



Curriculum statement for the teaching and learning of Maths

'Mathematics is not about numbers, equations, computations or algorithms: it is about understanding'

William Paul Thurston, American mathematician

INTENT

At Porthleven School, we promote the love of maths, giving pupils the essential mathematical and problem-solving skills to deal with real world challenges and the self-confidence to pursue their ambitions.

Our school's curriculum drivers of 'World Citizens', Resilient Individuals' and Respectful Communicators' are at the heart of our learning. Our math's curriculum takes pupils on a coherent journey to ensure that they have a sound understanding of how mathematics can be used to solve problems and challenges in different contexts.

When teaching mathematics, we provide a curriculum which gives all children the necessary skills and knowledge for them to become successful. Lessons weave fluency, reasoning and problem solving throughout, providing opportunities to make links with prior knowledge and to challenge pupil understanding.

Our aim is for every student to achieve fluency in the principles of mathematics, reducing cognitive overload and fostering flexible thinking. All pupils will be able to use the formal and informal strategies set out in our calculation policy, at an age -appropriate level. There is an understanding that pictorial representations are applicable in both KS1 and KS2.

Mathematics at Porthleven enable pupils to deepen their resilience, accept that struggle is often a necessary step in learning and enjoy the process of reasoning and problem solving. They are taught to explain their choice of methods and use mathematical vocabulary with accuracy.

IMPLEMENTATION

Curriculum Design:

Our approach is foremost about 'quality first teaching' We have a clear focus on expert direct, instructional teaching and interactive oral work with the whole class. The curriculum is organised in a linear way, using the White Rose structure. Teachers also refer to NCETM Curriculum Prioritisation Materials, and Test Base resources to plan a carefully, structured curriculum and support teacher knowledge. EYFS base their teaching on objectives in the 'Curriculum Guidance for the Foundation Stage', this ensures they are working towards the 'Early Learning Goals for Mathematics' The children are given access to daily mathematical challenges through continuous provision and in addition, participate in daily adult led mathematics sessions in preparation for year 1.

Learning in maths is modelled in a structured way from yr 1 to Yr 6., following the 'I do', 'we do', 'you do' approach.

Each lesson is introduced by a set of fluency questions followed by a recap element. New learning follows a sequential approach that builds on previous knowledge and initiates the next stages of learning. Where appropriate, a real-life problem is included to link the maths with real world situations. Vocabulary is a core part of every lesson.

Before completing tasks independently, teachers use carefully structured questions to consolidate learning. Pupils work independently (or with support as required) on thoughtfully selected challenges and a gradual progression of questioning offering children the opportunity to deepen their understanding.

Maths fluency is embedded throughout our maths curriculum. Daily practice of basic written and mental calculations ensures fluency in number facts and multiplication facts. Outside the maths lesson maths fluency is taught through the 'Mastering Number' programme in EYFS and KS1, Number Sense Times Table fluency in lower KS2 and targeted fluency practice in upper KS2. When required, children receive targeted fluency intervention both within and outside the lesson using a precision teaching approach. There are Online Maths Programmes available to the children which include TTR, Numbots and Maths Whizz. These are accessible at home.

IMPACT

Through discussion and pupil conferencing, children will talk enthusiastically about their maths lesson and can articulate the context in which maths is being taught. They relate these to real life problems. Mathematical concepts and skills are mastered when a child can use mathematical language and/or resources to explain their ideas. They can independently apply the concept to new problems to unfamiliar situations. Children can demonstrate a quick recall of facts and procedure including the recollection of number facts and times tables. At the end of the year, children have achieved Age Related Expectations (ARE) for their year group. Some children will have progressed further and achieved greater depth.

Assessment for learning- (daily; in class)

Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Live marking allows for adaptive teaching and immediate feedback.

Targeted support is given when children are deemed to be struggling through 1:1 precision teaching or small focused fluency groups.

Summative Assessment

The main purpose of assessment is to always provide excellent provision for every child. We assess and track progress using White Rose end of unit assessments and end of term assessments. The results help update our summative termly tracker and identify gaps that are addressed through lesson starters.

Continuing Professional Development

School based Maths professional development continues throughout the year. The Maths lead has been working with a Mastery Specialist from the CODE Maths Hub and shares the collaborative work she has participated in. In addition, Trust Network meetings strive to establish a consistency across the MAT. Any professional development is disseminated to relevant staff. We recognize the importance of collaboration and the sharing of ideas, for effective professional development.