



Mathematics

Intent

Our goal is for children at Vale school to be able to develop numeracy skills to the best of their ability. Our curriculum has been designed to help our children to better make sense of the world around them by making connections between mathematics and everyday life. We use an approach to mathematics which broadly follows the guidelines of the National Curriculum progression but which places a strong emphasis on functional mathematics for living. Our children need to experience mathematics in a more holistic way to encourage the necessary functional numeracy skills.

Implementation

The teaching of mathematics at our school aims to ensure that all children have the opportunity to access lessons which are relevant to them and meet their individual needs. All children are involved in regular planned mathematical activities, as well as the opportunity to encounter the use of mathematical skills at other times in the school day and in other subject areas. Our children will be taught mathematics in context and in the community so that they have the opportunities to build on their skills, knowledge and understanding of mathematics to apply them to their everyday lives. Within lessons we use the 'Concrete, Pictorial, Abstract' approach to teaching mathematics; a multi-sensory approach ensures that all children begin to learn new skills using a practical, physical approach; these skills should be secure before moving on to developing skills into the next stages.

Concrete Representation: Children are first introduced to an idea/skill/concept by acting it out with real objects; this is the practical stage where children use mathematical equipment for example, traditional mathematical equipment, such as cubes, beads, ten frames, dienes, place value counters and blocks.

Pictorial Representation: When the child has sufficiently understood the practical, concrete experiences they can now relate them to pictorial representations, such as a diagram or pictures of the problem. They will use these to perform mathematical functions.

Abstract Representation: At this stage the child is now capable of representing problems by using abstract mathematical notation, for example: $12 \div 2 = 6$.

We ensure that children are exposed to a wide breadth of study within mathematics. Children in the PMLD stage are exposed to number and shape and measure, to aid in their discovery and engagement in the world around them. Children in the Emergent stage follow the EYFS and have coverage of topics in Number and Place Value, Addition, Subtraction, Multiplication, Division, Fractions and Measure. Children in the Functioning stage follow the National Curriculum and cover, Number and Place Value, Measure, Geometry and Statistics.

Impact

As a result of the provision above, children at Vale School will be the best they can be and:

- Have functional mathematics skills to support their independence.
- Have the skills and knowledge to progress to meaningful further education, training or employment where appropriate.
- Be able to solve problems by applying their knowledge to a variety of problems with increasing skill, in unfamiliar contexts and real-life scenarios
- Develop an enjoyment and enthusiasm for mathematics that will stay with them throughout their lives and empower them in future life
- Know that mathematics is a vital life skill that they will rely on in many areas of their daily life.

This is evidenced through: analysis of mathematics assessment data; observations and learning walks, mathematics cognition and learning PSP targets; identifying meeting of related EHCP outcomes and any other relevant methods.