Scientific Cookies

4th grade

Reminders:
*Students should email safety plans to Mrs. Hwande and obtain approval **before** starting their project. chrishwande@claytonschools.net
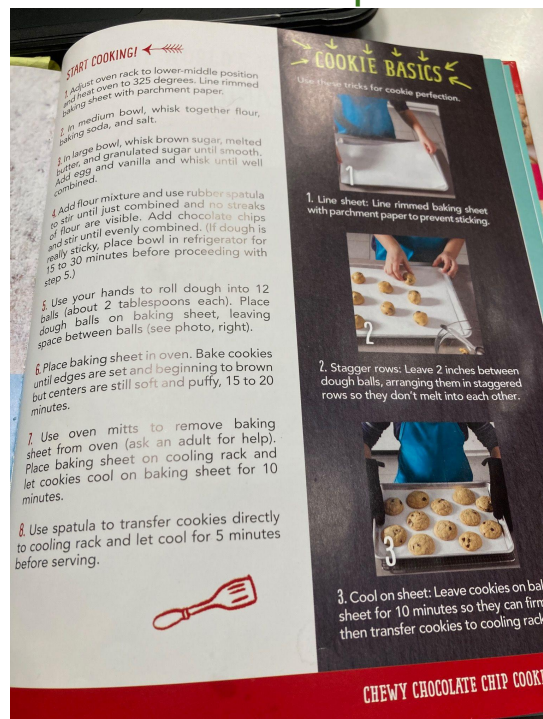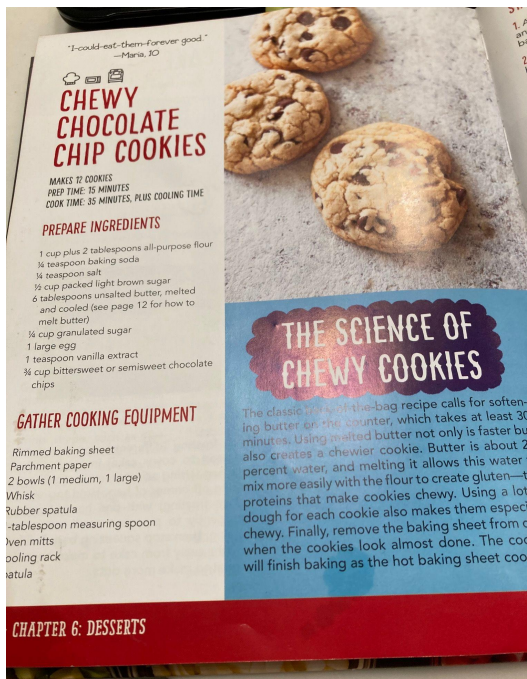*Students should write/type a dated entry in their logbook EVERY time they work on their project. This is a separate document.

Title & Description: 5 pts - Share an overview of your project.

This project is an experiment to find the best cookie by changing the ratio between sugar and baking soda. To do that I will make the dough batches, cook them, then have people taste them and complete a survey telling me which one is the best.

Procedure: 15 pts - Describe your process for collection in a way that others could repeat your process. Use as many or as few steps as you need.

1. Do research on baking soda
2. Make the dough for each batch of cookies with this recipe:

Procedure

3. When doing those batches I had to add and subtract the amount it says on the recipe. (double/half) I did that with the baking soda and sugar. I also had to just keep one batch the same as a control

4. After baking all the batches I labeled each bag

5. Then I put one of each of those bags into different bags, bags that had the people we were delivering to's names on them.

