

What makes mold grow?

Adapted from "Mold Terrarium" on "The Science Explorer" website

Students make their own mold terrariums and observe how different types of molds grow on different foods.

Objectives:

Mold is a living, growing thing.

There are different kinds of mold.

Mold grows on different types of food.

New/repeated Skills: observing, planning, analyzing

Definitions/Background:

Mold is a type of fungus. Fungi comprise one of the categories of eukaryotic life.

Mushrooms are one kind of fungus; molds are another.

Molds do *not* grow from seeds. They grow from spores which are pretty much everywhere in the air.

Molds cannot make their own food for energy (the way plants can from the sunlight) so they feed off of the foods in our experimental mold terrariums.

There are many kinds of mold. Sometimes molds are *good* things.

- The medicine penicillin is produced by a mold.
- Molds help food to rot, which makes the soil richer and provides food for other plants. (could use this lesson as part of recycling?)

Materials:

Per terrarium (pairs or groups?):

- A clear container with a lid – to be thrown away at end of experiment
 - Like Tupperware (like the ones cold cuts come in) or Could try a ziploc bag?
- Adhesive tape
- Water
- Leftover food – all types **except meat and fish** (bread, fruit, cheese, cookies, cake)

Method:

Consider doing steps I-IV on Day 1, concluding with having the students decide which foods they would like to test for mold growth. Send notes home to parents asking for these foods to be sent in.

OR: just send a note home asking for variety of foods and test whatever you get!

- I. Ask: what is mold?
 - a. Is it alive?
 - b. How do you know something is alive?
- II. Ask: what does mold need to grow?
 - a. What do other living things need to grow?
- III. Ask: Will mold grow on food?
 - a. On every food?
- IV. Plan experiment
 - a. Discuss not touching mold once you grow it.
 - b. Plan which foods will go in which containers.
 - c. Consider numbering containers and having a chart with the numbers that you can fill in with observations as a class each day.
- V. Do Experiment
- VI. Review Conclusions
 - a. What food started getting moldy first?
 - b. What color is the mold? How many colors are there?
 - c. What texture is the mold? (flat, fuzzy, bumpy?)
 - d. Does mold grow on every food?
 - e. Does mold spread from one food to another?
 - f. Do different types of foods grown different types of mold?
- VII. Throw out ENTIRE mold terrarium without opening them!**

Experiment:

1. Make food into about 1-inch chunks. (Cut if needed)
2. Dip each piece of food into some water.
3. Place food in container. Lay jar on side if it is large. Arrange food so not touching.
4. Put the lid on the container.
5. Tape the lid.
6. Mark it: **Mold Terrarium** – Do not disturb!
7. Make observations every day.

Additional possible experiments:

- Consider using foods with and without preservatives to test the effect of preservatives on mold growth.
- Test the ability of vinegar or salt to prevent mold growth.