

# Animal Survival

## Habitats

A habitat is a place where plants and animals live. There are different habitats, such as forests, polar regions, deserts, oceans, mountains and rainforests.

Habitats have living and non-living parts. Living parts include the plants and animals that live there. Non-living parts include sunlight, air, water, soil and temperature. Each habitat varies in its living and non-living parts.

All living things depend on the living and non-living things in their habitat to survive. This is called interdependence.



mountain habitat



ocean habitat

## Invertebrates

Invertebrates are animals without a backbone. They can be sorted based on what they look like. Six invertebrate groups include arachnids, crustaceans, insects, molluscs, myriapods and worms.



mollusc

## Microhabitats

A microhabitat is a small habitat contained within a larger habitat. There are different microhabitats.



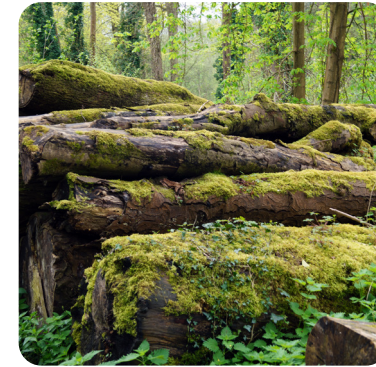
rock pool



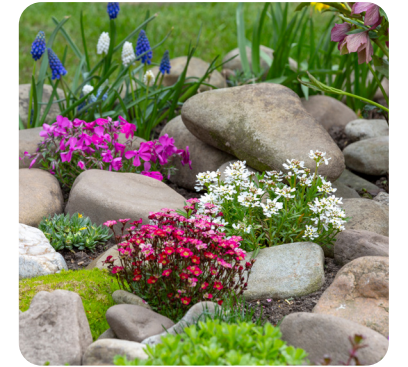
pond



hedgerow



under logs and stones



The living and non-living parts of a microhabitat can be very different to those in the surrounding larger habitat. For example, a pond is found within a larger garden habitat. It is different to the garden because it contains freshwater where frogs, pond snails and duckweed can live.

## Survival

Habitats provide the food, water, air, shelter and space that animals need to survive. They need food and water for energy and growth. They need air to breathe. Animals need shelter for protection from weather or dangers. They need space to grow and reproduce.



## Food chains

A food chain shows how living things depend on one another for food. All food chains start with a plant, which is a producer, followed by animals, which are consumers. Animals can be herbivores that only eat plants, carnivores that only eat meat or omnivores that eat plants and meat.



lettuce (plant)



slug (omnivore)



hedgehog (carnivore)





# Humans and 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. They can feed wildlife and build microhabitats, such as ponds or insect hotels. They can leave wild, uncut areas in gardens or public places. They can also remove weeds by hand instead of using chemicals.



feeding wildlife

insect hotel



wild, uncut areas

weeding by hand

# Animals and the seasons

Animals change their behaviour as the seasons change in the United Kingdom. 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.



## Offspring

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.



