Yeast Balloon Lesson Plan

Amount of time Demo takes: 30 mins.
Try this at home!

Materials

- Yeast (found at the grocery store), small plastic soda bottle (8 oz. preferably), sugar, some warm water, a small balloon
- Waste bucket, measuring spoons, funnel

Set-up Instructions

1. Fill the bottle up with about one inch of warm water

Lesson’s Big Idea

- Yeast is a living organism that feeds off of sugar and releases carbon dioxide when it consumes the sugar causing the balloon to inflate.
- Yeast are living things like us that need energy (sugar) to be active. When we put the sugar in the bottle the yeast are “eating” and release gas (carbon dioxide) that fills the balloon.

Background Information

- Most breads are made using yeast. When bread is made, the yeast becomes spread out in the flour. Each bit of yeast makes tiny gas bubbles and that puts millions of bubbles (holes) in our bread before it gets baked. When the bread is baked, the yeast dies and leaves all these bubbles (holes) in the bread.

Instructional Procedure

1. Add 1 ½-2 teaspoons of yeast and swirl the water around in the bottle for a few seconds.
2. Add 1 ½-2 teaspoons of sugar to the bottle and swirl the water around in the bottle for a few seconds.
3. Blow up the balloon a few times to stretch it out and place the neck of the balloon over the neck of the bottle.
4. Let the bottle sit in a warm place for about 20 minutes (may take longer).
5. If all goes well the balloon will begin to inflate!
Assessment/sample questions you can ask
1. Why does the balloon become inflated?
2. What temperature helps the yeast create the most gas?

Clean Up
- Dump water and throw away balloon.

References

Next Generation Science Standards
- K-5
  - 3-LS3-2
  - 5-PS1-1
- 6-8
  - MS-LS1-5
- 9-12
  - HS-LS1
  - HS-LS2