



# *Fifth Grade Food Science*

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# Question

In this experiment we hope to find out what happens when subtracting different fats from a batch of chocolate chip cookies.

# Hypothesis

One educated guess we can make about the end result in this experiment is that the batch of cookies without the egg in them might crumble and fall apart easily. The batch without the butter may be dry and hard.

# Experiment Design:

## Materials and Ingredients

Our materials were:

- Wisk
- Rubber spatula
- Measuring cup
- Measuring spoons
- 2 medium sized bowls
- Wire cooling tray
- Spatula

Our ingredients were:

- 1  $\frac{1}{8}$  cups all purpose flour
- $\frac{1}{2}$  teaspoon baking soda
- $\frac{1}{2}$  teaspoon salt
- $\frac{1}{2}$  cup (1 stick) butter, softened
- $\frac{3}{8}$  cup granulated sugar
- $\frac{3}{8}$  cup packed brown sugar
- $\frac{1}{2}$  teaspoon vanilla extract
- 1 large egg
- 1 cup chocolate chips

# Experiment Design: Procedure

First we made the made control, the normal batch of cookies. Then we set them on a wire cooling rack to cool. Next, we made the batch of cookies without butter and set them on the cooling rack, as well. Finally, we made the batch without eggs, and put them with the others to cool.





# Results

This was the No Butter batch. They turned out very crumbly, and with a crispy exterior.



This was the Control. These were soft, chewy, and moist.



This was the No Egg batch. These cookies came out more moist than the batch without butter but they were still hard and airy.



# Conclusion

Our conclusion is that the fat is a very important part of the cookie, both to the taste and consistency

