

At Chirton School we believe that a high quality maths education provides for understanding the world, develops the ability to reason mathematically and fosters an appreciation of the beauty and power of mathematics



Intent – We aim to move children on from Chirton...



Having an appreciation of number and its importance in everyday life



Enthusiastic about their learning and keen to share their ideas.



Able to articulate their understanding using mathematical vocabulary.



Recalling key number facts and applying these to derive new knowledge.



Trusting their own abilities to problem solve and applying their acquired skills to a range of situations and contexts.



Implementation – How do we achieve our aims?

Consistent & systematic approach

Across the school maths is taught 4 times a week in all classes with additional sessions taking place in the forest where this is deemed to enhance the learning opportunities. All classes follow the White Rose Maths approach to learning which blocks curriculum topics together to ensure that an adequate depth and breadth of learning is achievable for all pupils before they are moved on to another topic. Teachers use resources from a range of sources including White rose Maths, Master the Curriculum, Maths No Problem and the NCETM to ensure that provision is broad and interesting and children become used to seeing questions in different styles and contexts.

Regular Revisiting

We are aware that following the WRM approach to learning means that children may not revisit topics regularly as they did with a spiral teaching approach. To ensure that key concepts are regularly revised all of KS1 and KS2 use 'Flashback Four' as part of their lesson starter at least twice a week. This enables teachers to recap prior learning and to address any gaps that may have developed.

Arithmetic

Children from Year 1 all take part in Diamond Club three times a week. This carefully sequenced arithmetic task ensures that key skills (initially number bonds then moving into times tables and finally more advanced arithmetic recall) is deeply embedded. Children are required to recall key number facts quickly and accurately which supports them in all areas of their mathematics learning but particularly in the area of number.

Reasoning

We know that being able to reason mathematically is often a skill that younger children struggle with. To help scaffold the development of this skill all classes display and use a series of stem sentence openers which children are encouraged to refer to and implement when talking about maths within the class. This is further modelled by the class teacher during inputs.

Problem Solving

Contextualising their learning, recognising the importance of maths and understanding how essential it is to everyday life is central in fostering a positive attitude towards the subject. Children are regularly provided with opportunities to solve a range of one and two step problems to enable them to develop and demonstrate their ability to apply their learning in both familiar and unfamiliar contexts.



Implementation (continued)

CPA

The CPA (concrete, pictorial, abstract) approach to teaching mathematics has long been recognised as essential for children to develop deep conceptual understanding. We encourage children and teachers across the school to use this approach when introducing new concepts. We recognise that in KS1 children are much more likely to require longer focussing on the concrete and pictorial representations before being ready to explore the abstract concept. However, it is also important that these strategies are still applied in KS2 effectively.

Challenge for all

We strongly believe that all of our children can achieve in mathematics and that reasoning and problem solving challenges are not seen solely as extension work for quick finishers or only possible for the more able pupils. All children have the opportunity to regularly access a range of challenges and teachers ensure that scaffolding is in place to enable all children to achieve with this. This scaffolding may take the form of pre-teaching, providing different resources or altering the size of the numbers involved to reduce cognitive load.

All children have the opportunity to take part in 'Challenge Time' as part of their normal maths teaching in Faith and Courage Classes. This session provides children with a reasoning or problem solving question that they initially attempt independently, in small groups or with teacher support. The children are then encouraged to articulate their thinking to the class and a solution is modelled by the children or the teacher.



Impact: How will we know we have achieved our aims?



Children are engaged and productive in lessons



All children will feel that they are challenged in maths but all children will also be able to discuss their successes and take pride in these



Pupils know more and remember more and have skills to allow them to make progress from their starting point



Pupils will confidently use formal written methods in a variety of contexts to solve problems.



A high proportion of pupils achieve age-related expectations.



Pupils will be able to articulate their understanding and will reason effectively using well embedded sentence structures to support this.