LEARNING LIGHTHOUSE
Rooted in TRADITION, Built for TODAY.

SCIENCE

Upper Key Stage 2 · Years 5–6 · Ages 9–11

TWO-YEAR ROLLING PROGRAMME

Our Upper Key Stage 2 Science programme explores living systems, matter, sound, forces, electricity and the natural world. Pupils develop scientific understanding through discussion, diagrams, experiments, evidence and interactive enquiry.

How our rolling programme works

Years 5 and 6 learn together in one combined class. The school alternates Rolling Year A and Rolling Year B. Pupils can join either cycle and progress to the other the next academic year; **continuing pupils do not repeat the same annual programme.** Important scientific concepts recur at greater depth with different lessons.

ROLLING YEAR A

AUTUMN TERM | Plant Reproduction, Sound and Enquiry

Children study flowering and non-flowering plants, flower structure, pollination, seed dispersal and germination. They investigate vibrating sound sources, pitch and volume, while developing fair testing and scientific reasoning.

Learning objectives: Explain plant reproduction and germination; identify adaptations for pollination and dispersal; investigate vibrations, pitch and loudness; and plan and interpret fair tests.

SPRING TERM | Matter, Water, Digestion and Nutrition

Pupils investigate gases, the properties of water, evaporation, condensation, dissolving and solutions. They study the digestive system, healthy nutrition and practical scientific problems, including reducing water and food waste.

Learning objectives: Use particle ideas to explain changes in matter; interpret line graphs; describe digestion and balanced diets; and apply investigation skills to real-world problems.

SUMMER TERM | Forces, Seasons and Living Things

Children examine gravity, satellites, friction, resistance, upthrust and magnetic interactions. They explore how Earth’s orbit and tilted axis relate to seasons, and how animals and plants adapt to their environments.

Learning objectives: Identify and represent forces; explain magnetic interactions and seasonal changes; compare adaptations and conservation challenges; and use models and observations to justify conclusions.

ROLLING YEAR B

AUTUMN TERM | The Human Body and Material Properties

Pupils explore the nervous, circulatory and respiratory systems, disease prevention and body responses. They examine gases, heat and electrical conduction, reversible changes, chemical reactions and the practical uses of insulating materials.

Learning objectives: Explain how body systems interact; distinguish physical and chemical changes; compare material properties; and plan reliable scientific investigations.

SPRING TERM | Rocks, Food Webs and the Environment

Children investigate igneous, sedimentary and metamorphic rocks, fossils, the rock cycle and soils. They develop food chains into complex food webs and explore energy transfer, plastics, pollution and the effects of harmful substances on ecosystems.

Learning objectives: Classify rocks and soils; describe geological processes; interpret food webs and energy pathways; and evaluate evidence of environmental impacts.

SUMMER TERM | Forces, Electricity, Light and Space

Pupils distinguish mass from weight, explore buoyancy and analyse interacting forces. They investigate low-voltage circuits, electrical designs, reflection, refraction, colour and the relationships between the Sun, Earth, Moon and planets.

Learning objectives: Apply force diagrams; explain floating and sinking; interpret circuit symbols; investigate light behaviour; and use Solar System models critically.

Our online teaching approach

Science is taught live on Wednesdays, using teacher-led demonstrations, interactive simulations, diagrams, scientific data and guided discussion. Both year groups study the same theme, with differentiated questions and challenge. Practical activities are adapted for online safety; children are never asked to experiment with mains electricity.

The programme draws on international and British-curriculum-informed scientific themes and includes enrichment beyond particular year-group expectations. It is not represented as complete statutory Key Stage 2 Science coverage.

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