calf

cow

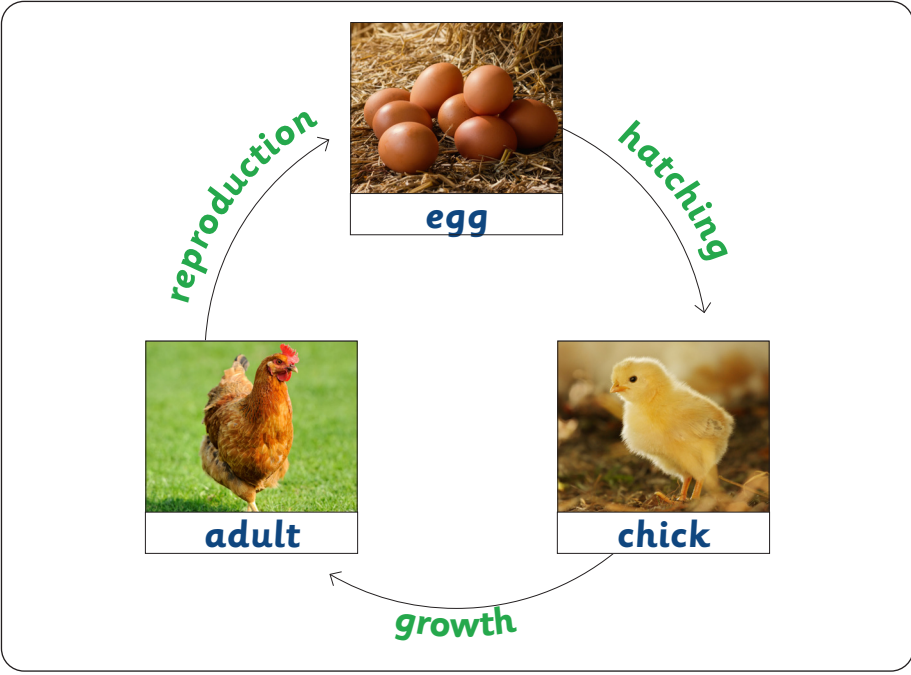


tadpole

frog

# Life cycles

All animals have a life cycle. Different animals have different life cycles. A life cycle shows the series of changes that happen to a living thing during its life. A life cycle starts again when adult animals reproduce and have offspring.



chicken's life cycle

## Glossary

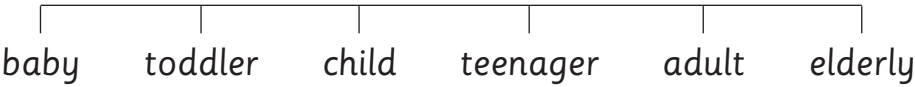
consumer	A living thing that feeds on other living things. All consumers are animals.
hibernation	A period of deep sleep and inactivity during winter.
producer	A living thing that makes its own food for energy. All producers are plants.
reproduce	The process of producing offspring.
survive	To continue to live or exist.



# Human Survival

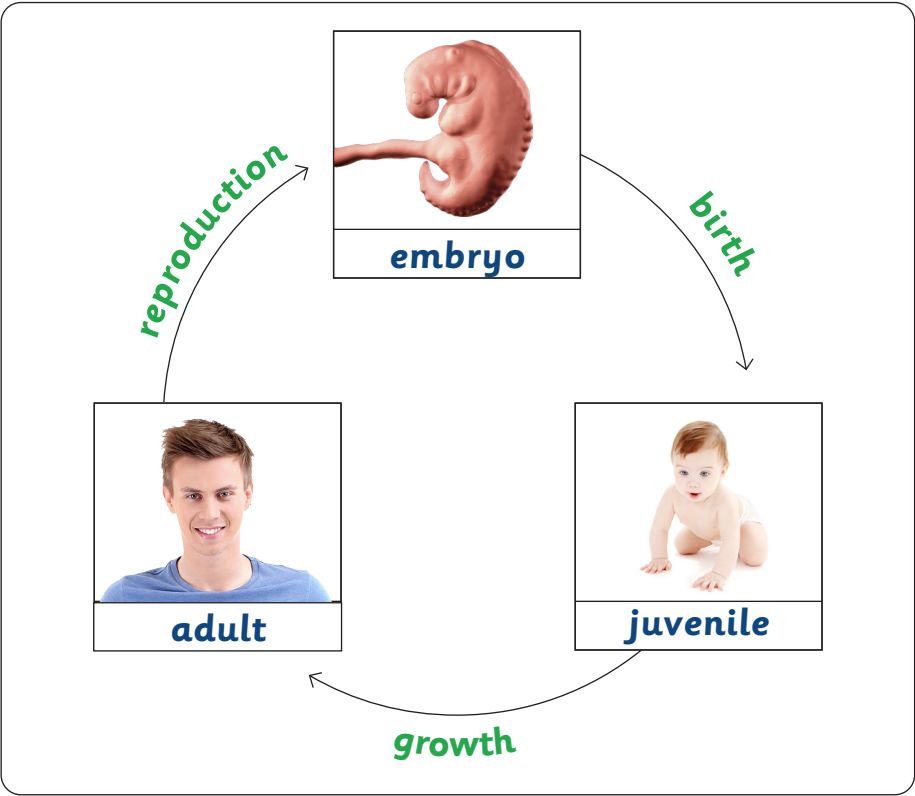
## Stages of human life

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.



