Curriculum intent Science

Intent

At Greenfields Primary School, we aim to develop curious, knowledgeable and enthusiastic scientists. We want pupils to enjoy science, understand its importance in everyday life and recognise how it contributes to society, the environment and the wider world.

Our curriculum develops pupils' knowledge and understanding across biology, chemistry and physics. We believe that all pupils should have access to an ambitious science curriculum that inspires curiosity and encourages them to ask questions about the world around them.

We aim for pupils to:

- develop secure and connected scientific knowledge
- understand and use scientific vocabulary accurately
- ask relevant questions and explore possible answers
- develop confidence in working scientifically
- use observations and evidence to explain their ideas
- recognise the importance of science in everyday life
- understand the impact of science on society and the environment
- develop curiosity, resilience, objectivity and teamwork

Implementation

We follow the National Curriculum for science and use **White Rose Science as the principal foundation for our scheme of work and curriculum sequencing**.

White Rose Science provides a coherent and progressive framework through which pupils build knowledge and working-scientifically skills over time. Teachers adapt the scheme according to pupils' prior knowledge, identified misconceptions and the needs of each class.

Scientific knowledge is organised into carefully sequenced units across biology, chemistry and physics. Important concepts and vocabulary are revisited so that pupils can connect new learning with what they already know and develop increasingly secure understanding.

Teaching includes opportunities for pupils to:

- retrieve and revisit previous scientific knowledge
- learn and use subject-specific vocabulary
- observe, compare, classify and identify patterns
- ask scientific questions and suggest ways of answering them
- make predictions using prior knowledge
- carry out comparative and fair tests
- use equipment safely and measure accurately
- record findings in tables, diagrams, charts and graphs
- interpret results and draw evidence-based conclusions
- communicate and explain their scientific thinking

Purposeful practical work is used to strengthen pupils' understanding of scientific concepts. Practical activities are carefully selected so that they support learning rather than being completed as isolated tasks.

Teachers check pupils' understanding through strategies such as questioning, cold calling, think–pair–share, mini-whiteboards, retrieval questions, pupil explanations, practical observations and short assessment tasks. Misconceptions are identified and addressed promptly.

Teaching is adapted to ensure that all pupils can access the intended curriculum. This may include additional modelling, pre-teaching, visual resources, vocabulary support, structured practical activities and targeted intervention. Pupils who understand concepts quickly are challenged to explain, apply and connect their knowledge in greater depth.

Impact

As a result of our science curriculum, pupils will:

- develop secure knowledge across biology, chemistry and physics
- remember and connect important scientific concepts
- use scientific vocabulary accurately and confidently
- ask relevant questions and investigate them systematically
- select and use appropriate scientific equipment
- observe, measure, record and present findings accurately
- interpret evidence and draw appropriate conclusions
- explain their ideas using scientific knowledge and evidence
- recognise how science influences everyday life, society and the environment
- approach scientific learning with curiosity, confidence and resilience

The impact of the science curriculum is evaluated through pupils' work, assessment, practical activities, pupil discussions, lesson visits and curriculum monitoring.

By the end of Key Stage 2, pupils will have developed secure scientific knowledge and a strong foundation in working scientifically, preparing them for the next stage of their education.