

# Teacher Prep

**Each group of students will need 3 zipper baggies prepared ahead of time.**

**Each baggie should be labeled with a Sharpie.**

Bag 1

- Materials to put inside baggie: nothing (this bag will be empty)
- Label for baggie: Only Yeast

Bag 2

- Materials to put inside baggie: 1 tablespoon of sugar
- Label for baggie: Yeast and Sugar

Bag 3

- Materials to put inside baggie: 1 tablespoon of milk
- Label for baggie: Yeast and Milk

Name: \_\_\_\_\_

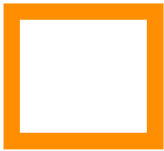
# Experiment Steps

## Part 1: Set Up

Follow the steps. Check off each step after you complete it.



Lay each bag on a flat surface. The names should be facing up so you can read the name on each bag.



Add 1 teaspoon of yeast to each bag.



Pour 1/4 cup of warm tap water into each bag.





Make sure each bag is zipped closed and that there is not a lot of air in each bag.



Mix materials together with your fingers. There should be no dry material sitting in a corner of the bag. Do not touch the bags for the rest of the experiment!



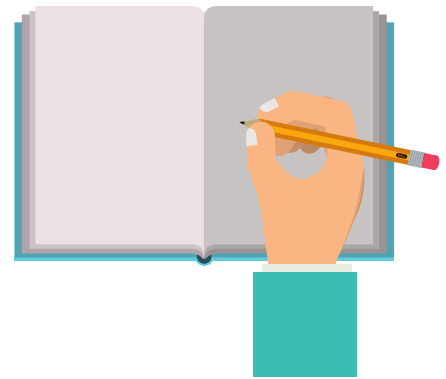
Lay bags on flat surface with the names facing up.



**Quick! Collect Data! Don't Wait!!**



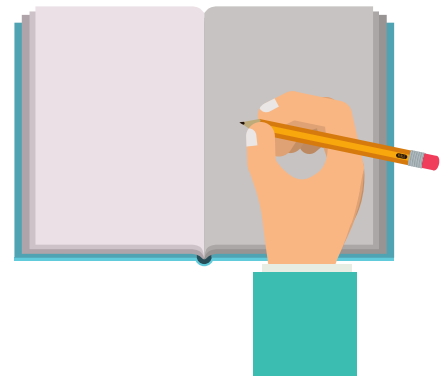
Draw or write what each bag looks in the first row. The row says 0 minutes. This means that the experiment is just starting. The experiment is starting now because all of the set up is done. No other ingredients are being added.



Quickly set a timer for 3 minutes.



After 3 minutes is up, draw and write what the bags look like in the next row. This row says 3 minutes.



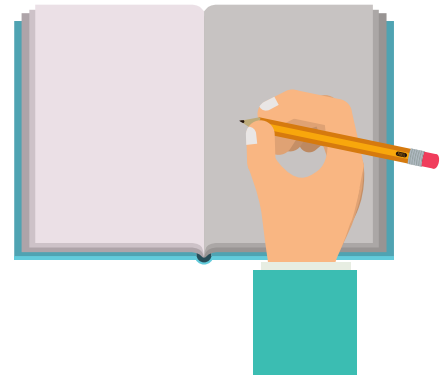
**Quick! Collect Data! Don't Wait!!**



Quickly set a timer for another 3 minutes.



After 3 minutes is up, draw and write what the bags look like in the next row. This row says 6 minutes.



**Quick! Collect Data! Don't Wait!!**

**The experiment is now over. Discuss with your group whether any of the bags started to bubble and expand. Bags that bubble and expand are making fuel!**

Name: \_\_\_\_\_

# Data Table

<b>Time</b>	<b>Just Yeast</b>	<b>Yeast &amp; Sugar</b>	<b>Yeast &amp; Milk</b>
<b>0 Minutes</b>			
<b>3 Minutes</b>			
<b>6 Minutes</b>			

# Roles For Group Members

Each group member will have a job during the experiment.

## Scientist #1

Name: \_\_\_\_\_

- Job: Writing and Drawing
- Description: It is your job to draw and write all observations in the table. Make sure to listen to all members of the group before you write or draw anything.

## Scientist #2

Name: \_\_\_\_\_

- Job: Setting Timer
- Description: It is your job to set the timer every 3 minutes. You will also tell the group when the time is up and remind the writer to add information to the table. Your job is very important because you must reset the timer as soon as possible when it goes off. If you wait too long, the experiment results won't be correct.

## Scientist #3

Name: \_\_\_\_\_

- Job: Making Sure Groups Follow Experiment Steps
- Description: It is your job to make sure the group carefully follows each step in the experiment. You will check off each box after your group completes a step.

## Scientist #4

Name: \_\_\_\_\_

- Job: Making Sure Group Members Have Professional Behavior
- Description: It is your job to make sure that your group has professional behavior during the experiment. Professional behavior means speaking to each other with respect and taking turns. It also means that one person doesn't take over and do all the work. Everyone is responsible for his or her own job.