

'The important thing is to never stop questioning.' Albert Einstein.

Curriculum Aims and Principles

At Greet, we are driven by a collective mission of ensuring that children understand that there are **no limits to what they can achieve**. It is through this relentless ambition and high expectations that we seek to **achieve excellence** for our children, to develop their **social intelligence** and their understanding of how to live **ethical lives**. Our school mission and values form the drumbeat of day-to-day life at Greet. They are the driving forces behind our curriculum design.

Our curriculum has the children of Greet at its heart. It is rooted in our school, our families and our local community whilst ensuring learners are also taught about national and global issues. We endeavour to give our children a strong sense of their own identity and their place in the world, and to respect the same for others. They will know the story of humankind, its place in history and how they can have a positive impact on the future, so they are fully prepared for the challenges of the 21st Century.

All of our curriculum areas are carefully planned and mapped using **our core curriculum principles**. These ensure our curriculum is: **values driven**; focused on **the essentials**; **coherent, connected** and **cumulative**; incorporates **carefully selected knowledge**; **vocabulary rich**; **ambitious**; and **builds cultural capital**. Please see our 'Curriculum Aims and Principles' document for more details.

For all subject areas we have **carefully selected and sequenced the key knowledge and vocabulary** our children need to build the foundations of future academic success. Knowledge and vocabulary are **explicitly mapped on our medium term plans**. This knowledge and vocabulary is **delivered as a minimum requirement**. Content is arranged sequentially and logically with key concepts are revisited in a range of contexts within a year group, across year groups and across subjects. Our curriculum threads link key themes across the school.

Science at Greet

During our science units we take our children on an exciting journey to explore themselves and the world around them. A high-quality science education provides the foundations for understanding the world through the disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity. All children are taught the essential aspects of the knowledge, methods, and processes.

Our science curriculum **aligns closely to the National Curriculum** and provides our children with the opportunity to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

At Greet Primary School we teach **an ambitious, knowledge rich science curriculum** through the use of the Cornerstones curriculum. This ensures that our science curriculum content is mapped **sequentially and logically** with **key vocabulary and knowledge revisited** to support children to **know more and remember more**.

We teach science as a discrete subject so children have the opportunity to think like 'scientists', **understanding the subject as a discipline in its own right**. Projects are placed alongside other subject projects where there are



opportunities for making meaningful connections. For example in Year 3, the projects Plant Nutrition and Reproduction is taught alongside the art and design project Beautiful Botanicals.

Children at Greet Primary School are taught to work scientifically by being curious and asking questions. Children are given opportunities to answer their questions through different types of enquiry, including: fair testing, grouping and classifying, research, observation over time and pattern seeking

EYFS

In EYFS children learn foundation scientific skills through the specific area of Understanding the World. Early science skills are interwoven through every unit, through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. During their time in Nursery and Reception our children will explore creature, people, plants and objects in their natural environments.

Key Stage 1

In Year 1, children start with Everyday Materials, linking this learning to the design and technology project Shade and Shelter. In the Human Senses project, they learn about parts of the human body and those associated with the senses.

In Year 2, children begin the autumn term with the project Human Survival, learning about the survival needs of humans, before expanding to study animals within their habitats in the project Habitats. Building on learning from Year 1, children learn about the uses of materials in the spring project Uses of Materials and begin to understand changes of materials through simple physical manipulation, such as bending and twisting.

Lower Key Stage 2

Having learned about human body parts, the senses and survival in Key Stage 1, children now focus on specific body systems and nutrition in Key Stage 2. In Year 3, they learn about the skeletal and muscular system in the project Skeletal and Muscular Systems.

In Year 4, children learn about the digestive system, again making comparisons to other animals, in the project Digestive System. Children also study electricity by creating and recording simple circuits in the project Electrical Circuits and Conductors. They also build on their knowledge of the properties of materials, identifying electrical conductors and insulators.

Upper Key Stage 2

In Year 5, children broaden their knowledge of forces, including gravity and air and water resistance, in the project Forces and Mechanisms. They revisit learning from design and technology projects, including Making It Move and Moving Mechanisms. Their knowledge of gravity supports the autumn term project Earth and Space, so they can understand the forces that shape planets and our solar system.

In Year 6, the final body system children learn about is the circulatory system and its roles in transporting water, nutrients and gases. Children also build on their knowledge about electrical circuits from Year 4, now learning and recording standard symbols for circuit components and investigating the function of components and the effects of voltage on a circuit in the project Electrical Circuits and Components.



Focus Scientists

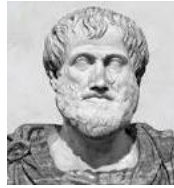
Through our science curriculum children learn about the following scientists:



Commander
Francis Beaufort



Anders Celsius



Aristotle



Claudius Ptolemy



Alhazen



Nicolaus
Copernicus



Sir Isaac Newton



Galileo Galilei



Pythagoras



Carl Linnaeus



Charles Darwin



Alfred Russel
Wallace

Entitlements

Through the science curriculum every child will:

- experience one science trip across a phase, for example visiting the Botanical Gardens in Year 2 as part of their plant survival unit.
- receive an hour of discrete science teaching each week.
- take part in a science investigation day every half term.
- be provided with an ambitious knowledge organiser with core knowledge and vocabulary.

Assessment

We assess children' learning of science in the following ways:

- through retrieval practise at the start of each lesson.
- end of unit quizzing.
- Cornerstones assessment criteria.