Nur Curriculum Vision

Everything we do, at Lanercost CE Primary School, stems from our children having a life-long love of learning. We are proud of our inclusive environment, which is firmly rooted in a shared Christian ethos and fosters the care and nurture of our school community. As a school, in partnership with parents and carers, we strive to build strong foundations for an excellent education. We enable our children to achieve all of their divine potential by inspiring them and promoting opportunities to delight in their learning as well as allowing them to grow into successful, compassionate, young adults who recognise their role in the community and the ever-changing wider world.

We aim to accomplish this through a loving, structured and joyful environment with consistently high standards of teaching. Our engaging and immersive learning is based upon the National Curriculum (2014), developed from a love of reading and reflects our school's unique circumstances. We make the most of our beautiful location, which is a stone's throw from Hadrian's Wall, Lanercost Priory, Naworth Castle and close to Northumbria National Park.

This brave, broad and rich curriculum motivates all of our children to build concepts, skills and knowledge fo<mark>r life. They become curious learners who are led by enquiry and inspired</mark> by a range of real-life experiences and cultural enrichment. Each of our subject leaders has worked hard to craft their subject curriculum to ensure this within their subject.

We know that the greatest way to understand school-life is to become a part of your child's learning journey. We aim to run several shared learning events, workshops and cultural enrichment moments that you can participate in, allowing you to see your child's progress and ventures in school. Please see our school website, social media platforms and school newsletter for the latest parent and community events.

Our vision for our curriculum comes directly from our whole school vision. It has been carefully crafted by our teaching staff in order to ensure that we provide an education that helps every child reach their divine potential and enables them to have a life-long love of learning. Each of our subject-leaders has then designed their subject to stem from an evidencebasis where our vision is threaded through at every point.

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None of Content

Our Vision for Mathematics

Our detailed and structured maths curriculum is designed through a carefully considered teaching cycle with the ambitious goal of all pupils achieving mastery in Mathematics. This ensures continuity and supports transition. We intend that children are always developing a love of the subject and an ability to connect areas of learning and solve problems; and know that they can achieve in mathematics whilst at Lanercost Church of England Primary School and in the future.

To achieve this, we aim to ensure:

- •All pupils should become fluent in the fundamentals of mathematics, by reviewing previous learning, through varied and frequent practice, so that pupils develop conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.
- •Mathematics is taught through carefully planned small steps within our mixed ability year groups and focuses on collaboration, growth mindset, resilience, and problem-solving as much as discrete mathematical knowledge.
- •Pupils who grasp concepts rapidly are challenged through rich and sophisticated problems as well as developing their understanding and social skills by supporting others.
- •Those pupils who are not sufficiently fluent with earlier material are provided with opportunities to consolidate their understanding, including through additional pre-lesson and post lesson practice. (https://assets.publishing.service.gov.uk/media/5a7da548ed915d2ac884cb07/PRIMARY_national_c urriculum - Mathematics 220714.pdf, page 3)

Lanercost Church of England Primary School is ambitious for every child including SEND and other vulnerable groups. Greater depth opportunities are available for all pupils in recognition that we believe everyone can be a successful mathematician because we know the importance of challenge as an integral part of being a mathematician.

Our systematic curriculum is aimed towards teaching all children to master and be bold with our mathematics curriculum. We strive to continuously develop and enhance a culture whereby mistakes are expected; efficiency and accuracy is challenged and mathematical creativity and flexibility is valued. We encourage all children to have tenacity and resilience when tackling tasks and, within our maths curriculum, we recognise that all children need to understand the importance of maths in science, technology, economics, and engineering. Within this, moving forward, we intend for them to learn the necessity for mathematical understanding for financial literacy and most forms of employment; it contributes to our economy, society and culture. Our curriculum supports children in applying their understanding to make new discoveries and rich connections, guided by the expertise of the teacher.

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Our Teaching and Learning of Mathematics

In order to offer the best teaching and learning of Mathematics, we have a multi-layered approach.

Our first layer uses the core content from the National Curriculum Programmes of Study (2014) and we build on this by aiming to provide children with a deeper knowledge and understanding of mathematical procedures and related concepts.

