

Vocabulary	
Key Word	Definition
canines	Ripping teeth.
carnivores	Animals that only eat other animals.
digestion	The process of breaking down food into simple chemicals for the body to absorb.
herbivores	Animals that only eat plants.
incisors	Cutting teeth.
large intestine	Where water is absorbed into the blood.
molars	Grinding teeth.
oesophagus	Food and water pipe.
omnivores	Animals that eat both plants and animals.
peristalsis	Muscular action to move food along the digestive tubes
predator	An animal that hunts, kills and eats other animals for food
prey	A term used to describe organisms that predators kill for food.
producer	A plant in a food chain
saliva	A lubricating digestive juice produced in the mouth
small intestine	Where food is broken down and nutrients are absorbed into the blood.
stomach	A rounded vessel in the body where acid and digestive juices break down food

Knowledge Organiser

Animals including humans

(The digestive system)

Strand: Biology

incisor

canine

premolar

molar

This is a simple food chain:

Key Questions

What is the digestive system?

Why are teeth different shapes?

What drink causes the most tooth decay?

What is a food chain?

How can I construct a food chain?

Vocabulary	
Key Word	Definition
appliance	A device or piece of equipment that has been made to perform a specific task.
battery	A small item used to power small appliances.
circuit	A route through which electricity flows.
component	The parts of a circuit.
conductor	Allows electricity to flow through it.
insulator	Doesn't allow electricity to flow through it.
current	The rate of flow of electricity measured in amps.
electrical	Something that uses electricity to work
mains power	Electricity provided by power stations.
portable	Can be easily carried around.
pylon	A tower used for keeping electrical wires above the ground.
switch	A device for controlling the flow of electricity in a circuit.




cork




iron nail



copper rod

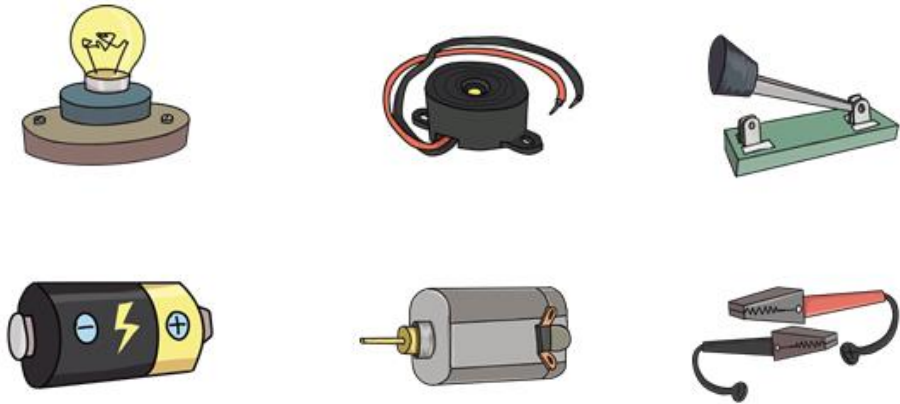


plastic ruler



steel spoon

Knowledge Organiser
Electricity
Strand: Physics



Key Questions

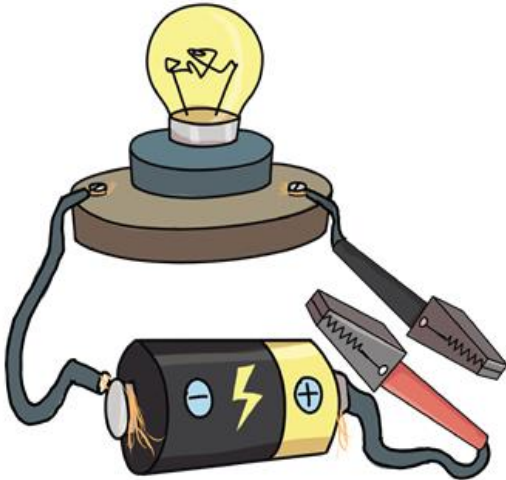
Which appliances use electricity?

How can I make a simple circuit?

Why don't some circuits work?

How can we test whether a material is a conductor or insulator?

