

Answers to There's Fun In Fungi, Grades 4–8

1. **Where do you find mushrooms?** They are found in soil, on living or dead plants, on insects, animals and people, on rocks, in the air and in the water.
2. Never eat a wild mushroom that you have picked, unless positively identified as safe to eat by a knowledgeable person! The mushrooms that your parents buy in the store and cook are safe to eat. **Which ones are poisonous?** The most common poisonous mushrooms are Amanita phalloides and Amanita virosa. Other toxic (=poisonous) fungi can cause stomach upsets or serious illness. ***
3. **What harm or good do mushrooms do to trees, plants, soil, animals, insects and humans?** 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 of its nutrients. Fungi play an important role in breaking down dead matter into soil. Some insects, such as termites, can “farm” a fungus to grow as food for themselves. Some fungi kill insects and microscopic animals, and then use them as food. Animals such as squirrels and deer eat fresh fungi or store them as food for the winter. People use fungi as food, but can be poisoned by some fungi. Yeast is a fungus that is used in baking bread. Some fungal diseases, such as Athletes Foot, can grow on your body. Two of the medicines made from fungi are penicillin, used to cure infections, and cyclosporin, important for people who have had organ transplants.
4. **What colors, shapes, sizes, and odors do they have?** Mushrooms come in every color that you can name, from pure white to red to yellow to green to very black. They can grow in the shape of circles, triangles, squares, hexagons, spheres, cones, pyramids, and many have 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. **Which ones are yummy to eat?** Agaricus bisporus (the common button mushroom) and related cremini and portobellos, as well as shiitake and oyster mushrooms, can be purchased in the supermarket. Favorite wild mushrooms, around the world, are morels, boletes, and chanterelles.
6. **How long do they live?** Anywhere from a few hours to several years. Most fleshy mushrooms that you see growing last about a week.
7. **Which mushrooms are slimy, repulsive, horrible and gross?** To name just a few, inky caps, dead man’s fingers and feet, stinkhorns, dog vomit slime mold and old puffballs and other decaying fungi.
8. **How do they grow?** Wind, water, animals, insects, and birds spread the spores. With the right conditions, spores grow into thread-like ‘hyphae’ which branch to form the mycelium or fungus organism. Mushrooms develop from the mycelium when they have food, water, and a favorable temperature and environment. They grow on both living and dead matter. They are the recyclers of dead matter and turn it into soil. They sometimes have a partnership with other living organisms and help each other to grow.
9. **What else would you like to know about mushrooms?**