

Y4

- recognize that living things can be grouped in a variety of ways
 - Living things can be divided into groups based upon their characteristics
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- recognise that environments can change and that this can sometimes pose dangers to living things.
 - Human activity significantly affects the environment
 - Different organisms are affected differently by environmental change
 - Environmental change affects different habitats differently
 - Different food chains occur in different habitats
- describe the simple functions of the basic parts of the digestive system in humans
 - Different animals are adapted to eat different foods
 - Food is broken down by the teeth and further in the stomach and intestines where nutrients go into the blood. The blood takes nutrients around the body
- identify the different types of teeth in humans and their simple functions
 - Animals have teeth to help them eat. Different types of teeth do different jobs
- construct and interpret a variety of food chains, identifying producers, predators and prey.
 - Nutrients produced by plants move to primary consumers then to secondary consumers through food chains
- compare and group materials together, according to whether they are solids, liquids or gases
 - Materials can be divided into solids, liquids and gases
 - Solids, liquids and gases are described by observable properties
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
 - The temperatures at which given substances change state are always the same.
 - Cooling causes gases to condense to liquids and liquids to freeze to solids
 - Heating causes solids to melt into liquids and liquids to evaporate to gases
- identify the part played by evaporation and condensation in the water cycle and associate rate of evaporation with temperature.
 - Materials change state by heating and cooling.
 - Some changes can be reversed and some can't
- identify how sounds are made, associating some of them with something vibrating
 - Sound is produced when an object vibrates.
 - Sound moves through all materials by making them vibrate.
- recognize that vibrations from sounds travel through a medium to the ear
 - Sound travel can be blocked
 - Sound travels from its source in all directions and we hear it when it travels to our ears
 - Sound spreads out as it travels
- find patterns between the pitch of a sound and features of the object that produced it
 - Changing the way an object vibrates changes its sound

- Changing the shape, size and material of an object will change the sound it produces.
- Faster vibrations (higher frequencies) produce higher pitched sounds
- find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases.
 - Changing the way an object vibrates changes its sound
 - Bigger vibrations produce louder sounds and smaller vibrations produce quieter sounds
- identify common appliances that run on electricity
 - A source of electricity (mains or battery) is needed for electrical devices to work
 - Electricity sources **push** electricity round a circuit
 - More batteries will push the electricity round the circuit faster
 - Devices work harder when more electricity goes through them
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
 - A complete circuit is needed for electricity to flow and devices to work
- recognize that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognize some common conductors and insulators, and associate metals with being good conductors.
 - Some materials allow electricity to flow easily and these are called conductors. Materials that don't allow electricity to flow easily are called insulators