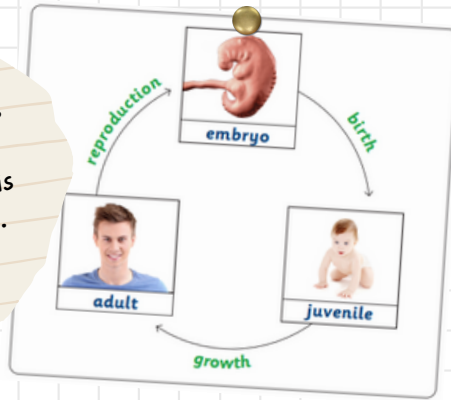


Human Survival

All humans are born and they grow and change over time to become an adult. At the end of their lives, all humans die. We can show the six stages of life as a timeline.

baby toddler child teenager adult elderly

A human life cycle is different from a timeline because it is a circular diagram.



How do germs spread?

Germs can spread onto our hands and surfaces we touch. Sneezing, coughing, using the toilet, handling pets and dirt from playing outside can all spread germs. Washing with soap and water removes germs.

What do humans need to keep us alive?

Humans need: food, water, air, shelter, space and sleep to stay healthy.

What should we eat?

To stay healthy, humans need a balanced diet, plenty of water, exercise and enough sleep. To eat healthily, we must eat the right amounts of food from all five main food groups.



Food group	Portions
fruit and vegetables	5+
carbohydrates	3-4
proteins	2-3
dairy and alternatives	2-3
oils and spreads	1

What is bodily hygiene?

Bodily hygiene is the way we keep our bodies clean and get rid of germs. Germs are tiny living things, such as bacteria, that can cause illness in humans.

Exercise

What is a aerobic exercise?

It makes the heart beat faster to keep it healthy for pumping blood.

What is strengthening exercise?

It makes our bones and muscles stronger and helps our balance.

What is stretching?

It makes our bodies more flexible, to help prevent sprains and injuries.

What is balancing?

It improves our balance and coordination.

carbohydrates

A food group containing nutrients that gives the body energy.

juvenile

A stage in the life cycle of animals. In humans, it includes the baby, toddler, child and teenager stages.

proteins

A food group containing nutrients that helps build muscle.

Habitats

What is a habitat?

A habitat is a place where plants and animals live. There are many different habitats on Earth.



Every habitat provides the things that plants and animals need to survive:

- food to provide nutrients for energy and growth
- water for plants to make food and stand upright and for animals to stay alive
- shelter for protection from weather and predators
- space to grow, feed and have offspring

Plant Adaptations

Spines
Some plants grow sharp spines to hurt predators.



Thorns
Woody thorns can scratch and pierce the skin of predators.



Hairs
Tiny hairs on the stems and leaves of some plants stop insects from crawling on them.



Prickly leaves
Sharp prickles can put animals off eating the leaves.



Stings
Painful stings can stop animals from eating some plants.



Chemicals
Some plants produce chemicals that are poisonous to animals.



Camouflage
Some plants are camouflaged so that they do not look like food.



Sheltering animals
Some plants provide a home to other animals that provides them with protection.



Many different plants and animals live in a habitat. Unknown plants and animals can be identified by observing their physical features and behaviour.

Animal Adaptations

Speed
Some prey, such as the springbok, use speed to outrun predators.



Weapons
Some prey, such as the porcupine, use body parts, such as sharp quills, to hurt their predators.



Warning colouration
Some prey use bright colours to warn predators to stay away.



Shields
Some prey have hard coverings for protection.



Mimicry
Some prey look like other, more dangerous animals.



Camouflage
Some prey blend into their surroundings so that predators will not see them.



Life Processes

What are the 7 life processes of living things?

1. moving
2. getting rid of waste
3. breathing
4. producing offspring
5. using their senses
6. feeding
7. growing

What is a food chain?

