

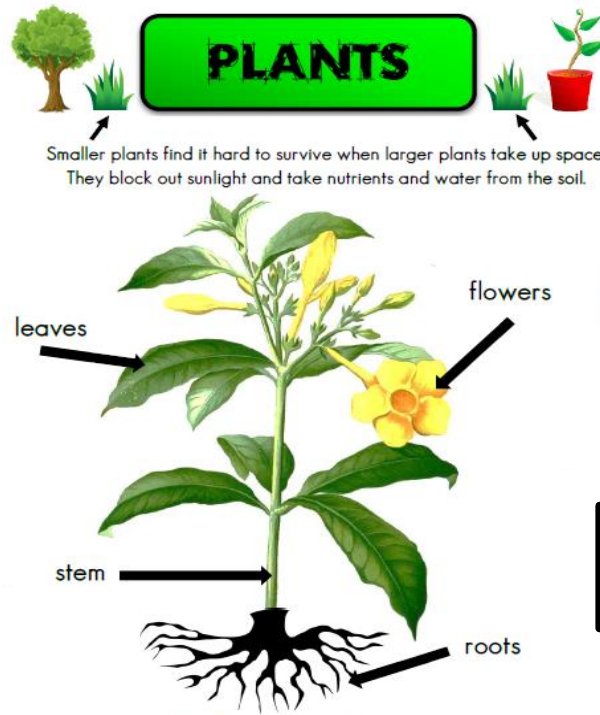
Parts of a Plant

The **flowers** are often brightly coloured and smell to attract insects. The insects help with plant reproduction.

The **leaves** use light from the sun to help them make food for the plant.

The **stem** or **trunk** carries water and nutrients to different parts of the plant and they help keep the plant upright.

The **roots** of a plant take up water and nutrients from the soil. They also help anchor the plant in the soil.



What does a plant need to grow well?

Air
Light
Water
Nutrients
Space
Warmth

Plants can make their own food!



similarity

Things that are the same



evidence

Proof



accurate

Correct



prediction

Think about what might happen



conclusion

Use evidence to make a decision

Topic (Tier 3) Vocabulary



pollination

Carrying pollen to a different plant.



seed formation

Making seeds



seed dispersal

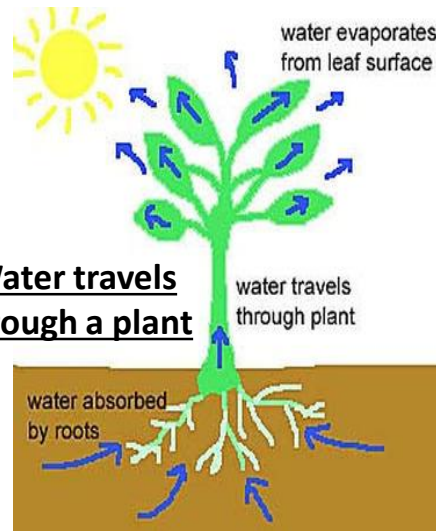
Spreading seeds so they have space to grow



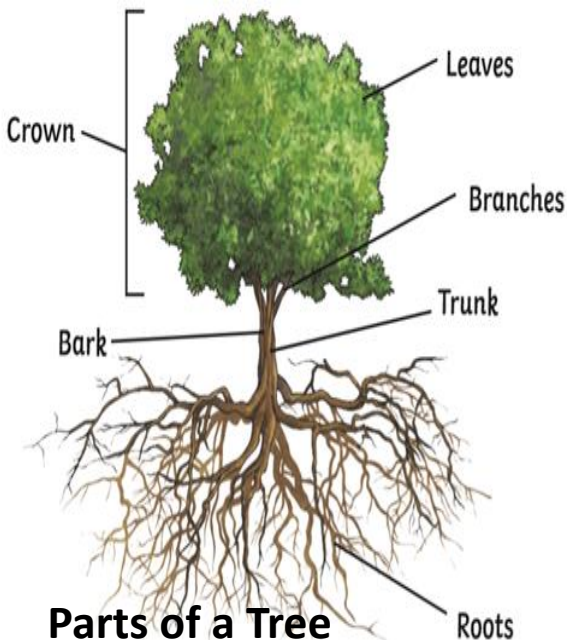
nutrients

These will help a plant grow well

Water travels through a plant



Parts of a Tree



Rights of the Child/Global Goals

Article 29

I have the right to an education which develops my personality, respect for others' rights and the environment.

Global Goal 14: Life below water

Global Goal 15: Life on land

Prior learning

Naming common plants (Y1)

Identifying plant structures (Y1)

Basic needs of plants (Y2)

Plants grow from seeds and bulbs (Y2)

National Treasures

The Eden Project: An indoor rainforest in Cornwall, England.



Big Ideas

Habitats provide living things with what they need

Life goes through a cycle

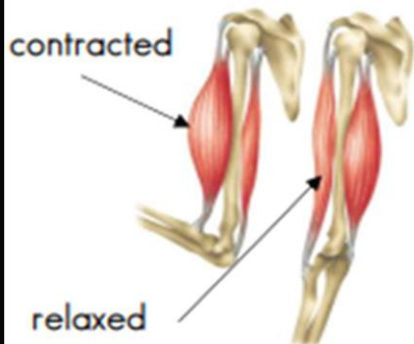
Living things have systems, each with its own job

Animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.



