



# What drives evolution?



## Pupils will learn

- To describe how living things are classified into broader groups.
- To record and investigate the observable characteristics of animals.
- To understand what microorganisms are.
- To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
- To give reasons for classifying plants and animals based on their characteristics.
- To create branching keys.
- To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

## Important facts

- Links to prior learning:
  - Living things and their habitats (Yr2,4,5)
  - Amazon (Yr5)
- **Charles Darwin** - observed the finches in the Galapagos Islands and how their beak sizes formed his theory on natural selection.
- **Evolution** is evident in the fossil record where you can see the changes of animals and plants across vast periods of time.
- **Adaptation** is the process of change by which an organism or species becomes better suited to its environment.
- **Inheritance** is the process by which genetic information is passed on from parent to offspring.
- **Natural selection** is known as 'the survival of the fittest'. The **best adapted** organisms are able to **survive**.
- **Natural selection** is a process by which a species **changes** over time in response to changes in the **environment**, or **competition** between organisms, in order for the species to **survive**.
- There are 7 groups of classification:
  - Kingdom
  - Phylum
  - Class
  - Order
  - Family
  - Genus
  - Species
- There are 6 basic groups for animals:
  - Mammal
  - Bird
  - Amphibian
  - Fish
  - Reptile
  - Invertebrates
- **Microorganisms** - are often single-celled or unicellular organisms. There are 7 different types of microorganisms, these include: bacteria, archaea, protozoa, algae, fungi, viruses and animal parasites

## Local Links

- The Norfolk Broads
- Local Parks and rivers
- Go and explore the different areas to find out about the local wildlife.
- Explore a local wildlife conservation area.

## Home Learning Ideas

- Create a bug hotel.
- Design a habitat box.
- Write a fact sheet about your favourite animal.
- Invent your own animal and write a story.

## Books to read at home

- Beetle Boy
- Living things and non-living things
- Tree of Life

## Inquiry Questions

- What is evolution?
- How does inheritance impact evolution?
- What does the fossil record tell us about evolution?
- How has climate change driven evolution?
- How has adaptation driven evolution?
- How has evolution impacted classification?
- Do we need classification to understand evolution?
- How has the millennium seed project been impacted by classification?

## Key Vocabulary

|                                   |   |                      |  |
|-----------------------------------|---|----------------------|--|
| <b>Animalia</b>                   | The basic group of living things, usually made up of animals.   | <b>Annelid</b>       | Segmented worms with no legs and no hard skeleton.                       |
| <b>Bacteria</b>                   | This is a microscopic living organism, that can be found everywhere. They can be dangerous or beneficial. | <b>Class</b>         | A rank in the system of classification.                                  |
| <b>Classification Key</b>         | A chart that helps you to find out information using yes or no questions.                                 | <b>Domain</b>        | A rank in the system of classification.                                  |
| <b>Family</b>                     | A rank in the system of classification. Divided into subfamilies like; bovine, canine etc.                | <b>Fungi</b>         | Fungi are a kind of living organism like: yeasts, moulds and mushrooms.i |
| <b>Genus</b>                      | A rank of classification.   | <b>Multicellular</b> | An organism that has many cells.   |
| <b>Observable Characteristics</b> | These include behaviour, biochemical properties, colour, shape, and size.                                 | <b>Phylum</b>        | A rank of classification.  |
| <b>Plantae</b>                    | A group of classification for plants and algae.   | <b>Species</b>       | A group consisting of living things with similar genes.                  |
| <b>Taxonomy</b>                   | A branch of science concerned with classification.  | <b>Unicellular</b>   | A one celled organism.   |
| <b>Compile</b>                    | Assembling information from other sources.  | <b>Diagram</b>       | A simplified drawing showing the workings of something.                  |
| <b>Perceive</b>                   | Become aware of something.  | <b>Precision</b>     | Being accurate and correct.  |

\* Words in grey are Tier 2 (non-topic specific) vocabulary