



Food Science Experiment

Topic Sugar Uses in Foods

Length of project: 1 hour

Research. What does society know. Look it up!

Sugar is used for many reasons in foods including sweeteners, texture and volume, color, food preservation, and alcoholic beverages

Words to search: sugar uses in food preservation edu

Situation. Try something different or document a problem that has now arrived.

Using different types of sugars in foods can cause foods to look, taste, feel different.

Hypotheses. Guess what may happen.

Using brown or white in cookies will cause the cookie to look like _____.

Using honey in cookies will cause the cookie to taste like _____.

Equipment. What you need.

Gather

- Items for cookie recipe (see last page)
- White sugar
- Honey
- 3 paper plates

Methods. Set up a procedure/protocol to test your hypothesis.

- Gather food and equipment to make cookies
- Label each plate with the treatment used.
 - White Sugar
 - Honey
 - Normal Recipe (control)
- Make and bake cookies
- Place one cookie on the labeled plate.
- Record results of size, color, flavor, and texture

Experiment. Conduct the experiment.

Conduct the experiment to test how cooking with different sugars affects the texture, flavor, and color of the food.

Change one factor and re-do the experiment

Option 1: Use other sugar sources you may have (Stevia, Molasses, etc.)

Redo the experiment.

Results/Observations. What happened?

Record what happened to the cookie. What did each of the treatments do? Was the color different? Do they taste different? Is the texture different?

Conclusion. Apply what you found out.

How could you use this knowledge?

Why would you change the sugar used?

Cookie Recipe

1 1/3 C	Butter, softened
1 C	White Sugar
1 C	Brown Sugar
2	Eggs
2 TSP	Vanilla
3 C	Flour
1 TSP	Baking Soda
1 TSP	Salt

Heat oven to 375° F. Cream butter, add sugars and cream well, add eggs, vanilla, blend thoroughly. Stir in dry ingredients. Spoon onto cookie sheet pan bake for 8 to 10 minutes or golden brown.

For White Sugar Treatment

Use 2 C white sugar

NO brown sugar

For Honey Treatment

Use 1 C honey

NO white sugar

NO brown sugar