

Maths Curriculum Statement

From September 2014, the school have been following the new National Curriculum for mathematics. The teaching and learning of mathematics at Purbrook Infants fully incorporates its aims by ensuring that all children have the opportunity to:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that children 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;
- 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. (National Curriculum, 2014)

The fundamentals of mathematics are taught using a concrete, pictorial and abstract approach with visual aids (models and images) and physical apparatus used throughout the school to support conceptual understanding. The school has a progression in

calculation document that gives an overview of the progression expected in the four operations (addition, subtraction, multiplication and division) as well as a progression overview of the mental strategies related to these. At Purbrook Infants, we value the importance of mental strategies which we teach through Number Sense. This programme builds on our innate ability to process quantities visually with graphics that expose mathematical structures. With animations and exercises with visual scaffolding, and a wide range of practical activities, a deep understanding of number and quantity is developed. At the core of the programme are the Addition and Subtraction Fact Grids. These essential facts are the equivalent of times tables for addition and subtraction. Just as all multiplication and division calculations use root times table facts, all future addition and subtraction calculations use these root addition and subtraction facts. The core facts are taught alongside 12 calculation strategies. Learning and applying these strategies gives children a deep understanding of number and number relationships. Using these strategies children can then “use what they know to work out what they don’t know”. Explicit teaching of derived fact strategies is an effective route to fluency in addition and subtraction facts for all children, including lower attainers. Problem solving and reasoning are integral elements of all units of work and are embedded throughout the mathematics curriculum. Teachers

regularly plan opportunities for children to apply their understanding of the fundamentals of mathematics to a variety of rich, problem solving contexts. Wherever possible, these will include an element of global citizenship, giving purpose and real-life context to the children’s learning. We value mathematical conversation in the classroom and give emphasis to this when teaching, encouraging children to justify and prove their understanding of concepts using precise mathematical vocabulary. At Purbrook Infant School, children are taught in flexible groupings according to the previous learning. The groups are used flexibly and children move between them based on their strengths and needs. Teachers use on-going daily assessments and termly formal assessments to decide which groups children should be working in. The new curriculum framework (or Early Years Framework in EYFS) is used in conjunction with Hampshire guidance as a starting point for planning maths units and on-going assessments help to ensure work is appropriately challenging for all children.

