



Science Knowledge Organiser:

Science unit: Living things and their habitats

Year group: Y2



Overview: What will we learn in this unit?



Key vocabulary

Scientific language



- In this unit the children will learn:
- the difference between things that are living, dead and things that have never been alive.
 - that most living things live in habitats which suit them and depend on each other
 - to name some plants and animals in their habitats including micro-habitats
 - how animals get their food from plants and other animals using a simple food chain

habitat

the natural home or environment of an animal or plant

underside

underneath or bottom of something

webbed

where fingers or toes are connected by skin

environment

the conditions around something

cells

the basic part of all living things

reproduce

to produce offspring

nutrition

the process of providing or obtaining the food necessary for health and growth.

Key knowledge

Diagrams and symbols

Is it alive?

Things can be split into three groups: things that are alive; things that were alive but are now dead; things that have never lived.

Things that are alive

- Are made from cells and show signs of life

Things that are dead

- Are made from cells.
- A wooden table used to be alive as a tree

Things that never lived

- These are not made from cells
- For example, a pan is made from particles of metal

How to tell if it is alive

Move	For example, animals can run, birds can fly and flowers turn towards light.
Reproduce	This is when living things have offspring. For example, animals have babies and plants have seeds which turn into new plants.
Nutrition	This is where food is used to provide energy. For example, humans get energy from food. Animals eat plants or other animals. Green plants make their own food.
Growth	This is when things get bigger/older. For example, babies grow into adults. Seedlings grow into bigger plants.

Habitats

What is a habitat? Most living things live in an environment they are suited to (habitat)

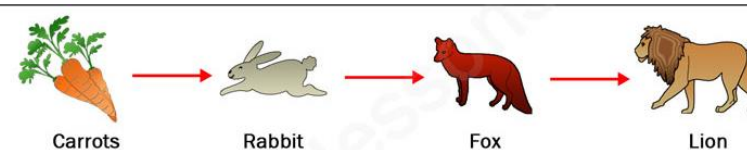
Types of habitat. Habitats can be very different eg hot or cold; wet or dry; on the ground or up high.

Choosing the right habitat Animals live in habitats that suit them best eg

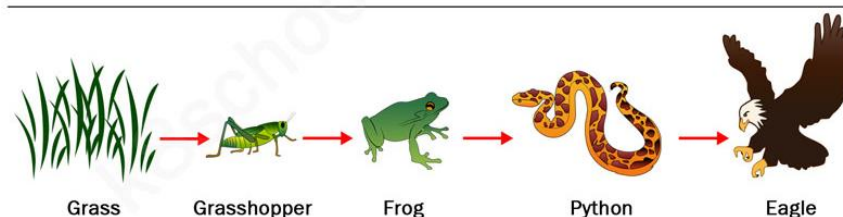
Cold habitat	Polar bear - thick white fur, to keep warm and camouflaged in the snow.
Hot habitat	The Desert Rat - Large ears to help lose excess body heat. Good hearing and sight in the dark so can hunt at night when the temperature is cooler.
Dry habitat	The cactus - long roots find water that is deep in the ground. Thin needle leaves don't lose water.
Wet habitat	The Otter - eyes and nostrils can close underwater. Feet are webbed to help move in the water.

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'.



A four linked food chain



A five linked food chain

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

For example:

- If a disease killed all of crops
- The field mice wouldn't have as much food
- Birds of prey wouldn't have as many mice to eat

Possible experiences / research

- Experiment to decide if an object is alive or not (such as a car)
- Investigate habitats in the school grounds, such as hedgerows and trees
- Investigate micro-habitats, such as under stones and logs
- Construct food chains using given plants and animals
- Investigate the range of impacts should one aspect of the food chain die out



Key skills including Working Scientifically



To sort given objects into categories of alive, dead or never been alive
To group and classify plants and animals belonging to a variety of habitats
To look closely using equipment – using magnifiers to study micro-habitats
To ask questions eg why do polar bears live in the Arctic? etc

Curriculum links

- Geography - geographical features eg. river, mountain
- Christian values – thankfulness, awe and wonder

Useful websites: <https://www.bbc.com/bitesize/articles/z3c2xnb>
<https://www.topmarks.co.uk/Search.aspx?q=food+chain>
<https://www.stem.org.uk/resources/elibrary/resource/34119/education-pack-food-chains>

