

Topic:	Year group	Term
Living things and their habitats	6	Autumn

Background knowledge

In year 4, children classified animals into vertebrates and invertebrates and plants into flowering and non-flowering. The five vertebrate groups were introduced and the children also used simple keys to identify animals. This was extended in year 5 in the life cycle topic where the 5 main groups of invertebrates were revised and the children devised their own simple key based on the features of these groups.

Living things can be formally grouped according to their characteristics. Plants and animals are two main groups but there are other living things which don't fit into these groups e.g. microorganisms such as bacteria or yeast, and fungi like toadstools and mushrooms. Plants can make their own food whereas animals cannot.

Animals can be divided into two main groups; those that have backbones (vertebrates) and those that don't (invertebrates). Vertebrates can be divided into 5 smaller groups; fish, amphibians, reptiles, mammals and birds. Each group has common characteristics.

Invertebrates can be divided into a number of groups including insects, spiders, snails and worms.

Plants can broadly be divided into two main groups; flowering and non-flowering plants.

Common misconceptions

- All micro-organisms are harmful.
- Mushrooms are plant.

What should I already know?

Year 4.

I can group living things in different ways.

I can use classification keys to group, identify and name living things.

I can create classification keys to group, identify and name living things (for others to use.).

Year 5

I can devise a classification key to determine the main animal groups. (Mammals, reptiles etc.).

National Curriculum Objectives / Key Skills	The Journey
Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics. <u>Working scientifically</u> Identifying scientific evidence that has been used to support or refute ideas or arguments. Use and develop keys and other information records to identify, classify and describe living things (non-statutory). Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment (non-statutory). Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Use relevant scientific language and illustrations to discuss, communicate and justify their ideas and should talk about how scientific ideas have developed over time (non-statutory). <u>Scientific enquiry</u>	1. Conditions for life 2. Group organisms 3. Classify animals 4. Classify plants 5. Microorganisms 6. Classify organisms 7. Carl Linnaeus TAPS - Making a branching key - Do - Record



Outcomes

Working towards: With support I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. With support I can give reasons for classifying plants and animals based on specific characteristics.

Expected: I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. I can give reasons for classifying plants and animals based on specific characteristics.

Exceeding: I can describe and explain with confidence how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. I can with confidence give reasons for classifying plants and animals based on specific characteristics.

Key Vocabulary

Amphibian- a cold-blooded vertebrate animal e.g. frogs or newts.

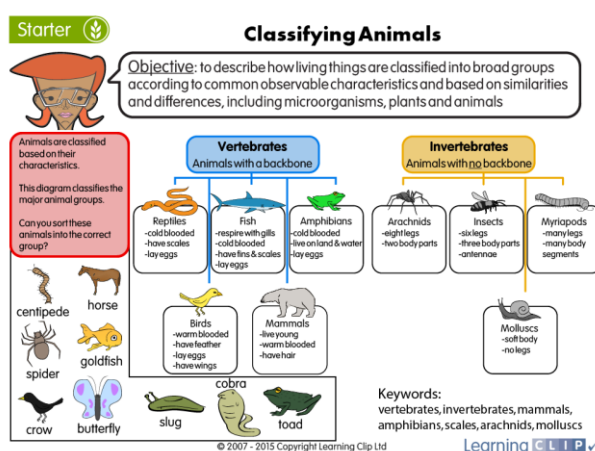
Bird- a warm blooded egg laying vertebrate animal with wings, feathers and a beak.

Classification- sorting organism into groups which have features in common.

Classification key- a series of questions about the organism's physical characteristics which help you identify it.

Fish- an animal that lives in water and has fins for swimming and gills for breathing.

Timeline / Diagrams



Fungus; a living thing which is not a plant or animal and gets its nutrients from other organism.

Insect- a small animal that has 6 legs and 3 parts to its body.

Mammal- a warm blooded vertebrate animal, has hair or fur and gives birth to live young.

Micro-organism; a small living thing which can only be seen using a microscope. Examples include bacteria, viruses and many fungi.

Mini beast- a small invertebrate animal such as an insect or spider.

Organism; a living thing.

Key people / places

STEM job; Entomologist, Oliver Hutter

Famous scientists ; Carl Linnaeus

Question of the week

Question of the Week

Diddy has been looking at living and non-living things.

Rocks are living
because they
can move.



Do you agree with Diddy? _____

Why? _____

Question of the Week

This animal has a
backbone and dry scales
on its body.



This animal lives on
both land and water: _____

This animal does not
have a spine.



Question of the Week



Sam and Tommy are talking about how animals can be classified.

Why?



Animals can be classified based on where they live.

Animals can be classified based on their features.



Who do you agree with? _____

Question of the Week



Match each plant to its description.

flowering plant

a plant that does not produce flowers and fruit

evergreen tree

a plant that produces flowers and fruit

non-flowering plant

a tree that produces cones

coniferous tree

a tree that loses its leaves annually

deciduous tree

a tree that keeps its leaves all year round

Question of the Week



Alex, Tommy and Sam are researching different microorganisms. Use the labels to write which microorganism each child is describing.

bacterium

virus

fungus



This microorganism is invisible to the naked eye, needs a host and can cause illnesses.



This microorganism is invisible to the naked eye. It can cause illness but some are good for you.



This microorganism can cause disease. Most of these microorganisms are invisible. Some can be eaten like mushrooms, for example.
