Science Curriculum Overview 2025-2026

Year 1/2

Plants: Introduction to Plants Venturing outside, children identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. They use magnifying glasses to observe and name plant parts and draw and label diagrams of flowers. Children closely observe leaves and sort them into groups based on their appearance. They use non-standard units to measure leaf length and record their observations in a table. Pupils investigate if beans need water for growth and identify edible plant parts.	**Plants: Plant Growth** Carrying out comparative tests, pupils identify the conditions required for seed germination and compare these to the survival needs of plants in later growth phases. Pupils use rulers to measure stem growth and record data in a table. They use their results to conclude that plants need water, light and a suitable temperature to grow and stay healthy. Children identify the stages in a plant's life cycle and discover how humans impact plants in the environment
Force, Earth and Space: Seasonal Changes Reflecting on their own experiences, children learn about the four seasons and the weather associated with each. They explore how seasonal changes affect trees, daylight hours and our choices about outfits. They plan and carry out their own weather reports, considering the knowledge required for this job.	**Animals Including Humans: Lifecycles and Health** Studying the life cycles of various animals, children learn what animals need to survive and how they change over time. Pupils collect data that allows them to observe changes in their peers, while also developing their ability to take measurements and record data. They consider how scientific knowledge helps people to make healthy choices.
Living Things and their Habitats Considering the life processes that all living things have in common, pupils classify objects into alive, was once alive or has never been alive. They explore global habitats, naming plants and animals that can be found there and learn how a range of different living things depend on each other for food or shelter. They then explore this further by creating food chains to show the sequence that living things eat each other for energy to grow and stay healthy.	**Making Connections: Ocean Protectors** Consolidating knowledge of life cycles, habitats and food chains, children explore the ocean and rock pools. They investigate what happens to litter when it is left in water to better understand the choices we make about materials available. Pupils role-play as marine biologists to collect data about population sizes to plot as pictograms and to better understand how we can protect the oceans.

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Year 3/4

Energy: Light and Shadows 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.	**Animals Including Humans: Digestion and Food** 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.
Animals Including Humans: Movement and Nutrition 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	**Energy: Electricity and Circuits** 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.
Materials: Rocks and Soil 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.	**Making Connections: How does Food Affect Muscle Fatigue?** Using practical investigations, pupils develop their working scientifically skills by exploring how food influences muscle fatigue. Revisiting learning on digestion, nutrition and energy, they plan and carry out a comparative test, measuring muscle endurance before and after eating. Gathering and recording data carefully, pupils analyse their findings and evaluate the reliability of their test.

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Year 5

Materials: Mixtures and Separation Pupils explore different types of mixtures and the different methods that can be used to separate them. They dissolve a range of substances, identify different solutions and investigate how temperature affects the time taken to dissolve. They design and create a water filter, sieve soil and evaporate solutions.	**Living Things: Life Cycles and Reproduction** Studying animal life cycles, children learn about the significance of reproduction for a species' survival. Pupils compare asexual and sexual reproduction in plants and grow cuttings to measure and plot root growth over time. Children compare the life cycles of mammals, birds, amphibians and insects identifying key differences. They analyse secondary data to investigate how the amphibian life cycle is affected by predators and climate change.
Materials: Properties and Change Broadening their experience of the properties of materials, children investigate hardness, transparency and conductivity and consider how these properties influence the uses of materials. They explore reversible changes, including dissolving and changes of state. Children compare these to irreversible changes, including rusting, burning and mixing vinegar and bicarbonate of soda.	**Forces and Space: Unbalanced Forces** Building on their knowledge of forces, children explore gravity, air resistance and water resistance in more depth and consider the effect of these forces being imbalanced. They demonstrate key principles in the classroom and plan investigations to further their understanding of the effects of these forces. Pupils test their ideas using models and compete to build the most effective pulley system
Forces and Space: Earth and Space Exploring some of the key celestial bodies in our Solar System, children learn their names and compare their movements. Pupils discover the relationship between the Earth's rotation and daylight, making models to represent their knowledge. They make their own sundials and consider how and why humans' ideas about the universe have changed over time.	**Animals: Human Timeline** Studying human development and changes, children identify key stages and consider what data may help determine if a child is growing normally. They describe how puberty affects girls and boys and produce graphs to compare how gestation periods vary across different mammals, including humans.

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Year 6

Living Things: Classifying Big and Small Children broaden their knowledge of how vertebrates, invertebrates, plants and micro-organisms are grouped using shared characteristics. They discover how Carl Linnaeus developed the Linnaean and binomial systems for classifying and naming living things. Pupils use and produce classification keys to sort and identify organisms.	**Energy: Circuits, batteries and switches** Using their prior knowledge of electrical circuits, children learn to draw conventional circuit diagrams and use models to explain current, resistance and voltage. They compare different batteries and consider the effect on bulb brightness. Pupils apply their knowledge of switches and electrical circuits to design and produce their own practical devices
Energy: Light and Reflection Proving that light travels in a straight line, children use this information to explain observations of reflection and shadows. They explore how our eyes allow us to see and how mirrors can be used in a variety of ways. Pupils investigate factors affecting the size of shadows and the laws of reflection. Children apply what they have learned about light by exploring real-life uses of mirrors.	**Animals including Humans: Circulation and Health** Studying the human circulatory system, children learn about the role of the heart, blood and blood vessels and use models to demonstrate their function. They explore how lifestyle choices affect our health and use secondary sources to help them play the role of healthcare professionals advising patients. Pupils devise their own investigation to look at the relationship between exercise and heart rate, applying their knowledge of variables and then analysing secondary data to understand fitness better.
Living Things: Evolution and Inheritance Studying patterns in humans and other species, children learn about characteristics that are inherited from parents and those that are environmental. Through the eyes of Darwin and Wallace, they learn how observations lead to theories and explore natural selection. By modelling the variation and natural selection of Darwin's finches, they begin to explain how species evolve over time and the role of fossil evidence that supports this theory.	**Making Connections: Are some sunglasses safer than others?** Exploring sun safety and its impact on health, children investigate the efficacy of different sunglasses. They devise enquiries to test light and UV transmission of the lenses to form a conclusion about which sunglasses are best, applying their knowledge of electrical circuits to provide a light source in the experiment. The children summarise their findings through presentations and advertisements.