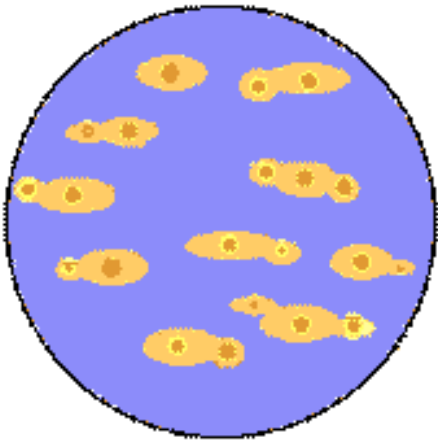


# Activating Yeast

## A Hands On Activity

Yeasts are unicellular organisms. They reproduce by budding, and can be activated in the classroom.

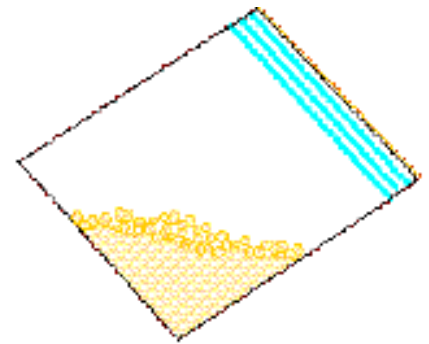


### Materials

Zip-lock plastic sandwich bags	Packages of Yeast	Sugar
Heating pad or hot water bottle	Warm water	Towel

### Procedure:

Each group receives a zip-lock bag.  
 Pour about a third of a cup of warm water into the bag.  
 Add three or four teaspoons of sugar. Seal the zip-lock bag.  
 Shake sugar and water together until the sugar is dissolved.  
 Open the bag and add about a half a teaspoon of yeast.  
 Push as much of the air as possible out of the bag. Seal the bag again.  
 Set the bag aside and let the yeast go to work.



### Notes:

Yeast grows quickly in water that feels a little warm. If the water is colder, the yeast will grow more slowly. If the water is too hot, it will kill the yeast.

The flat shape of the plastic bag has a lot of area in proportion to its volume. It will come to room temperature quickly. If you want the yeast to work more quickly, you may want to wrap it in a towel and put it on top of a heating pad or hot water bottle. Be careful not to get the yeast too hot: it will die.

If the room is cool and you have no way to keep the yeast culture warm, wait until next morning to see the bags puff up!

### Results:

As the yeast works, it will break down the sugar. About 45% of the sugar is broken down into carbon dioxide. The rest is turned into alcohol. The yeast cells will grow and bud, producing daughter cells.

Yeast will stop growing when it has used up the sugar or when the alcohol level reaches about 14 % of the liquid.