



What's the Matter with My Orange?
Background Information



Fermentation

What is it?

Fermentation is a process by which organic matter can be broken down into complex molecules when little oxygen is present. Fermentation is a chemical change since the properties of the object have changed and a new substance is produced.

How does it relate to this activity?

When the sealed oranges were first put in their containers, there was enough oxygen trapped inside to promote the growth of yeast (a fungi). Once the oxygen was used up in the container, the yeast stopped reproducing and survived by changing the sugar in the orange into alcohol and carbon dioxide. The sweet odor coming from these sealed containers is a gas from the alcohol that is being produced.

Did you know?

- Grape farmers produce wine through a similar process.
- Your body ferments the sugar made from digesting food when you exercise. If you exercise too rigorously, the waste product of fermentation (lactic acid) will cause a muscle cramp.