

1 Classifying living things – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)		
kingdoms	界	_____	_____	_____
Animal	动物	_____	_____	_____
Plant	植物	_____	_____	_____
photosynthesis	光合作用	_____	_____	_____
Fungus	真菌	_____	_____	_____
mushrooms	蘑菇	_____	_____	_____
yeast	酵母	_____	_____	_____
Prokaryote	原核生物	_____	_____	_____
bacteria	细菌	_____	_____	_____
nucleus	细胞核	_____	_____	_____
Protoctist	原生生物	_____	_____	_____
algae	藻类	_____	_____	_____
Vertebrates	脊椎动物	_____	_____	_____
backbone	脊柱	_____	_____	_____
fish	鱼类	_____	_____	_____

English	中文	Write it 3 times (English)		
amphibians	两栖动物			
reptiles	爬行动物			
birds	鸟类			
mammals	哺乳动物			
Arthropods	节肢动物			
exoskeleton	外骨骼			
insects	昆虫			
arachnids	蛛形纲			
dichotomous key	二歧检索表			
Viruses	病毒			
protein coat	蛋白质外壳			
genetic material	遗传物质			
host	宿主			

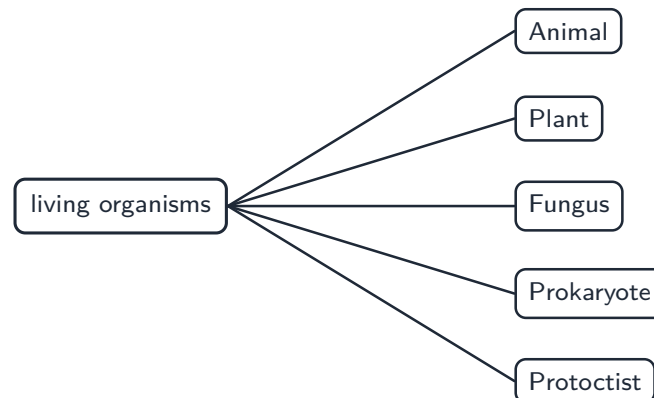
Recall

There are millions of kinds of living thing, so scientists sort them into groups. The biggest groups are the **kingdoms** 界. 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 动物	many cells, no cell wall; feed on other organisms
Plant 植物	many cells with a cell wall; make food by photosynthesis 光合作用
Fungus 真菌	e.g. mushrooms 蘑菇 and yeast 酵母; feed on dead or living matter
Prokaryote 原核生物	e.g. bacteria 细菌; one cell, no nucleus 细胞核
Protocist 原生生物	e.g. algae 藻类; usually one cell, with a nucleus

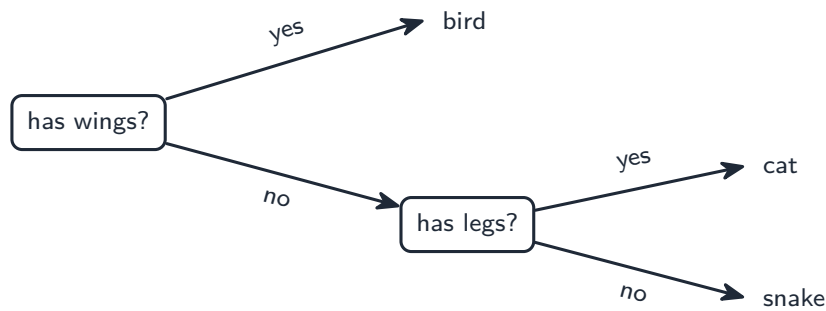
■ 2 Grouping the animals

Animals split into those with and without a backbone:

- **Vertebrates** 脊椎动物 have a **backbone** 脊柱 — the five groups are **fish** 鱼类, **amphibians** 两栖动物, **reptiles** 爬行动物, **birds** 鸟类 and **mammals** 哺乳动物.
- **Arthropods** 节肢动物 have no backbone but a hard **exoskeleton** 外骨骼 — e.g. **insects** 昆虫 and **arachnids** 蛛形纲.

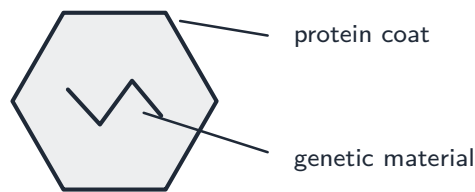
■ 3 Dichotomous keys

A **dichotomous key** 二歧检索表 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 病毒 are not in any kingdom and are not made of cells. A virus is just a **protein coat** 蛋白质外壳 around its **genetic material** 遗传物质, and can only reproduce inside a living **host** 宿主.



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]