## Human life cycle

A human life cycle is different from a timeline because it is a circular diagram. It starts when a baby is an embryo inside the female's body. Following birth it is a juvenile. It grows over time to become an adult. An adult is a fully grown human and can reproduce and have offspring of its own, starting the life cycle again.



## Human needs

Humans need different things to keep them alive and healthy. Without one or more of these things, we cannot survive. The most important human needs are:



food



water



air



shelter



space



sleep

## Nutrition and hydration

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. This is called a balanced diet. These are the 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

The Eatwell guide shows which food is in each group and how much of each type of food we should eat each day. Sugary and fatty foods are not needed for a balanced diet.



We should also drink six to eight glasses of water every day to stay hydrated. Water carries the nutrients from food around our bodies and helps us to concentrate.



# Exercise

Regular exercise keeps our bodies strong and healthy. It also improves our mood. We should exercise for one hour every day. There are four main types of exercise:

**Aerobic** exercises like running make the heart beat faster to keep it healthy for pumping blood around the body.



**Strengthening** exercises like push-ups make our bones and muscles stronger and helps our balance.



**Stretching** exercises like the cobra stretch make our bodies more flexible, to help prevent sprains and injuries.



**Balancing** exercises like gymnastics improve our balance and coordination. This makes us less likely to fall and improves our sporting performance.



# 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. There are germs on most surfaces we touch, so keeping ourselves clean helps us stay healthy.

Wash your hands with soap and running water frequently.



Brush your teeth twice a day.



Wipe your bottom and wash your hands after using the toilet.



Have a bath or shower at least twice a week and also after playing sport or getting dirty.



Wash your hair with shampoo at least once or twice a week.



Trim your fingernails and toenails every week and clean them every day.



Wear clean clothes. Change your underwear and socks every day.



Cough and sneeze into a tissue before throwing it in the bin and then washing your hands.



# How 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.



# Glossary

**carbohydrates** A food group containing nutrients that gives the body energy, such as wheat and potatoes.

**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, such as meat or beans.





# Plant Survival

Plants are living things that change with the seasons. They grow in different habitats.



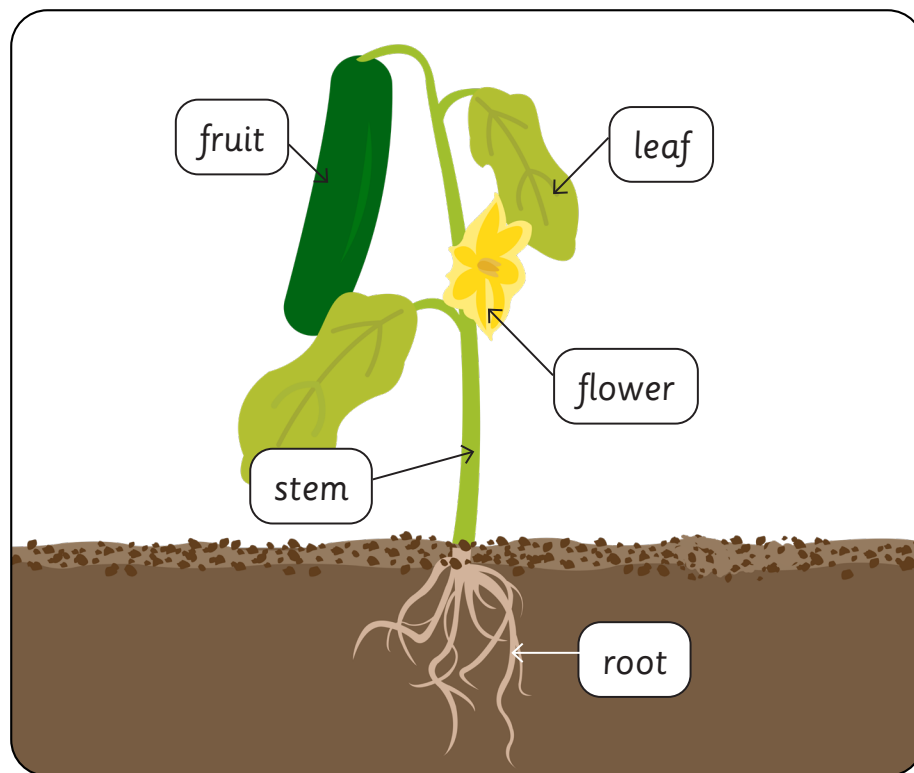
Cacti grow in desert habitats.



