

The Six Kingdoms

Guide for Reading

- ◆ What are the six kingdoms into which all organisms are grouped?

Today, the system of classification includes six kingdoms: archaeobacteria, eubacteria, protists, fungi, plants, and animals. Organisms are placed into kingdoms based on their type of cells, their ability to make food, and the number of cells in their bodies.

The name archaeobacteria means "ancient bacteria." Archaeobacteria can be either autotrophic or heterotrophic and live only in places without oxygen. Archaeobacteria are prokaryotes, organisms whose cells lack a nucleus. A nucleus is a dense area in a cell that contains nucleic acids—the chemical instructions that direct the cell's activities. In prokaryotes, nucleic acids are scattered throughout the cell.

Bacteria belong to the kingdom known as Eubacteria. Eubacteria are unicellular prokaryotes. Some eubacteria are autotrophs while others are heterotrophs. Even though they are similar to archaeobacteria, eubacteria are classified in their own kingdom because their chemical makeup is different from that of archaeobacteria.

Slime molds are protists. The protist kingdom is sometimes called the "odds and ends" kingdom because its members are so different from one another. Protists can be autotrophs or heterotrophs. Although many protists are unicellular, some are multicellular. However, all protists are eukaryotes—organisms with cells that contain nuclei.

Mushrooms, molds, mildew, and yeast are all fungi. Most fungi are multicellular eukaryotes. A few, such as yeast, are unicellular eukaryotes. Fungi are found almost everywhere on land, but only a few live in fresh water. All fungi are heterotrophs. Most fungi feed on dead or decaying organisms.

Plants are all multicellular eukaryotes. The plant kingdom includes a variety of organisms. All plants are autotrophs. Plants feed almost all of the heterotrophs on Earth.

All animals are multicellular eukaryotes. All animals are heterotrophs. Animals have different adaptations that allow them to find food, capture it, eat it, and digest it. Members of the animal kingdom are found in diverse environments on earth.

Name _____ Date _____ Class _____

SECTION 6-2

REVIEW AND REINFORCE

The Six Kingdoms

◆ Understanding Main Ideas

Fill in the correct characteristics of each kingdom in the table below. More than one answer may fit in each kingdom.

Kingdom	Prokaryote or Eukaryote	Autotrophic or Heterotrophic	Unicellular or Multicellular	Other Characteristics
Archaeobacteria				
Eubacteria				
Protists				
Fungi				
Plants				
Animals				

◆ Building Vocabulary

Write a definition for each of the following terms in the spaces provided.

1. prokaryote

2. eukaryote