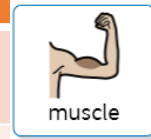
MUSCLES

Skeletons move because bones are attached to muscles. When a muscle contracts (bunches up), it gets shorter and so pulls up the bone it is attached to. When a muscle relaxes, it goes back to its normal size.



Animals (including humans) can not make their own food inside of them.

Topic (Tier 3) Vocabulary



These help make the body move (biceps, triceps, abdominal)



This is made up of bones and gives the body support, protection and movement



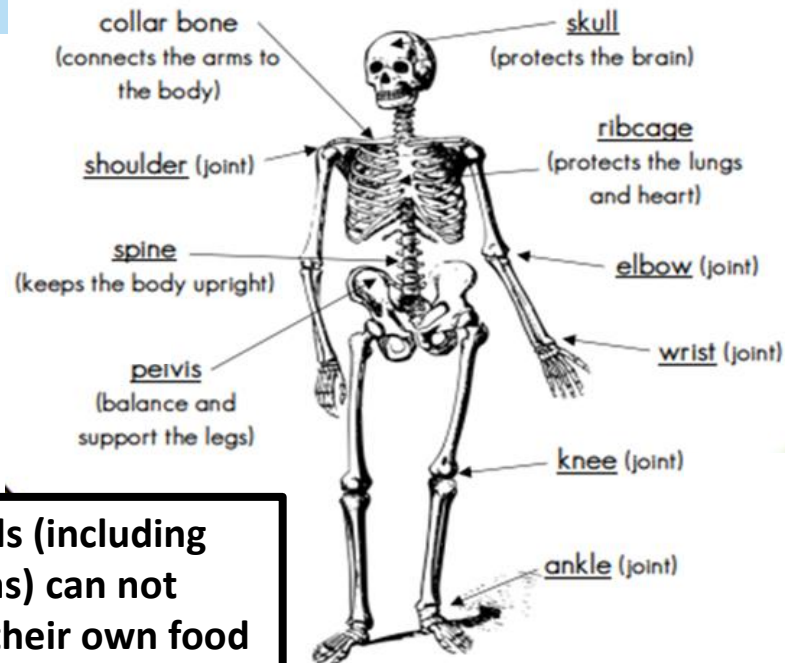
A place where two bones join



An animal with no backbone like a slug



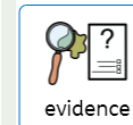
An animal with a backbone like a human



Tier 2 Vocabulary



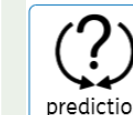
Things that are the same



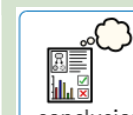
Proof



Correct



Think about what might happen



Use evidence to make a decision

Rights of the Child/Global Goals

Article 24: Every child has the right to the best possible health.

Global Goal 3: Good health and wellbeing.

Prior learning

Alive/Dead/Never Alive KS1
Naming the body parts KS1

National Treasures

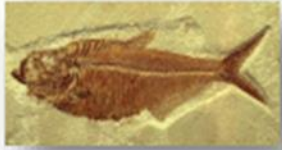
This skeleton of a Blue Whale hangs in the National History Museum in London.



Big Ideas

Living things have systems, each with its own job

Rocks and Soils



FOSSILS

How is a fossil made?

1. An animal or plant dies. Some parts decay (break down) and only the skeleton is left.
2. The skeleton is covered in rock or sand.
3. Over a very long time, the bones break down and an empty space is left in the rock where the bones used to be.
4. Minerals fill the space where the bones used to be.
5. Under lots of pressure, the minerals harden and turn to rock.
6. The earth is eroded (worn away) by the weather or the sea.
7. The fossil is uncovered.

Properties of Rocks

Hard or Soft

Some rocks need to be split with tools because they are very hard (**granite**).

Other rocks can be easily moulded because they are soft (**clay**).

Permeable or Impermeable?

Permeable rocks allow water to pass through them (**pumice**).

Impermeable rocks do not allow water to pass through (**marble**).

Crystals, grains or fossils?

These can be found in different types of rock.

Rocks and their properties

Granite is a hard rock with crystals. It is impermeable.

Chalk is a soft rock with no crystals. It is permeable.

Sandstone is a hard rock. It is permeable.

Tier 2 Vocabulary



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Topic (Tier 3) Vocabulary



rock

A solid mass made up of minerals. Rock is what cliffs and mountains are made from.



soil

The top layer of the Earth where plants grow. Made from rock and organic matter.



organic

Organic matter comes from a living thing



fossil

The remains of a living animal or plant from a long time ago. Fossils are found in rock.



National Treasures

Mary Anning was a famous British fossil hunter.



Big Ideas

Materials have different properties.

We think about the properties when choosing a material for a job.