At our school, our learning sequences are developmental and, depending on the concept, a good proportion of time will be spent securing key learning. Although we follow the White Rose maths scheme, teachers are encouraged to use their judgment about when it is the right time to move on and to organise the sequence of maths 'blocks' in a way that is purposeful and related to the wider curriculum. All our teachers are having training in the Teaching for Mastery (T4M) approach from a North North West Maths Hub Maths Mastery Specialist to ensure that the core Five Big Ideas are threaded through our lesson design and rationale for teaching. Within this all teaching staff understand the Mathematical concepts which flow throughout all lessons; Conceptual Understanding, Fluency, Reasoning and Problem Solving.

As we secure this approach, it is envisaged that a large majority of pupils will progress through the curriculum content at broadly the same pace. This will be closely monitored to identify any issues.



Five Big Ideas

(https://www.ncetm.orq.uk/teaching-for-mastery/mastery-explained/five-big-ideas-in-teaching-for-<u>masteru/</u>)

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Teaching Mathematics in Early Dears

Our approach begins within our Early Years where children are given the opportunity to develop their understanding of number, shape, space and measure through a combination of child initiated, adult led and supported experiences consisting of small group and whole class teaching. We follow the Statutory framework for the early years foundation stage 2021 Mathematics statement to 'develop a strong grounding in number' and 'the necessary building blocks to excel mathematically'.

Children in Early Years have both daily Mastering Number (NCETM) discreet sessions and short teacher-led inputs followed by guided provision. Mastering Number in order to have a strong and robust understanding of number. This combines with a Concrete-Pictorial-Abstract approach across the whole school which allows children to understanding all strands of Mathematics from different aspects.

This is in addition to a range of play provocations, which promote curiosity both independently, and are supported by teachers as play partners, where there is plenty of scope for exploration. Maths is also emphasised in all aspects of the daily routine e.g. snack-time /lining up etc. Maths through reallife and meaningful experiences, using practical hands-on resources both inside and outside is key in Early Years. Numicon and other mathematical equipment such as counters and Rekenrek are used to support teaching and learning across EYFS and into KS1. Using Numicon ensures that children develop a common imagery of the number system, which is then used in the various modeling techniques that teachers use. The range of equipment, both mathematical and natural, allows children the chance to represent numbers in a range of ways and in different contexts which supports the mastery approach. After initial assessment in the Early Years, areas of need are identified and maths interventions take place throughout the teaching week.

Teaching Mathematics in KSI and KS2

Within KS1, the Early Years approach is built upon into more formal learning. Children continue to have daily Mastering Number sessions to ensure a solid understanding of number. Children in KS2 are also beginning their Mastering Number daily sessions as of Autumn 2 2023. Within taught lessons, children follow a structured lesson plan that continues into KS2. Most maths lessons within KS1 and KS2 will follow this structure, with a few exceptions.

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Rapid Recall

All lessons begin with recalling facts from previous lessons. The teacher chooses facts that are relevant to the class. Recall is the mental process of retrieval of information from the past and these must be fit for the purpose of overlearning rather than new information.

Guided Practise (Modelled)

The new learning aspect of the lesson begins with the teacher explicitly teaching the knowledge or skills that they want the children to learn. This is heavily modelled by the teaching staff. Within this guided practise, the teacher will have crafted the opportunity to see and learn through a variety of different representations. These include but are not limited to concrete, pictorial and abstract representations.

Independent Practise

Children move to independently practise the skills and knowledge learned during guided practise. This can take many forms, including problem-solving, practising a method or much more. The teaching staff will move around the room to celebrate or intervene where appropriate.

This part of the practise can have multiple layers, including but not limited to reasoning answers, focusing on misconceptions, and solving real-life problems.

Purposeful Practise

This part of the lesson is specifically crafted for the children to think about the knowledge and skills they have learned in a different way. This may be a challenging question for the children where the question is reversed, a 'trap' for the children where a common misconception is used, or a puzzle for the children to use their knowledge and skills in a different manner. Within some areas of mastery, this is called the Dong Nao Jin.

Within this, children begin each lesson with Rapid Recall, where children are able to recall previous learning in order to ensure that it is within their long-term memory. Teachers then build upon the previous knowledge known to guide the children's learning and explicitly teach new concepts or address misconceptions. Through KS1&2, children then have the opportunity to independently practise this within the lesson using procedural and conceptual variations which are crafted by the teacher to allow intelligent practising. To allow all children to delve deeper within this learning, every child has the opportunity to challenge themselves further within each stage of the lesson through careful and open-ended questioning.

