

# Biology for Kids

## Fungi

Fungi are a group of living organisms which are classified in their own kingdom. This means they are not [animals](#), [plants](#), or [bacteria](#). Unlike bacteria, which have simple prokaryotic cells, fungi have complex eukaryotic cells like animals and plants.



Fungi are found throughout the Earth including on land, in the water, in the air, and even in plants and animals. They vary widely in size from microscopically small to the largest organisms on Earth at several square miles large. There are more than 100,000 different identified species of fungi.

### How are fungi different from plants?

Fungi were once classified as plants. However, they are different from plants in two important ways: 1) fungi cell walls are composed of chitin rather than cellulose (plants) and 2) fungi do not make their own food like plants do through photosynthesis.

### Characteristics of Fungi

- They are eukaryotic.
- They get their food by decomposing matter or eating off their hosts as parasites.
- They do not possess chlorophyll like plants.
- They reproduce through numerous spores rather than pollen, fruit, or seeds.
- They are usually not motile, meaning they cannot actively move around.

### Roles of Fungi

- Food - Many fungi are used as food such as mushrooms and truffles. Yeast, a type of fungi, is used when baking bread to help it rise and to ferment beverages.
- Decomposition - Fungi play an important role in the decomposition of organic matter. This decomposition is necessary for many of the cycles of life such as the carbon, nitrogen, and [oxygen cycles](#). By breaking down organic matter, fungi release carbon, nitrogen, and oxygen into the soil and the atmosphere.
- Medicine - Some fungi are used to kill bacteria that can cause infections and disease in humans. They make antibiotics like penicillin and cephalosporin.

### Types of Fungi

Scientists often divide fungi into four groups: club fungi, molds, sac fungi, and imperfect fungi. Some of the more common fungi that you are likely to see or use everyday are described below.

- Mushrooms - Mushrooms are part of the club fungi group. Mushrooms are the fruiting body of a fungus. Some mushrooms are good to eat and are used as food, while others are very poisonous. Never eat a mushroom you find in the woods!
- Mold - Molds are formed by filaments called hyphae. Molds tend to form on old fruit, bread, and cheese. They sometimes look furry as the hyphae grow upward and release more mold spores from their tips.
- Yeast - Yeasts are small round single-celled organisms. Yeasts are important in making bread rise.

### **Interesting Facts about Fungi**

- Scientists who specialize in the study of fungi are called mycologists.
- The fungi kingdom is more similar to the animal kingdom than the plant kingdom.
- The word "fungus" is a Latin word meaning "mushroom".
- It is estimated that there are at least 1.5 million different species of fungi.
- The top of a mushroom is called the cap. The small plates under the cap are called gills.
- The fungus *Trichoderma* is sometimes used in the process when making stone-washed jeans.