

Science Curriculum Overview

Year 3 and 4 - Year A



Autumn 1	Autumn 2
Energy	Energy
<p>Sound and vibrations</p> <p>Exploring different ways of producing sounds, children learn about the relationship between vibrations and what they hear. They study dolphins and whales to develop their understanding of how sound travels between objects and investigate the role of insulation to protect our ears. Pupils explore how pitch and volume can be altered and make their own musical instruments to demonstrate these principles.</p>	<p>Electricity and circuits</p> <p>Exploring appliances that use electricity, children learn how to work with electricity safely and build circuits. They investigate electrical conductors and insulators and explore the relationship between the number of bulbs and bulb brightness. Real scenarios and historical discoveries inform children about scientific progression and home safety.</p>
Spring 1	Spring 2
Animals, including humans	Living things and their habitats
<p>Movement and nutrition</p> <p>Studying the human skeleton, children identify key bones and compare them to other animals explaining the role within the body. Pupils explore how changes in muscles result in movement and the implications these discoveries have in the scientific development of prosthetic limbs. They study how energy is used by the body, what constitutes a balanced diet in humans and how research contributes to nutritionist expertise.</p>	<p>Classification and changing habitats</p> <p>Identifying different ways to group living things, children make classification keys to explore which grouping methods are most effective. Pupils study how habitats change over time and understand that humans can have both positive and negative effects on their surroundings. They play the role of conservationists and design conservation pamphlets.</p>
Summer 1	Summer 2
Energy	Making Connections
<p>Light and shadows</p> <p>Identifying examples of light sources, children learn that light is needed to see and how its absence causes darkness. Children investigate reflection and shadow formation, including how different factors affect shadows. They explore how shadows can be used to entertain in the arts and create shadow puppets to recount how different people work or experiment with light.</p>	<p>Making connections between their science learning from throughout the year, pupils apply key knowledge and work scientifically to answer an enquiry question.</p>

Science Curriculum Overview



Year 3 and 4 - Year B

Autumn 1	Autumn 2
Materials	Materials
<p style="text-align: center;">Rocks and soil</p> <p>Studying rocks and their properties, children learn how to classify rocks and identify how they were formed. They look at the work of paleontologists to learn about fossil formation and use models to explore how fossils tell us about the past. Pupils investigate the physical properties of rocks and link these to their particular uses and explore soil formation, separate soil using a sedimentation jar and test soil drainage.</p>	<p style="text-align: center;">States of matter</p> <p>Investigating the properties of solids, liquids and gases, children learn about the different states of matter. They explore changes of state using relatable examples and use this to explain changes to water through the water cycle. Pupils investigate the relationship between temperature and rate of evaporation while broadening their experience of working scientifically.</p>
Spring 1	Spring 2
Animals, including humans	Forces, Earth and Space
<p style="text-align: center;">Digestion and food</p> <p>Using models, children describe the function of key organs in the digestive system. They identify the types of human teeth to create their own model and investigate factors that impact our dental health. They compare human teeth to other animals' and consider this in the light of prior knowledge about predators, prey and food chains. Children take on the role of a naturalist investigating animal faeces for clues about diet, digestion and dentition.</p>	<p style="text-align: center;">Forces and magnets</p> <p>Investigating the movement of vehicles on different surfaces, children learn about the impact of friction and compare uses and drawbacks. They broaden their experience in writing scientific methods and recording data as they investigate contact and non-contact forces. Pupils explore the properties of different magnets and use this to understand their uses.</p>
Summer 1	Summer 2
Plants	Making Connections
<p style="text-align: center;">Plant reproduction</p> <p>Building on their prior knowledge of plant structures, children describe the functions of named parts and use evidence to explain their significance in plant development. They investigate factors that may affect plant growth and how water is transported. They explore how seeds vary and create models to show seed dispersal methods.</p>	<p style="text-align: center;">Making connections between their science learning from throughout the year, pupils apply key knowledge and work scientifically to answer an enquiry question.</p>