

Strawberry and Banana Rot Race

Which fruit will brown the fastest



Grade Levels: ALL

Standard: 1-LS1-1, 3-LS3-2

Have you ever bought strawberries that started to grow fluffy mold and turn brown before you could finish eating them? What about a banana that has started to turn from yellow to brown after being peeled if not eaten right away? This is something that happens to all fruit if it isn't eaten in time. While fruits no longer taste as good once they begin to brown, this process of browning is a fruit's special way of preserving itself. It is called **oxidation**.

Each fruit contains chemicals that react when they come in contact with the air. So, if you bite into an apple, the skin is no longer protecting the inside and the exposed part of the apple will begin to brown. If you peel a banana, the fruit inside will begin to brown because it has been exposed to the air. When oxidation takes place it often times leads us to throw our fruits into the trash (or compost). **But, what if there was a way you could slow down the oxidation process to make fruits last longer?**

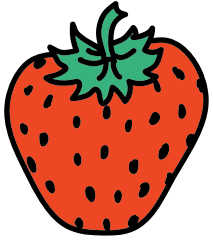
In this experiment you will get to test different methods of preserving fruit and slowing down the browning process. 1 of the 3 preservatives listed below will be able to slow down the oxidation process, but which one? It is up to you to determine which preservative does the best job at slowing down the oxidation process, and allows the fruits to stay edible for a little bit longer.

Materials:

- 1 strawberry (sliced)
- 1 banana (sliced)
- Notebook or piece of paper for taking notes on the chemical reactions that take place
- 1 lemon
- 2 cups of water
- 1 tbsp of sugar

Preservatives:

1. Lemon
2. Water
3. Sugar



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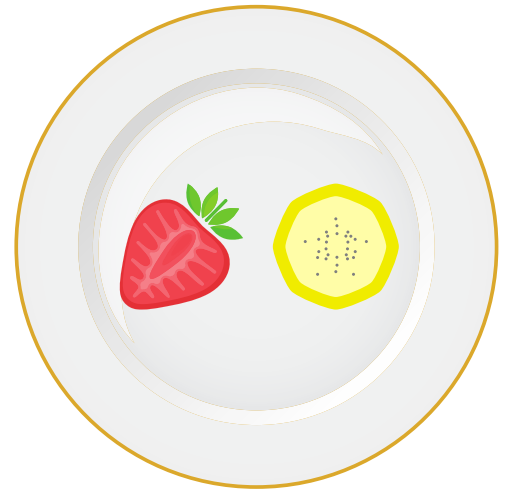


Part 1:

Which fruit will oxidize in air faster?

Step 1:

Place 1 banana slice and 1 strawberry slice on a plate (try to cut them so they are the same size)



Step 2:

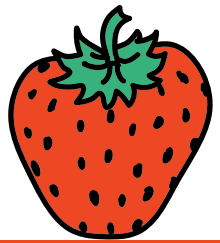
After 60 minutes observe which of your two fruit slices was more brown and record your results using your notebook or sheet of paper.





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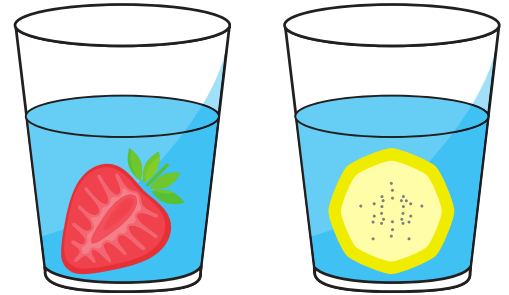


Part 2

Which preservative slows oxidation best?

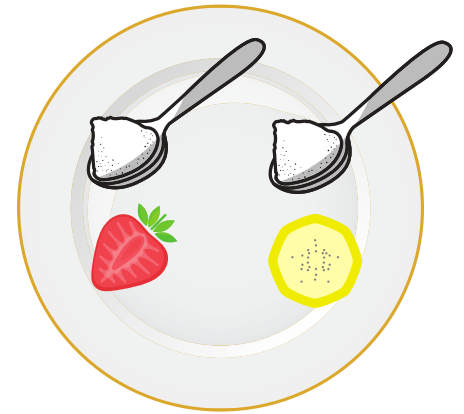
Step 1:

Place 1 banana slice and 1 strawberry slice in separate cups of water.



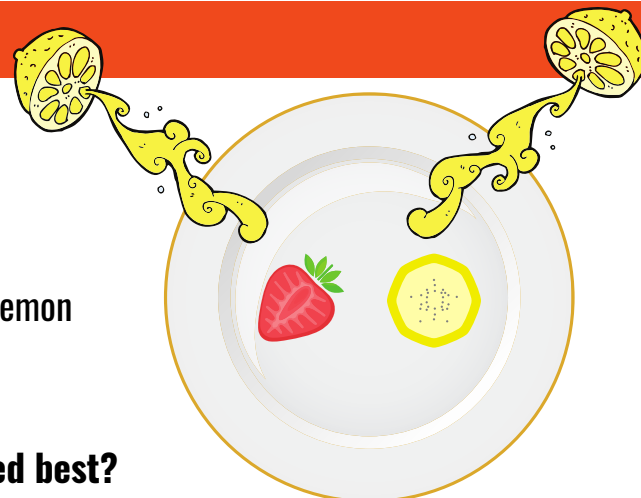
Step 2:

Place 1 banana slice and 1 strawberry slice on a plate and sprinkle each with sugar



Step 3:

Place 1 banana slice and 1 strawberry slice on a plate and squeeze a lemon over each so that each is covered in lemon juice.



After 30 minutes observe your fruits. Which preservative worked best?