

## **Answers to Questions About Mushrooms, K - 3**

1. **What is a mushroom?** A mushroom belongs in a group of organisms called mushrooms (in English) or fungi (in Latin). The mushroom produces spores that can grow into new fungi. The mushroom you can see or eat is really a fruiting body grown from the fungus organism (the mycelium) the way an apple grows on an apple tree. The mushroom contains spores, as the apple contains seeds. Plants grow from seeds and make their own food. Fungi, however, are different from plants because they grow from spores, lack chlorophyll and do not produce their own food.
2. **Where do you find mushrooms?** You can find them in soil, on living or dead plants, on insects, animals and people, on rocks, in air and in water. Everywhere!
3. **How do they grow?** Wind, water, animals, insects, and birds spread the spores. With the right conditions, spores grow thread-like so-called ‘hyphae’ that branch to form the mycelium or fungus organism. Fruiting bodies grow from the mycelium when they have food, water, and a favorable temperature and environment. Mushrooms grow on both living and dead matter. They sometimes have partnerships with other living organisms and help or kill the partner.
4. **What colors, shapes, sizes, and odors do they have?** Mushrooms have any color you can name, from pure white to red to yellow to blue to green to very black. They can grow in the shape of circles, triangles, squares, hexagons, spheres, cones, pyramids, and some grow in irregular forms. Some mushrooms have no odor, some have delicious food odors, some smell sweet like flowers or perfumes, and some smell extremely bad. Many mushrooms are so small that we can only see them with a microscope. Most of the ones you would notice are several inches tall. The biggest ones can grow to be as big as the largest ball you have ever seen, and could weigh up to 150 pounds.
5. **How do they help or harm trees, soil, plants, insects, and animals?** Some fungi help trees and plants grow by bringing them water, nitrogen and minerals from the soil. In turn, the tree provides sugars as food for the fungus. Sometimes the fungus kills a plant by using up all its nutrients. Fungi play an important role in the environment by breaking down dead matter, turning it into soil. Some insects, such as termites, can “farm” a fungus to grow it as food for themselves. Some fungi kill insects and then use them as food. Both people and animals, such as squirrels and deer, eat fresh fungi or store them as food for the winter. Some fungi can poison animals and people.
6. **How do people use mushrooms?** People use mushrooms for food and medicine. Yeast is a fungus that is used in baking bread. **However, some mushrooms are poisonous, so never eat a mushroom that you have picked in your backyard, or in a field or forest, unless identified as safe to eat by a knowledgeable person.** The mushrooms that your parents buy in the store and cook are safe to eat. Some fungal diseases, such as Athletes Foot, can grow on your body. Some can grow inside your body, causing hard to cure infections. Two of the medicines made from fungi are penicillin, used to cure infections, and cyclosporine, important for people who have had organ transplants.