Woodfall Primary and Nursery School

Mathematics Curriculum Statement

At Woodfall Primary and Nursery School we aim to create a creative and engaging Mathematics Curriculum. The curriculum is designed so it accessible to all and allows all children to develop their ability and reach their academic potential. Lessons and content will allow children to explore a natural curiosity within the subject. Lessons will build on children's understanding and allow them to become more fluent, reason and problem solve with mathematical concepts. Through the curriculum, children will understand that Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Our high-quality mathematics education intention therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

It is our aim and intention to:

- provide mathematical experiences which harness children's natural curiosity in an exciting and stimulating way in order to develop positive attitudes and a desire to question and seek answers and develop their own thinking skills

- enable children to 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

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

- enable children to 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

- provide children with the knowledge, skills and understanding necessary to build confidence and competence to work proficiently with number and become numerate, so that they:
  - have a sense of the size of a number and where it fits in the number system;

    - know number facts such as number bonds, multiplication tables, doubles and halves;
    - use what they know to calculate mentally and efficiently;
    - calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies;
    - make sense of number problems, including non-routine problems, and recognise the operations needed to solve them;
    - explain their methods and reasoning using correct mathematical terms and vocabulary;
    - judge whether answers are reasonable and have strategies for checking them;
    - suggest suitable units for measuring, and make sensible estimates of measurements; and
    - explain and make predictions from the numbers in graphs, diagrams, charts and tables.

- develop children's ability to solve problems, to reason, to think logically and to work systematically and accurately.

- promote high standards of mathematics through effective teaching and learning.

- provide a broad and balanced mathematics curriculum which is continuous and progressive in order to develop and consolidate the knowledge, skills and understanding set out in the key objectives appropriate to their age and prior attainment.

- develop a wide mathematical vocabulary in children, which is used to communicate their ideas clearly and give effective verbal and written explanations of their reasoning

- provide children with real contexts in which to develop an appreciation of the knowledge and skills of mathematics which are necessary for everyday life, a variety of jobs and tasks and the study of other subjects.

- provide mathematical experiences which are challenging but achievable in order to and motivate pupils of all ability levels.

- encourage children to work both independently and co-operatively as appropriate to a task, their age and prior attainment