, working with those who need additional teaching before they are ready to work independently.

When pupils are ready for independent work, they complete mathematical questions on a 'strip'. The initial questions are carefully designed so that they are accessible to all of the pupils, often supported by a pictorial representation to support those who find maths more challenging. We believe that it is important for all of the pupils to start at the same point on the strips as this supports the less confident mathematicians and ensures that more confident mathematicians do not inadvertently develop gaps in their understanding. The questions become increasingly challenging so that there is always sufficient challenge for pupils who grasp new concepts quickly.

Feedback

At Truro Learning Academy, we endeavor to give pupils immediate verbal feedback on their work to assess their understanding and move their learning forward. Pupils begin to self-mark their work once they are ready and this is embedded throughout Key Stage 2. The pupils mark their work in purple pen and also correct mistakes in this pen. Teachers mark the pupils' work in green pen and pupils respond to this marking in purple pen. So that the teachers know how much support every child has received in the lesson, the pupils circle whether they have worked independently, in a pair, as a group or with a teacher/teaching assistant. It is also recorded whether the pupils used resources to support their learning.

Intervention

During the 'Morning Maths' sessions, teachers work with pupils who need support to correct work from the previous day and with those who need additional input in order to be able to keep up with the mastery learning journey. They also use this time to work with pupils on their maths IEP targets.

Monitoring procedures

The heads of school, phase leaders and maths subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning in the school. Monitoring includes: book scrutiny, pupil conferencing, pupil progress meetings, Aspire monitoring visits and learning walks.

Date reviewed:
07/09/2022

Review date:
06/09/2023