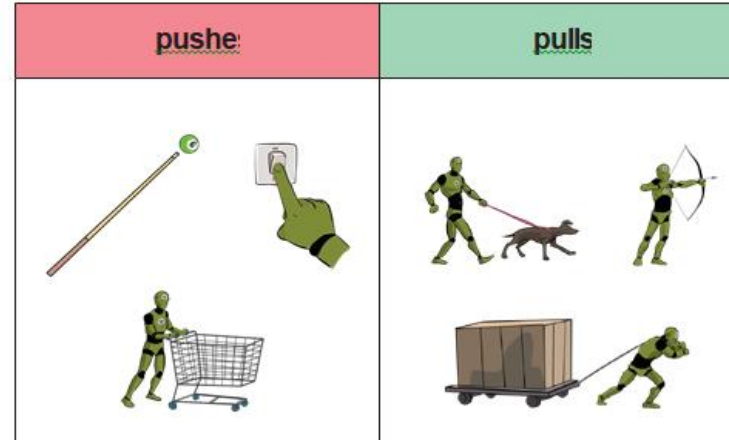
How do switches affect a circuit?



Vocabulary

Key Word	Definition
force	Push, pull, twist or turn caused when two objects interact with each other
magnet	An object or device that attracts iron or another magnetic material contact – touching
contact non-contact	Touching. Not touching.
attract	Pull towards
repel	Push away
magnetic	Attracted to a magnet.
non-magnetic	Not attracted to a magnet.
iron	A metal that can be made into a magnet.

Knowledge Organiser Forces and Magnets: Physics



Key Questions

1

What is a force?

2

Do objects move the same on different surfaces?

3

How do magnetic forces work?

4

Which materials are magnetic?

5

Do magnets attract each other?

6

Are all magnets the same strength?

Magnets and their poles



Examples of magnetic objects



iron nails



steel spoon

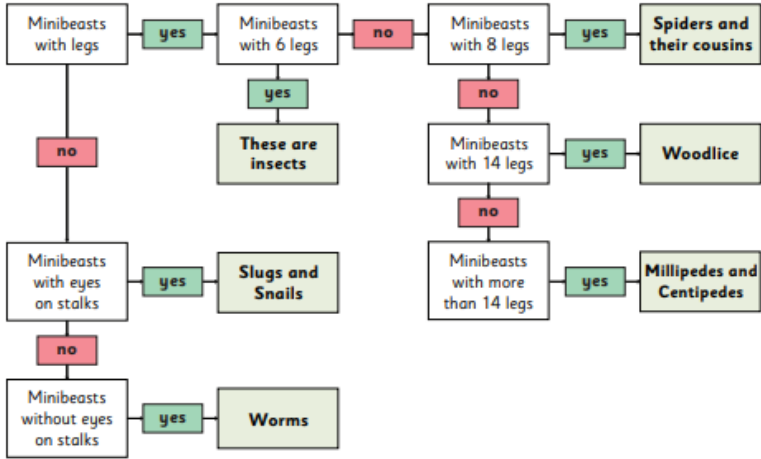


steel paper clip

Vocabulary	
Key Word	Definition
environment	The conditions (both living and non-living) that surround an organism.
classify	To arrange a group of people or things in classes or categories according to shared qualities or characteristics.
vertebrate	An animal which has a backbone.
invertebrate	An animal without a backbone.
exoskeleton	A rigid external covering for the body in some invertebrate animals.
key	A questioning device that allows the progressive narrowing down of the classification of an unknown living thing based on observable or testable features.
adaptation	The way in which an organism is particularly suited to its environment.
pollution	The introduction into the environment of a substance which has harmful effects.

Knowledge Organiser

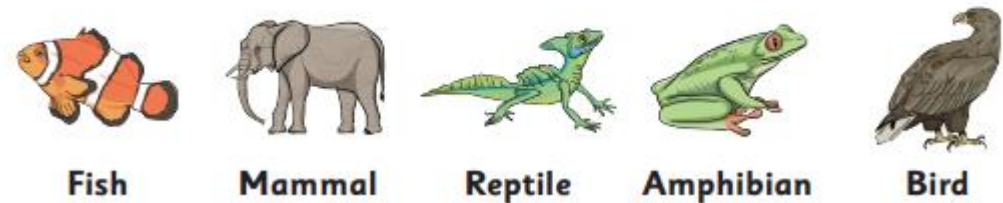
Living Things & their Habitat: Biology



Use the **classification key** to identify these minibeasts.



