



Introduction: What ingredients are in bread and how do you make it? What do you think makes bread rise? In this activity, you will create a loaf of bread in a bag.



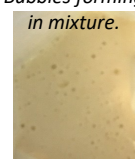
Supplies Needed:

- 3 Cups all purpose flour plus 2-3 Tablespoons extra
- 3 Tablespoons white sugar
- 1 package yeast (rapid rise or regular)
- Bread pan (two mini or one loaf)
- 1 gallon size resealable plastic bag
- 1 Cup warm water
- 3 Tablespoons oil (vegetable or olive oil)
- 1 teaspoon salt
- Cooking spray to grease pan
- Wax paper or foil

Instructions: *Recipe makes 2 small loaves (approximately 5" x 3" x 2") or 1 large loaf (approximately 8" x 5" x 2 1/2")*

1. Preheat oven to 375 degrees F.
2. Grease bread pan with cooking spray. Spray bottom and sides of pan.
3. In a resealable plastic bag place 1 Cup flour, 3 Tablespoons sugar, 1 packet of yeast, and 1 Cup warm (not hot) water. Water should be 105-110 degrees F. (*bath water temp*)
4. Squeeze air out of the bag and seal. Be sure that the bag is sealed completely.
5. Squish with your hands until the ingredients are mixed together.
6. Let it rest for 10 minutes at room temperature. Bubbles will form.
7. Open the bag and put in 1 Cup of flour, 3 Tablespoons oil and 1 teaspoon salt.
8. Seal bag again and squish until well blended.
9. Add last cup of flour and seal bag. Continue mixing in the same manner until the ingredients are combined and the dough starts to stick together in a ball.
10. Remove the dough from bag and put onto a piece of wax paper or foil lightly dusted with approximately 1 Tablespoon of flour. The dough will be very sticky when you touch it.
11. Dust your hands with flour and knead the dough for 5-10 minutes or until smooth. Add 1-2 Tablespoons of flour to the dough as you are kneading to reduce the stickiness.
12. Divide dough in half and place each half into a greased mini bread pan or make one large pan.
13. Cover with a towel and allow to rise for 30-45 minutes. The dough will rise and double in size.
14. Bake in a 375 degree oven for 25-30 minutes or until bread is golden brown. When you tap on the top of the bread and it sounds hollow, the bread is done.
15. Remove the bread from the oven and cool it in pan for 1-2 minutes. Then remove the bread from pan and allow the bread to cool on a wire cooling rack or a clean towel.

*Bubbles forming
in mixture.*



The Science of Baking Bread: The yeast is what makes the bread increase in size (rise). Yeast is a living, single-cell fungus. There are several types of yeast but for this recipe active dry yeast was used. The yeast is dormant until you activate it. Yeast needs to be combined with warm water and a food source (sugar), to activate it. The sugar feeds the yeast and creates the fermentation process. Did you notice the bubbles forming when you let the flour, sugar, and yeast rest after combining them together? The bubbles are carbon dioxide (CO₂) gas given off by the yeast as it is eating the sugar. These bubbles are also what cause the dough to rise as air pockets are trapped in the sticky strands of the dough.

Adapted from various sources.

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