



Maths

Intent

At Tweedmouth Prior Park First School we believe that every child can be successful in maths. We aim to engage, enthuse and enable our children to take small, significant steps in mathematical concepts to allow for deep and sustainable learning.

Implementation

We use White Rose Maths and material from NCETM to cover all National Curriculum objectives.

“The White Rose Maths small steps to progression are a series of learning objectives that children need to master in order to progress onto more challenging lessons. There are small steps for each year group, which are sorted into blocks of weeks”.

We use the concrete, pictorial, abstract approach, allowing pupils plenty of time with objects and manipulative to build their understanding of a concept, building to pictorial representations to aid pupils’ reasoning and problem solving before moving onto abstract methods or more complex calculations.

These plans set out the small sequential steps necessary for a deep and lasting understanding. These steps are taken at the necessary pace of the class, teachers will use their judgement and only move on when they are confident and the majority of pupils have grasped the small step. We believe these small steps will avoid cognitive overload and help us to cover the depth necessary for a greater understanding- depth before breadth so we can learn more and remember more.

Using the correct mathematical vocabulary is taught from the Early Years to Year 4. Stem sentences are used to model ideas to the children and they are encouraged to use these when explaining their thinking. This scaffolding gives them confidence whilst supporting their understanding, consolidating the main concept and encouraging reasoning. Deliberately presenting children with mistakes and ‘non-examples’ also encourages them to use this mathematical vocabulary to identify why the examples given do not work, further deepening their understanding of the concept.

Mathematics in the Early Years is woven into many different areas of the curriculum. Activities are planned and developed for children to access independently, or with an adult, during child-initiated learning activities. This gives children the opportunity to practice concepts taught through play and investigation and encourages them to make their own discoveries about maths in the world around them.

In Key Stage 1 and 2 independent practice tasks are carefully planned in short steps, deepening the challenge as they move through them. We can then see that the mathematical concept has been understood and can be applied in a variety of contexts. Tasks are created with the intention that all children can reach the final stage, and then

greater depth questions are available for those who are secure to explore the concept further.

How parents can help

Children learn key facts such as multiplication tables and addition facts within 10 to automaticity (instant recall) to avoid overload in the working memory; having key facts at their 'fingertips' enable them to focus on new concepts. Regular practice of these at home has a huge impact on how well the children remember them and can then apply them in school. To help support this practice at home, we subscribe to Times Tables Rockstars. Your child's class teacher will be able to offer ideas for other areas you could work on with your child, e.g. shape recognition, at consultations and informal catchups.

For children:

- <https://trockstars.com/>
- <https://www.topmarks.co.uk/maths-games/daily10>
- <https://www.topmarks.co.uk/maths-games/hit-the-button>
- <http://www.amathsdictionaryforkids.com/dictionary.html>
- <https://www.mathsisfun.com/definitions/>
- <https://nrich.maths.org/9086>
- <https://www.bbc.co.uk/bitesize/primary>
- <https://www.bbc.co.uk/cbeebies>
- <http://www.interactivestuff.org/sums4fun/tabletimes.html>
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For parents/carers:

- <https://home.oxfordowl.co.uk/at-school/>
- <https://www.familymathstoolkit.org.uk/>
- <https://www.nationalnumeracy.org.uk/family-maths-toolkit>
- <https://www.mathsisfun.com/definitions/>

Impact

Throughout each lesson formative assessment takes place and feedback is given to the children through marking and next step tasks to ensure they are meeting the specific learning objective. Learning is tracked and monitored to ensure all children make good progress.

Our children are engaged and challenged and can talk about Maths and their learning.

Our lessons use a variety of resources to support learning

