

## Grade 6 SCIENCE

## WHAT ARE FUNGI?

A fungus is a simple organism, or **living thing**, that is neither a plant nor an animal. When there is more than one fungus they are called fungi. Some familiar fungi are mushrooms, molds, mildews, truffles, and yeasts.

### Where do Fungi Grow?

There are about 50,000 known species, or types, of fungus. They are found all over the world on land or in the water. Some live on or inside plants and animals. Fungi grow particularly well in mild, moist regions and in the tropics. Fungi are not often found in very dry, hot, or cold areas, though some fungi have been reported in the Arctic and Antarctic regions. Some molds are known to grow on refrigerated food.

### SPECIAL FEATURES OF FUNGI

Fungi were once classified as plants. However, they lack the typical features of plants. Those features include stems, roots, leaves, and the pigment chlorophyll. Therefore, biologists now say that fungi are neither plants nor animals.

A fungus generally consists of a mass of threadlike strands called hyphae. This mass, called the mycelium, is the main body of the fungus. Some fungi develop a special part that makes cells called spores that help the fungus reproduce. This is usually the part of a fungus that can be seen. For example, a mushroom is the spore-producing part of a fungus that is mostly underground.

The visible parts of fungi vary greatly in size. Some are so tiny that they cannot be seen with the naked eye. Others are quite large. Some mushrooms grow to 8 to 10 inches (20 to 25 centimeters) in diameter and 10 to 12 inches (25 to 30 centimeters) in height.

### Life Cycle of Fungi

A fungus usually reproduces by forming spores. Wind, water, and insects carry spores away from the fungus that made them. If a spore lands in a damp place, it can grow into a new fungus. Fungi also develop from fragmentation, cell division, or budding. The simplest process is fragmentation, in which the body of the fungus breaks up. In a favorable environment, each of the fragments develops into a new organism. Some yeasts are single-celled fungi that reproduce by simple cell division. In this process, a yeast cell divides into



two complete yeast cells. Other yeasts reproduce through budding. A bud develops on the surface of a yeast cell and becomes a new fungus.

### USES OF FUNGI

Many mushrooms and truffles can be eaten. Truffles grow underground and are prized as a delicacy. They grow in association with the roots of trees, particularly oaks. France, Italy, and England are famous for truffles. Since truffles grow underground, pigs or dogs are used to sniff and find them.

Some yeasts are used to bake bread and brew beer. Brewers' yeast has long been considered nutritionally useful to humans because it contains a high quantity of B vitamins.

Some types of fungi, plants, and animals are mutually dependent on each other. This relationship is called [symbiosis](#). Certain fungi live in such close association with other types of living things called [algae](#) that they seem to be a single plant. These combinations are called [lichens](#).

Penicillin and many other drugs called [antibiotics](#) come from fungi. Antibiotics are used to treat certain infections in people. They revolutionized the practice of medicine in the 1900s.

### HARMFUL EFFECTS

Some saprophytes destroy timber, textiles, paper, and leather. They can also ruin foods such as bread, cheese, fruit, and vegetables. Parasitic fungi can cause serious diseases in plants. Dutch elm disease, which is caused by a fungus, destroyed many elm trees in Europe and the United States during the 1900s.

Ergotism, also known as Saint Anthony's fire, is a serious disease of rye and other grains. If people and other animals eat the grains they can become very sick. The ergot fungus, which contains a number of poisons called alkaloids, causes the disease. There is no known cure.

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