

Mathematics Curriculum Rationale



At Abbey Lane Primary School we aim to foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts.

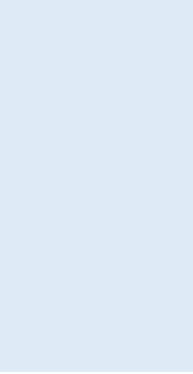
Our Whole-School Maths Vision is:

- To provide children with the opportunity to expand upon and develop their mental maths skills and times tables knowledge.
- To prepare children for the wide variety of problem-solving opportunities that they will encounter in their lives.
- To enable our pupils to confidently reason about their mathematics, using a suitable range of mathematical language, recognising its importance for communication and deep thinking.
- To develop an enjoyment of mathematics and a 'can do' attitude when approaching their work.
- To use a wide range of models, concrete and visual manipulatives to develop a deep conceptual understanding alongside procedural fluency.
- To develop mathematical skills within the wider curriculum
- To implement the current legal requirements of the new Foundation Stage (EYFS) and the National Curriculum.


Through our Maths vision, we are passionate and fully committed to developing a balance between the children's procedural fluency and a conceptual understanding.

INTENT	IMPLEMENTATION	IMPACT
<p>Alignment to the National Curriculum</p> <p>Abbey Lane's maths curriculum begins in EYFS with the Mathematics strand from the Statutory Framework. From KS1, the school follows a bespoke scheme of learning, which equips children with a wide range of mathematical methods and supports them in selecting appropriate methods, to develop mastery of concepts. The curriculum enables children to reason and problem solve across different concepts within Mathematics, thus developing an in-depth understanding. It also supports children to internalise number facts and mental mathematical skills to ensure all children succeed in application of these skills within school and beyond, within the modern world. Teachers stay within the required key stage and follow the idea of depth before breadth.</p>	<p>Pedagogical Approaches</p> <p>Maths lessons are taught daily, offering opportunities for fluency, reasoning and problem solving within concepts. Tasks are carefully designed using scaffolding strategies so that all children can access the task confidently. Lessons are planned carefully to ensure that children are exposed to a range of representations.</p> <p>The curriculum the children receive is broad and balanced and makes links to opportunities to develop Maths across different subjects. For example in Science using measuring skills for evaporation or using a timer for a parachute experiment. History looking at number lines for time. Design Technology using the measuring, rotation and problem solving.</p>	<p>Approach to assessment</p> <p>Children work both collaboratively and independently to solve mathematical problems in different forms providing formative assessment. Summative assessments at the end of each half term provide a snapshot of children's progress within the year's learning. Children not progressing as expected will receive additional support.</p> <p>Mock SATS take place in both Year 2 and 6 to prepare children. Times table assessments in Y2 (2,5,10), Y3 (3,4,8) and Y4 (all tables) and mock tests.</p> <p>All areas of Maths are checked with recap tests to ensure knowledge is retained.</p> <p>FS2- Use observation during sessions, recapping daily and check against profile every half term (assessing).</p>

<p>End points</p>	<p>The Maths Curriculum develops a progressive and in-depth understanding of the knowledge, skills and vocabulary required to be a successful and resilient mathematician.</p> <p>It instils a love of learning and the ability to apply Mathematics, across different subject areas, which in turn ensures all children succeed and achieve their full potential.</p>	<p>Teachers' Expert Knowledge</p> <p>All teacher's development is informed by the national curriculum. Teachers are provided with a range of resources to support subject knowledge including NCETM and Number sense. All these resources include key language, sentence stems and key questions created to push learners on to the next stage of their learning. The Maths Lead delivers training and support on using these resources.</p>	<p>Performance Data</p> <p>Children are achieving their potential in Mathematics, the majority reaching age related expectations as per the 2014 National Curriculum. Governors, the senior leadership team and Mathematics team review this data termly to ensure children are on track to achieve or exceed national standards.</p>
<p>Sequencing</p>	<p>Abbey Lane's bespoke curriculum map is carefully sequenced so that each unit block follows on from the previous year's learning. This enables pupils to 'master maths' by consistently building on previous learning. Concrete manipulatives and visuals cement this understanding.</p>	<p>Promoting Discussion and Understanding</p> <p>Teachers plan lessons to ensure that the curriculum is delivered in a range of engaging ways (teaching methods & instruction, mathematical games, real life practical experiences, collaborative and independent problem solving activities).</p> <p>Use of manipulatives and visuals supports learners in their understanding of concepts and allow for discussion and collaboration on tasks.</p>	<p>Pupils' Work</p> <p>Children are showing increasing resilience within reasoning and problem solving in mathematics, showing they are retaining fluency knowledge, remembering more and applying it.</p> <p>Children are consistently remembering skills from the previous learning in Mathematics and building on them to solve increasingly complex problems.</p>
<p>Addressing Social Disadvantage</p>	<p>A key principle of our teaching is that every child can engage with the curriculum for their year group, unless they have a significant developmental delay. Teacher and teaching assistant support is put in place to ensure progression. If appropriate, keep up support and afternoon intervention is provided.</p>	<p>Knowing More and Remembering More</p> <p>School curriculum maps use a progressive structure across year groups, revisiting and building on topics, allowing opportunities to consolidate tricky concepts and addressing misconceptions.</p> <p>Teachers plan lessons, ensuring repetition of skills throughout different topics, in starters or use of methods within lessons, to ensure they are embedded into long-term memory.</p>	<p>Talking to Pupils</p> <p>Children can talk with confidence about different mathematics concepts, methods and problems, articulating ideas by using subject specific vocabulary, explain their understanding of methods and using manipulatives where appropriate. The maths team talk to pupils as part of regular monitoring. Pupils are questioned about what they have learnt and what they can remember, as well as how much they enjoy maths which informs improvement actions.</p>
<p>Local Context</p>	<p>For a proportion of our lower attaining pupils and pupils with SEND, carefully structured support and purposeful guidance is provided, for example</p>	<p>Teacher Assessment</p> <p>Throughout every lesson, teachers assess learning before moving on and adapt planning according to the cohort's needs. Misconceptions can then be addressed</p>	



Birmingham grid for learning. With a large emphasis on teacher modelling, use of concrete manipulatives, and building on mental strategies, we support children to build their fluency, reasoning and problem solving skills, not just for school but for life.



with individuals or groups of children. End of half term assessments inform teachers' ongoing planning as any gaps in understanding can be addressed in future lessons.