Supporting Teaching and Learning of Mathematics

In addition to offering every child our mastery approach of learning, every child from Year 2–Year 6 has daily access to Doodle Maths, where they have a tailored online lesson to ensure any gaps or

misconceptions in their knowledge is addressed. Furthermore, one of our Teaching Assistants is training as an NCETM Teaching Assistant offering tailored intervention and pre-teaching in order for all children to achieve a mastery level of understanding.

An additional fluency lesson to allow children to practise recall of number facts and recall of variations, through carefully chosen and linked questioning is completed once a week in Y2 and KS2. This allows children to see mathematical connections on a constant basis and recall facts from their long-term memory faster, so that they can be used within problem solving and reasoning at a rapid pace.

Furthering the Teaching and Learning of Mathematics

In addition to our daily mathematics lessons and interventions, children access mathematics through different platforms. These allow children to relish their mathematics learning further and delight in the day-to-day understanding of mathematical skills. This list is by no means exhaustive and continues to grow and be refined as new opportunities arise:

Numbots Times Table Rock stars Maths Escape Room Days Maths Investigation Days Visitors where maths has been a core skill within their career

Assessment of the Teaching and Learning of Mathematics

Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This feedback should be incisive and regular. Teacher-led mini-plenaries help in this process.

Within the Early Years, assessment for learning is an on-going process throughout the day. This takes place in routine daily activities, such as lining-up, during snack-time, as well as in discrete learning sessions. This is used to inform ongoing planning and teaching.

On a daily basis, children should be able to verbally and physically self-assess to have a sense of self-achievement and their own next steps. Children should know when they are making progress through a range of peer, self and teacher feedback strategies.

Pupils' work should be marked in line with the School Marking Policy. Teachers should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods. A purple pen will be used to show improvements.

Future lesson design should depend on class success, this having been evaluated through marking and observations/assessments made during the lesson.

Teachers use the new NC Year group and POS expectations and this allows teachers to level children's progress in mathematics by gathering evidence over the course of each half term. This builds over the course of the academic year to provide a full picture of where each child is 'at'. Teachers use this information to inform planning for groups and individual pupils.

Summative assessments are completed at the end of each term in order to provide further understanding of the level a child is working at and to ensure teachers have a more rounded judgment of each pupil's abilities.

Regular pupil progress conversations between the class team and the maths lead ensure that children who are not making expected progress are focused on and necessary interventions are put in place to support their progress. Those who are not making expected progress are focused on and necessary interventions are put in place to support their progress.

In the Early Years, individual pupils are tracked and assessed on an ongoing basis. The results from this are collated every half-term and are used to inform planning and 'next steps' learning to enable learning to progress and gaps closed.

The Impact of Teaching and Learning of Mathematics

The impact of our mathematics curriculum is that children understand the relevance and importance of what they are learning in relation to real-world concepts. Children know that the skills that they learn in mathematics are life skills that they will rely on in many areas as they grow up.

Children relish their mathematics learning due to a positive environment where maths is promoted as being an exciting and an enjoyable subject in which they can investigate, be inquisitive and achieve their divine potential. Every child will understand that being incorrect is a strategy that can strengthen their learning because the journey to finding an answer is most important. This enables all the children to become resilient mathematicians.

Children are confident to use trial and error and choose the equipment (both physical and strategic) they need to help them to learn. They are able to select the strategies that they think are best suited to each problem. Due to peer and self-assessment, along with crafted formative assessment, children understand their strengths and know their next steps development in maths and what they need to do to improve and become even better mathematicians.

Our maths book looks, pupil voice and day-to-day excitement of mathematics evidence teaching and learning of a high standard of which children clearly take pride. The carefully crafted sequences of learning demonstrate constant and consistent coverage of conceptual understanding, fluency, reasoning and problem solving. Our ongoing, useful feedback and evidence-based interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are expected or great depth. Our school standards are consistently high and we moderate our books both internally and externally and children are achieving well.

The impact of this is a life-long love of mathematics which enables our children to use their adaptable knowledge and skills in our ever-changing world.

Working with the North North West Maths Hub

Mathematics teaching at Lanercost is on a journey with the North North West Maths Hub. We are working with an 'Developing' Maths Mastery Specialist who visits our school at least once a term. The maths lead and other teachers also attend TRGs at other schools to see their maths in action and disseminate it to the teaching staff. We are currently in our second year of working with the Hub.



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