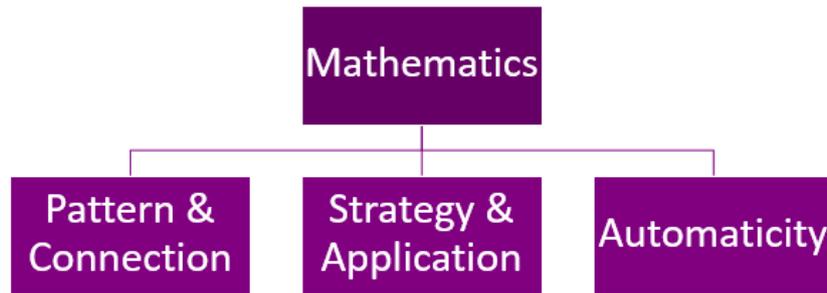


# Key Threads



## Intent:

We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps. We use mistakes and misconceptions as an essential part of learning and provide challenge throughout the lessons. Our intent for mathematics is to teach a rich, balanced and progressive curriculum using maths to reason, problem solve and develop fluent conceptual understanding in each area.

Our curriculum is frequently reviewed to ensure that it is current and effective and teachers are supported and aided in their teaching of mathematics through appropriate high quality PLD ensuring confidence in the skills and knowledge that they are required to teach. Our curriculum allows children to better make sense of the world around them by making connections and asking questions between mathematics and everyday life. The structure of the mathematics curriculum across school shows consistency and clear progression in line with age related expectations. Teaching curriculum content in blocks allows children to explore skills and knowledge in depth and gain a secure understanding of particular subject matter. Key knowledge and skills are also revisited regularly allowing repetition to embed learning. This approach provides children with a clear structure in which they can develop their depth of understanding of mathematical concepts. We aim to ensure that mathematics is a high profile subject which children view positively and with a 'Can do' attitude.

## Implementation:

Children study mathematics daily covering a broad and balanced mathematical curriculum including elements of number, calculation, geometry, measures and statistics. Staff subject knowledge allows the intentions of our mathematics curriculum to be delivered successfully. Our key threads ensure that pupils learn progressively and that teaching builds on from previous learning. The structure of all maths lessons is consistent and ensures that our approach is clearly aligned to the Science of Learning. All lessons will provide opportunities to retrieve and recall core learning to ensure that both knowledge and skills are learned. We continually strive to build upon the excellent understanding of the expectations of the curriculum that our staff have. We achieve this through regular quality PLD which is provided through the subject leader, external courses, collaborative lesson study and through regular network meetings across the PACT. All staff are encouraged to raise questions, seek support and request further training if needed in order to ensure everyone is confident in what they teach. Good practice is always shared between staff and all PLD is used to inform teaching and learning across school.

Curriculum maps are based on the White Rose yearly overviews which set the curriculum out in blocks enabling children to get to grips with different areas of maths through extended periods of time. Alongside the White Rose materials, we use many other resources to ensure that our offer is rich and varied. These include Collins Maths, NCETM, NRich, Third Space Learning – these are used across KS1 and KS2 allowing children to be exposed to a variety of different types of learning and to ensure coverage of fluency, problem solving and reasoning in different formats. Teachers also implement the schools agreed calculation policies for progression in written and mental

calculations. Pre and post unit assessments are used where appropriate along with termly assessments which help teachers to gather an understanding of their pupil's existing and developing knowledge and skills.

Correct mathematical vocabulary is used by all teachers and this is discussed with and explained to children who are then encouraged to use it independently when talking about maths. Vocabulary is displayed clearly on working walls and is referred to in every lesson. Timetabled interventions for maths are in place for children with SEND; all other children receive regular group support as part of their maths lessons with further support for individuals or small groups where a need is identified.

Fluency is developed through repeating, reinforcing and revising key skills; daily arithmetic takes place in all classes. Children are given time to practice and perfect their calculation strategies including giving pupils the opportunity to make appropriate decisions when estimating, calculating and evaluating the effectiveness of their chosen methods. Feedback is given in a variety of ways to ensure pupils are well informed and making visible progress. Discussion is essential to learning and children are encouraged to discuss their thoughts, ideas and methods with a partner, group or the teacher. Task types are varied to suit different pupils and their learning preferences; developing reasoning remains one of our key focuses. Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently when solving problems which require them to persevere and develop resilience.

## **Impact:**

Children at Birchfield Primary School understand and value the importance of Mathematics, this is evident through pupil voice and monitoring which takes place by the curriculum leader as well as the leadership team.

We want children to be confident in making rich connections across mathematical ideas as a result of developing fluency, mathematical reasoning and competence in solving increasingly sophisticated, contextual problems during their time at Birchfield Primary School.

Our Children understand the relevance and importance of what they are learning in relation to real world concepts. They have a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; they know that it is OK to be 'wrong' and that this can strengthen their learning because the journey to finding an answer is most important. Our children are confident to 'have a go' and choose the equipment they need to help them to learn along with the strategies they think are best suited to each problem. Our maths books evidence work of a high standard of which children clearly take pride. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are on track or above. Our school standards are high, we moderate our books both internally and externally and children are achieving well.

Through quality first teaching, guidance and effective feedback, children will:

- Clearly explain their reasoning and justify their thought processes
- Quickly recall facts and procedures
- Have the flexibility and fluidity to move between different contexts and representations of mathematics.
- Have the ability to recognise relationships and make connections in mathematics.
- Be happy, confident, articulate and autonomous learners with a life-long passion for learning.
- Leave our school at the end of KS2 prepared for the next step in their mathematical education.