6. Then I made the form that people fill out and give back with my dad

7. Then I put those in the bags

8. Finally I gave those bags to our family.

Background: 10 pts - Explain why you chose this project and share what you found out while researching. Research should be age appropriate.
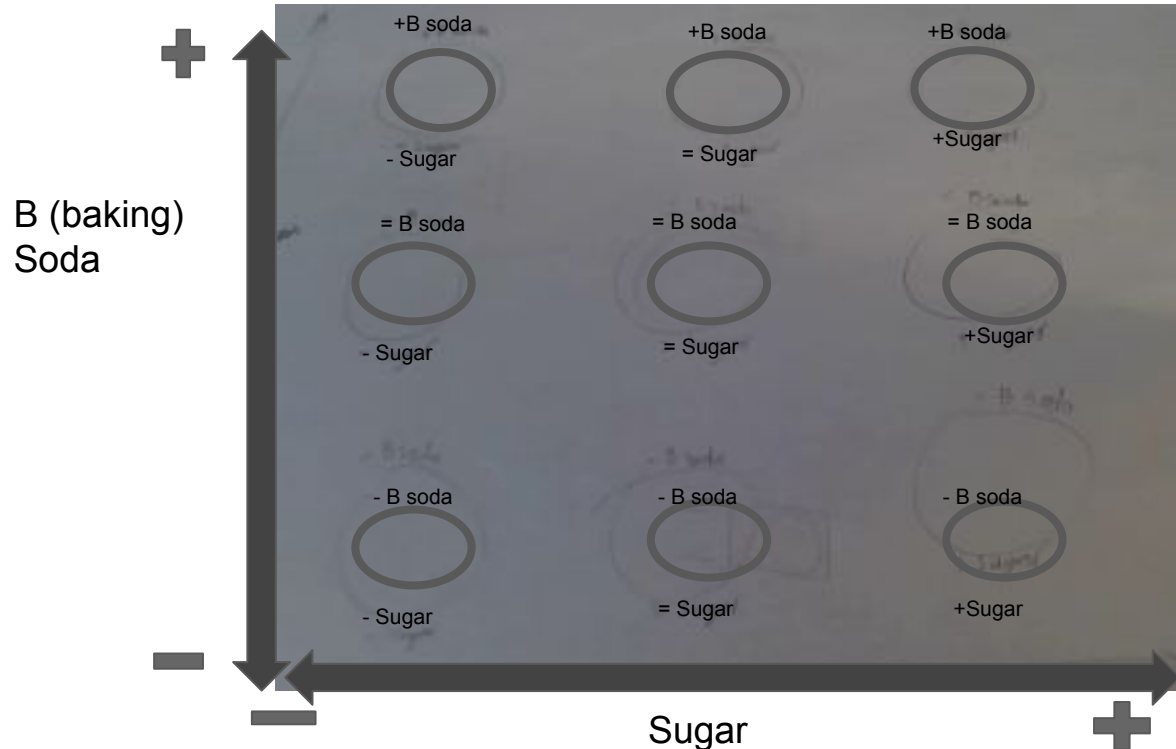
I chose this project because I wanted to find out more about baking soda and what it does.
I also wanted to make the "best" cookie.
Another thing I wanted to do is bake so I took that and came up with the idea of scientific cookies.
The last thing I wanted to do was do an experiment that I would enjoy and take something away from.

I found out that It gets really tiring making five batches of cookies.

Data and Identification: 15 pts - Use photos, charts, graphs, or illustrations to show your collection. Be sure to label each part of your collection or data. At least 8 samples should be included and data should be clear and accurate. No faces should be shown in photographs. Use additional pages if needed.

B (baking) Soda

Sugar

+B soda
- Sugar

+B soda
= Sugar

+B soda
+Sugar

= B soda
- Sugar

= B soda
= Sugar

= B soda
+Sugar

- B soda
- Sugar

- B soda
= Sugar

- B soda
+Sugar

This graph shows all the cookies I could have made. The ones I did make were

- + B Soda
  - Sugar D.
- - B Soda
   - Sugar C.
- + B Soda
  +Sugar B.
- - B Soda
  + Sugar E.
- = B Soda
  = Sugar A.

Data and Identification

This was my work setup you can see some cookies are already bagged. You can also see the bags that we used to deliver the cookies.
One other thing you can see is most of the ingredients I used in my project including semisweet chocolate chips and vanilla.

