

Our Philosophy

- We adopt a teaching for mastery approach, embracing the idea that all children 'can do mathematics', and base our teaching and learning on the understanding and belief that ALL children can succeed.
- Pupils are taught as whole year groups in EYFS and KS1 and in mixed year groups in KS2 with no grouping according to 'ability'. The focus is on all children working together on the same concept at the same time.
- Adaptive teaching ensures all children can master concepts before moving on, allowing no pupil to be left behind.
- Rapid, immediate, responsive intervention (including in-lesson support, 1:1 and group support in addition to lessons, pre-teaching and post-lesson follow up) ensures that any pupil who does not grasp a concept or procedure is identified quickly and supported to make the necessary progress before moving on.
- Time is spent deepening understanding of key ideas needed for foundations of future concepts. Therefore, the pace of the lesson may appear slower but progress and understanding are deepened and enhanced.
- Understanding of the '5 Big Ideas' informs teaching sequences to deepen children's understanding and make connections and patterns explicit.
- Through the CPA model, structure and connections are exposed and emphasised to ensure depth of understanding rather than surface learning. Physical manipulatives are valued for all ages and abilities.
- The ability to succeed and reach 'Greater Depth' is not fixed and this is clear in our offer to all pupils during each and every lesson. All children will be expected and given opportunities to reason and problem solve regularly.
- Value is placed on the importance of staff CPD and subject knowledge as well as educating parents in our approaches and how to support their children at home
- Consistent, progressive representations and vocabulary are used to ensure a coherent journey of progression as outlined in our 'Progression and Calculation' documents.
- Within lesson feedback, daily assessment and reflection are used to inform planning which is adapted accordingly both during and between lessons.
- Careful scaffolding, additional time, and peer and adult support, are all used to support those children taking longer to grasp a concept.
- Importance is placed on fluency of basic number facts to free working memory and reduce cognitive load.

Questioning

Teaching staff use questioning to check and deepen thinking and learning throughout the lesson. A variety are used but you will hear some repeated. For example: How do you know? Can you prove it? Can anyone build on this explanation? Can you explain how you did this?

STEM Sentences

Subject specific STEM sentences are used to '*help children to communicate their ideas with precision and clarity*'. These often '*express key conceptual ideas or generalities and provide a framework to embed conceptual knowledge and build understanding*' NCETM 2015

Assessment

Our formative assessment process within lessons drives progress and recognises that the aims of the curriculum cannot be assessed through coverage but are based upon the children's depth of understanding within each topic. A range of summative assessment tools are used to track progress and make final attainment judgements. These include: papers and resources from MNP, White Rose, NCETM and Nrich.

Resources

High quality resources have been selected to support and enhance teaching and learning. These include: MNP, White Rose, NCETM, Nrich, Classroom Secrets and Target Maths.

Fluency

Frequent practise is recognised as a vital part of learning but is used intelligently so that:

- ⇒ procedural and conceptual understanding are developed alongside each other
- ⇒ key facts are learnt in a meaningful order with focus placed upon revealing pattern and structure
- ⇒ speedy recall is expected to avoid cognitive overload and free up working memory
- ⇒ fluency across all topics is considered and expected, thinking beyond addition and multiplication facts
- ⇒ The Ashley Down approach has been adopted and adapted to ensure all multiplication facts are learnt in lower KS2 and so the children are well prepared for the MTC
- ⇒ 'Speedy Maths' has been devised by our maths lead to ensure all addition and subtraction facts are learnt by the end of KS1

Lesson Structure

A typical week of carefully sequenced lessons will include some/ all of the following:

- exploration of real life problems
- time devoted to exploration, discovery and discussion
- carefully crafted small steps
- identification and explanations of new concepts to be taught
- clear, connected coverage of the '5 Big Ideas'
- peer discussion and collaboration
- consistent expectation that children use the correct mathematical terminology and answer in full sentences
- explicit modelling and teaching based upon the CPA approach
- back and forth interaction between children and teaching staff
- questioning to deepen thinking
- use of STEM sentences to communicate, make connections and generalise
- carefully crafted variation to address misconceptions and reveal pattern and structure

Workbooks and Journals

1. High quality 'MathsNoProblem' workbooks are invested in for all children in EYFS and KS1. In KS2 'MathsNoProblem' online content is used in conjunction with a variety of White Rose resources. These provide well structured, fluency based tasks with intelligent variation. Additional resources are selected to ensure and enrich best-practice, and widen question style and type.
2. Blank paged A4 journals are used to invite children to record and problem solve in their own way once fluent with the CPA approach. Children are expected to find out, prove, justify, explain, reason and question.

Reference documents:

The Essence of Maths Teaching for Mastery: NCETM [The essence of teaching for mastery | NCETM](#)

NCETM Calculation Guidance [Primary Calculation Guidance | NCETM](#)

Other websites referenced: <https://mathsnoproblem.com/> , <https://www.ncetm.org.uk/> , <https://nrich.maths.org/> , <https://whiterosemaths.com/>