



Grange Primary Academy

The best in everyone™

Part of United Learning

Science at Grange Primary Academy

Science Curriculum Drivers

As a result of the children being taught the Grange Curriculum, our children will be:

A Resilient Learner

Scientific knowledge and understanding is shared with the children and prioritised in the teaching. We are committed to ensuring children learn and remember the key fundamentals of scientific knowledge and enquiry. The scientific learning process will include regular peer and feedback to further develop knowledge and skills.

An Independent Enquirer

Children will be encouraged to ask questions about the scientific concepts they are learning. They will want to know about what makes up the world around them and beyond.

An Articulate Collaborator

Children will experience the full range of scientific disciplines and will articulate their personal opinions on what they learn. They will be encouraged to develop a critical viewpoint based on prior knowledge. They will be taught precise, technical vocabulary and they will apply this to their discussions and investigations during the learning process. They will work confidently independently and with others.

An Ambitious Individual

The scientific learning journey through Grange does not shy away from the complex concepts or skills. Lessons will ensure that children understand the core concepts of all scientific disciplines. Children will demonstrate their scientific knowledge and understanding through high quality investigations and confident discussion whilst learning about past and current scientists.

A Considerate Participator

Children will experience a breadth of scientific learning. Children will be excited to share the science they learn about and the key knowledge and skills that it brings. They will respect and value the opinions of others.

Sequencing of Content

The Grange Primary Academy Science overview ensures that pre-requisite knowledge is considered and linked to new learning.

A range of key concepts and skills are taught across phases, giving opportunity to deepen these across the various units.

Practical Science is heavily considered within the curriculum.

Big Ideas

- Biology
- Physics
- Chemistry
- Similarity & Difference
- Research and experimental analysis
- Make links between scientific disciplines and real life
- Investigation

Purpose

Each unit of work is purposeful and works towards a known end goal which ensures all children understand that their learning has a real-life purpose.

Retrieval Practice

Children take part in regular mini-quizzes and retrieval activities to strengthen their memory. Learning journeys dovetail so that learning can be retrieved and applied

Remembering information and knowledge is celebrated and is part of the Grange culture.

Deepening Concepts

The curriculum is broken into three core strands: Biology, Physics and Chemistry. Each of these are interrelated and essential in giving a child a rounded experience of science. Scientific concepts and working scientifically skills are taught and revisited and understanding deepened in elements throughout the primary phase

British Values

At Grange Primary Academy we understand the importance of promoting the fundamental British Values that are recognised around the world. It is our aim as a school to address these values wherever possible in the curriculum, including in Science. Wherever possible we find it important to immerse the children in these values which are important to our identity.

We are committed to serving our community. We recognise the multi-cultural, multi-faith and ever-changing nature of the United Kingdom. We understand and embrace the vital role we have in ensuring that groups or individuals within the school are not subjected to intimidation or radicalisation by those wishing to unduly, or illegally, influence them. Grange Primary Academy follows equal opportunities guidance which guarantees that there will be no discrimination against any individual or group, regardless of faith, ethnicity, gender, sexuality, political or financial status, or similar. As a school, we are dedicated to preparing students for their adult life beyond the formal examined curriculum and ensuring that it promotes and reinforces British values to all its students.

The children are able to critique each other's work in a positive and constructive manner whilst showing respect for the opinions and beliefs of their peers which may differ from their own.

Cultural Capital

Cultural Capital is the accumulation of knowledge and skills that a child can draw upon and which demonstrates their cultural awareness, knowledge and competence. It is one of the key ingredients a child will draw upon to be successful in society, throughout their educational journey and eventually their career and world of work. At Grange Primary we enhance children's experiences and learning by utilising different opportunities in our Science curriculum, across the whole curriculum and around school.

We provide engaging Science lessons for every child in which we include a various experiences to develop their skills to prepare them for the real world. We aim to foster children's curiosity and fascination within the scientific world so that this thirst for knowledge and understanding remains with them for the rest of their lives. We give children as many opportunities to experience, explore and explain the 3 branches of Science (Biology, Chemistry and Physics).

SMSC

Our curriculum helps to promote and foster SMSC through a variety of different ways.

Spiritual

Awe and wonder of the world around us and nature.
The growth of plants, humans and animals.
The use of enriching trips and experiments.
Caring for our environment
Use of imagination and curiosity to discover the world and draw comparisons – child initiated learning.
Open-ended enquiries – there is not always an answer.

Moral

Risk management and safety.
Respecting living things and their environments.
The importance of exercise and looking after our bodies.

Social

Advances in medicine and scientific discovery for the benefit of all.
Acting in a responsible way.
Science theme days and collaborative learning.
Developing the ability to ask and answer questions.
Opportunities for evaluative and enquiry work.

Cultural

Discovering and respecting different scientific beliefs.
Valuing the contributions to science of other cultures.
Respecting beliefs of others with regards to sensitive aspects of science – evolution.
Appreciating the variance in all living things

Impact

Through our planned and progressive curriculum children build a knowledge and understanding of key concepts within Science. Through the development of Science enquiry skills children are able to question ideas and reflect on their knowledge and understanding of Science in a real-life context. Learning allows children to work collaboratively and practically to investigate and experiment and be able to reason.