A food chain shows how energy from food is transferred from plants to animals in a habitat. The arrow between members of a food chain means 'is eaten by'.



camouflage

The ability to hide or blend in with the surrounding habitat.

mimicry

When a living thing copies the appearance or behaviour of another animal, plant or object.

offspring

the young of an animal or plant.

nutrient

A substance that plants and animals need to grow, live and stay healthy.

USES OF MATERIALS

WHAT IS A MATERIAL?

Materials are what things are made from. There are many everyday materials.

- absorbent
- not absorbent
- opaque
- transparent
- bendy
- not bendy
- rough
- smooth
- hard
- soft
- stretchy
- not stretchy
- strong
- not strong
- waterproof
- not waterproof

WHAT IS A PROPERTY?

A property is a quality that a material has. Materials can have several properties. For example, wood is hard, strong, opaque and absorbent.

Objects are made from materials with suitable properties.

Object: chair legs
Material: metal
Properties: Strong and not bendy so the legs won't bend or collapse when a person sits down.



Object: chair seat
Material: plastic
Properties: Strong and waterproof so the seat won't break when sat on, and any spills can be wiped off.



Material	Products	Examples
cardboard	packaging	
glass	bottles and jars	
metal	tins, cans and foil trays	
paper	newspapers and magazines	
plastic	bottles, pots and trays	

WHAT IS RECYCLING?

There are three ways we can save the Earth's natural resources.

- Reduce the number of objects we buy and the amount of packaging we use.
- Reuse items like carrier bags and envelopes.
- Recycle as much waste as possible.

SHAPING MATERIALS



twisting



squashing



bending



stretching



absorbent sponge



soft fabric



stretchy rubber band



transparent vase

absorbant

An absorbent material easily soaks up liquid.

opaque

It stops light from travelling through it, so you cannot see through it.

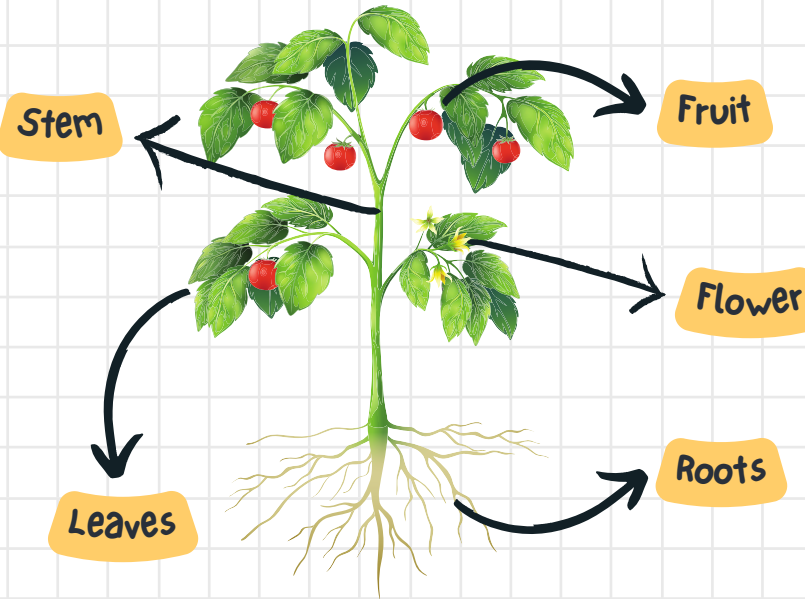
transparent

A transparent material allows you to see through it.

waterproof

A waterproof material does not let water pass through it.

Plant Survival



Germination

What is germination?

Germination is the first stage of plant growth when a seed starts to grow. Seeds do not need light to germinate because they start to grow underground in the dark. The food stored inside the seed helps it to start growing.

What happens after germination?

Some time after germination, a shoot appears above the soil. The shoot develops into a stem and leaves. The plant uses its roots to take in nutrients and water from the soil.



Do all plants need the same things?

Some unusual plants in the world have developed ways to survive in their habitats. Reindeer moss survives in cold polar habitats. It is inactive for long periods of time to save energy.

