

Intent, Implementation and Impact



Intent	Implementation	Impact
<p>At Pyrford, we know that mathematics is a creative and highly inter-connected discipline vital to everyday life and necessary for financial literacy and most forms of employment. It opens the doors to a variety of fields such as science, engineering, architecture, medicine and business.</p> <p>Our aim is to ensure that pupils acquire core mathematical knowledge which will allow them to experience success and foster an association of mathematics with enjoyment, creativity and motivation.</p> <p>We have high expectations of all children and we encourage them to challenge themselves, show resilience and pursue success in order to become competent and confident in their use of mathematics beyond the classroom.</p> <p>At Pyrford, children learn to be successful in Maths through small steps and the children have the opportunity regularly consolidate</p>	<p>We follow a mastery approach and are in a ‘sustaining and refining’ phase, from the Early Years Foundation Stage through to transition to KS3. This approach allows teachers to deliver high quality teaching so that the children can be taught a mathematical concept in depth; moving through small progressive steps to develop a deep, lasting understanding, ability and competence. In order for us to do this, we follow a 6-step lesson. This looks like:</p> <ol style="list-style-type: none"> 1. Revise/ recap prior knowledge 2. Identify and explain key language that will be used during the course of the lesson 3. Build upon small steps to develop and deepen the child’s knowledge 4. Fluency opportunities 5. Problem solving opportunities 6. Self- assessment <p>Teaching and learning in this way ensures that all children can enjoy mathematics. Teaching methods in mathematics today are very different from how many adults (i.e. their parents and grandparents) were taught as we try to help the children understand “why” rather than just show the “how”. We are able to do this by using guidance from professional sources including (but not only) the NCETM, our local Maths Hub mastery specialists including our own in-house specialist, WRM and the OFSTED Mathematics Research Review May 2021. Effective and successful Teaching for Mastery is underpinned by the ‘5 Big Ideas’ put forward by the NCETM; these are coherence, representation and structure, variation, fluency and mathematical thinking.</p> <p>In a Maths lesson you will typically see whole class interaction from all of the children where the teacher will lead back and fourth interaction. This will include targeted questioning, short fluency or</p>	<p>Attainment in mathematics is measured using the statutory assessments at the end of Key Stage One and Two. These results are measured against the mathematical attainment of children nationally.</p> <p>By the end of KS2 we expect our children to calculate efficiently with understanding and competency at an age appropriate level in readiness for secondary school and to understand, and have confidence in, other mathematical strands including fractions, algebra, measures and geometry.</p> <p>The school measures impact through:</p> <ul style="list-style-type: none"> ➤ Assessment of Early Learning Goals in Number and Numerical Patterns ➤ End of KS2 Statutory Assessments ➤ The Statutory Multiplication Check in Summer term of Year 4 ➤ Mathematics assessments (NTS Mathematics tests termly) ➤ The Ready to Progress Framework assessment guidance (used to plan appropriate starting points for each new concept/block of teaching which is identified in the S-plans used to plan a unit of work. ➤ End of block assessments using the White Rose Maths Framework ➤ FFT is used to analyse gaps in children’s knowledge and gain an overview of specific groups of children across school.

<p>previous learning. This supports our pedagogy that children who know more, remember more.</p> <p>In addition, our aim is for all our children to:</p> <ul style="list-style-type: none"> ➤ Be independent, confident and enquiring mathematicians. ➤ Be fluent in key Mathematical skills and facts so that they can use this knowledge to make connections in their learning. ➤ Have a positive attitude towards mathematics and a confidence to give it a go and develop resilience. ➤ Have a developed mathematical vocabulary beyond that used in everyday speech. 	<p>problem-solving tasks, explanation, demonstration and discussion. This ensures opportunity for the children to think, reason and apply their knowledge. If a child were to misunderstand a concept, this is quickly identified so that gaps in understanding is addressed and prevented.</p> <p>Place value is the foundation of our number system and every year group revisits this number strand before moving onto calculation and other mathematics strands including measure, fractions and geometry. S-plans are evident to demonstrate the progression of knowledge and skills throughout units across the whole school.</p> <p>Daily recall tasks are included to help develop our children's fluency in arithmetic and embed and reinforce their understanding of mathematical methods. Rather than having to rely on derivation or guessing, we help pupils to develop 'automatic recall' of key concepts to prevent their working memory from becoming overloaded. To support this at Pyrford, the children complete an additional fluency lesson; this is seen through mastering number in EYFS and KS1 and Fluency in 15 in KS2 where the children focus on place value facts, addition and subtraction, multiplication and division, fractions and recapping concepts that have been taught during the week.</p> <p>Problem solving and reasoning tasks are also supported by automaticity and efficiency of facts, enabling children to draw on and make links with previous learning to solve more challenging age-appropriate tasks where children will reason and justify their answer using appropriate language.</p> <p>Developing language is seen throughout Pyrford in many ways. A rich mathematical vocabulary is taught throughout the year groups and the children are shown how to explain their reasoning and articulate their understanding of the "why". In this way, the children can learn from one another in a collaborative and safe environment whilst developing resilience in their own learning and respect for the ideas and learning of their peers.</p>	<ul style="list-style-type: none"> ➤ Pupil tracking sheets across the week help to identify any immediate interventions that may be needed to take place. ➤ Monitoring (learning walks, pupil voice, book looks, teachers' planning, professional dialogue with teaching and support staff and data tracking meetings) to assess learning and attitudes towards mathematics. This monitoring informs next steps for the children whilst ensuring consistency in planning and teaching schoolwide and areas of need for staff development.
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