

1 Classifying living things – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)		
kingdoms	_____	_____	_____
Animal	_____	_____	_____
Plant	_____	_____	_____
photosynthesis	_____	_____	_____
Fungus	_____	_____	_____
mushrooms	_____	_____	_____
yeast	_____	_____	_____
Prokaryote	_____	_____	_____
bacteria	_____	_____	_____
nucleus	_____	_____	_____
Protoctist	_____	_____	_____
algae	_____	_____	_____
Vertebrates	_____	_____	_____
backbone	_____	_____	_____
fish	_____	_____	_____

English	Write it 3 times (English)		
amphibians			
reptiles			
birds			
mammals			
Arthropods			
exoskeleton			
insects			
arachnids			
dichotomous key			
Viruses			
protein coat			
genetic material			
host			

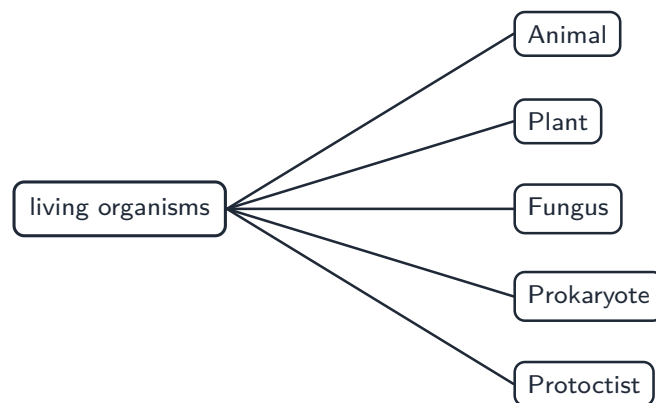
Recall

There are millions of kinds of living thing, so scientists sort them into groups. The biggest groups are the **kingdoms** . You decide where an organism belongs by looking at its features.

New ideas

Read these first, then do the Practice.

■ 1 The five kingdoms



Kingdom	A key feature
Animal	many cells, no cell wall; feed on other organisms
Plant	many cells with a cell wall; make food by photosynthesis
Fungus	e.g. mushrooms and yeast ; feed on dead or living matter
Prokaryote	e.g. bacteria ; one cell, no nucleus
Protoctist	e.g. algae ; usually one cell, with a nucleus

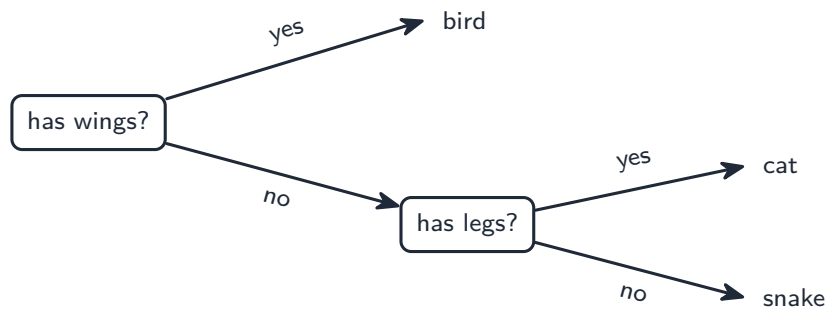
■ 2 Grouping the animals

Animals split into those with and without a backbone:

- **Vertebrates** have a **backbone** – the five groups are **fish**, **amphibians**, **reptiles**, **birds** and **mammals**.
- **Arthropods** have no backbone but a hard **exoskeleton** – e.g. **insects** and **arachnids**.

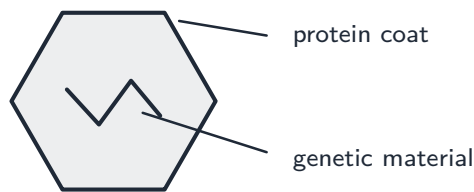
■ 3 Dichotomous keys

A **dichotomous key** helps you name an unknown organism. At each step you choose between **two** options, and that choice sends you to the next step, until you reach a name.



■ 4 Viruses

Viruses are not in any kingdom and are not made of cells. A virus is just a **protein coat** around its **genetic material**, and can only reproduce inside a living **host**.



Watch out: a **virus** is not in any kingdom – it is not made of cells and can only reproduce inside a host. In a dichotomous key, each step offers exactly **two** choices.

Practice

Try these in order.

1.6 Name the five kingdoms that living things are sorted into. [3]

1.7 What is the difference between a vertebrate and an arthropod? [2]

1.8 Give one feature of mammals and one feature of birds. [2]

1.9 What does “dichotomous” mean, and how many choices are there at each step? [2]

1.10 Why do some scientists say a virus is not a living organism? [1]

1.11 Challenge. An unknown animal has a backbone, feathers and lays hard-shelled eggs. State its vertebrate group, and give the feature that rules out “mammal”. [2]