

Living things and their habitats- Year 6- Kapow unit- Living things: Classifying big and small

Previous learning

Describe the differences in life cycles of a mammal, amphibian, insect and a bird

Describe the life process of reproduction in some plants and animals

Key scientists you could look at...

Aristotle, Carl Linnaeus, Gregor Mendel

Scientific skills

Working scientifically	Questioning and enquiry	Observing and measuring	Investigating	Recording	Grouping and classifying
To use practical scientific methods, processes and skills	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Take measurements using a range of scientific equipment with increasing accuracy and precision. Take repeat readings where appropriate. Identify patterns that might be found in the natural environment. Make own decisions about what observations, measurements to use and whether or not to repeat them. Choose most appropriate equipment. Interpret data and find patterns. Select equipment independently. Use accurate and precise measures	Use test results to make predictions to set up further comparative and fair tests. Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Suggest improvements to methods and give reasons. Decide when it is appropriate to do a fair test.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Report and present findings from enquiries. Decide how to record data from a choice of familiar approaches. Choose how best to present data	Use and develop keys and other information records to identify, classify and describe living things and materials.

Key Vocabulary for Year 6

Classification	
Vertebrates	
Invertebrates	
Micro-organisms	
Amphibians	
Reptiles	
Mammals	
Insects	

Previous vocabulary

Mammal, reproduction, insects, amphibians, birds, offspring

Useful links

- <https://www.stem.org.uk/resources/community/collecion/12740/year-6-all-living-things>
- <https://ypte.org.uk/lesson-plans/living-things-and-their-habitats-year-6-classification>
- <https://www.hamilton-trust.org.uk/science/year-6-science/classification-connoisseurs/>

Experiment and activity ideas

Creating cough syrup	Classification games	Create own classification keys	Dissecting plants to classify	What bugs can you find- bug hunt, invertebrates and vertebrates
----------------------	----------------------	--------------------------------	-------------------------------	---

Knowledge- objectives

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.

Resources in school

Use of the forest school site to observe living things in their habitats, bug finders, magnifying glasses, microscopes

Classification

In 1735, Swedish Scientist Carl Linnaeus first published a system for **classifying** all living things. An adapted version of this system is still used today: The Linnaeus System.

Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.

Domain: Eukarya	jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox
Kingdom: Animalia	jackal, clownfish, cat, dog, ladybird, rabbit, fox
Phylum: Chordata	jackal, clownfish, cat, dog, rabbit, fox
Class: Mammalia	jackal, cat, dog, rabbit, fox
Order: Carnivora	jackal, cat, dog, fox
Family: Canidae	jackal, dog, fox
Genus: Canis	jackal, dog
Species: Lupus	dog

Each group allows scientists to observe and understand the **characteristics** of living things more clearly. They group similar things together then split the groups again and again based on their differences.

Microorganisms

Microorganisms are viruses, **bacteria**, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also **microorganisms**.

Microorganisms are very tiny living things that can only be seen using a **microscope**. They can be found in and on our bodies, in the air, in water and on objects around us.

