

Year 3/4 Subject Knowledge Organiser - Living things and their habitats

What I should already know

Explore and compare the differences between things that are living, dead, and things that have never been alive.

Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.

Identify and name a variety of plants and animals in their habitats, including microhabitats.

Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

What I will have learnt by the end of the unit

I can recognise that living things can be grouped in a variety of ways.

I can use classification keys to help group, identify and name a variety of living things in local & wider environment.

I can recognise that environments can change and that this can sometimes pose dangers to living things

Key Concepts

Biology

Chemistry

Physics

Scientific enquiry

Science for the future

Vocabulary

What I will have learnt at the end of the key stage

I will be able to describe the difference in the life cycles of a mammal, an amphibian, an insect and a bird.

I will be able to describe the life process of reproduction in some plants and animals.

I will be able to describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.

I will be able to give reasons for classifying plants and animals based on specific characteristics.

Key skills I will learn/use

- ✚ Recognise that living things can be grouped in a variety of ways.
- ✚ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.
- ✚ Recognise that environments can change and that this can sometimes pose dangers to living things.
- ✚ Asking relevant questions and using different types of scientific enquiries to answer them.
- ✚ Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment.
- ✚ Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.

Opportunities for teaching diversity, equality (including protected characteristics and expanding cultural capital)

Get to meet a scientist! Explore people who use science in their jobs. I'm a Scientist, Get me out of here! - A super-curricular science outreach education & engagement activity (imascientist.org.uk) Science for Everyone (science4everyone.org)

Skills I may use for other subjects

Literacy- I can use my literacy knowledge to write about my findings.

Mathematics- I can use my knowledge carry out simple tests and record my findings using diagrams and graphs.

Key Vocabulary

amphibian - a cold-blooded vertebrate that can live in water and on land.

biomes - a natural area of vegetation and animals.

bird - warm-blooded vertebrates with feathers, pointed beaks and wings.

carnivore - an animal that eats meat.

classification key - a system which divides things into groups or types.

criteria - a factor on which something is judged.

environment - all the physical surroundings on Earth including everything living and non-living.

excretion - the process of eliminating waste from the body.

fish - cold-blooded (mainly) vertebrates that can only live in water.

habitat - the natural environment in which an animal or plant lives or grows.

herbivore - an animal that only eats plants.

invertebrate - creature that does not have a spine.

life processes - the seven processes that tell us that living things are alive.

mammal - a warm-blooded vertebrate that breaths air and grows hair.

microhabitat - a small part of the environment that supports a habitat.

nutrition - the process of taking food into the body and absorbing nutrients.

omnivore - person or animal that eats both meat and plants.

organism - a living thing.

reproduction - when an animal or plant produces one or more copies of itself.

reptile - cold-blooded vertebrates.

respiration - process of respiring; breathing; inhaling and exhaling air.

sensitivity - responding to the external environment.

vegetation - plants, trees and flowers.

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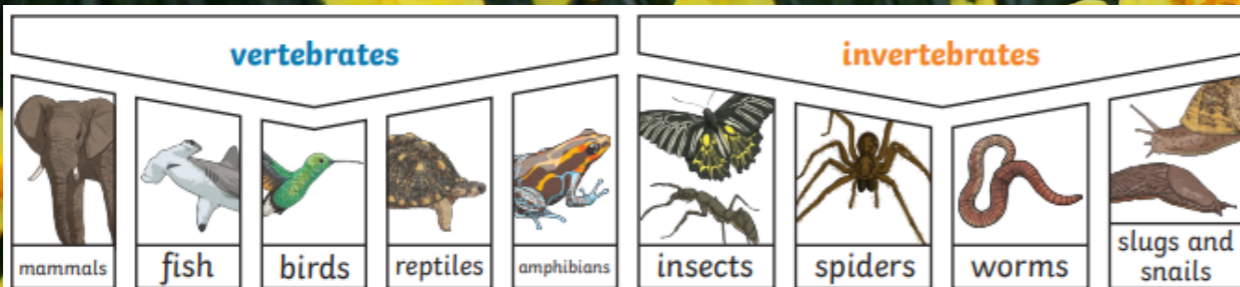
Key Knowledge

All living things, which can also be called organisms, have to do certain things to stay alive. These are the life processes.

