



YEAST IN ACTION!

TIME:

2½ TO 3 HOURS

CATEGORY:

RECIPE, EXPERIMENT

MATERIALS:

3 TEASPOONS ACTIVE DRY YEAST

1 TEASPOON SUGAR

¾ CUP WARM WATER

2 CUPS WHOLE-WHEAT FLOUR

¼ CUP ALL-PURPOSE FLOUR, PLUS
EXTRA FOR KNEADING

1 TEASPOON SALT

1 TABLESPOON OLIVE OIL

2 LARGE BOWLS

1 SMALL BOWL

MEASURING CUPS

MEASURING SPOONS

RUBBER SPATULA OR
WOODEN SPOON

PLASTIC WRAP

DISH TOWEL

9-BY-5-INCH LOAF PAN

COOLING RACK

TIMER

Yeast, the fungus that helps dough rise, was once a mystery to humans. Let's make our own bread and track the yeast while it's at work!

Safety First! Ask for permission or help using the oven.

PREP WORK:

In your journal, create three sections: "Foaming," "Rising," and "Baking."

INSTRUCTIONS:

1. In a small bowl, mix the yeast and sugar into the warm water. Set aside for 5 minutes, or until it begins to foam.
2. In a large bowl, mix the whole wheat flour, all-purpose flour, and salt.
3. Add the yeast mixture to the flour mixture. Add the olive oil. Use a rubber spatula to mix until combined.
4. Lightly flour a clean, flat surface. Knead the dough by pulling, pushing, and folding. The dough will be wet. Dust with more flour as you knead until the dough becomes elastic. Do this for 8 to 10 minutes.
5. Coat a large bowl with olive oil. Place the dough in the bowl. Cover it with plastic wrap. Set it aside in a warm place for 60 minutes, or until the dough doubles in size.
6. Punch the dough to release any air bubbles.



7. On the flat surface, knead the dough again for 2 to 3 minutes and put it in a greased loaf pan. Cover it with a damp dish towel. Place it in a warm place for 30 minutes, or until it has doubled in size.
8. While the dough is rising, preheat the oven to 400°F.
9. Bake the dough for 20 to 25 minutes, until golden brown.
10. Gently flip the bread out of the pan onto a cooling rack. Cool it for 45 minutes before slicing and eating.

THE JOURNAL ENTRY

1. Write your observations after each step of the experiment: foaming, rising, and baking. How could you see the yeast at work?
2. What happened to the yeast mixture after 5 minutes? What did it smell and look like?
3. What might happen if you didn't use yeast?

CONCLUSION:

You just watched yeast work its magic! As yeast begins to eat sugar, it foams and you can see the leavening process begin. Once added to flour, it keeps eating and makes the dough grow. After it cools, you can see more evidence of the yeast—small holes in the baked bread where the yeast released its gas.

TIPS

- ➔ If the baking bread starts to brown too quickly, cover with foil.
- ➔ Bread can be stored in a paper bag at room temperature for 2 to 3 days. Storing home-made bread in the refrigerator will cause it to get stale faster.