



# Knowledge Organiser

# Subject: Science

# Topic: Living things and habitats

# Year 6

## Key Knowledge & Vocabulary

Living things (or **organisms**) are classified into broad groups according to common observable characteristics and based on similarities and difference

All **living things** share certain characteristics - they all **move, respire, grow, reproduce, excrete**, require **nourishment** and are **sensitive** to their surroundings.

Living things include **microorganisms**. Some examples of these types of living things are **viruses, bacteria and fungi**.

Some **microorganisms** can be **harmful** to **humans**, causing **diseases** and **illnesses**.

Some **microorganisms** are **useful**. Scientists have found ways to use **microorganisms** to help humans.

## Working Scientifically

Fair testing 

Observing over time 

Researching 

Classifying, identifying and comparing 

Exploring 

Seeking patterns 

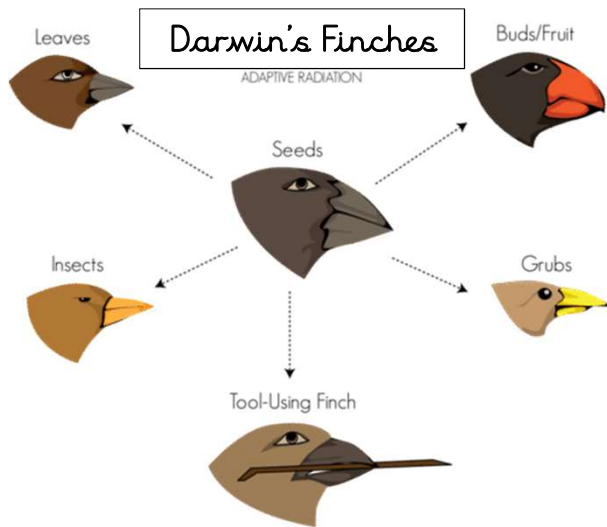
Which did you use in science lessons and why?

## Key Concepts

Living thing	Microorganism	Virus	Bacteria	Fungi	Disease
All living things share these characteristics - Movement, Respiration, Growth, Reproduction, Excretion, Nutrition, Sensitivity	Microorganisms are very tiny organisms that can only be seen in detail using a microscope. Many microorganisms are unicellular which means they exist as a single cell.	Viruses are the most diverse and numerous disease-causing organisms on Earth, infecting animals, plants, fungi and bacteria - as well as humans.	Bacteria are among the smallest living things. A single <b>bacterium</b> consists of just one cell.	The fungi kingdom consists of mushrooms, lichen, yeast, plant rusts, moulds, and smut. Unlike plants, which can photosynthesise, animals and fungi are both reliant on external food sources for energy.	Some bacteria cause diseases, including food poisoning, meningitis and scarlet fever. Inside the body, these bacteria reproduce quickly. They produce poisons that make you feel ill.

## Linking Thinking Across Our Learning Journey

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Self-care and healthy bodies	Self-care and healthy bodies	Am I an animal?	Living things and habitats	Life cycles of plants	Classification	The human body	Living things and habitats



### Peppered Moth

Over time, the black peppered moths became far more common in urban areas than the pale variety. This change was not due to pollution making the moths darker. The dark variety had always existed, but was the best suited variant when the environment changed. It took many generations before the population of moths was mainly black in colour.



### Sloth - adaptations



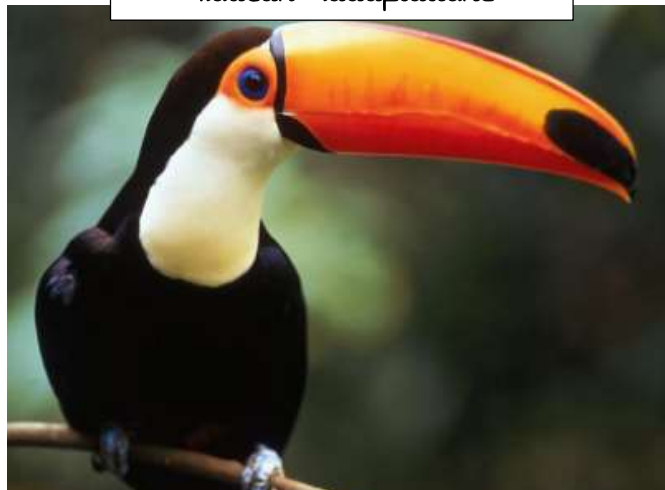
The sloth is well camouflaged and moves slowly which makes it difficult for predators to spot. This also means it uses little energy.

### Flying frog - adaptations



The flying frog has fully webbed hands and feet and a flap of loose skin that stretches between its limbs, which allows it to glide from plant to plant.

### Toucan- adaptations



The toucan has a long, large bill to allow it to reach and cut fruit from branches which are too weak to support its weight.

### Giraffe- adaptations



Over many years, giraffes were born with longer necks. These giraffes survived better than the giraffes with the shorter necks, and eventually all of the giraffes had long necks.