Acre Hall Primary School- Maths Intent, Implementation, Impact

Intent

At Acre Hall our intent is to develop our pupil's ability to reason mathematically, problem solve and develop procedural fluency and conceptual understanding in each strand of the curriculum. We intend to deliver a curriculum that allows pupils to be part of creative and engaging lessons allowing them to explore maths in depth, using mathematical vocabulary to reason and explain their workings. We encourage resilience, perseverance and an acceptance that struggle is often a necessary step in learning. We encourage our children to have a 'can do' attitude and become aspirational learners, learning from mistakes and reflecting on their own successes, weakness and targets.

We give each pupil a chance to believe in themselves as mathematicians. To achieve our intent, we provide a rich, balanced and progressive curriculum which caters the needs of all pupils and entitles them to the same quality of teaching and learning opportunities, striving to achieve their potential. At the core of our curriculum is the concrete, pictorial and abstract approach to maths. The children are taught and encouraged to explain their choice of methods and develop their mathematical reasoning skills whilst recognising that mathematics underpins much of our daily lives. Our lesson's sequence allows the children the opportunity to watch the 'expert' (the teacher) explain and do a concept before allowing them to try, before moving onto independent tasks.

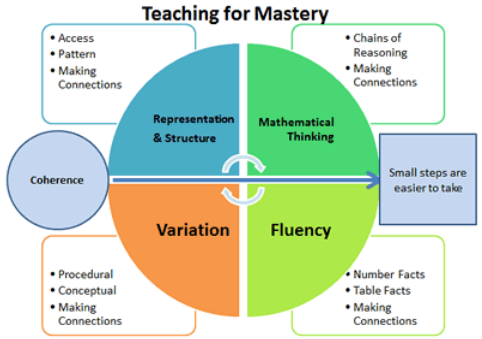
In line with the National Curriculum Objectives for Mathematics, our intent is that all pupils:

• become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately

• reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

• can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions .

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects. Central to our approach are the 5 Big Ideas which underpin mastery in mathematics. Key knowledge and skills are also revisited regularly allowing repetition to embed learning.



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Implementation	**Planning:** Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers follow the White Rose Maths Hub using Grammarsaurus materials. Staff also refer to the Calculation Policy when teaching formal methods, understanding that sometimes children find their own efficient methods along the way. Each week children in KS1 and KS2 complete a weekly arithmetic skills test. As the children become more confident with this it is changed to a weekly Basic Skills test that focuses more on reasoning style questions. The children enjoy the weekly challenge and strive to improve their time and score each week. All children also have access to their own personal account of 'Times Tables Rockstars' where they can compete against other pupils and classes in school. KS2 classes also have access to IXL- a personalised learning platform that allows children to practice personal areas of need both in school and at home. **Teaching:** At Acre Hall we employ a variety of teaching styles and opportunities for children to learn and develop their Mathematical skills and competencies, both individually and collaboratively. The main aim of all lessons is to develop children's knowledge, understanding and skills, applying these to a variety of contexts. One of the key elements in lessons throughout the school should be on developing the children's mental calculation strategies alongside developing the children's written calculation strategies as laid out in the Written Calculation Policies for addition, subtraction, multiplication and division. Every class completes a 'fluent in five' activity before their maths lesson to promote retrieval practice. . **Leadership, Assessment and Feedback** - Assessment informs the teaching and learning sequence, and children work on the objectives they are assessed as being at. - Children who not making the required progress are given extra support through intervention sessions and support in class in order to meet our INTENT of developing pupils academically. - Feedback is given on children's learning in line with our feedback policy. Formative assessment within every lesson using the reflection section on the maths planning document allows teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities. - In order to support teacher judgments, children are assessed using current and reliable tests in line with the national curriculum for maths - Analysis of any tests that the children complete is undertaken and fed into future planning. Summative assessments are completed at the end of every term and help influence the overall judgement reported to parents in the end of year report. - The maths leader has a clear role and overall responsibility for the progress of all children in maths throughout school. Working with SLT, key data is analysed and regular feedback is provided and discussed at pupil progress meetings to inform on progress and future actions. In order for this to happen, the Mathematics lead, the Headteacher and the Senior Leadership Team take responsibility for the monitoring of the Mathematics curriculum and the standards achieved by the children. The Mathematics leader will monitor teaching and learning through: 1. lesson observations and feedback; 2. learning walks and pupil voice conversations; 3. planning scrutiny followed by support where necessary; 4. book scrutinies on a frequent basis; 5. termly data analysis;

	6. moderation within and between year groups to ensure each year group and teacher has the same high standards; Data is collected half termly and reported to SLT. All teachers contribute to a termly Pupil Progress Meeting where the data is analysed and targets are made by highlighting 'stuck' pupils and focusing on next steps.
Impact	Maths lessons are engaging and well-resourced with the pupils acknowledging that the journey to finding an answer is the most important factor. Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times tables. Children show confidence in believing that they will achieve and are keen to attempt a range of problems and demonstrating flexibility and fluidity to move between different contexts and representations of maths. Children are developing skills in being articulate and are able to reason verbally, pictorially and in written form. Children are developing the ability to make connections between mathematical topics. **Assessment and Feedback** • Assessment informs the teaching and learning sequence. • Feedback is given on children's learning in line with our feedback policy. Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities. • In order to support teacher judgments, children may be assessed using current and reliable tests in line with the white rose scheme. • Summative assessments are completed at the end of the academic year and reported to parents in the end of year report. • The maths leader has a clear role and overall responsibility for the progress of all children in maths throughout school. Working with SLT, key data is analysed and regular feedback is provided, to inform on progress and future actions.