SCIENCE CURRICULUM OVERVIEW FOR PARENTS

OUR SCHOOL VISION

"Striving for excellence together in a caring Christian community."

RESPECT COMPASSION COURAGE

As a Church school, we believe that people grow in mind, body and spirit. Christian values are the foundation of our teaching and our ethos as we strive together for excellence for all. We aim for each member of our school community to fully engage in the great adventure that is Primary education.

Working together, we aim for all of our school community to become:

- successful learners who enjoy learning and exploration, make progress and achieve;
- confident, well-rounded individuals who are able to live safe, healthy and fulfilling lives; and
- responsible citizens with strong moral and social values who make a positive contribution to society.

"I came to give life—life in all its fullness." John 10:10

LIVING OUR VISION THROUGH SCIENCE

Our Science curriculum helps children become curious, confident and collaborative investigators who explore the natural world and use their learning to make informed, responsible choices. Children work together on practical investigations and group enquiries that build teamwork, resilience and shared problem-solving, while learning how science connects to everyday life and our values of Respect, Compassion and Courage. Hands-on experiments, visits, local links and opportunities to test ideas both inside and outside the classroom make science engaging and relevant, and support children to understand how their choices affect their health, their community and the wider planet.

YEAR GROUP BREAKDOWN

- **Year 1: Discovery and the Seasons** Children begin by identifying common **animals** (pets and wild) and the basic parts of the **human body** and **senses**. They explore **everyday materials**, testing properties like whether things float or sink. In **plants**, they grow seeds and learn the names of local garden and wild plants. Throughout the year, they complete "seasonal walks" to observe and record changes in weather and nature.
- **Year 2: Survival and Suitability** Pupils investigate why certain **materials** are suitable for specific jobs, such as why glass is used for windows. They learn about the basic needs of **animals and humans for survival** (water, food, and air) and the importance of exercise and hygiene. They explore **habitats** and micro-habitats, discovering how living things are suited to where they live.
- **Year 3: Forces and Foundations** Children are introduced to **forces**, investigating how objects move on different surfaces and exploring **magnets**. They study **rocks, fossils, and soils**, learning how they are formed and their different properties. In **light**, they recognise that they need light to see and investigate how shadows change. They also study **nutrition** and the human **skeleton and muscles**.

- **Year 4: Vibrations and Circuits** Pupils explore how **sound** is made through vibrations and how it travels. They build **electrical circuits**, identifying components like cells, wires, and bulbs. In **states of matter**, they investigate solids, liquids, and gases, and learn about the water cycle. They also explore **living things** and how they are classified using keys.

- **Year 5: The Universe and Change** Children learn about the **Solar System**, describing the Sun, Earth, and Moon and investigating the distance of planets from the Sun. They explore the **properties of materials**, investigating conductivity, transparency, and reversible/irreversible changes. They also study **forces** like gravity and air resistance, and the life cycles of different animals.

- **Year 6: Evolution and Systems** In their final year, pupils study **evolution and inheritance**, seeing how living things have changed over time. They investigate **light** in more detail, exploring how it travels in straight lines. They learn about the **circulatory system** in humans and build more complex **electrical circuits**, using recognized symbols in diagrams.

PROGRESSION

Our curriculum focuses on the development of "Working Scientifically" skills:

- **Questioning:** Children progress from asking simple questions about what they notice to creating their own scientific questions linked to complex phenomena.

- **Testing:** In KS1, pupils perform simple comparative tests. By the end of KS2, they plan their own fair tests, recognizing and controlling variables.

- **Measuring:** Children move from using simple observations to taking accurate measurements with a range of equipment, including **thermometers, dataloggers, and Newton Meters**.

- **Data and Conclusions:** Progression moves from recording findings in simple tables to plotting **line and scatter graphs** and using results to identify causal relationships.

HOW PARENTS CAN SUPPORT

- **Nature Walks:** Use your child's curiosity to look for seasonal changes, identify local plants, or hunt for micro-habitats under logs or stones.

- **Kitchen Science:** Discuss reversible and irreversible changes while cooking (e.g., melting chocolate vs. frying an egg) or investigate which materials dissolve in water.

- **Predict and Observe:** When playing with magnets or building with different materials, ask your child to predict what will happen and why.

- **Connect to Life:** Discuss how science keeps us healthy, such as the importance of a balanced diet, exercise, and personal hygiene.

GLOSSARY OF TECHNICAL TERMS

- **Classification:** Grouping living things or materials based on their features or properties.
- **Variable:** Something that can be changed, kept the same, or measured in an investigation to make it a fair test.
- **Habitat:** The natural home or environment where an animal or plant lives.
- **Opaque:** A material that does not allow light to pass through it.
- **Conductivity:** How easily heat or electricity can move through a material.
- **Solubility:** A measure of how well a substance (like salt) can dissolve in a liquid.
- **Evolution:** The process by which living things change over very long periods of time.
- **Force:** A push or a pull that can make something move, stop, or change direction.