Data and Identification

Please rank the cookies in each of the following categories:
(Please put a number 1-5, 1 is the best)

Cookie	Chewiest	Best Looking	Best Tasting	Sweetest
A				
B				
C				
D				
E				

Out of all of the comments, please rank the cookies to which you think is the BEST?
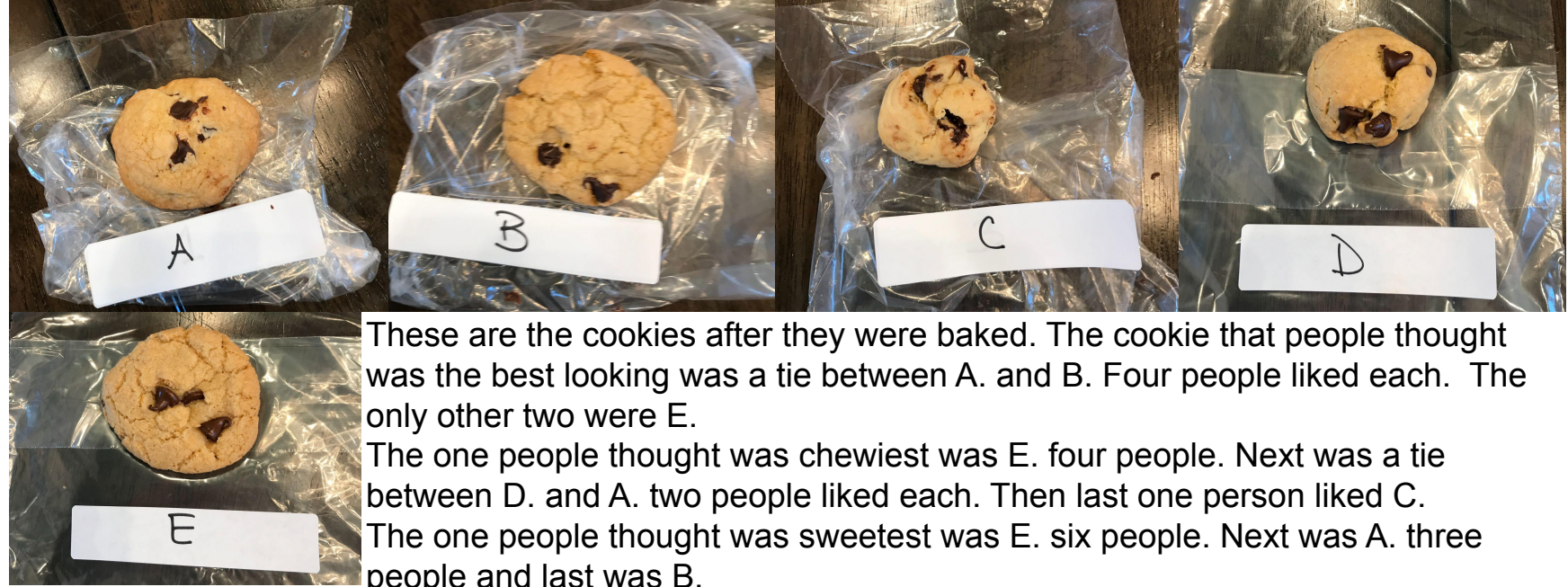(Please put a number 1-5, 1 is the best)

Cookie	Overall Rank
A	
B	
C	
D	
E	

Other comments:

This was the survey that I had my family take. The questions that it asks is : rate the cookies one through five,chewiest, best looking, best tasting, and sweetest. After you answer all those questions you get asked what is the overall rank? (which means which is the best and which is the worst.) The way the people were ranking is one through five, one being the best five being the worst.

Data and Identification

These are the cookies after they were baked. The cookie that people thought was the best looking was a tie between A. and B. Four people liked each. The only other two were E.

The one people thought was chewiest was E. four people. Next was a tie between D. and A. two people liked each. Then last one person liked C.

The one people thought was sweetest was E. six people. Next was A. three people and last was B.

The one people thought was best tasting was E. seven people. Next was B. two people and last was A. one person.

Lastly the overall rank was E. seven people. Then was B. two people and last was A. one person.

Conclusion and Reflection: 15 pts - Share what you learned. Were there any surprises? What would you do differently or to continue the project?

I found out that people like a chewy sweet cookie.

I was surprised that there could be so much variety in people's taste

If I did this project again I would count out the number of chocolate chips in each cookie and make sure the number is the same in all of them.