

Y6

- 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..
- identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
 - The heart pumps blood around the body
 - Oxygen is breathed into the lungs where it is absorbed by the blood
 - Muscles need oxygen to release the energy from food to do work.
 - Oxygen is taken into the blood in the lungs
 - The heart pumps blood through blood vessels to the muscles
 - The muscles take the oxygen and nutrients from the blood
- recognize 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.
- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
 - Fossils provide evidence that living things have changed over time
- recognize that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
 - Different animals mature at different rates and live to different ages
 - Organisms reproduce and offspring have similar characteristics to parents
 - Variation exists within a population (and between offspring of the same parents)
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
- Over time the characteristics that are most suited to the environment become increasingly common
- Environmental change can affect how well an organism is suited to its environment
- recognize that light appears to travel in straight lines
 - Light travels 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
 - Light reflects of all objects (unless they are black). Non-shiny surfaces scatter the light so we don't see a single beam.
- 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
 - Animals see light sources when light travels from the source into their eyes
 - Animals see objects when light is reflected off that object and enters their eyes
- use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
- associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
 - Batteries are a store of energy. This energy pushes electricity round the circuit. When the battery's energy is gone it stops pushing. Voltage measures the 'push'
 - When current flows through wires, heat is released. The greater the current, the more heat is released
- 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
 - Current is how much electricity is flowing round a circuit
 - The greater the current flowing through a device, the harder it works
- use recognized symbols when representing a simple circuit in a diagram.