We can group animals into **five different groups** based on their characteristics.



Key Questions	
1	What are the 7 life processes?
2	How can we sort and group animals?
3	What are vertebrate animals?
4	Which living things can be found in the local area?
5	What is a classification key?
6	How is our environment changing?

Movement

Respiration

Sensitivity

Growth

Reproduction

Excretion

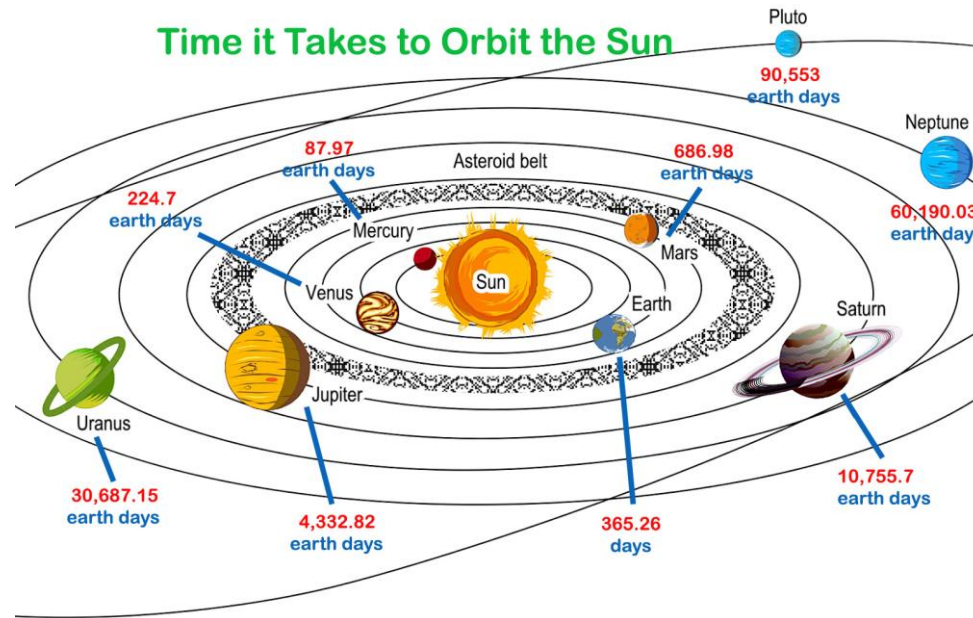
Nutrition



Vocabulary

Key Word	Definition
solar system	Is made up of the sun and the planets which orbit it.
axis	An imaginary line which passes through the middle of an object.
planet	A celestial body which orbits a star. They have their own gravity.
sun	The star at the centre of our solar system.
moons	Are satellites of planets. Some planets have none and some can have several.
The Earth	The only known planet which can sustain life. It orbits the Sun every 365 days
lunar	Anything relating to the moon.
orbit	The path taken by one body as it travels around another. E.g. The Earth orbits the Sun.
waxing moon	When the moon is becoming more visible after a new moon.
waning moon	When the moon is becoming less visible after a full moon.
gibbous moon	When $\frac{3}{4}$ of the moon is visible to the naked eye.

Knowledge Organiser Earth & Space: Physics



Key Questions

1

What are the names of the planets in the Solar System?

2

• How do we know the Earth is a sphere?

3

• How long does it take the Earth (and other planets) to orbit the sun once?

4

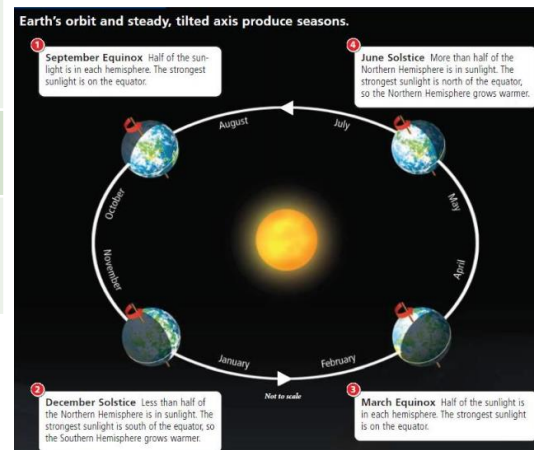
• What is the largest object that orbits the Earth?

