

Jeavons Wood Primary School – Science Knowledge Organiser

Topic: Living Things and their Habitats

Year:6

Strand: Biology

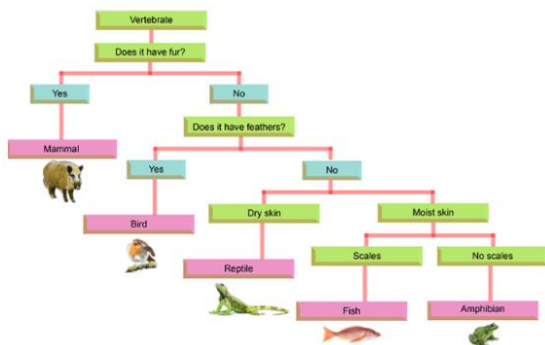
Big Question: How and why do we classify living things?

What should I already know?

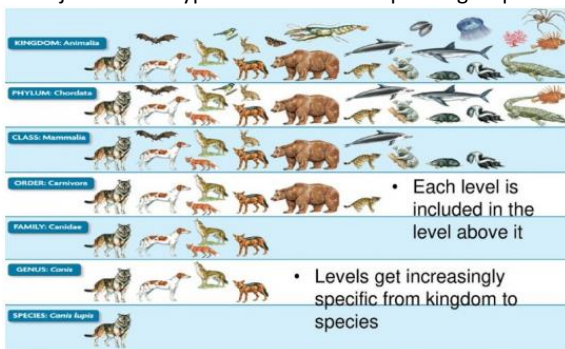
- Animals can be grouped into carnivores, herbivores and omnivores. They can also be grouped into vertebrates and invertebrates.
- Organisms can be classified and we can use a classification key to identify them.
- Examples of habitats (including microhabitats) and the organisms that can be found there.
- Living things depend on each other to survive.
- How environments are changing.
- The relationships between predators and prey.
- Food chains demonstrate the direction in which energy travels.
- How organisms have adapted and evolved over time.

What will I know by the end of the unit?

- Living things can be grouped according to different criteria (where they live, what type of organism they are, what features they have). For example, a camel can belong in a group of vertebrates, a group of animals that live in the desert, and a group of animals that have four legs.
- A classification key is a tool that is used to group living things to help us identify them using recognisable characteristics.



- The Linnaean system, named after Carl Linnaeus, has different levels where the number of living things in each group gets smaller and smaller, until there will just be one type of animal in the species group.



What are microorganisms?

- Microorganisms are very tiny organisms where a microscope has to be used to see them.
- Examples of microorganisms include dust mites, bacteria and fungi, such as mould.
- Some microorganisms can be helpful in certain situations. Others can be harmful, and their spread needs to be controlled or contained.

Where will my learning go next?

In yr 7: Genetics and evolution. Chromosomes, genes and DNA in hereditary. Differences between species. Variations within a species. Changes in the environment which may lead to a species less well adapted to compete and reproduce. The importance of maintaining biodiversity.

Vocabulary

adaptation	a change in structure or function that improves the chance of survival for an animal or plant within a given environment
carnivore	an animal that eats meat
characteristics	the qualities or features that belong to them and make them recognisable
classification key	a system which divides things into groups or types
criteria	a factor on which something is judged
energy	the ability and strength to do physical things
environment	all the circumstances, people, things, and events around them that influence their life
evolution	a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics
food chain	a series of living things which are linked to each other because each thing feeds on the one next to it in the series
habitat	the natural environment in which an animal or plant normally lives or grows
herbivore	an animal that only eats plants
invertebrate	a creature that does not have a spine, for example an insect, a worm, or an octopus
microhabitat	a small part of the environment that supports a habitat, such as a fallen log in a forest
microorganism	a very small living thing which you can only see if you use a microscope
minibeast	a small invertebrate animal such as an insect or spider
omnivore	person or animal eats all kinds of food, including both meat and plants
organism	a living thing
predator	an animal that kills and eats other animals
prey	an animal hunted or captured by another for food
species	a class of plants or animals whose members have the same main characteristics and are able to breed with each other
vertebrate	a creature which has a spine

Things to Investigate...

- Sort vertebrate and invertebrate animals into groups, describing their key features. Use a classification key to identify which group of vertebrates animals belong to and then create your own.
- Explore the different ways in which invertebrates can be classified (e.g. arachnids, insects, molluscs).
- Describe some organisms that may be difficult to classify (e.g. platypus) and explain why.
- Use simple computer software programmes to create a branching classification key.
- Sort scenarios where microorganisms might be helpful (e.g. yeast in baking) or harmful; (e.g. infectious diseases).
- Use classification systems and keys to identify some organisms in the immediate environment. Record these in a variety of ways (e.g. Venn and Carroll diagrams, tables)
- Research unfamiliar organisms from a broad range of other habitats and decide where they belong in the classification system.
- Research the work of Carl Linnaeus.

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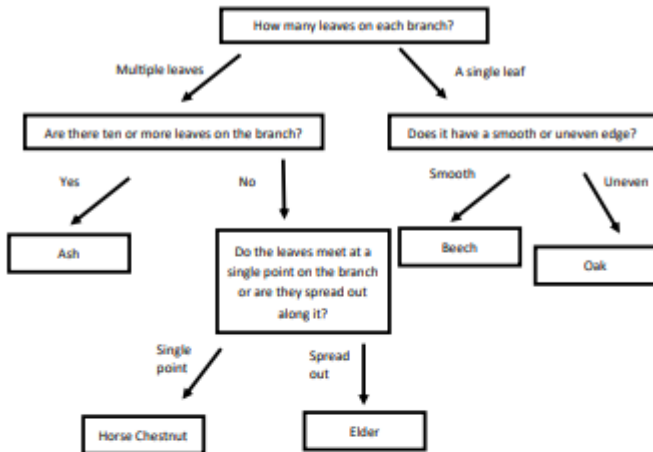
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Big Question: How and why do we classify living things?

Question 8: Use the classification key to identify which plant these leaves have come from.

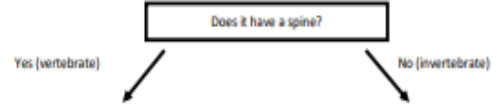



Question 1: Which of these is not a vertebrate?	Start of unit:	End of unit:
bird		
mammal		
reptile		
insect		
amphibian		

Question 2: Give an example of a microorganism.	Start of unit:	End of unit:

Question 10: Create your own classification key to sort the following animals. It has been started for you.



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            graph TD
                Q10[Does it have a spine?] -->|Yes (vertebrate)|
                Q10 -->|No (invertebrate)|
            
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