Science Fair 2026 Project Presentation Sections

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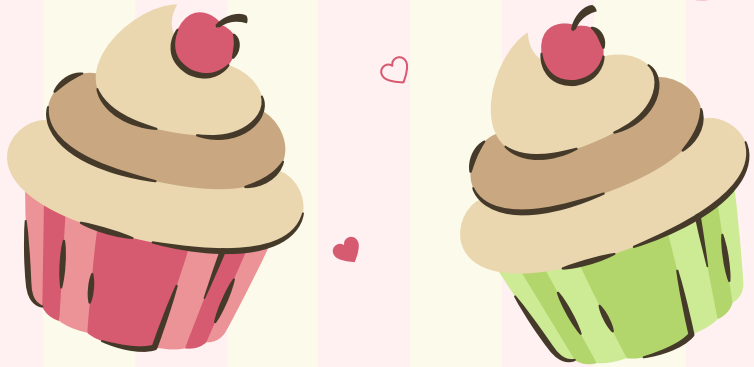


Which One Dries Out Quicker: Cupcakes or Cake?

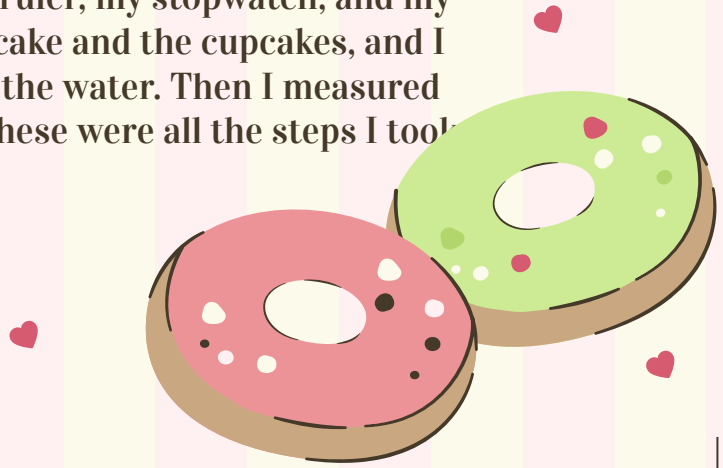
Cupcakes dry out faster than cakes because they have a much larger surface area exposed to the air. Even using the same amount of batter, dividing it into small cupcake molds means that a greater amount of the batter comes into contact with the air more quickly. This allows the water to evaporate faster, causing the cupcakes to lose their moisture sooner than a large cake. Therefore, the shape and size of food are important data in determining how quickly it dries out, and this is why cupcakes dry out faster than cakes.

Problems and predictions

There were many risks I had to overcome while doing this experiment. I could have burned the materials. I could have ruined my experiment and ended up without a presentation. I also could have used too much water, or I could have used other materials that wouldn't have worked. Besides, if I hadn't carefully watched the video tutorials on how to make the cake and cupcakes, I wouldn't have been able to do the experiment, and I would have gotten a zero for not doing it correctly. I could have even set my house on fire doing this.

Investigative methods and procedures

I'll tell you step by step how I did my experiment. First, I made my cake and cupcakes. I made the batter, added all the ingredients, and then baked them. Once they were ready, I placed each one in a separate container or on a surface where they would fit. I gathered all my materials, which were pieces of paper towels, and then I got my ruler, my stopwatch, and my notebook. I put the same number of drops of water on both the cake and the cupcakes, and I waited at least ten to fifteen minutes for the paper to absorb all the water. Then I measured the wet area with my ruler and wrote it down in my notebook. These were all the steps I took to conduct this amazing experiment!



Example of data Table

Notes:

Cake (flat)shape
3 -wet spot size cm
Small, uniform wet area -notes

Cupcake 1
5 - wet spot size cm
area larger than cake- notes
Cupcake 2
5- wet spot size cm
Consistent with cupcake 1

Cupcake 3
6-wet spot size cm
Slightly larger, likely due to shape- notes

Explaining the notes:

The flat cake a small, uniform wet area with a wet spot size of about 3 cm. When the cupcake was tested, the wet spot increased to about 5 cm because the cupcake is taller and not flat. This shape allowed the liquid to spread more, making the area larger than the cake. Cupcake 2 showed the same wet spot size as cupcake 1, which means the results were consistent. Cupcake 3 had a slightly larger wet spot 6 cm, likely because its shape caused more spreading.

Discussion and interpretation

Some of the things that could have gone wrong were that the material could have burned. I could have forgotten to add an ingredient and ruined it. I had to follow all the instructions exactly, because I could easily have made a mistake and ruined the experiment. If I didn't have the correct materials for my experiment, it could have failed. If I didn't put the same amount of water on both sides, one of them might have dried faster. In this experiment, I saw that the cupcakes dried first because it has a much larger surface area exposed to the air. It has more surface area in contact with the air, which causes it to dry faster.

Implications and ideas for further research

My experiment is important to the real world because if we know that cupcakes dry out faster than large cakes, we can store them better or simply eat them faster so they don't go stale. People who specialize in food can use these methods to keep food fresh for longer. Bakeries and other shops need to use these types of methods to know how long a cake or any product containing batter will last.

Methods and Procedures

Materials

1 cupcake

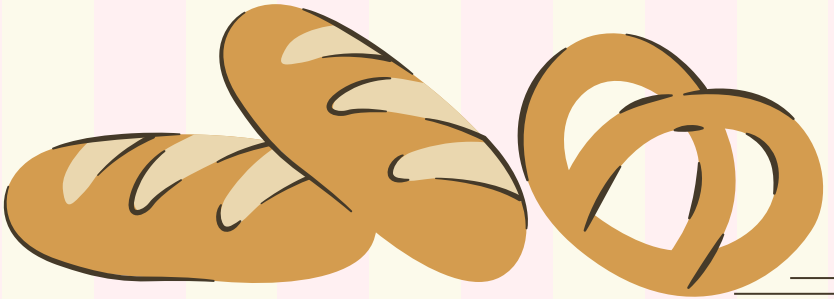
1 slice of cake

Paper towels

Ruler

Timer or clock

Notebook for recording data

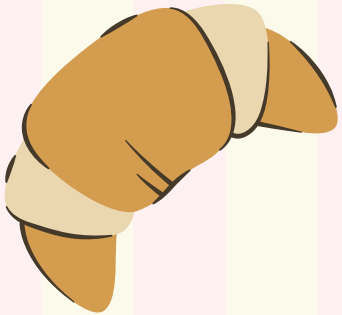


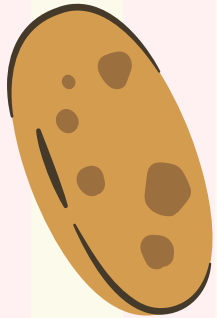
references

How to make cake

https://www.youtube.com/watch?v=cIjJ9Bce3tI

How to makes cupcakes
https://www.youtube.com/watch?v=uU7eOlSL6Hkc





How it looked