

# Science - Year 4

## Autumn 1

### States of Matter

- A solid is an object that is firm and stable.
- A liquid is a substance that flows freely.
- A gas has no fixed shape and will expand freely.
- Changing state means to change from a solid to a liquid or a liquid to a gas.
- Water boils at 100 degrees Celsius (°C).
- Water freezes at 0 degrees Celsius. (°C).
- The temperature is how hot or cold something is.
- Evaporation is where a liquid turns into vapour.
- Condensation is water which collects as droplets on a cold surface when humid air is in contact with it.

## Autumn 2

### Electricity

- Electricity is the flow of an electrical current or charge through a material. It helps to power appliances.
- Electricity needs to flow around a complete circuit in order to work.
- A circuit is a pathway for electricity to flow around.
- A circuit includes a cell, wires, bulb, switch/buzzer.
- A conductor is a material that electricity can pass through.
- Metals make good conductors.
- An insulator is a material that electricity cannot pass through.

## Spring 1

### Animals Including Humans Food Chains

- Food chain – The process of how animals and humans get their food.
- All food chains start with a producer which is always a plant that converts the sun's energy into food.
- Animals then eat the producer and are called consumers.
- Sometimes animals eat other animals. These are called predators.

## Spring 2

### Living Things and Their Habitats

- Living things can be grouped and classified based on their characteristics.
- Animals can be classified as either vertebrates or invertebrates.
- Vertebrates are animals that have a backbone inside their body.
- Invertebrates don't have a backbone. They either have a soft body, like worms and jellyfish, or a hard outer casing covering their body, like spiders and crabs.
- Vertebrates include: mammals, fish, birds, reptiles, amphibians.
- Invertebrates include: insects, spiders, worms, slugs, snails.
- Environment - where something is/lives.
- Plants and animals rely on what their environment provides them, so any changes to do this could be dangerous to the animals and plants living there.

## Summer 1

### Sound

- Sounds are created by vibrations.
- Vibrations are movements backwards and forwards.
- Sound waves (vibrations) travel through solids, liquids and gasses to the ear.
- The pitch tells you how high or low a sound is.
- The volume tells you how loud or quiet a sound is.
- The louder the sound the bigger the vibrations are.
- The further away from a sound you are, the quieter it is because the vibrations have further to travel.

## Summer 2

### Animals Including Humans - Digestion

- Digestion is the how the body breaks down food so it can be taken in and used.
- Food goes in through your mouth, is chewed by the teeth and then travels through the body and comes out of the rectum.
- Our teeth will change with age.
- Humans have two sets of teeth in a life time, first set is called primary as a young person and second set is called secondary these are adult teeth.