



Reach for the Stars

Maths Policy 2022

Subject Leader: Rachael Williams

Vision

We want all our pupils to experience deep, sustained understanding so that they become happy and confident mathematicians, throughout their learning and into their adult life. Through a positive, caring environment, we, at Cheswardine Primary School, nurture confidence in the subject and a love of mathematics, to enable every child to reach their full potential. We promote a 'can do' attitude to maths without a fear of making mistakes. Children will be given time, support and resources to develop a depth of understanding in maths, because we believe that every child is entitled to a good mathematical education. We aim to equip the children with an ability to use and apply mathematics across the curriculum and in real life situations, helping them to develop an understanding of mathematics through a process of enquiry and experiment. We aim to equip them with an ability to solve problems, to reason, to think logically and to work systematically and accurately. We know that when this happens they will find pride and encouragement in their own mathematical achievements and this in turn will drive their love for the subject.

Introduction

Cheswardine Primary School uses White Rose Maths to teach in mixed aged groups throughout the school. This uses mastery vocabulary and approaches at its heart but allows us to approach teaching and learning of Maths in practical ways that can encompass the mixed ages we have in each class and move learning on appropriately and with flexibility where needed. Our philosophy is that all children can achieve, in line with the 2014 National Curriculum, which states:

- The expectation is that most pupils will move through the programmes of study at broadly the same pace.

- Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.
- Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Implementation

Our teaching for mastery is underpinned by the NCETM's 5 Big Ideas:

Mathematical Thinking: allow children to make chains of reasoning connected with the other areas of their mathematics.

Representation and Structure: ensures concepts are explored using concrete, pictorial and abstract representations, the children actively look for patterns as well as specialise and generalise whilst problem solving.

Coherence is achieved through the planning of small connected steps to link every question and lesson within a topic.

Variation is used within lessons both in pictorial representations and abstract tasks.

Fluency relentlessly focuses on number and times table facts.

We believe that the vast majority of children can succeed in learning mathematics in line with national expectations.

- Where we can, year groups are taught mathematics together, the expectation here is that every child will master the key concept, whilst some will work more deeply on challenging tasks.
- Children are given tasks related to the teaching, which deepen their challenges according to the level of understanding. We use a bronze, silver, gold, platinum range of deepening problems to develop and challenge learners
- Differentiation is in the form of the amount of time children will spend using concrete resources to grasp concepts. With higher attainers, challenge is presented through more demanding problems, which deepen their knowledge of the same content.

- Further differentiation will be seen through targeted questioning and the feedback and scaffolding individual pupils receive in class, as they work through problems, will differ.
- Depth of understanding and readiness for the next stage (whether it is the next lesson, next unit of work, year or key stage) is prioritised, alongside high expectations of every child.
- Precise mathematical language, often couched in full sentences, is used by teachers so that mathematical ideas are conveyed with clarity and precision.
- Sufficient time is spent on key concepts to ensure learning is well developed and deeply embedded and returned to regularly over time.
- Pupils will develop their fluency skills and memory through daily warm ups e.g. Flash Back 4s and morning starters focusing on 6 areas (place value, +, -, \times , \div , fractions/decimals/percentage, shape/geometry and reasoning). We strongly believe that this exposure to different areas on a daily basis supports overlearning, promotes memory and enables identification of misconceptions and gaps in knowledge to be swiftly addressed and catch-up to be planned for.
- Throughout the whole school curriculum, opportunities exist to extend and promote mathematics. Teachers will seek to take advantage of all these opportunities within the curriculum where appropriate to make strong meaningful links in a variety of contexts.
- Our staff have high expectations of all children and promote growth-mindset to encourage them to be successful and work towards achieving their full potential. Where TAs are available, they will be used to support the year groups with their specific objectives and through delivery of intervention strategies both within and outside the classroom.

Resources

When introduced to a key new concept, pupils should have the opportunity to build competency in this topic by taking the following approach:

Concrete - children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial - pupils should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.

Abstract - with the foundations firmly laid, learners should be able to move to an abstract approach using numbers and key concepts with confidence.

Each classroom will have designated resources accessible for children to independently select them to support their learning.

Assessment

The quality and timing of feedback is crucial in boosting self-esteem and confidence as well as addressing areas of misconceptions and modelling next steps.

- Assessment for learning will occur throughout the entire maths lesson, enabling teachers/teaching assistants to adjust their teaching/input to address the needs of the children, to spot misconceptions and address these either immediately or to plan for intervention/catch up opportunities or future lessons.
- Teachers will assess pupils with end of unit/block checks in order to make judgements and address gaps.
- We believe that live-marking is crucial in boosting self-esteem and addressing misconceptions at the time pupils are working through activities. In KS2 pupils will use self-marking (suitable to year groups) so that pupils know how well they are doing and to enable misconceptions to be addressed as soon as possible.
- Towards the end of each term, NFER standardised tests are administered to assess progress for the year groups from Year 2 (year 1 in the Summer term) with gaps to be planned to be address in future planning. Teachers will also use past and sample papers to inform their assessments.
- National Curriculum tests are sat at the end of KS1 and KS2.

Monitoring

The Maths Lead alongside SLT are responsible for monitoring and evaluating mathematics curriculum. Mathematics is monitored though a

triangulation of observing the teaching and learning of lessons, book looks, planning trawls and through talking to pupils which continually reflect back to the school set targets. Teachers have pupil progress meetings with the Head teacher termly to discuss where children are working in terms of age-related expectations. From this they identify pupils not making appropriate levels of progress based on progress expectations and plan for further interventions which can enable pupils to address those areas of weakness. Outside agency support maybe sought for pupils who are continuing to not make the expected progress despite high quality intervention.

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