

# Science Curriculum at Nightingale

## Core Principles:

- ◆ We are active
- ◆ We investigate
- ◆ We think about the world around us
- ◆ We work together
- ◆ We are curious

At Coop Academy Nightingale, we want our children to have a good understanding of what science is, how it works and be able to see themselves as scientists. We introduce children to key concepts in science, following the national curriculum. We teach them about living things (biology), forces (physics) and materials (chemistry) gradually increasing in complexity as they journey through school.

Running throughout all the science topics, children are introduced to the 5 types of scientific enquiry. They carry out experiments, observe changes over time, classify, investigate using secondary sources and look for patterns. As they travel through school, they gain experience of new vocabulary and increasingly scientific apparatus. They learn to design experiments, make predictions, draw conclusions and use scientific evidence to support or refute arguments. Many topics are revisited year on year building on the learning that has gone before. Here are the topics covered in each year group.



In EYFS children are first encouraged to explore their surroundings. They learn to talk about how to stay healthy and safe. Children observe animals, plants and their immediate environment and talk about things that are the same and how they are different.

In Year 1 children learn to identify and use their senses. They learn to describe and compare everyday materials and identify and group different types of animal. In the spring and summer they learn about plants.



In Year 2 children learn about the properties of materials and how to describe them. They learn about the importance of diet and exercise in staying healthy. Year 2 children learn about plants and about living things and their habitats. They are also introduced to life cycles.



In Year 3 children learn about rocks, and about forces and magnetism and light. Building on their work in earlier years they learn about keeping their bodies healthy and develop their understanding of plants.

In Year 4 children learn about the changing states of matter (solids, liquids and gases). They learn about electricity and sound. They also learn about the human digestive system, classification systems, food chains in nature and the impact of humans on the environment and natural habitats.



In Year 5 children return to their study of forces. They build on their understanding of the states of matter and how this relates to properties and changes of materials. They learn about Earth and Space and return to earlier learning on classification systems and life cycles.

In Year 6 children return to and build on their learning on light, electricity and on animal and plant classification systems. They learn about evolution and about the human circulatory system.

Where possible, we try to make science as active and engaging as possible with visitors, workshops, outings and an after-school science club. We hope your child will be inspired!

