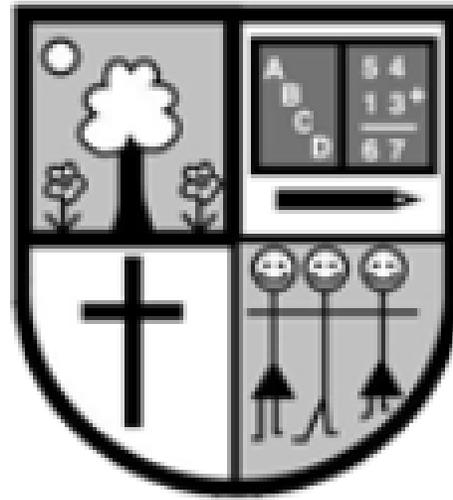


Little Bollington C of E Primary School



Mathematics
Curriculum Journey
EYFS-Year 6



Little Bollington- How Our Children Learn MATHEMATICS

Our Intent

At Little Bollington CE Primary School, we inspire our children through our Mathematics Curriculum. As a foundation for our Mathematics curriculum, we use [White Rose Maths](#), which offers a framework to teach the [Mathematics Programme of Study](#) as laid out by the National Curriculum and the [Statutory Framework for the Early Years Foundation Stage](#), alongside other high-quality resources, including [National Centre of Excellence in the Teaching of Mathematics](#) (NCETM) and [NRICH](#). White Rose has been influenced, inspired and informed by the work of leading maths researchers and practitioners across the world and is based on the latest pedagogical research.

At Little Bollington, we strive to have children develop a positive attitude and interest towards mathematics. From the earliest years, we encourage children to 'have a go,' to have children notice numbers, patterns, shapes, and connections and to be able to discuss their findings with others. It is important to instil a love of learning from an early age and to teach children that we learn from making mistakes.

Knowledge and Skills: Proficiency in mathematical concepts and skills is vital for engaging successfully with the real world. We want to open children's eyes to this and help them to see the importance of how what they learn in the classroom applies to the real world, both every day for everyone and more broadly across disciplines and careers. We provide a maths curriculum that balances acquiring rapid fluency alongside opportunities to apply reasoning skills in various problem-solving contexts. Each classroom environment is set up to enable children to build independence in learning maths, from up-to-date working walls, carefully chosen scaffolds and accessible resources. Beyond teaching maths discretely, we give children the opportunity to apply and develop what they have learnt across wider learning within the curriculum, such as in science, design and technology lessons, to support our intention that children see mathematical skills as something that is essential for their daily life.

Creativity & Adventure: We believe all children can achieve highly in maths. For some children, this demands a great deal of perseverance and resilience, and we talk explicitly about this in lessons and link it to other areas of curriculum learning, such as PSHE. We encourage children to support one another to build a classroom climate of endeavour. In virtually every lesson, children have the opportunity to apply mathematical reasoning to solve problems, which deepens their understanding and supports making connections across the curriculum. We take every opportunity to promote creativity in maths.

Kindness: Kindness is at the heart of everything we do at Little Bollington, and we work hard to create a classroom climate where mistakes are respected as part of the learning process. Staff model making mistakes to ensure children are comfortable to take risks in their learning and can see the value in their own errors or misconceptions. Explicit modelling of how to respond to other ideas helps children to be able to support one another. Children are encouraged to work collaboratively and support one another in their learning journeys in order to be the best they can be.

Our Implementation

Children have a daily one-hour discrete maths lesson.

White Rose: White Rose 'Schemes of Learning' provide sequential 'Blocks' of learning for the whole year, where children meet each area of learning each year, providing a **spiral** curriculum.

Each 'Block' provides sequential 'Small Steps' towards meeting curriculum outcomes. Teachers use professional judgement to decide how long to spend on each small step or whether they are needed for their cohort.

Each 'Small Step' incorporates valuable support for teachers, including:

'Notes and Guidance' which outline where the Small Steps sit in relation to prior and future years' learning, supporting pitch and expectation;

'Mathematical Talk' which provides prompt questions to support children to explain their thinking;

'Varied Fluency' which enables children to meet concepts in a variety of ways;

'Reasoning & Problem Solving' which offers opportunities to apply the small step's learning in new contexts.

We use White Rose Maths as a framework for teaching because of its Concrete - Pictorial Abstract approach, which is fundamental to helping children build mental images in their heads, fully understand concepts and spot patterns easily.

Concrete representation: a pupil is first introduced to an idea or skill by acting it out with real objects. This is a 'hands-on' component using real objects and is a foundation for conceptual understanding.

Pictorial representation: a pupil has sufficiently understood the 'hands-on' experiences performed and can now relate them to representations, such as a diagram or picture of the problem.

Abstract representation: a pupil is now capable of representing problems by using mathematical notation, for example, $12 \times 2 = 24$. It is important that conceptual understanding, supported by the use of representation, is secure for all procedures. Reinforcement is achieved by going back and forth between these representations.

For this reason, teachers use manipulatives to explain ideas and model techniques, and they are available in every lesson for children to use too. They provide a supportive scaffold for any learner who needs this at any point to achieve success. When children have grasped a concept, they are given opportunities to deepen their understanding through reasoning, problem-solving and investigative challenges. This ensures that every child is working within their own stage of development. Children who are struggling at any point may receive additional support where necessary.

Assessment: Assessment is ongoing with low-stakes retrieval quizzes within lessons to reinforce current or recent learning (e.g. White Rose's 'Flashback 4'), as well as end-of-term Nfer assessments. Within lessons, adults provide immediate feedback so children know their successes and next steps. Adults acknowledge *written* work in exercise books, addressing misconceptions.

Our Impact

By the time children in Year 6 leave us, we want them to have the following experiences and understanding:

Children should have the chance to do this in every maths lesson, but should also recognise that these skills apply across the curriculum and even more widely in the real world.

Knowledge and Skills:

Children will have the knowledge and skills to be able to:

Meet National Expectations

Calculate efficiently with integers, fractions and decimals

Measure accurately

Interpret statistics effectively

Recognise shapes and their properties

Reason mathematically

Solve problems related to all of the above

Explain and represent their thinking clearly

Understand and use maths to enhance their learning across the Inspire Curriculum

Learn from mistakes and persevere when they meet challenges

Creativity & Adventure:

As part of our Maths Curriculum, children will:

Recognise that mathematics is a creative and highly interconnected discipline *that has been developed over centuries*

Understand that maths is essential to everyday life and use it to understand the world around them

Develop a sense of enjoyment and curiosity around maths

Kindness:

As part of our Maths Curriculum, children will:

Believe in their potential as mathematicians

Recognise the benefits of learning from mistakes or missteps

Collaborate with peers

Show respect for other's ideas and thinking