Cycle A

Science

Throughout the year the children will cover a variety of aspects of the science curriculum to ensure all children:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Autumn 1	**Light - Including 'How the eye works' (6)** recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Autumn 2	**Living Things and Habitats - Microorganisms (6)** To classify plants and animals based on specific characteristics. To explain how living things are classified into broad groups according to common observable characteristics, including microorganisms, plants and animals. To give reasons for classifying plants and animals based on specific characteristics
Spring 2	**Forces – Buoyancy (5)** *explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object* *identify the effects of air resistance, water resistance and friction, that act between moving surfaces* *recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.*
Summer 1	**Evolution and Inheritance (6)** *recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago* *recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents* *identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.*
Summer 2	**Living Things and Habitats - Life Cycles (5)**

	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird *describe the life process of reproduction in some plants and animals.*

Investigations – on-going throughout all units

planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
using test results to make predictions to set up further comparative and fair tests
reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
identifying scientific evidence that has been used to support or refute ideas or arguments.