



# Science

## at St Mary's Catholic Primary School

### Beyond St Mary's

Our curriculum encourages curiosity, interest and enquiry into our world and the universe around us through the specific disciplines of biology, chemistry and physics. Children will be immersed into the science curriculum through being exposed to a varying type of lesson structures to develop their understanding of scientific: processes, knowledge, methods and uses. To develop greater independence, children are encouraged to ask scientific questions, plan and perform experiments to practice their scientific knowledge practically. As children progress through our school, they will build upon their prior knowledge, ensuring the knowledge and ability to work scientifically is embedded in their long-term memory. Children are provided with a rich and broad science curriculum which includes: relevant science vocabulary; a conceptual understanding; scientific knowledge; the ability to ask deep questions with the appropriate investigative skills to answer them where possible. The children at St Mary's will be able to recognise how each topic they learn connects to everyday life and equips and empowers them to participate, challenge and reshape the world around them.

### Year 6

#### Light

Children will recognise how light travels, reflects and how shadows have the same shape as the object.

#### Classification

Children will describe how living things are classified using observable characteristics and give reasons for their classification.

#### Evolution & Inheritance

Children will recognise living things change over time and produce offspring of the same kind. Children will also identify how animals and plants have adapted to suit their environment.

#### Electricity

Children will associate brightness with voltages of cells, compare and give reasons for how components function and recognise symbols in a diagram.

#### Circulation & Lifestyle

Children will identify the human circulatory system and describe its function. Children will recognise the impact of diet and lifestyle on their body as well as how nutrients are transported.

### Year 4

#### Skeletons, Muscles and Nutrition

Children will identify the right nutrition animals and humans need and animals including humans have skeletons and muscles for support, protection and movement.

#### Rocks and Fossils

Children will compare and group different types of rock and describe how fossils are formed, recognising soils are made from rocks and organic matter.

#### Light and Shadows

Children will recognise the use of light, what different sources of light are and how to be safe in the sun. Children will understand how shadows are formed and how light reflects.

#### Plants: Needs for Survival

Children will learn the life-cycle of a plant, building on Plants and Growth in Y2. Alongside labelling the parts of a flower.

#### Forces and Magnets

Children will compare how objects move on different surfaces, how magnets attract and repel and compare groups of everyday materials.

### Year 2

#### Uses of Materials

Children will identify the sustainability of different materials and how they can be manipulated with different force.

#### Animals: Needs for Survival

Children will notice animals, including humans grow into adults, understand the basic needs of animals and humans and the importance of exercise.

#### Habitats & Protecting our Environment

Children will compare the differences between living, dead and things that have never been alive as well as identifying the most appropriate habitat for these using food chains for more detail

#### Plants and Growth

Children will observe and describe how seeds and bulbs grow into plants and what a plant needs to grow healthily.

### EYFS

Science at Foundation Stage is covered in the 'Understanding the World' area of the EYFS Curriculum. It is introduced through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. Our children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify differences and similarities. They will learn to use their senses, feeling dough or listening to sounds in the environment, such as sirens or farm animals. Children will make observations of animals and plants and will be encouraged to ask questions about why things happen and how things work. Children will also be asked questions about what they think will happen to help them communicate, plan, investigate, record and evaluate findings.

### Year 5

#### Earth and Space

Children will learn the movement in the Solar System and use the idea that Earth rotation gives us day and night.

#### Forces

Children will explain the use of gravity, air and water resistance and friction is present between moving surfaces.

#### Materials: Properties and Changes

Children will compare and group everyday materials, explore solids, liquids and gases and irreversible and reversible changes.

#### Life-Cycles

Children will describe the differences in lifecycles of different animals and describe the process of reproduction in some plants and animals.

#### Growing Older

Children will describe changes in a human life cycle.

### Year 3

#### Skeletons, Muscles and Nutrition

Children will identify the right nutrition animals and humans need and animals including humans have skeletons and muscles for support, protection and movement.

#### Rocks and Fossils

Children will compare and group different types of rock and describe how fossils are formed, recognising soils are made from rocks and organic matter.

#### Light and Shadows

Children will recognise the use of light, what different sources of light are and how to be safe in the sun. Children will understand how shadows are formed and how light reflects.

#### Plants: Needs for Survival

Children will learn the life-cycle of a plant, building on Plants and Growth in Y2. Alongside labelling the parts of a flower.

#### Forces and Magnets

Children will compare how objects move on different surfaces, how magnets attract and repel and compare groups of everyday materials.

### Year 1

#### Everyday Materials

Children will explore different materials, compare and group them based on their characteristics and properties.

#### Autumn, Winter, Spring and Summer

Children will explore and observe changes across the 4 seasons including how the weather and day length varies.

#### Amazing Animals

Children will identify and name a variety of animals, including carnivores, herbivores and omnivores and label parts of the human body associated with senses.

#### Plants

Children will identify a variety of common plants and identify the structure of these.