

Key Words

- fungi:** living things that absorb food from living or dead things
- hyphae:** branching tubes that often grow in a tangled mass and make up the main part of fungi
- fruiting body:** part of fungi used in reproduction; often the only part of fungi that can be seen

KEY IDEAS

Fungi are a group of living things that share traits with both plants and animals. Although we may not be aware of their presence, fungi are as common as plants and animals.

You may have seen or eaten fungi and not have known it. Fungi include mushrooms, molds, and yeasts. For thousands of years, people have been using yeasts to make bread and to brew beer.

Traits of fungi. Fungi (FUN-geye) are living things that absorb food from living or dead things. You may have seen tiny mushrooms in damp earth after a rain shower. Like plants, some fungi grow in the ground and do not move from place to place. Fungi are like plants in another way. The cells of fungi have cell walls. For these reasons, fungi were once classified as plants. But fungi do not share the main trait of plants. Unlike plants, fungi cannot make their own food.

Like animals, fungi must take in and break down food. However, fungi differ from most animals because fungi break down their food before they absorb it. For example, fungi living on bread digest the bread and then absorb the digested food. Fungi are so different from other types of living things that they are now classified in their own kingdom.

- ✓ 1. Why are fungi no longer classified as plants? _____
- _____

Structure of Fungi. There are many types of fungi. Some are tiny single-celled organisms. Others are large organisms, such as the mushrooms used in cooking. But all fungi share some common traits. Most fungi are made up of

branching tubes called **hyphae** (HY-fee). The hyphae often grow tangled together in a mass that makes up the largest part of fungi. Sometimes you can see a mass of hyphae growing on the surface of a food. In other cases, hyphae are hidden under the food's surface.

Often, the only part of the fungi you can see are fruiting bodies. **Fruiting bodies** (FROOT-ihng BAHD-ees) are the parts of fungi used in reproduction. Look at the structure of two types of fungi shown in Fig. 21-1. Find the hyphae and fruiting body in each.

Helpful Fungi. Many fungi are helpful. Along with bacteria, fungi are important decomposers. Decomposers break down dead things and release matter that can be used by other living things.

Some fungi, such as mushrooms, are an important source of food. Mushrooms are a good source of vitamins and minerals. Other types of fungi are used as medicines. For example, the type of fungus that grows on the skin of an orange is used to make the antibiotic penicillin. Penicillin is used to treat many diseases caused by bacteria.

For thousands of years, people have been using yeast, a tiny one-celled fungus, to make bread. Yeast takes in sugar as energy. As yeast uses sugar, the yeast gives off carbon dioxide gas that makes bread dough rise. Yeasts are also used to make beer and some kinds of cheese.

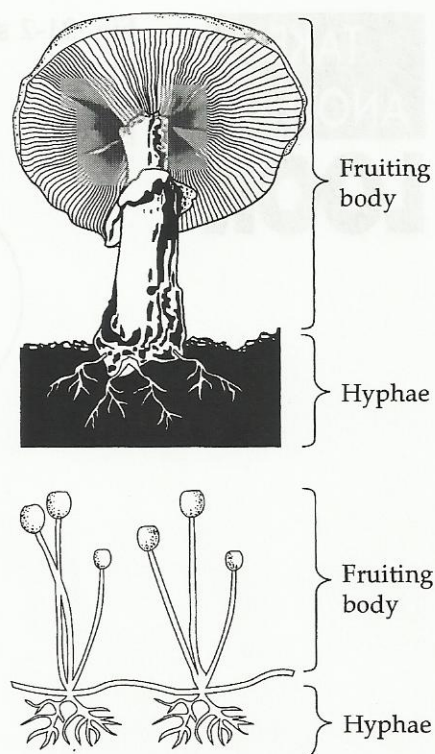


Fig. 21-1

- ✓ 2. What are some examples of helpful fungi? _____

Harmful Fungi. Many types of fungi are harmful. Fungi can cause diseases in humans. One type of fungus causes athlete's foot, a disease in which the skin of the feet becomes itchy and red. Athlete's foot is easy to get if your feet stay damp. Fungi that cause athlete's foot and other diseases often live where it is warm, damp, and dark.

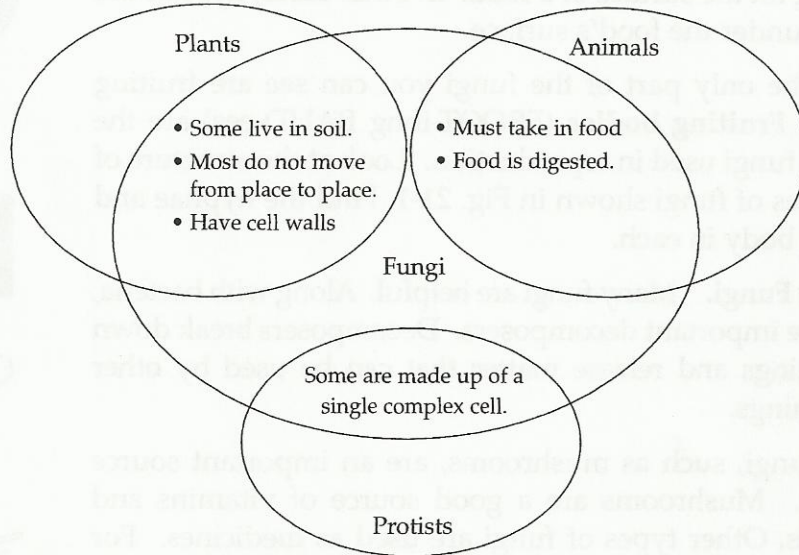
Fungi are harmful in other ways, too. Some mushrooms, for example, are poisonous. If you eat a poisonous mushroom, you could become very ill. Some fungi, such as those that cause Dutch elm disease, attack and kill plants. Before Dutch elm disease spread and destroyed many of these plants, elm trees were common in most parts of the United States.

Many kinds of fungi grow on foods such as fruits, vegetables, cheeses, and breads. Such fungi change the taste and smell of the food and eventually cause the food to rot.

TAKE ANOTHER LOOK

Fig. 21-2 shows the traits that fungi share along with plants, animals, and protists.

Fig. 21-2



Check Your Understanding

Write a sentence explaining the connection between each pair of words.

- fungi, absorb _____

- hyphae, tubes _____

- fruiting body, reproduction _____

- In the space below, draw and label two main parts of any kind of fungus.



7. In what ways are fungi like plants? In what ways are they different?

8. In what ways are fungi like animals? _____

9. Describe some harmful fungi. _____

10. Explain why yeasts are important. _____

11. Think about a forest from which all fungi have been removed. Describe how the forest will change without fungi. _____
