



Poulton Lancelyn
Maths
Long Term Plan
2020/21

Maths Rationale

The purpose of mathematics at Poulton Lancelyn Primary School is to equip children with the knowledge, skills and understanding to become confident mathematical problem solvers. Children are taught to think and reason mathematically, applying skills fluently and efficiently, arriving at the accurate answer and discussing their methodology. Mathematics education at Poulton Lancelyn provides children with an understanding of the world around them through contextual problem solving and a curiosity and enjoyment of the subject. At Poulton Lancelyn Primary School, we are passionate about ensuring that all children receive a sequenced, knowledge rich mathematical education.

Maths Intent

See individual year group long term plans

Maths Implementation

At Poulton Lancelyn, our curriculum is designed to ensure that all children have the opportunity to reach the expected standard (and beyond) at the end of Year 6. We do not follow a specific scheme of learning, however planning is constructed using White Rose Maths materials, Maths No Problem strategies and other resources including Classroom Secrets, NCETM activities, NRich problems and TTS reasoning cards to ensure variation, challenge, flow of topics, pace of progression and exposure to mathematics in a variety of contexts.

We strive to enable children to:

- become fluent in the fundamentals of mathematics so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- reason mathematically to make sense of mathematics and understand problems in a variety of contexts and forms and to justify or prove ideas using mathematical language;
- 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.

Staff are given creative freedom to plan their own long term plan so that mathematical elements are spiralled in order to ensure concepts and knowledge are returned to throughout the year in order to create repetitive, spaced learning, which encourages retrieval of previous learning. Staff then produce weekly plans that are adapted to their classes needs so that all learners are catered for through scaffolded learning and, where appropriate, differentiated activities. To support pupils learning, we have a range of concrete mathematical resources in classrooms including Numicon, Base 10 and counters to support pictorial and abstract learning. To ensure learning is sequenced appropriately, staff have access to strand progression maps and the school has a calculation policy.

Daily lessons last between 40 minutes and 1 hour. Each lesson will have a clear learning intention, taken from National Curriculum 2014, and learning will be structured for pupils to achieve this by creating a shared success criteria for learning. Teachers model strategies that will support pupils to develop effective understanding. In each classroom, maths displays are developed as working walls as the learning builds.

Retrieval strategies are planned into lesson sequences so that knowledge is retained in the long term memory and any knowledge gaps are filled with appropriate intervention. Maths lessons will not overload the working

memory; instead learning will be deepened rather than moving on to different concepts (maths mastery approach/keep up not catch up). Variation is planned into each lesson to develop children's confidence when reasoning in maths. Teachers' effective use of open questioning strategies will help to probe understanding and address misconceptions.

Lessons are rich in current mathematical vocabulary to support the lessons being taught. In Key Stage Two, staff build a second twenty-minute session into the day so that feedback and misconceptions can be addressed promptly. To add to this, pupils complete Fluent in Five and Rapid Reasoning from Third Space Learning to further develop basic skills and reasoning strategies.

Where teachers want support to develop their subject knowledge, the school encourages a range of strategies including peer support, CPD opportunities, co-ordinator support and access to the NCETM self-evaluation tool, which provides effective links to develop subject knowledge.

Evaluation of the quality of teaching and learning is conducted termly through methods include lesson observations, book scrutiny, pupil/teacher voice and planning reflections conducted by SLT. Teachers constantly reflect on pupil understanding and progress and use the Maths Feedback book regularly to write formative assessment notes that aid the development of further activities. Teachers moderate work internally and through MAT moderation meetings to ensure assessments are accurate. Summative assessments are completed termly, using Rising Stars NTS tests. The data from these tests is discussed in termly progress meetings, and in combination with teacher assessments, provision maps are produced to create interventions.

Where more than quality first teaching is required, staff implement maths interventions, including daily homework, 3rd Space Learning 1:1 tuition and No Nonsense Number Fluency. Teachers are able to use End of Unit assessments - available from White Rose Maths - if required to confirm assessments.

In order to further develop a mastery approach to learning, teachers ensure age appropriate cross-curricular links to other areas of the curriculum during topic work to identify whether pupils are able to transfer mathematical skills to other areas of learning. In Year Six, this is signified through the £5 Challenge, during which pupils are encouraged to become young entrepreneurs and create profit using their original money. In the past two years, this challenge has both extended mathematical skills in real life situations and raised over £2000 for school projects. Maths is developed at home using online resources for the majority of the year. Online products including Mathletics, Timestable Rockstars and SATs Companion are set based on what has been taught in the class to consolidate pupils' opportunities to practise learning.

In Lower Key Stage Two, Times table Rock Stars is completed daily to ensure that pupils have a repetitive practise at times tables to correspond with the National Curriculum 2014 statement that by the end of Year Four, pupils should know all multiplication facts to 12x12. Pupils that do not reach a score of 20 within the multiplication check are systematically monitored during Year 5 and 6 to ensure that these facts are taught before they leave primary school.

In Foundation, high quality texts (recommended by White Rose Maths) are used to implement the development of Early maths and Early reading simultaneously.

At Poulton Lancelyn we believe that all children are capable of achieving high standards in mathematics and we want all children to enjoy mathematics and to experience success in the subject.

Maths Progression Map

See individual strand progression maps.

See calculation policy