

Inquiry, Investigation and Analytical Thinking Skills

Learning in and through the Sciences will provide children with opportunities to develop their inquiry and investigative skills. They will be required to:

- identify appropriate methods of experimentation or investigation
- make predictions and hypothesise
- use equipment appropriately and safely
- carry out experiments
- observing, exploring, collecting, classifying, measuring and recording information in a variety of ways for a specific purpose
- analyse information collected and draw conclusions
- develop fair testing and explore variables
- present and report on findings.



For more information about the sciences please visit:

<https://education.gov.scot/Documents/sciences-eo.pdf>

Materials

Properties and Uses of Substances

Children will discover different uses for a variety of materials. They will explore the changing states of materials and can create experiments and relate gained knowledge to everyday experiences

Earth's Materials

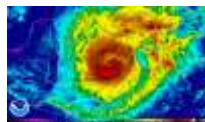
Children will develop their knowledge of the earth and its substances. They will discover ways to conserve materials to protect the environment.

Chemical Changes

Children will explore properties of water, every day chemicals and chemical reactions.

Topical Sciences

In this area of Science, children will explore and discover current scientific issues, discoveries and will comment, research and report on such issues using information they find through news articles and as a result of research.

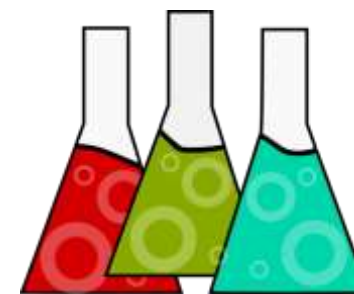


Windyknowe Primary School



Sciences

Information for Parents/Carers



January 2024

Sciences

By providing children with high quality Science experiences we aim to encourage children to be inquisitive and to understand how the world and the materials within it work and play an important role in our lives.

Through Science lessons and activities we provide children with opportunities to:

- develop investigation skills
- make predictions
- increase their understanding of sciences and the environment
- explore scientific inventions and discoveries created in the past and the effect they have on the world
- develop an understanding of the Earth's resources and the need for responsible use of them
- consider how Science relates to sustainability and our roles and responsibility within this area
- express opinions and make decisions
- develop a lifelong interest in the Sciences



What will my child experience?

The 5 areas the sciences are split into are:

- *Planet Earth*
- *Forces, electricity and waves*
- *Biological systems*
- *Materials*
- *Topical science.*

Planet Earth



In this area children will learn about:

Biodiversity and Interdependence

How species depend on one another for survival as well as the negative impact of the human population on the environment.

Energy Sources and Sustainability

Different types of energy sources and develop their understanding of how to save energy.

Processes of the planet

The changing states of water as well as knowledge and understanding of the water cycle.

Space

Planet Earth and its position within the universe. They will develop their understanding time and scale and the role the sun and moon play in our lives.

Force, Electricity & Waves

Forces

Through research and practical experiments, children will explore and discover the effects of friction, floating and sinking, air resistance, magnetic materials as well as gravitational forces.



Electricity

By investigating appliances and electrical equipment children will learn about the safe use of electricity, how electrical circuits work, energy and even how batteries work.



Vibrations and Waves

Children will discover scientific facts such as how sounds produce vibrations and how shadows are formed.

Biological Systems

Body Systems and Cells

Children will develop their knowledge of the human body including the senses, germs and micro-organisms.

Inheritance

Children will explore similarities and differences, families, inherited characteristics and life cycles of animals, humans and plants.

