

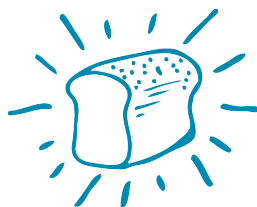
# Bread in a Bag & Butter in a Jar

This activity works best when students work in small groups or with a partner. If you are making bread as a microorganism experiment, vary the yeast, sugar, salt, or water temperature for interesting results.

## Bread in a Bag

### Step 1

In a large one gallon (3.79L) Heavy Duty Ziploc bag, combine 1/2 cup (120 mL) all-purpose flour, yeast, 1/2 cup (120 mL) warm water, and sugar.



### Step 2

Close the bag and knead it with your fingers until the ingredients are completely blended. Leave the bag closed, with contents in the corner and let dough rest 10 minutes (this is a good time to make butter.)

### Step 3

Add 2 cups (480 mL) of flour, 3/4 cup (180 mL) warm water, oil, and salt. Mix well.

### Step 4

Add enough all-purpose flour to make a stiff dough, about 1 or 1-1/2 cups. Close the bag and knead it (you may need to remove some air in the bag). Add more flour until dough no longer sticks to the bag. Let the dough rest for 5 minutes.

Open the bag and allow the dough to fall out onto clean or gloved (food handler's gloves) hands. Spray the hands or gloves with oil so there will be no sticking. Form the dough into a loaf, place in a loaf pan or onto a cafeteria cookie sheet.

Remember the dough will grow 1-1/2 times larger, so leave space between loaves if baking on a cookie sheet. Allow it to rise 30 to 45 minutes. **Bake 30-35 minutes in a 350°F (180°C) oven.** Delicious!

## Bread Materials

- 4 cups (960 mL) flour
- 1 pkg. or 2 1/4 teaspoons (10.25 mL) yeast.
- Warm water
- 2 tablespoons (30 mL) sugar
- 2 teaspoons (10 mL) salt
- 1 tablespoon (15 mL) vegetable oil
- 1 Gallon (3.79L) heavyduty Ziploc bag

## Butter Materials

- Heavy whipping cream
- Jar with lid (plastic or glass)  
or
- 2 oz. (60mL) plastic cups with lids. small plastic 2 oz. (60mL) cups with lids available from restaurant supply stores or your cafeteria.

## Butter in a Jar

- Pour heavy whipping cream into a jar.

Fill the container 2/3 full. Make sure the lid is secure. Shake briskly. The more cream in a container, the longer it will take. Cream in 2 oz. (60mL) containers should take 5-10 minutes. After butter is separated it is usually salted. For an experiment, try salting before shaking.

