Cakes

Cake Baking Experiment Activity

Cake baking requires that you measure the ingredients carefully. Varying or changing ingredients in a recipe can result in a different product than intended. The following activity illustrates how important each ingredient is and what happens when ingredients are left out.

**SUPPLIES NEEDED**

- Dry and liquid measuring cups
- 4-inch soup bowl or cake pans
- Mixing bowls, fork, and spatula
- Aluminum foil
- All-purpose flour
- Sugar
- Baking powder
- Salt
- Oil
- Milk
- Vanilla
- Eggs
- Oven, preheated to 450°F

**ACTIVITY PROCEDURES**

Using the following standard cake recipe, vary the ingredients as listed in the chart below. You will make four different cakes and then evaluate each based on appearance, texture, and flavor.

**Standard Cake Recipe**

Makes one 4-inch cake

| 6 tablespoons all-purpose flour | 2 tablespoons oil |
| 3 tablespoons sugar | 2 tablespoons milk |
| ⅛ teaspoon baking powder | ¼ teaspoon vanilla |
| pinch salt | ⅓ of one beaten egg |

1. To make your own 4-inch cake pans, wrap several layers of aluminum foil around the outside of a 4-inch soup bowl to form a mold. The mold should stand on its own when removed from the soup bowl. Place the mold on a sheet pan for support. Slightly grease your foil mold to prevent the cake from sticking. You will need a total of four foil molds.
2. In a small-sized mixing bowl, combine dry ingredients. Add remaining ingredients. Remember to only use ¼ of the egg. Mix lightly with a fork, until all the flour is moistened and a smooth batter is formed.

3. Pour the batter into your mold and bake at 350°F for about 15 minutes or until the center comes out clean when tested with a toothpick.

4. Repeat recipe and instructions, using the variations listed below.

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<thead>
<tr>
<th>VARIATIONS</th>
<th>APPEARANCE</th>
<th>TEXTURE</th>
<th>FLAVOR</th>
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<tbody>
<tr>
<td>Standard recipe above</td>
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<tr>
<td>Standard recipe minus oil</td>
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<td>Standard recipe minus egg</td>
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<td>Standard recipe minus baking powder</td>
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Cut each cake in half and make the following assessments.

Compare the appearance of each cake.

Compare the texture of each cake.

Describe the difference in flavor.

Rank the cakes from most tender (1) to least tender (4).