Daisies grow in meadow habitats.

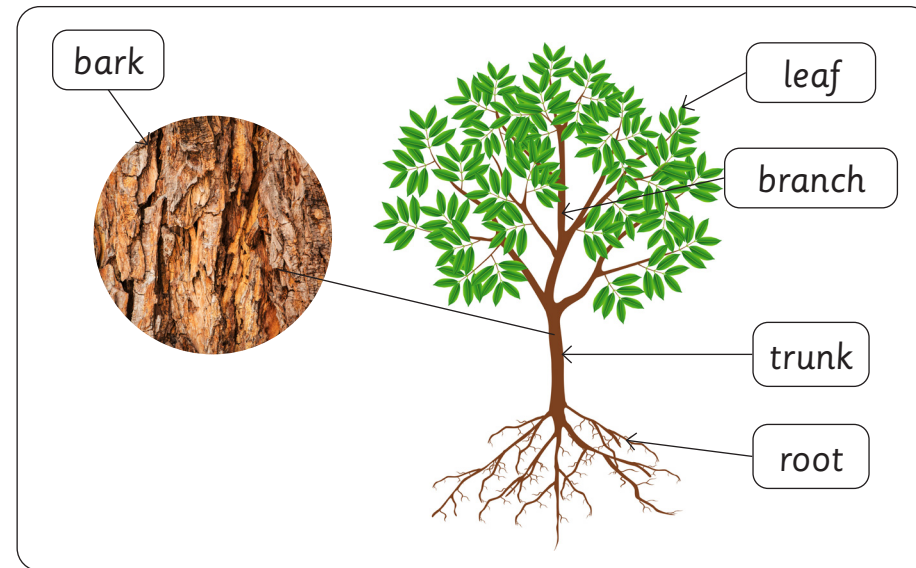
## Plant parts

A plant has different parts. These include roots, a stem and leaves. Some plants have flowers and fruit, such as the cucumber plant.



## Trees

Trees are plants. They have roots, a stem called a trunk, bark, branches and leaves.



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.



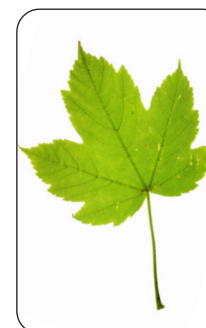
deciduous trees in winter



evergreen trees in winter

## Leaves

Leaves come in different shapes and sizes. They make food for the plant.



## Bulbs

Some plants grow from bulbs. A bulb contains a tiny plant and all the food the plant needs to grow.



daffodil bulbs

## Seeds

Some plants grow from seeds. A seed is a small object that a plant makes. 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





# Germination

Germination is the first stage of plant growth when a seed starts to grow.

Seeds need warmth and water to germinate. 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.



# After germination

Some time after germination, a shoot appears above the soil. The shoot develops into a stem and leaves. The leaves unfold and start to make food for the growing plant. The plant uses its roots to take in nutrients and water from the soil. The plant grows bigger over time. Some plants develop flowers and fruit.



# What plants need to grow

Plants need sunlight, warmth, nutrients, water, air and space to grow and be healthy.

## sunlight

Plants need sunlight to make food. In shady places, plants grow slowly.

## warmth

Plants need warmth to help them make food and grow quickly.

## nutrients

Plants need nutrients to help them grow well and fight diseases. Nutrients are taken from the soil through the roots.

## water

Plants take in water through their roots. The water carries nutrients around the plant.

## air

Plants take in a gas from the air, called carbon dioxide, through their leaves. They need this gas to make food.

## space

Plants need space to grow. If an area is overcrowded, the nutrients and water in the soil are used up. Overcrowding also blocks sunlight.



healthy aubergine plant



unhealthy aubergine plant

# Unusual plants

Not all plants need the same things to grow well. 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

# Glossary

<b>germinate</b>	When a seed starts to grow.
<b>habitat</b>	The place where a plant or animal lives, such as a woodland or desert.
<b>season</b>	One of the four periods of the year, including winter, spring, summer and autumn.

