

# PIECING TOGETHER



## ACTIVITY: MAKING MOLD

**FOR AGES:** 5-17, or as developmentally appropriate

**ESTIMATED TIME:** 1 hour to set up. Mold grows for approximately 48 hours.

**STEM AREA:** Science (Biology, Microbiology, Animal Science, Botany) Mold is a living organism, like a bug or a dog or a person, because it is made of cells. Cells store DNA, which is the basic building block of life.

**CAREER OPTIONS:** Research Scientist, Research Assistant, Research Technician, Veterinary Assistant, Zoo Scientist

### INSTRUCTIONS:

**ITEMS NEEDED:**

- 4 slices of white bread
- magnifying glass
- 4 zip lock sandwich bags
- sugar water (1/4 cup water+1TBLS sugar)
- lemon juice water (1/4 cup water+1TBLS lemon juice)
- small spray bottle
- marker to write on zip lock bags

**PROCEDURE:**

1. Put one of the pieces of dry bread into the zip lock bag and seal the bag. This piece of bread will be the piece of bread you compare to the others to see which solution causes the most mold growth. Label the bag as "control".
2. Pour 1/4 cup of water in the spray bottle and spray one piece of bread with the water. Then put that piece of bread into a zip lock bag and seal the bag. Label the bag as "water".

3. Pour 1/4 cup of sugar water in the spray bottle and spray one piece of bread with the water. Then put that piece of bread into a zip lock bag and seal the bag. Try to spray the same amount of liquid on each piece of bread, but this doesn't need to be perfect. Label the bag as "sugar".
4. Pour 1/4 cup of lemon juice water in the spray bottle and spray one piece of bread with the water. Then put that piece of bread into a zip lock bag and seal the bag. Try to spray the same amount of liquid on each piece of bread, but this doesn't need to be exact. Label the bag as "lemon juice".
5. Store the bags in a warm spot (near the oven or the furnace or even in a blanket).
6. After 48 hours, look at the bags without opening the seal. At this point, any mold on the bread can be viewed with the magnifying glass. Replace the bags and look at them again after another 24 hours and for as many days as you like.

**OTHER OPTIONS:**

Think of additional solutions to spray on a piece of bread (vinegar, soda, milk)

Use crayons or markers to draw a picture of what each piece of bread looks like

Using graph paper and markers, create a graph or pie chart that represents how much of each piece of bread is covered in mold (is it half covered in mold? is it all covered in mold?).

Think of different things that could affect how much mold grows on the bread (cold vs heat, dark vs light, white bread vs wheat bread)

**MORE BIOLOGY IF YOU LIKE THIS:**

- Nature walks with a magnifying glass
- Plant seeds and watch their growth
- Go on a biology "treasure hunt" using pictures
- Search for caterpillars on citrus trees
- Visit a pet store or a zoo
- Visit a science center
- Grow Sea Monkeys