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition

Focus Scientists — Carl Linnaeus Carl Linnaeus (1707-1778) was a botanist, zoologist and physician. He's most famous for simplifying the naming system scientists use to describe the millions of species on Earth. **Rachel Carson** Rachel Carson (1907-1964) was a marine biologist. She was most famous for her book *Silent Spring* (1962) which warned of the damage humans were doing to the environment and led to the

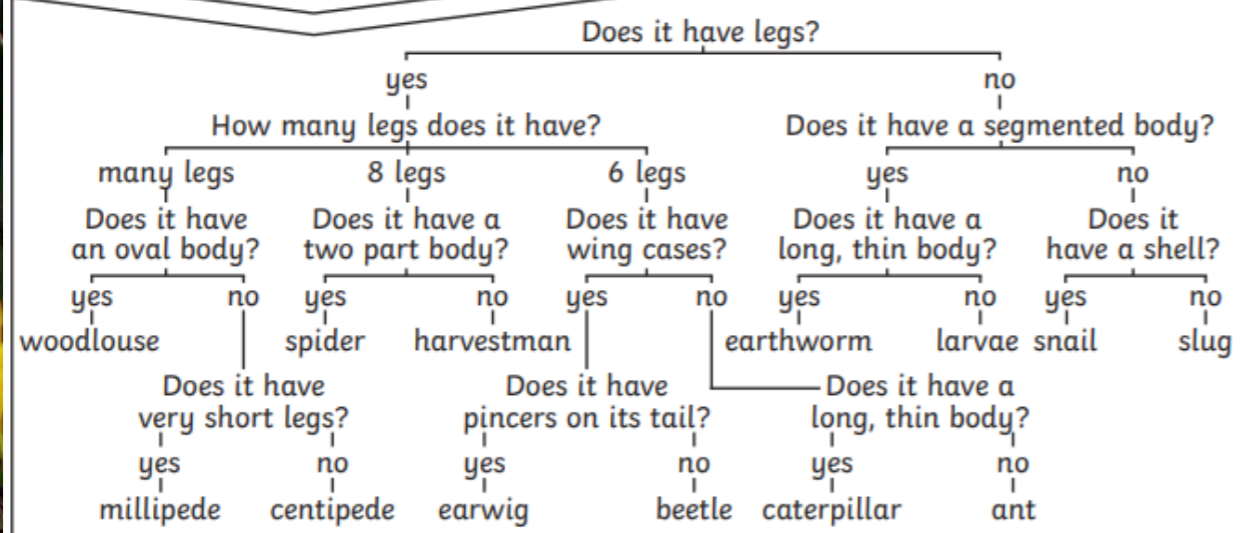


Vertebrates can be separated into five broad groups.

You can use **classification** keys to help group, identify and name a variety of living things. Here is an example of a **classification** key:

You could sort **invertebrates** you might see around school in different ways, such as in this example. The vast majority of living things on the planet are **invertebrates**.

Invertebrate Classification Key



Changing Habitats

Living things depend upon their habitats to give them everything they need, including food, water, air and a space to live and grow. Human beings are able to make big changes to their habitat to make it suitable for them to live in.

Some species are very good at adapting to changes in their habitats. These species are able to live alongside humans successfully in towns and cities.



Some animals can only survive in a particular habitat, such as rainforest, desert or marshland. When the habitat changes, these species find it very difficult to survive

Events like earthquakes, storms, floods, hurricanes, wildfires and droughts can have very serious consequences for living things. Habitats can be destroyed and the plants and animals that live there might be killed. Those animals that survive might find that their sources of food and water have disappeared. They may no longer have a safe place to live and grow.

Most of the changes to the habitats of living things are caused by humans. We call these changes man-made.



Deforestation

Many of the things that humans do, destroy animal habitats. Only a very small amount of the world's land is covered in rainforest, but about half of all plants and animals live here. Humans have cut down large areas of the forest to clear space for building or farming. This has destroyed the habitats of many species and made it difficult for them to survive.



Classifying plants and animals

Classifying is when you group things together that are similar. With so many living things to make records of, and so many yet to discover, it is important that we have a system to organise and make sense of the information we have about them.

We organise living things into groups based on their similarities and differences, so that we can learn more about what makes each species unique. The differences between living things is sometimes called variation.

Scientist: Greta Thunberg, The Eco-Warriors and you!