5

• Why is there day and night on Earth?

6

• Does the moon change shape?

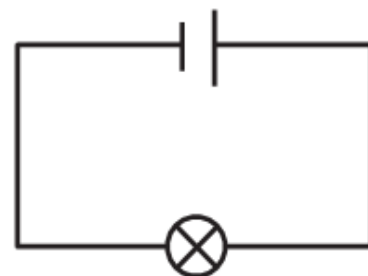
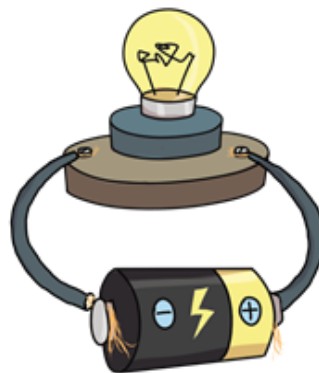


Vocabulary

Key Word	Definition
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battery	A small item used to power small appliances.
circuit	A route through which electricity flows.
components	The parts of a circuit.
conductor	Allows electricity to flow through it.
electrical	Something that uses electricity to work.
insulator	Doesn't allow electricity to flow through it.
mains power	Electricity provided by power stations.
pylon	A tower used for keeping electrical wires above the ground.
renewable energy	Energy from a source that is not depleted when used, such as wind or solar power.
non-renewable energy	Energy from a source that is depleted when used, such as coal, gas and oil.

Knowledge Organiser Electricity: Physics

Simple Circuit



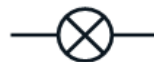
The **circuit** has to be complete to allow the **electricity** to travel all the way around it.

Scientific Symbols

When scientists draw electrical circuits, they use **scientific symbols** to show **different components**.



battery or cell



bulb



wire



open switch (off)



close switch (on)



motor



buzzer

Key Questions

1

How do I draw a scientific diagram of a circuit?

2

How does voltage in a circuit affect the brightness of a bulb?

3

How do I plan a fair test experiment to investigate variations in how components function?

4

How do I write a conclusion for my experiment?

5

• What is renewable and non-renewable energy?

Vocabulary

Key Word	Definition
gravity	The force which attracts a body towards the centre of the Earth
friction	Is a force which slows moving objects when surfaces rub together.
air/water resistance	A force caused by air which acts in the opposite direction to the object moving through it
upthrust	A force which acts in an upwards direction in a liquid, usually water.
newtons	Is a measurement of force named after the scientist, Sir Isaac Newton
newtonmeter	Is a device used to measure forces.
mass	Is a measurement of the amount of matter something has.
weight	Is a measurement of the force exerted on a mass by gravity.
gears	Are small wheels with small teeth which when combined change the force needed to move an object.
pulleys	A pulley is a device which helps move objects by making a smaller force larger.
lever	A lever is a long beam that rests on a fulcrum. Depending on the position of the fulcrum, this makes lifting loads easier.

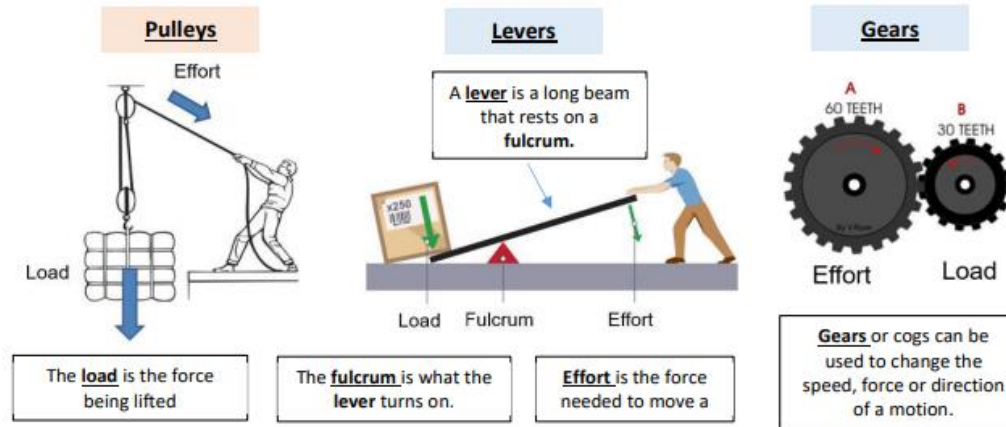
Knowledge Organiser Forces: Physics



Water resistance is a type of **friction** caused by water pushing against any moving object.