Rights of the Child/Global Goals

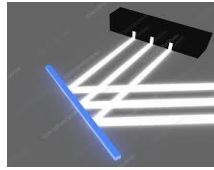
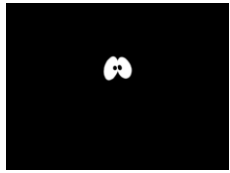
Article 13

I have the right to find out and share information.

Global Goal: responsible consumption and production.

Prior learning

Properties and uses of rock as a material (KS1)



- We need light to see things.
- It is dark when there is no light.
- Light is reflected from surfaces.
- Mirrors, glass and metals are good reflectors.
- Light from the sun can be dangerous. We can protect ourselves with sunhats, sun cream, sunglasses and shade.
- You should never look directly at the sun.
- The moon is NOT a light source.

Tier 2 Vocabulary



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Topic (Tier 3) Vocabulary



shadow

A dark image seen when light is blocked



opaque

Objects that block light



transparent

Objects that let some light through



translucent

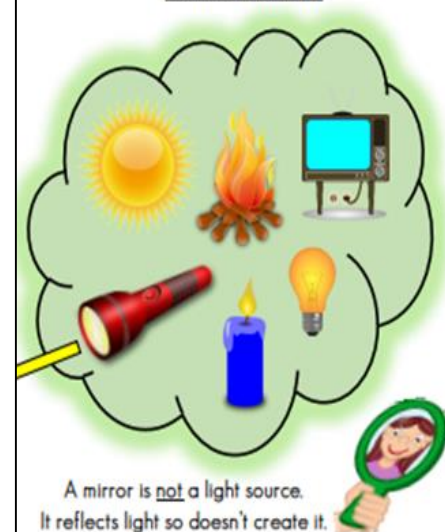
Objects that light can travel through



light source

Where light comes from

LIGHT SOURCES



Because light travels in straight lines, when it hits an object, it is blocked. It can't bend around the object so it casts a shadow.

Rights of the Child/Global Goals

Article 13

I have the right to find out and share information.

Prior learning

Exploring shiny materials (KS1)

National Treasures

Festivals and light

Diwali



Christmas



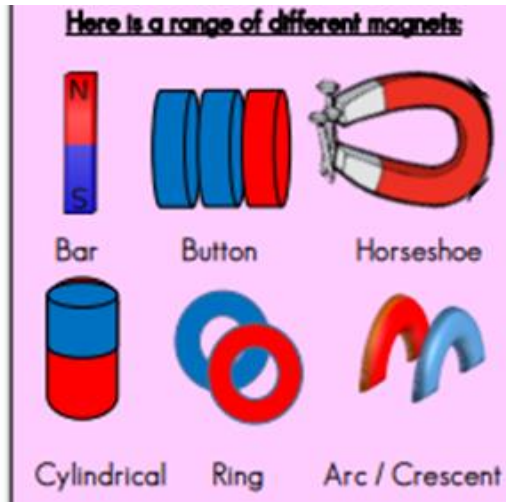
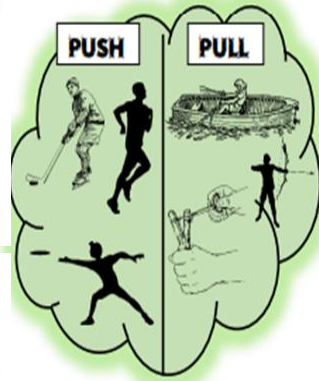
Big Ideas

Light & sound can be reflected & absorbed; they enable us to see & hear

Pushing and Pulling

A force is a push or a pull acting on an object. Forces can make objects start or stop moving.

Many, but not all, metals are magnetic.

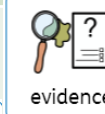


Tier 2 Vocabulary



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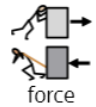
Think about what might happen



conclusion

Use evidence to make a decision

Topic (Tier 3) Vocabulary



force

A push or a pull



repel

When two magnets push away from each other



attract

When two magnets come together



push

A force used to move something away from you



pull

A force used to bring something towards you



magnet

A piece of metal that attracts other metals that are magnetic



magnetic pole

The two ends of a bar magnet

magnetic



These are attracted to magnets.

non-magnetic



These are not attracted to magnets

Surfaces

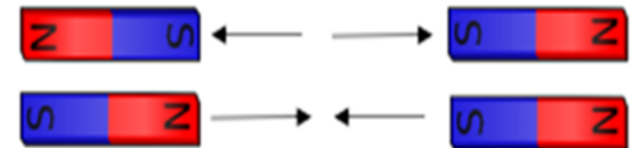
Objects move faster for longer on smooth surfaces and they slow down more quickly on rough surfaces.

Magnetic Poles

When two magnets are close, they create pushing or pulling forces on each other.

The two ends of a magnet are known as the north and south poles.

The same poles repel (push)
The opposite poles attach (pull)



National Treasures

Isaac Newton:

A British scientist who studied forces over 400 years ago. His work established the universal laws of motion and gravity.



Prior learning

Materials and their properties (rough, smooth) KS1
Pull, push and twist KS1
Natural and man-made KS1

Rights of the Child/Global Goals

Article 13

I have the right to find out and share information.

Big Ideas

There are contact and non-contact forces; these affect movement