

Lesson 2: How are living things grouped?

Vocabulary

genus a group of closely related living things

species a group of similar organisms that can mate and produce offspring

Classification Systems

The world has over a million kinds of organisms. Scientists use a classification system to identify, compare, and study them. This system sorts organisms into different groups. All organisms in a group are the same in some way. Are a dandelion and a mushroom in the same group? Scientists decide by asking questions about their characteristics:

How many cells does it have? Some organisms have only one cell. But a dandelion has plant organs made of many cells. A mushroom also has more than one cell.

Where does it live? Dandelions and mushrooms live on land. Mushrooms can also grow on dead trees.

How does it get food? A dandelion makes its own food. A mushroom gets its food from other living or dead things.

Both the dandelion and mushroom have more than one cell. They live on land. The dandelion makes its own food; the mushroom does not. They are in different groups.

Kingdoms

A kingdom is the largest classification group. Many scientists classify organisms into six kingdoms. Scientists look at how many cells and cell parts an organism has. They also look at where an organism lives and how it gets food. All animals belong to one kingdom. All plants belong to another kingdom.

Kingdoms of Living Things

These are the six kingdoms:

Ancient bacteria have only one cell. They do not have a separate nucleus. They live on land or in water. They also make their own food.

True bacteria also have one cell with no separate nucleus. They live on land or in water. Some make their own food.

Protists have a nucleus and other cell parts. They live in water and damp places. Some make their own food. Algae are protists.

Fungi are mostly made of many cells. Each cell has a nucleus and other cell parts. Fungi live on land. They get food from other living or nonliving things. Mushrooms are fungi.

Plants are made of many cells. Each cell has a nucleus and a cell wall. Most plants live on land. They use the Sun's energy to make their own food.

Animals are made of many cells. They live on land or in water. Animals eat plants or other animals.

Getting More Specific

Scientists divide kingdoms into smaller and smaller groups. The first part of an organism's scientific name is its **genus**. Animals that are closely related are in the same group, called a genus. For example, lions and house cats are in the genus *Felis*. The second part of an organism's scientific name is its **species**. A species is a group of similar organisms that can produce offspring. The species name describes something about the organism, like its color.

Name _____

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Lesson 2 Checkpoint

1. Why is a classification system important to scientists?

2. What are some of the characteristics scientists use to classify organisms?

3. In which kingdoms would you expect to find living things that can make their own food?
