

Maths Curriculum

Intent	By adopting a Mastery approach, it is intended that all children, regardless of their starting point, will maximise their academic achievement and leave Newtown School with an appreciation and enthusiasm for Maths, resulting in a lifelong positive relationship with number. We ensure that we deliver a high-quality maths curriculum that is both challenging and enjoyable and that utilises appropriate apparatus for children to develop their mathematical models and understanding. We want children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. We aim to develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement. We want them to know that maths is essential to everyday life and that our children are confident mathematicians who are not afraid to take risks.
Implementation	<p>Our whole curriculum is shaped by our school vision which aims to create a positive, safe and nurturing environment, where everyone belongs and is encouraged to shine and become the best they can be. We teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children. Vocabulary and themes are revisited to help children to embed their learning. For maths, this progression is defined by our Newtown School Mathematics Guidance which details how each area of maths will progress from EYFS to KS1 and gives examples of how aspects of number and calculation are taught. Long term plans for maths are based on the White Rose Small Steps and teachers plan using resources from Master the Curriculum and the Newtown School Mathematics Guidance to create short term plans. The White Rose Small Steps incorporate the National Curriculum and each year group follow a medium term plan where small, cumulative steps build a solid foundation of deep mathematical understanding. Assessment is threaded throughout both each lesson and unit of work and appropriate revisions to planning are made by the class teacher to ensure all lessons are tailored to best meet the needs of their children. The majority of children work through the curriculum at the same pace and adaptations are made for those who need additional support. Leaders regularly review the impact of the teaching of maths and use this to inform policy change and to implement CPD as necessary. Leaders are involved in the Mastery programme from the Maths Hub in conjunction with the NCETM.</p> <p><u>Mathematical thinking</u></p> <p>Reasoning and problem solving underpin mathematics lessons and children regularly apply their knowledge in order to solve problems. This is modelled for children who are taught how to answer problems before being given opportunities to complete their own. Stem sentences are used to support</p>

	<p>reasoning and development of mathematical vocabulary so that children are confident to reason and justify their answers which demonstrates deep mathematical understanding and connections made between concepts.</p> <p><u>Fluency</u></p> <p>Fluency tasks in lessons are designed for variation to scaffold children to be able to solve more complex problems and become more confident in new concepts. Children are taught fluency as a part of maths lessons, but also through discrete Mastering Number lessons from the NCETM (National Centre for Excellence in the Teaching of Mathematics). In KS1, weekly fluency assessments called ‘Brilliant Bonds’ support children with development of crucial knowledge of number bonds and to highlight areas for growth. This progresses to ‘Magnificent Multiplication’ which tests the children’s recall of multiplication and division facts.</p> <p><u>Variation and Representation & Structure</u></p> <p>Lessons are designed so that knowledge is built throughout a session, including variation in the questions and representations. This allows children to make connections between mathematical concepts and deepen their understanding. It also involves incorporating the CPA (concrete, pictorial, abstract) approach where children will be given opportunities to work through the process of manipulating concrete resources for a concept first, before moving onto a visual (pictorial) representation, before lastly moving on to the abstract. This approach supports children’s developing understanding of number and may happen over a lesson, a series of lessons, or over a longer period. Using a variety of representations and structures supports children’s mathematical thinking and reasoning as they can use these to communicate concepts and make connections in their learning.</p>
<p>Impact</p>	<p>By the time children leave Newtown School they will be able to:</p> <ul style="list-style-type: none"> • Have the knowledge, skills and vocabulary necessary to progress to the next stage of their learning. • Recall number, geometry and measurement facts appropriate for EYFS and KS1 rapidly and accurately. • Recall and use methods for calculation set out in the Newtown School Mathematical Guidance. • Reason appropriate to their understanding, using mathematical vocabulary and drawing on their developed knowledge and links between concepts. • Solve problems appropriate to their understanding by applying what they have learned to a context and working through steps to solve the problem. • Show a positive attitude and increasing confidence towards maths based on secure mathematical knowledge and skills that will provide a solid foundation for future learning.