Year 6 Science Overview

Animals, including Humans

- **identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood**
- **recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function**
- **describe the ways in which nutrients and water are transported within animals, including humans**
- explore and answer questions that help them to understand how the circulatory system enables the body to function.
- learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body

Evolution and Inheritance

- **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**
- find out more about how living things on earth have changed over time
- be introduced to the idea that characteristics are passed from parents to their offspring
- find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution

Electricity

- **associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit**
- **compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches**
- **use recognised symbols when representing a simple circuit in a diagram**
- construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors
- learn how to represent a simple circuit in a diagram using recognised symbols

Light

- **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**
- explore the way that light behaves, including light sources, reflection and shadows. They should talk about what happens and make predictions

Maths Links:

- Statistics – plotting results from experiments into Excel to create bar charts, line graphs and pie charts.
- Statistics - analyse data , posing questions and using this to form conclusions.
- Statistics – calculating different averages
- Measurements: use of metric measurements (capacity, length and weight)
- Negative and positive integers- reading and recording temperatures

Living Things and Their Habitats

- **describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals**
- **give reasons for classifying plants and animals based on specific characteristics**
- be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided.
- Through direct observations where possible, classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals)
- discuss reasons why living things are placed in one group and not another.
- find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification

English Links:

- Biographies – work and lives of scientists
- Report writing- describe and write a report about a different species of dinosaur
- Explanation – features of creatures e.g habitat
- Fact Files – research into aspects of the science curriculum, eg fact files on describing the 5 different vertebrate groups.
- Letter Writing – to write a letter of complaint to a restaurant about cleanliness as there has been a case of food poisoning linked to Micro-organisms.