



Maths Curriculum Intent

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Curriculum Intent:

At Newbold and Tredington our maths curriculum is designed so that pupils are introduced and re-introduced to concepts on a rolling cycle in order to achieve end of Key Stage outcomes. We strive for our children to achieve the aims of the national curriculum so they become fluent in the fundamentals of mathematics, can reason effectively and coherently and apply their knowledge to problem solving challenges.

To begin Key Stage 1, children in our mixed Year 1 and 2 class are taught maths as separate year groups on a one year rolling programme. This allows children in Year 1 to develop secure number sense through practical and visual exposure to mathematical structures, using a CPA approach within lessons. This development in Year 1 allows for confident progress into Year 2 where children improve upon their foundations to learn procedures and concepts practically before moving into the abstract. Children are introduced to key mathematical language through regular opportunities to verbally reason.

Moving into Key Stage 2, children are taught in a mixed Year 3 and 4 class before moving into a mixed Year 5 and 6 class. Both of these classes teach maths on a rolling two-year cycle to allow for the class to be taught together as a whole using a Teaching for Mastery approach. Lessons are planned in a cohesive sequence to allow children to make links between becoming fluent in mathematical concepts and reason effectively. Opportunities to develop these skills and apply them to solving problems are carefully planned in the sequence of learning.

Children's progress is monitored by continual in-class and end of unit assessments. Consolidation of learning occurs through interventions and daily Fast Fact sessions. We aim for our children to leave our school as confident mathematicians, able to articulate their thinking and utilise their mathematical knowledge effectively.

Curriculum Implementation:

To ensure we are covering the demands of the national curriculum, we use a combination of schemes and resources to be effective and consistent in our delivery. We take a Teaching for Mastery approach which follows the 5 Big Ideas from the NCETM: **Fluency, Representation & Structure, Variation, Mathematical Thinking** and **Coherence**. This means that we deliver concepts broken down into small steps to make the learning accessible for all. We use carefully chosen **representations** to expose the mathematics being taught so that children can access the learning eventually without the scaffolds, by visualising the representations themselves. To be able to do this efficiently, children need to be **fluent** in their number facts and be able to apply them confidently. We address the theme of **variation** by ensuring that children are exposed to different ways of approaching a concept so that they begin to identify what remains the same and what is different. This helps them to pay attention to the **structure** being taught. By teaching through a series of small steps, the children can identify the slight variations from lesson to lesson whilst consolidating what remains the same each time. Having opportunities planned in to engage in discussion with partners and small groups allows children to develop and articulate their **mathematical thinking** to consolidate their learning.

Despite having mixed age classes, we teach common concepts to each class as a whole - moving away from teaching separate year group objects simultaneously. Using a rolling programme developed by Yorkshire Ridings Maths Hub, we teach the content from the NCETM Curriculum Prioritisation materials organised for mixed classes to teach all objectives over a two year cycle. In one year, children may explore a concept very deeply, yet the following year will revisit the concept at a shallower level to consolidate the prior learning. To ensure that all of the content is covered, we match the NCETM CP units to units from the Oak National Academy so as to make sure the children have a consistent approach to how mathematics is delivered as they move through the school.

EYFS:

In EYFS maths will be seen and heard in our continuous provision which is carefully planned to meet the range of needs and enhancements added to practise and secure current learning. This is supported by 'Play Partners' using Sustained Shared Thinking to develop conversations, to make links to previous knowledge, to introduce new and practise recently introduced vocabulary and to challenge thinking. Other approaches we use are: focus group activities, 1:1 and small group work and, in Reception, daily Mastering Number sessions. The range of approaches allows all of our children to develop the knowledge and understanding of early mathematical concepts and language. These are underpinned by developing the key characteristics of learning:

- Playing and exploring - children investigate and experience things, and 'have a go'.
- Active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements.
- Creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

Years 1-6:

The school follows a two-year rolling programme of units taken from the NCETM Curriculum Prioritisation guidance. They have been organised into an appropriate two year sequence following support from local and national maths hubs. Years 3, 4, 5 and 6 are taught on a two-year sequence however Years 1 and 2 are taught separately due to the different demands of each years' curriculum and so are therefore both following a one year programme. Children's fluency is addressed through daily Fast Fact sessions for Key Stage 2 and Year 1 and 2 participate in Mastering Number sessions. In addition, the children use Times Table Rockstars as additional independent learning that can be done both in school and at home.

Teaching for Mastery

To facilitate better engagement in the mathematics and ensure children make progress through their maths learning, as said above, mixed age classes are taught together as a whole. This is managed through a Teaching for Mastery approach in each classroom. The fundamentals of this in each classroom can be seen through:

- Episodic (ping-pong) teaching
- Independent tasks being the same for all children
- Use of stem sentences are used to structure discussion and are put as reminders on the working walls
- Mixed ability seating so children can discuss effectively with all of their peers
- Tasks involve conceptual and procedural variation

How are SEND needs addressed in mathematics delivery?

We aim to include all children in our mathematics teaching as a whole, making reasonable adjustments where necessary for SEND needs. SEND children are encouraged to be 'kept on the bus' by working through problems together, working with more able children to support them, making problems visual to aid understanding with concrete resources where appropriate, scaffolding reasoned discussion using stem sentences and varying the type of support according to the needs of each child. Where a child's needs have meant that they are significantly behind their peers, a separate curriculum is provided where required to best meet their needs and ensure that they continue to make progress.

Assessment:

Teachers continually assess the children that they teach. As part of the teaching process, staff undertake day-to-day assessments during the maths sessions through observation, questioning, marking and feedback on work. This feedback informs the progression of teaching the concept further. Within each maths session, children undertake a 'starter quiz' to inform the teacher of prior knowledge as well as an 'exit quiz' to help check understanding. Pre-teaching, where appropriate and viable, can take place to help children secure conceptual understanding.

At the end of each unit, children take an informal assessment based on the concepts covered in the unit. These assessments are formulated around the Ready to Progress criteria for each year group and match the Oak units taught. These informal assessments allow teachers to make a judgement as to where the children are attaining each term. These judgements are uploaded to Insight where the maths lead will look at the data to identify any particular areas of weakness and individual pupils identified for further support are discussed at pupil progress meetings between teachers and senior leaders.