IT'S ALIVE! YEAST BALLOON BLOW UP

Yeast is a single-celled fungus. Shake a few grains into your palm, and check it out. It may not seem to be alive but it's just **dormant** right now. But watch what happens when you activate a yeast culture. Can you inflate a balloon with it?

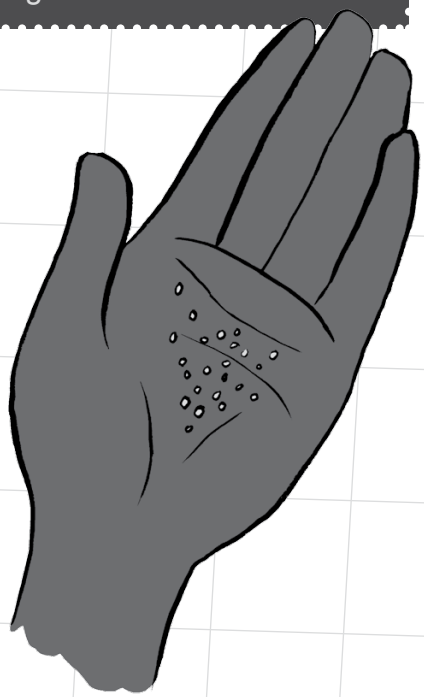
Hint: Don't use hot water. That will kill the yeast.

1 Pour baker's yeast into the bottle. Carefully pour warm water into the bottle until it's about one-quarter full. Swirl the bottle in a circular motion to dissolve the yeast. As yeast is absorbed in water, it becomes active. Yeast cells are microscopic, so you won't be able to see any signs of life.

Words to Know

dormant: not growing and developing.

colony: a group of plants or animals living cooperatively together.



Just for Fun

Q: What's the difference between the shining sun and a loaf of bread?

A: One rises from the east, and the other rises from yeast.

activity

Supplies

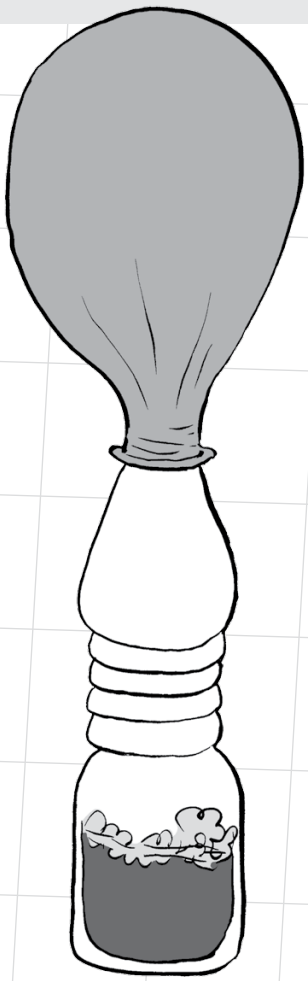
- package of active dry baker's yeast
- empty plastic water or soda bottle
- very warm tap water, about 110 degrees Fahrenheit (43 degrees Celsius)
- 2 tablespoons sugar
- small balloon
- science journal and pencil

2 Add sugar to the bottle. You're feeding the yeast. Yeast uses sugar's energy to become more active. Swirl the bottle again to dissolve the sugar. How is the yeast changing? Is it bubbly or foamy?

3 Fill the bottle with more of the very warm water. Add water all the way to the top of the neck.

4 Stretch the balloon to loosen it. Blow it up several times. Check to make sure there are no leaks, and then deflate it. Slip the deflated balloon over the bottle's neck.

5 Make a scientific method worksheet to record your predictions and results. Then incubate your yeast culture in a warm location away from drafts. After a few hours, check your experiment. It may take longer, depending on your environment.



What's happening?

As yeast gobbles sugar, it releases CO_2, the gas carbon dioxide. It releases more and more gas, which bubbles into the bottle. Yeast also makes more yeast. As whole *colony* produces more and more gas, the gas has to go somewhere.