

# MAKING YEAST BREAD

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Grades 3-6

Do you know that yeast is alive? It is a one-cell fungus that grows by budding and separating into individual cells. It forms tiny spores. Fungal spores float in the air all around us. They are so small that they can only be seen with a microscope. There are many different kinds of yeast. Some are harmful, causing infections in humans, and some contaminate fruits and vegetables. Others are helpful, such as *Saccharomyces cerevisiae* and the other yeasts that we use for making bread. The same yeast is used to make beer and wine.

## RECIPE FOR TWO LOAVES OF YEAST BREAD

### Ingredients

2 cups warm water  
1 tablespoon Red Star yeast  
2-3 tablespoons sugar  
1 tablespoons salt  
1/4 cup canola oil (optional)  
4-5 cups unbleached flour  
oil to coat one bowl and the baking pans

### Equipment

2 large mixing bowls  
Mixing spoon  
Measuring cups and spoons  
2 oiled baking pans  
Towel to cover bowl  
Hot pads

1. Add water to un-oiled bowl. Gently sprinkle yeast on top. Add sugar and let stand for about 10 minutes or until the surface becomes foamy. Mix all ingredients in bowl. Add salt, mix, and then add oil.
2. Slowly add flour in small amounts, mixing each time until it becomes too difficult to move the spoon. Using your hands, continue to add flour until it no longer sticks to your hands. The dough should still be very pliable and form into a ball.
3. Set the ball in oiled bowl. Cover with a towel. Let rise in a warm place for 2 hours or until double in size.
4. Move the dough from the bowl to a working surface, and punch it down. Divide the dough into two balls with a knife. Knead each dough ball counting 100 times. You do this by pressing dough down with the palm of one hand while folding part of it with the other hand. It's fun!
5. Shape each loaf to fit your oiled pans. Allow them to stand in a warm place for 45 minutes. In the meantime, preheat oven at 400 degrees for 15 minutes. Bake the loaves for 25 to 30 minutes, or until they are firm when you press your finger on top. Cool loaves on a surface that will not burn.

Once you learn how to make yeast bread, you can bake breads with different types of flour; use seeds and nuts in the batter; even make sweet breads. You will find many wonderful recipes in cookbooks.

## QUESTIONS AND COMMENTS

1. What's happening to the yeast? Warm water and sugar provide food for the yeast. Watch the reaction as it starts to foam up.
2. Why salt? It slows the yeast activity.
3. Flour? It provides protein and food for the yeast.
4. Rising? The yeast cells multiply producing carbon dioxide gas which causes the dough to expand.
5. Kneading? It improves the dough by developing gluten. It also compresses the gas pockets. Gluten is what holds it together.
6. Baking? The yeast cells continue to grow with the heat, but as the temperature rises in the oven the yeast cells die. We should thank the yeast for giving us this wonderful food source that is an important part of our diet.

## LIFE ALONG OLD CANADA ROAD

European Americans settled in and around Old Canada Road about 1850, after the 49er prospectors came to California in search of gold. This is how the SF 49er's football team got its name. Soon after, California became a state in the Union. People from all over the world moved here to start new lives. This was before Mr. Bourn bought Filoli in 1915. There were no lakes along Highway 280. Instead it was a perfectly serene valley where people grew corn, watermelons and even tobacco.

Bread making was the wife's duty. She also raised her family, cooked meals, made clothes and washed them by hand, chopped wood and had to help her husband in the fields in her spare time. Life was not easy for her. There was no electricity, running water, household gas, grocery stores or K-marts. The iron stoves that were commonly used then were heated by burning wood. In many homes the stove provided heat for the whole house.

We hear a great deal about the sour dough bread that San Francisco made famous. In the days of the 49ers, prospecting for gold ore involved much traveling. Prospectors packed a bread starter in a pot carried on their backs. A starter was made with water, yeast and flour. It looked like white liquid paste. When they settled down for an evening meal, they usually made bread, perhaps their only food. The prospector would mix some of the starter from his starter pot in a bowl with a few cups of warm water. After adding more flour, he would take a cup of the mixture and return it to his starter pot for future meals.