Ladywood Primary School Year 2 Science – Animals including Humans

What should I already know?

There are five types of vertebrates (mammals, fish, reptiles, amphibians, birds)

- Vertebrates are animals that have a backbone.
- Some animals are suitable to be kept as pets but others are not.
- Some animals give birth to live young but others lay eggs.
- Doctors and nurses give us medicine when we are poorly.

Investigate!

Compare the heights/hand spans of people at different stages of their lives.
Find out more about the life cycle of a different animal.
Investigate how animals are cared for in zoos and farms.
Record a food diary and evaluate your diet.
Collect information about favourite foods and present it in a pictogram or bar chart.
Investigate the effects on exercise on the body.

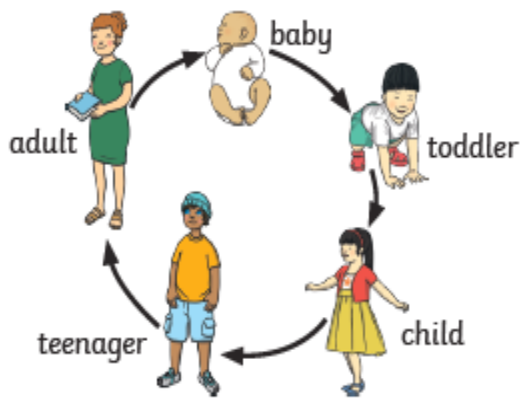
What will I know by the end of the unit?

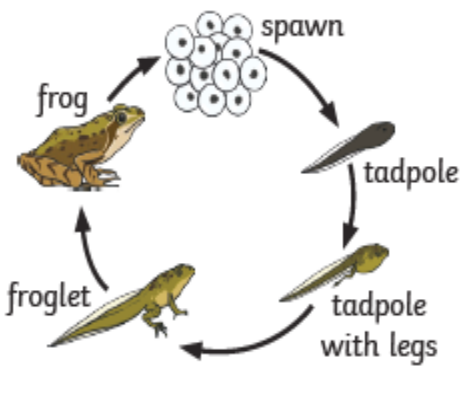
A life cycle is the series of changes that an animal or plant passes through from the beginning of its life until its death.
Understand that animals, including humans, have offspring which grow into adults.
Know and explain the life cycle of a human, frog and caterpillar.
All animals need water, air and food to survive
To keep healthy, humans need:

- To eat a balanced diet and healthy food
- Some exercise to keep their muscles and bones healthy.
- To keep good hygiene by washing regularly, having clean clothes, brushing teeth and hair.

Key Vocabulary

life cycle – the process things go through to become an adult.
Offspring -a person or animal's child or children.
Pupa -an insect that is about to turn into an adult.
Baby - a very young child.
Toddler- a young child that is just beginning to walk.
Child-a young person below the age of 13.
Teenager -a person aged between 13 and 19.
Adult- a fully grown animal or plant.
Reproduce - when a living thing makes a new living thing.
Balanced diet – the food and drink animals need to be healthy.
Hygiene – how clean something is.
Germs – bugs that could cause illness.





Ladywood Primary School Year 2 Science – All living things and their habitats

What should I already know?

- Which things are living, dead and things which have never been alive.
- Some animals are suitable to be kept as pets but others are not.
- All animals need water, air and food to survive.
- Animals can be grouped into vertebrates and invertebrates, carnivores, herbivores and omnivores.
- Animals, including humans, have offspring which grow into adults.

What will I know by the end of the unit

Things can be separated into:

- Things that are alive.
- Things that were alive but are now dead.
- Things that have never lived.

Things that are alive can move, grow, reproduce and need nutrients.

What is a habitat?

That a habitat is a place where animals and plants live and survive.


ocean


forest


river


pond


coast


desert


woodland


tundra


habitat

What is a micro habitat?

Micro habitats are very small habitats where mini beasts live. For example: under logs or stones, in soil or grass. Some creatures are ants, millipedes, snail, butterflies etc.

Minibeasts are able to survive in their habitats because they can find the things they need to survive there, such as food and water. For example, caterpillars can survive on leaves as they give them food.

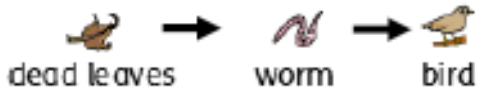

leaves


soil


minibeast

Food chains

Animals get their food from plants and other animals. A food chain shows how energy from food is passed along. Only green plants make their own food, so every food chain starts with a green plant.



The arrow on a food chain means 'is food for'.

If one element of the food chain changes, this can impact on the rest of the chain.

Key Vocabulary

Depend -If you depend on someone or something, you need them in order to be able to survive physically.
Survive –to stay alive.
Life processes – the things that all living things do.
Habitat -the natural environment in which an animal or plant normally lives or grows.
micro habitat - a small part of the environment that supports a habitat, such as a fallen log in a forest.
Environment -The conditions around something.
Vegetation -plants, trees and flowers.
Source -where something comes from.
Food chain – a food chain shows where animals get their food from and how they depend on each other.

Investigate!

- Investigate habitats in the school environment
- Investigate micro-habitats
- Compare two different habitats and explain what animals and plants can be found there.
- Go on a minibeast hunt. What minibeasts can you find? Why can they survive in their habitat? Create a tally chart or pictogram to show your results.
- Answer questions such as 'Why would a polar bear not survive in the desert?'
- Create simple food chains that begin with a plant. What would happen if one of those living things in a food chain did not exist?

