AFNR Food Science

What is living in your food?

Food Biology

If foods are prepared and packaged when purchased from a store, why do they spoil? In this lab, different breads will be compared to see what causes them to spoil and how bakeries and food processors try to preserve the food to lengthen shelf life.

1. How is biology applicable to food sciences?

2. Why is biology important to the study of food?

3. Where have you seen evidence of food biology?

Materials:

Different types of bread- white, wheat, soy, gluten free, different brands, homemade, etc. prepared by leaving open for week
Bread Labels
Microscope
Glass slides
Cover slips

4. Look at the nutrition labels of various types of bread. Use your knowledge from the snack lesson to make some evaluations of the products. Which bread(s) will be first to fall victim to food biology, or mold? Why do you think?

5. Observe the different types of bread. Which ones have the most mold? Which have no visible mold? Write down any other observations you make about the characteristics of the bread after it has been out of the wrapper for a week.

6. What factors may have led to the differences in amounts of mold?

5. Choose one type of bread to observe more closely. Prepare a microscope slide and view the mold living in the bread. (Unfortunately, the bacteria that grows along with it may be too small to see with a school microscope)

- Add a drop of water to the slide to be prepared
- Scrape a small amount of the mold onto the slide and into the water
- Cover with cover slip
- Place under microscope and observe

5. Rotate around to other groups to observe the microscope slides and compare.

Extension

Research what type of mold is present on your bread type.