Air resistance is a type of **friction** caused by air pushing against any moving object.



Key Questions

1

What is gravity?

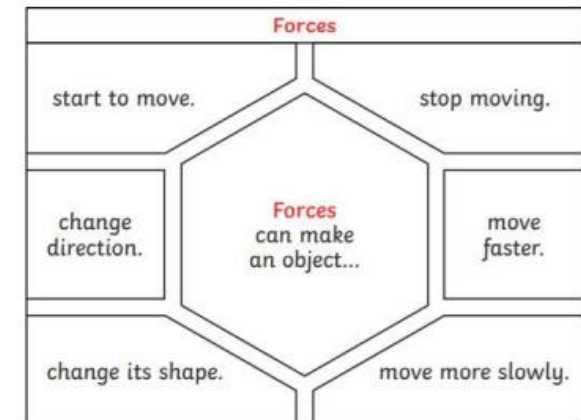
What is Friction?

Can I carry out Friction Investigation?

Can I identify the effects of air resistance?

- What is water resistance?

Can I explain about gears, levers and pulleys?



Vocabulary

Key Word

Definition

classify

To arrange a group of people or things in classes or categories according to shared qualities or characteristics.

vertebrate

An animal that has a backbone.

invertebrate

An animal without a backbone.

exoskeleton

A rigid external covering for the body in some invertebrate animals.

vascular

Plants that use roots and stems to take in water and nutrients.

Non-vascular

Plants that do not use roots and stems to take in water and nutrients.

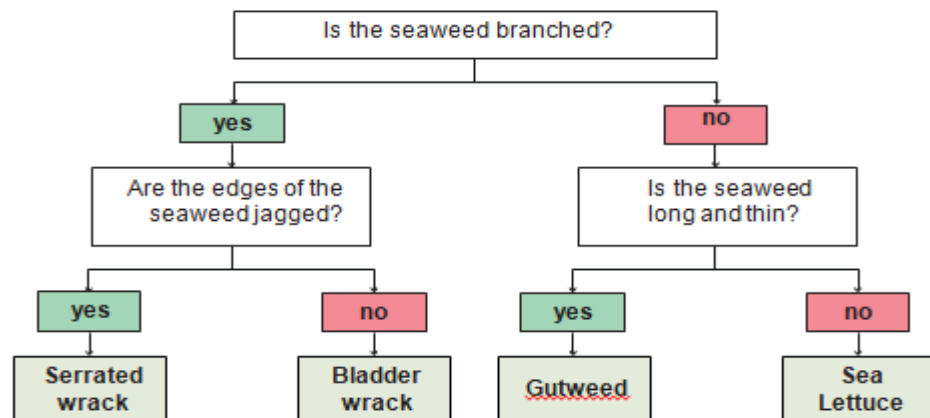
taxonomy

The scientific process of grouping or classifying living organisms

Knowledge Organiser

Living things and their Habitats 6

Classification: Biology



Seaweed A is



Seaweed B is

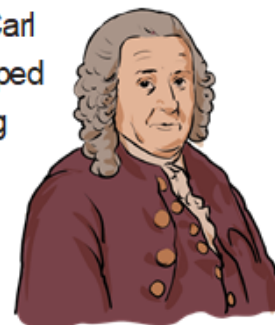


Seaweed C is



Seaweed D is

Carolus Linnaeus (also known as Carl Linnaeus) was a scientist who developed a detailed way to **classify** all living things known as a **taxonomy**.



His taxonomy helps us to determine what each living thing is. His scientific process involved **observing**, **recording** the information and making **conclusions**.

Microorganisms are **very small** living things. We can classify microorganisms into **five groups**.

viruses, bacteria, fungi, algae, protozoa

Key Questions

1

How are animals classified?

2

• What is a classification key?

3

• How can we classify plants?

4

• Is yeast a living microorganism?

5

• What are the five main groups of microorganisms?

6

• Who was Carolus Linnaeus?