



## **Domains of Knowledge for Primary Science**

Throughout the year, students will learn about the three disciplines of science: biology, chemistry and physics. We teach science in a way that fosters a curiosity and lifelong love of the subject. We will give our students the opportunity for practical, hands on experiences and the knowledge to make sense of, and revel in, the wonders of the natural world.

We will explicitly teach them the skills they need to be a methodical, analytical and inquisitive scientist. We use the following skills across the curriculum.

- **Comparison**
- **Fair testing**
- **Research**
- **Observation over time**
- **Pattern seeking**

## **Domains**

### **Biology**

- **Living things and habitats**
- **Plants**
- **Seasons and changes**
- **Animals including humans**
- **Evolution**

### **Chemistry**

- **Materials and states of matter**
- **Rocks**

### **Physics**

- **Light and sound**
- **Electricity**
- **Forces and magnets**
- **Earth and space**

## **Key Concepts**

### **Biology**

#### **Living things and habitats**

- Look at the suitability of environments and at food chains.
- Investigate differences between all living things.
- Identify and name plants and animals.
- Look at classification keys.
- Look at the life cycle of animals and plants.
- Look at classification of plants, animals and micro-organisms.
- Look at reproduction in plants and animals, and human growth and changes.
- Look at the effect of diet, exercise and drugs.

#### **Plants**

- Identify, classify and describe their basic structure.
- Observe and describe growth and conditions for growth.
- Look at the function of parts of flowering plants, requirements of growth, water transportation in plants, life cycles and seed dispersal.

#### **Animals including humans**

- Identify, classify and observe.
- Look at growth, basic needs, exercise, food and hygiene.
- Look at nutrition, transportation of water and nutrients in the body, and the muscle and skeleton system of humans and animals.
- Look at the digestive system in humans.
- Look at teeth.
- Look at the human circulatory system.

## **Evolution**

- Look at the resemblance in offspring.
- Look at changes in animals over time.
- Look at adaptation to environments.
- Look at differences in offspring.
- Look at adaptation and evolution.
- Look at changes to the human skeleton over time.

## **Chemistry**

### **Materials and states of matter**

- Identify, name, describe, classify, compare properties and changes.
- Look at the practical uses of everyday materials.
- Look at solids, liquids and gases, changes of state, evaporation, condensation and the water cycle.
- Examine the properties of materials using various tests.
- Look at the solubility and recovering dissolved substances.
- Separate mixtures
- Examine changes to materials that create new materials that are usually not reversible.

### **Rocks and Fossils**

- Compare and group rocks and describe the formation of fossils.

## **Physics**

### **Light**

- Look at sources and reflections.
- Look at sources, seeing, reflections and shadows.
- Explain how light appears to travel in straight lines and how this affects seeing and shadows.

## **Sound**

- Look at sources of sound, vibration, volume and pitch.

## **Electricity**

- Look at appliances, circuits, lamps, switches, insulators and conductors.
- Look at circuits, the effect of the voltage in cells and the resistance and conductivity of materials.

## **Forces and magnets**

- Describe basic movements.
- Look at contact and distant forces, attraction and repulsion, comparing and grouping materials.
- Look at poles, attraction and repulsion.
- Look at the effect of gravity and drag forces.
- Look at transference of forces in gears, pulleys, levers and springs.

## **Earth and Space**

- Look at the movement of the Earth and the Moon.
- Explain day and night.
- Observe seasonal changes.