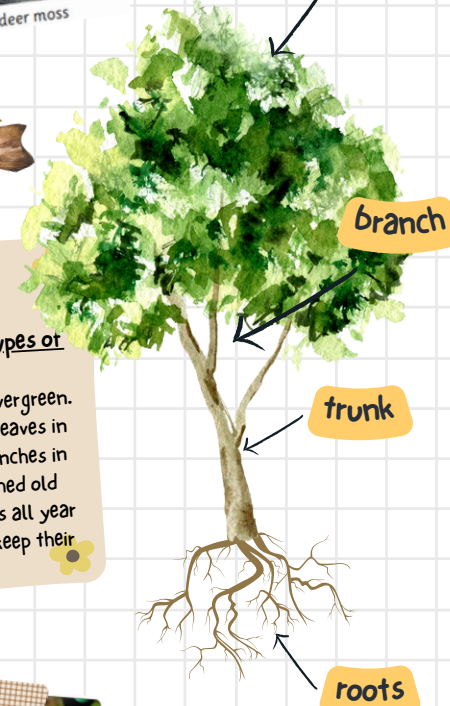


reindeer moss

bark

What are the different types of trees?

Trees can be deciduous or evergreen. Deciduous trees lose their leaves in autumn and have bare branches in winter. Evergreen trees shed old leaves and grow new leaves all year round, which means they keep their leaves in winter.



What do plants need to grow?

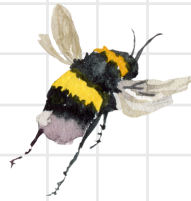
Most plants need water, nutrients, room to grow, light and air to grow.



healthy aubergine plant



unhealthy aubergine plant



germinate

When a seed starts to grow.

habitat

The place where a plant or animal lives, such as a woodland or desert.

season

One of the four periods of the year.



daffodil bulbs

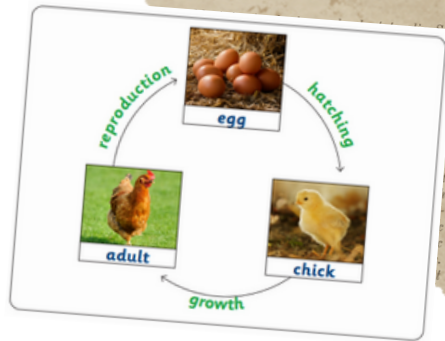
What do plants grow from?

Some plants grow from bulbs. A bulb contains a tiny plant and all the food the plant needs to grow. Some plants grow from seeds. It contains a tiny, young plant and a store of food that the plant needs to start growing before it can make food from sunlight.



planting seeds

Life Cycles



Animal Survival

How do the seasons affect animals?

In spring, animals reproduce and have offspring. In summer, young animals grow and develop. In autumn, animals prepare for winter. In winter, animals protect themselves from the cold weather by sheltering, hibernating or migrating.

Food chains



lettuce (plant)



slug (omnivore)



hedgehog (carnivore)

off spring

Adult animals reproduce to have young called offspring. Having offspring is important for the continued survival of all species of animals. Some offspring look like smaller versions of their parents. Others look very different to their parents.



tadpole



frog



calf



cow

How do humans harm habitats?

Humans can harm the habitats of other living things by using chemicals on their gardens, tidying green spaces and digging up habitats. Litter can also harm habitats.



Humans can help habitats in many different ways.



feeding wildlife



insect hotel



wild, uncut areas



weeding by hand

What are microhabitats?

A microhabitat is a small habitat contained within a larger habitat.



under logs and stones



hedgerow



pond



rock pool



mountain habitat



ocean habitat

What are habitats?

A habitat is a place where plants and animals live. Habitats have living and non-living parts. Living parts include the plants and animals that live there.

consumer

A living thing that feeds on other living things.

hibernation

A period of deep sleep and inactivity during winter.

producer

A living thing that makes its own food for energy.

reproduce

The process of producing offspring.