

36 - Mold

Mold is a living organism -- a type of fungus -- and just like all other life on earth, it needs energy to survive. But mold doesn't have a mouth or a gut. Instead, it shoots out long, microscopic 'arms' into whatever it's living on. It could be a piece of bread, an old sweater, or your bathroom wall. The arms release chemicals that break the food down into nutrients the mold can absorb. As its arms spread through the food, the more the mold eats, the more it grows. Mold needs to digest food, just like you!

100 years ago, chemists realized mold releases something called citric acid, which both preserves food and gives it a sour flavor. Since then, this citric acid, made from mold, has been used in soda, ice cream, and candy. From now on, instead of calling them gummy worms -- call 'em moldy worms!

While it's true some molds can be delicious, and even life-saving—the molds that grow ON your food are the ones that CAN make you sick. So, if you see mold on food -- it's better not to risk it.

Questions we answer on today's episode include:

1. Is mold more like an animal or a plant?
2. Why is mold so colorful?
3. Can mold make foods taste better?
4. Can mold be helpful?

Grow Their Mind

Mold is literally EVERYWHERE. It's way up in the atmosphere and deep down in the soil. It's in the scorching Sahara Desert, and the bitter cold of Antarctica. Given enough time, mold can spread through just about everything, but especially things that are old, warm, and wet. Mold does play a crucial role on Earth. In nature, mold breaks down dead plants and animals and recycles them into nutrients that can grow new plants and animals. Our ecosystem would collapse without it.

Activities

1. Make your own Mold! Take three plastic baggies, and fill each with a small piece or two of bread. To the first bag, add a few drops of water to the bread, and place it in a dark part of your home. Place the second bag in the refrigerator, and the third bag outside, where it will get some sun. Check back each day to see whether any mold has sprouted and to discover which conditions are most hospitable to mold.
2. A Blue Cheese Snack - taste some blue cheese -- either alone or on a cracker. Or, pour some blue-cheese dressing on a plate and use it as a dip with carrots, bell peppers, or celery. Blue cheese tastes the way it does thanks to a special flavoring... MOLD! The mold is added after the cheese has been rolled into wheels, then it's left to age for 2 to 3 months. The type of mold in blue cheese is from the mold family *Penicillium Roqueforti*. While it might SOUND like Penicillin,

the mold in blue cheese is not medicine -- however, medicinal Penicillin is made using another mold from the same family!

Additional Resources

1. Which food will mold the fastest? This [experiment](#) helps you discover which sorts of foods provide the best environment for mold. Remember, do NOT eat the mold!
2. How do you keep your bread from molding? Check out this [video](#)!

Kids News

Students at Bullock Creek High School in Midland, Michigan found an unusual way to raise money for their robotics team – they used 27,434 rolls of toilet paper to build the world’s largest toilet paper pyramid.

Every year, the BlitzCreek 3770 Robotics team takes part in the FIRST Robotics Competition – a national robotics contest, where students are challenged to create a robot that can perform certain tasks. You can read the [full news article](#) and learn more about the pyramid.¹

¹ This activity guide is for the Who Smarted? podcast www.WhoSmarted.com