

MATHS POLICY

INTRODUCTION

Mathematics is important in everyday life and at Aldingbourne Primary School we endeavour to ensure that children are equipped with the uniquely powerful set of tools this subject provides. This document outlines our aims in providing an exciting and engaging mathematics curriculum to all children which sparks curiosity and equips children with the tools for logical reasoning, problem solving and the ability to think in abstract ways. It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society.

The curriculum expectations and entitlement for all children are outlined as well as the topics for each Key Stage. This policy also summarises teaching methods and resources used to captivate the children and allow their knowledge to blossom and grow, whilst building upon foundations laid in previous years. Finally, our methods in assessing the children's knowledge and progress is explored and how we enable children to develop their mathematical thinking.

AIMS

We aim to deliver the mathematics curriculum in an engaging manner, accessible to all children, of all learning styles, whilst building upon prior learning and making mathematics fun.

Our further aims mirror that of the National Curriculum. To ensure that all children:

- 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 series of simpler steps and persevering in seeking solutions.

CURRICULUM EXPECTATIONS AND ENTITLEMENT

At Aldingbourne School all children experience a broad and balanced mathematics curriculum that takes into account all abilities, learning styles and emotional and intellectual development. Mathematics is taught following the programmes of study set out in the National Curriculum, and these form the content of the school plans and the activities which children undertake to achieve the objectives. Long term planning

is accompanied by medium term planning as well as daily planning for each weekly topic session. As a school we endeavour to help children to master skills before moving on, ensuring that lessons are planned to revisit key objectives across the entire school year.

Early Years

In Early Years:

- children count and order number 1-20
- children solve problems with numbers 1-20
- children use everyday language in relation to measure
- children compare, explore and solve problems involving everyday objects, numbers, shape and measure.

Key Stage 1

During Key Stage 1:

- children develop confidence and mental fluency with whole numbers, counting and place value.
- children work with the four operations - including numerals and words.
- children use practical resources to aid counting and place value.
- children compare, order, read and write numbers to 100 using numbers and words
- children develop their ability to recognise, describe, draw, compare and sort different shapes and use related vocabulary.
- children use a range of measures to describe and compare different quantities.
- children know number bonds to 100 by the end of year 2.
- children read and spell mathematical vocabulary in line with their reading and spelling knowledge.

Lower Key Stage 2

During Years 3 and 4:

- children become increasingly fluent with whole numbers and the four operations.
- children become increasingly fluent with number facts and place value.
- children develop efficient written and mental methods.
- children develop ability to solve a range of problems including simple fractions and decimal place value.
- children analyse shapes and their properties and describe the relationships between them.
- children become accurate with measuring equipment, make connections between measure and number and convert between units of measure.
- By the end of year 4 children should have memorised their multiplication tables up to and including 12×12 .

- Read and spell mathematical vocabulary in line with their reading and spelling knowledge.

Upper Key Stage 2

During years 5 and 6:

- children extend understanding of the number system and place value to include larger integers.
- children make connections between multiplication and division with fractions, decimals, percentages and ratio.
- children solve a wider range of problems including increasingly complex properties of numbers and arithmetic.
- children use efficient written and mental calculation including long multiplication and division.
- children use the language of algebra as a means for solving a variety of problems.
- children use knowledge of number to consolidate geometry and measure understanding.
- children classify shapes with increasingly complex geometric properties and learn the vocabulary they need to describe them.
- Read, spell and pronounce mathematical vocabulary correctly.

TEACHING METHODS AND RESOURCES

As a school, we pride ourselves on ensuring the teaching of Mathematics is creative, fun, exciting and accessible to all learners. We achieve this in the following way:

- Grouping children according to their ability in order to tailor the learning specifically to their needs.
- Lessons are comprised of an input and 3 or 4 activities to follow up the objective.
- Using a wide range of practical resources in order to allow those that learn kinaesthetically to access learning. E.g. 2d and 3d shapes, fraction walls, 3d pizza fractions, measuring equipment.
- Using games in order to incorporate the learning objective and engage children in the learning. For example, using the cake game to run and pull out number candles to multiply together.
- Hunt questions stuck up around the school for children to find and solve before checking with an adult.
- Maths book activities in every lesson to ensure the practice of written methods and evidence of progress.
- Use ICT to support learning, for example, Maths Frame and Education City.

ASSESSMENT

At Aldingbourne School, formative assessment is an integral part of our daily practise. It is used to inform planning, to facilitate differentiation and to ensure that the children have the foundations to successfully build upon their prior historical knowledge. Teacher's integrate the use of formative assessment strategies such as effective questioning, clear learning objectives, the use of success criteria and effective feedback and response in their teaching. Children use self-assessment stickers in their maths books at the end of each session to inform teacher's marking and forward planning.

Half termly summative assessments against the NC levels are undertaken. We use National Curriculum tests at the end of each Key Stage and use optional tests, provide by Testbase, to monitor progress at the end of each academic year. The children's progress is tracked throughout the year using tracking grids

At the end of the academic year a judgement is given by the class teacher which states if a child is working towards, within or met the numeracy curriculum. This is reported to parents in the child's end of year report.