

BIOLOGY

YEAR 3 and 4: AUTUMN 2

How can we classify animals and their changing habitats?

COVERAGE: How can we classify animals and their changing habitats?

The children will be exploring ways to group living things, creating classification keys, studying how habitats change over time and understand the positive and negative effects humans have on their surroundings.

- Group animals in various ways, including vertebrates (mammals, birds, reptiles, amphibians, fish) and invertebrates.
- Group plants in various ways, including flowering and non-flowering plants.
- Recognise and describe different habitats and their inhabitants.
- Recognise the impact humans can have on habitats.
- Recognise the impact of natural disasters on habitats.

Working Scientifically

- Record data in different ways.
- Apply and create classification keys.
- Make careful observations.
- Make and use classification keys.
- Present information in different ways.
- Research using an information sheet.

KEY LANGUAGE AND VOCABULARY:

amphibian (Y1)

bird (Y1)

classification key

classify

conservation

deforestation

endangered

fish (Y1)

flowering plants (Y3)

group

habitat (Y2)

insect

invertebrate (Y3)

mammal (Y1)

nature reserve

non-flowering plants

observe (Y1)

pollution

reptile (Y1)

research (Y2)

slug

snail

spider

vertebrate (Y3)

worm

KNOWLEDGE AND FACT SHEET

Science - Classification and changing habitats

Living things can be sorted and identified with a tool called a classification key, which uses a series of yes/no questions.

Does it have flowers?

yes
flowering plants

no
non-flowering plants

Taxonomists are scientists who sort, group, identify and name living things.

Habitats can change because of negative human impacts:

- Plastic pollution is building up in our seas, harming animals that get trapped in or ingest it.
- Climate change, caused by human activities, is heating up the Earth, disrupting habitats and affecting species survival.
- Coral bleaching, resulting from increased sea temperatures, makes it difficult for coral and the animals that live there to survive.
- Deforestation involves cutting down large areas of forest, destroying the habitats of many plants and animals.

Habitats can change due to natural disasters:

- Earthquakes can make mountains change shape. They can also cause volcanoes to erupt, destroying animals' shelters and uproot plants.
- Wildfires can destroy large areas, burning all the plants. This can cause animals to die or lose their homes.
- Floods can make plants waterlogged or uproot them. They can wash away soil, destroying animals' shelters and cause animals to drown. Floods can also spread

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Science - Classification and changing habitats

Living things can be classified into different groups according to their shared characteristics.

Animals without backbones are classified as invertebrates. They include the following groups:

worms snails and slugs insects spiders

Animals with backbones are classified as vertebrates. They include the following groups:

fish amphibians reptiles birds mammals

Conservationists are scientists who protect and restore habitats. They are working to reverse negative human impacts.

Conservationists help by:

- Studying nature
- Protecting and restoring habitats
- Cleaning up pollution
- Fighting climate change
- Helping endangered species
- Making laws and rules to protect the environment
- Educating others about the environment

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KEY QUESTIONS:

1. What are vertebrates and invertebrates?
2. How can we group plants?
3. What are classification keys and how can we use them?
4. What are habitats and how do they change for animals through the seasons?
5. What impact are humans having on animals habitats?
6. What natural changes are happening to animal habitats?

KEY SKILLS AND KNOWLEDGE

Knowledge

- Living things can be grouped in different ways.
- A classification key can be used to group and identify plants and animals.
- Vertebrates are animals that have a backbone and invertebrates are animals that do not have a backbone.
- Plants can be grouped into flowering or non-flowering varieties.

- Flowering plants include grasses and non-flowering plants include ferns and mosses.
- There are five main vertebrate groups: birds, mammals, reptiles, amphibians and fish.
- Invertebrate groups include snails, slugs, worms, spiders and insects.
- Habitats can change throughout the year, which can be dangerous for living things.
- Humans can have both a positive and negative impact on the environment.

Skills

Observing

- Using their senses to describe, in more detail and with simple scientific vocabulary, what they notice or what has changed.

Recording

- Recording data in Carroll and Venn diagrams.
- Using a prepared table to record results, including more detailed observations.
- Using tables with more than two columns.

Grouping and classifying

- Grouping based on visible characteristics and measurable properties.
- Populating a pre-prepared branching and number key.
- Choosing appropriate questions for classification keys.

Researching

- Gathering specific information from a variety of sources.

ENRICHMENT:

- Children will look at any animal habitats we have in our own school environment. How can we support these habitats in our own school?

Visits: -

Previous Learning:

Future Learning:

The children will be developing their knowledge of shadows and reflections. They will also look at famous scientists.

School Drivers to Examine

Children will look at:

- Care for the Environment = how do humans and nature have an impact on animals habitats? How can we help change this?
- Economy and Power = what impact does the economy have on animals habitats and how can we have the power to change this?