

## Experimenting with yeast

### Instructions



- 1) Pour the yeast into the bottle.
- 2) Add about 100ml warm water to the bottle
- 3) Add 1 teaspoon of sugar and gently swirl the bottle around to mix all the contents together.
- 4) Place the balloon over the mouth of the bottle so that it is sealed and there are no leaks.
- 5) Watch your yeast and see what happens! It may take a little while so the best place to put it is somewhere warm such as a windowsill or near a heater. You could also place the bottle in a bowl of warm water to act as a water bath.

**Why not try experimenting with different temperatures of water or different amounts of sugar?**

### You will need:

One teaspoon of Instant Dried Yeast (approx. 5- 7g)  
500ml clear plastic bottle  
Balloon  
Sugar  
Warm water

### **Some uses for yeast:**

Bread, Some fizzy drinks (alcoholic and non-alcoholic), Biofuel, Scientific research

**Why not try baking some bread?**



### What is yeast?

Yeast is a single celled microorganism and is part of the fungi family. Like many living things it needs the right conditions to live, grow and reproduce such as warmth and food.

This experiment uses dried yeast. Each particle you can see is actually a clump of yeast cells that are currently dormant, in fact, in a 5g packet there are over 90 billion egg shaped yeast cells that are so tiny you would need a microscope to see them. Adding water wakes them up and the sugar acts as their food. Happy yeast will respire and produce carbon dioxide bubbles which will rise out of the liquid and inflate the balloon. Why not draw a smiley face on the balloon before inflating then as the yeast gets happier the smile will grow.

### **Did you know:**

The complete genome (set of genetic instructions unique to a living thing) of bakers yeast was first published in 1996. Scientific researchers including those in North East universities often use yeast in their experiments because it is cheap, grows really fast, and has lots of similarities to human cells.

**P.S. Don't forget to empty your yeast bottle when you have finished otherwise you could end up with a yeast explosion!**