



Aston-on-Trent Primary School Intent, Implementation and Impact

Science



Intent

At Aston-on-Trent primary school we believe that a high-quality science education allows our children to:

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

The staff at Aston-on-Trent primary ensure that all children are exposed to high quality teaching and learning experiences. Children are encouraged to learn through classroom-based activities and through the exploration of the outdoor environment. We intend to provide a broad and balanced curriculum which develops a sense of excitement and curiosity about the world around them. We see the importance of cross-curricular links to deepen scientific knowledge and conceptual understanding. Children are exposed to technical and scientific vocabulary and are encouraged to say, use, and spell these words confidently.

Through the teaching of science, we encourage our children to be independent scientific thinkers, who can both ask and answer scientific questions through a deepening subject knowledge and scientific enquiry skill base. We should encourage their natural curiosity and need for discovery and set them off on a life-long journey to explore and understand the world around them.

Implementation

Each year group has been allocated six units that need to be taught every year. A detailed programme of study is provided by the 2014 science curriculum.

Science should be taught regularly every week and follow the medium-term plans. We should include opportunities for enrichment, cultural capital, wider curriculum links, core text and wider reading.

SCIENCE CURRICULUM MAP

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Colour	Animals including humans	Plants	Forces and magnets	Living things	Forces	Evolution and Inheritance
Light and Dark	Autumn and Winter	Animals including humans	Rocks	Animals including humans- Digestive System	Properties of materials, reversible changes	Light
The Natural World Materials	Winter and Spring	Scientists and Inventors	Light	Scientists and Inventors	Earth and space	Animals Including Humans-Heart and Circulatory System
The Natural World Growing	Spring and Summer	Use of everyday materials	Skeletons	States of Matter	Scientists and Inventors	Living Things and their Habitats
Growing	Plants	The Environment	Plants	Sound	Living Things and Their Habitats	Electricity
Travel. Climate	Everyday materials	Habitats	Famous Scientists	Electricity	Animals including humans- Human Lifecycle	Scientists and inventors

Impact

We have developed a robust system for measuring the impact of science throughout school.

Teacher assessment of progress in science is largely formative through effective questioning, mini plenaries, checks on prior knowledge, KWL grids, knowledge organisers, Kahoot quizzes, live marking, feedback folder, talk partners, sticky note quizzes, timed pair share, pupil vice, low stakes quizzes and exit quizzes. Summative tests are also available for end of topic testing.

There is:

- Integris, an online tracker, to track progress in the Autumn, Spring and Summer terms.
- a science assessment target sheet for the children to colour and monitor their progression through the science curriculum.
- A science feedback sheet to use in Feedback folders.

We encourage children to discuss previous learning ('Get Ready' and 'Refer Back'), reflect on questions asked at the start of a topic and consider how their deepening knowledge has enriched their understanding of the world. This sharing of experiences will encourage an enthusiastic and life-long interest in science.