

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	_____	_____	_____

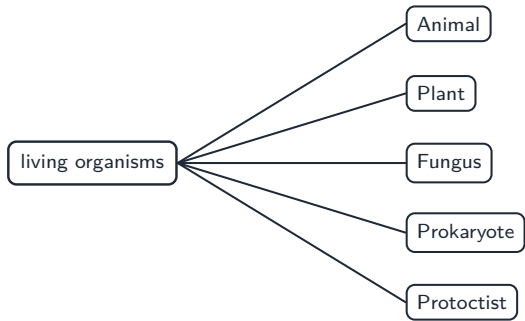
Recall

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
Protocist	e.g. algae ; usually one cell, with a nucleus

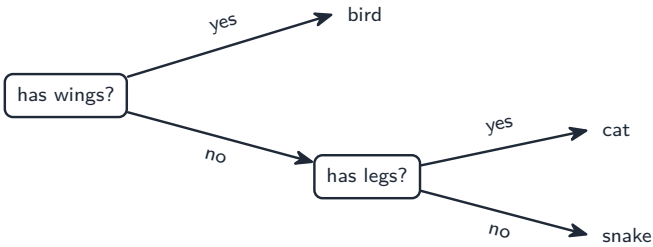
■ 2 Grouping the animals

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** .

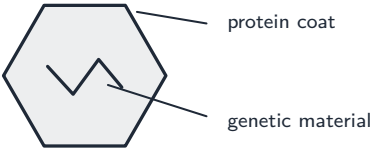
■ 3 Dichotomous keys

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]