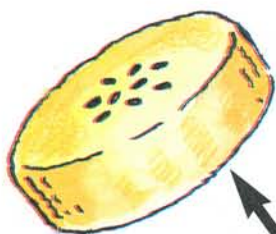


Foiling Spoiling

Other important food additives are used to preserve foods so that bacteria and fungus will not grow on them as fast as they normally would. Some foods change color because of a chemical reaction they have with the oxygen in the air. This reaction is called **oxidation**. There are certain chemicals that can be added to foods to slow down this chemical reaction. These chemicals are called **antioxidants**.

1 Spread paper towels over your work area. Ask your adult partner to help you cut three pieces each of potato, apple, and banana to about the size shown. Also, ask your adult partner to cut the lemon in half.

2 Place a sheet of paper on your paper towels and put the pieces of potato, apple, and banana on the paper in rows and label the rows as shown.



ACTUAL SIZE

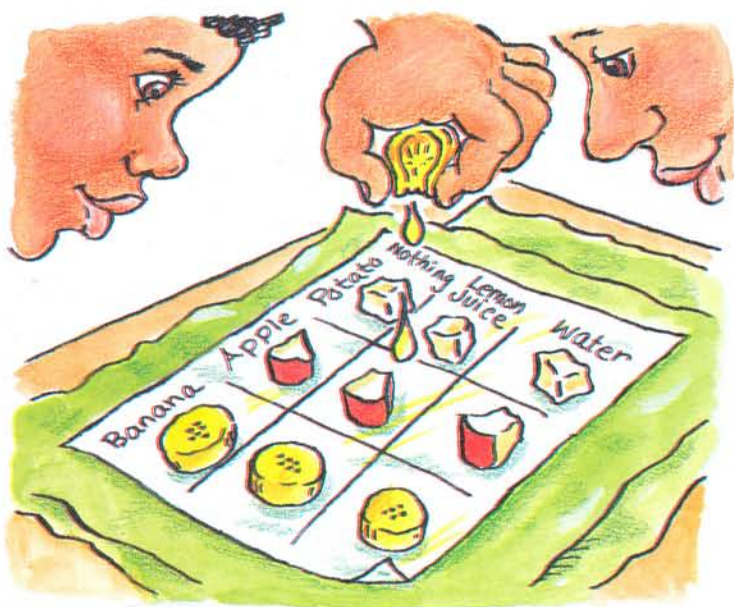
You will need

- paper towels
- 4 sheets of paper
- potato
- banana
- apple
- lemon
- water
- butter knife

Be sure to wash your hands when you finish. Lemon juice can sting your eyes!

3 Do nothing to the first piece of food in each row. Squeeze a few drops of lemon juice on the second piece in each row so that the whole surface of the piece has lemon juice on it. Put a few drops of water on the third piece in each row so that the whole surface has water on it.

4 Label the columns on your piece of paper as "nothing," "lemon juice," and "water" as shown.



5 On a separate sheet of paper, make a chart like the one at right but make it big enough to fill the whole sheet. Each box is for you to draw a picture of the food and write down your observations about how it looks.

6 Wait about one hour and look very closely at your pieces of food. In each box, write down any changes you see in the food in that box. See if you can draw what each piece of food looks like and the changes you see happening to each piece, if any.

Make at least two more charts to record your observations at 12 and at 24 hours. Did the lemon juice act as a preservative?

		ADDITIVE		
		nothing	lemon juice	water
FOOD	potato			
	apple			
	banana			