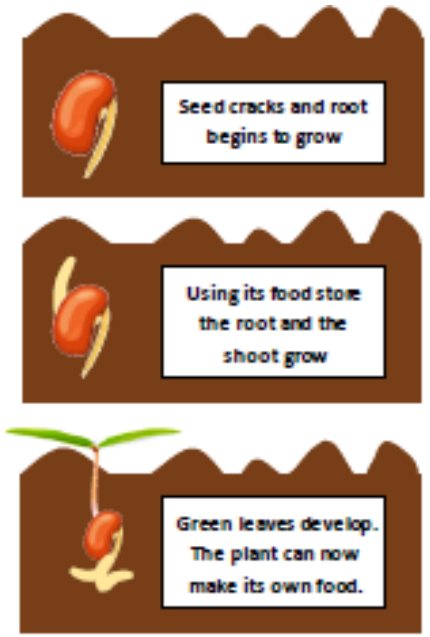
Ladywood Primary School Year 2 Science – Plants

What should I already know?

- The names of some common garden and wild plants and trees.
- Some parts of a plant and tree.

What will I know by the end of the unit?

Germination is when a seed starts to grow. To germinate, seeds need air, warmth and water. They don't need light.
Once the stem breaks through the soil, it is a plant.



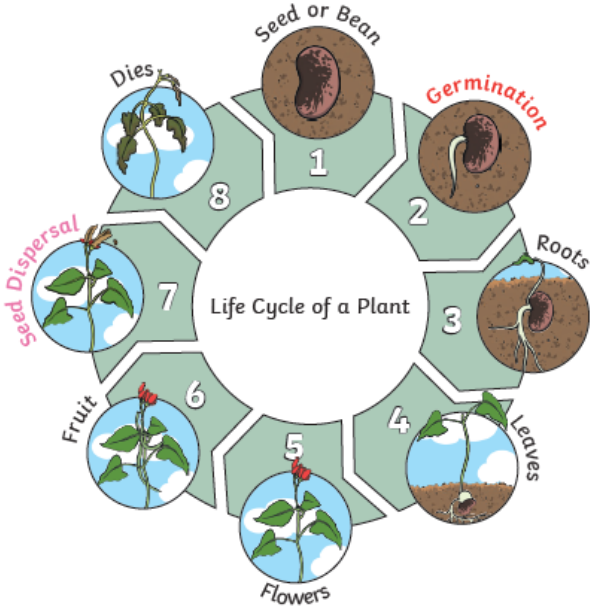
Many plants provide us with food by bearing fruits which carry their seeds.
When farmers grow plants to provide us with food, these are called crops.
We eat vegetables, grains, cereals, nuts, seeds and herbs.

Plants require things such as water, warmth, nutrients from soil and light to grow.
If they do not have one or more of these things, they may stop growing.
Plants can:

- move
- grow
- react to their surroundings (sense)
- absorb nutrients.
- Reproduce

The life cycle of a plant

- The plant grows.
- The flower comes and then dies.
- A fruit with seeds is left behind.
- The seeds get scattered.
- The process begins again.



Key Vocabulary

Branches -parts that grow out from the tree trunk and have leaves, flowers, or fruit growing on them.
Petal -thin coloured or white parts which form part of the flower.
Shoot –a part of a new plant that grows upwards.
Root -the parts of a plant that grow under the ground.
Weed -a wild plant that grows in the garden and prevents the plants that you want from growing properly.
Edible – something that can be eaten.
Nutrients – food that keep the plant healthy.
Reproduce -when an animal or plant produces one or more individuals .
Sprout- a plant grows new shoots.
Life cycle -continuous series of changes showing the life of something.
Seed dispersal- seeds move away for the pant by wind or animals.
Germination - the seed sooks up water and swells, until the new plant bursts out of its shell and starts to grow.

Investigate!

- Plant a bulb or a seed and watch it grow. Record your observations in a diary. Compare the growth of that plant with a plant (using the same bulb or seed) where one of the conditions is different (no water, no light, a smaller container).
- Experiment with different ways to make a seed germinate without soil.
- Dissect a variety of fruits and locate where their seeds are.
- Create a bar chart to show how tall your plants are to the nearest cm.

Ladywood Primary School Year 2 Science – Uses of Everyday Materials

What should I already know?

- Objects are made from different materials.
- Some materials that objects are made from.
- Some words to describe materials.
- Materials which are natural and which are man-made.

What will I know by the end of the unit

Materials are used for different purposes based on their properties. Some things are made from more than one material.

Squashing- to crush something so it becomes flat and out of shape.

Bending –to put force on a straight object until it is curved.

Twisting –to change the shape by turning it.

Stretching – make it longer and wider without tearing or breaking.

People who developed new materials

- John Dunlop - Invented the first inflatable tyre.
- Charles Macintosh -Invented the first waterproof fabric.
- John McAdam -He invented building roads with a smooth, hard surface.

Key Vocabulary

Elastic – rubber material that stretches when you pull it and returns to its original size and shape when you let it go.
Recyclable-waste or materials which can be processed and used again.
Flexible – very bendy.
Fragile – breakable.
Light-weight – doesn't weigh much.
Inflatable – can be filled with air.
Suitable- something that is suitable for a particular purpose or occasion is right or acceptable for it.
Macdamisation – The name given to John McAdam's construction building roads.
Fabric -cloth or other material produced by weaving together cotton, wool or other threads.
Tarmac – material the road is made with.

Investigate!

- Compare the uses of everyday materials in school with materials found in other places.
- Investigate which materials are the most waterproof / absorbent.
- Find materials in your house which are made of more than 2 materials.
- Discuss which materials are recyclable and why.
- Investigate how some objects can be changed by squashing, bending, twisting and stretching.
- Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam