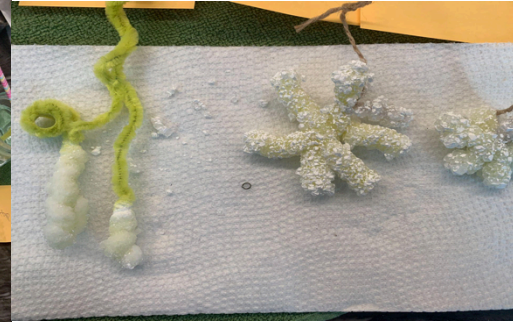


Borax Crystals Optimized

Grade 1

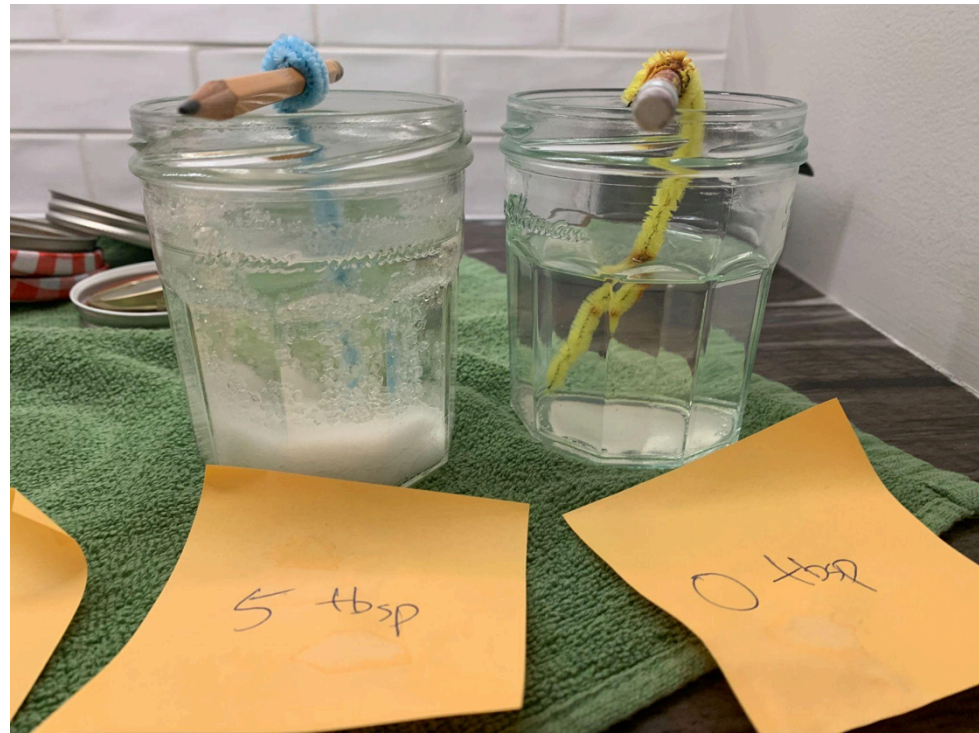


Testable Question: How does the concentration of Borax in the water affect the size of crystals that will grow?

Prediction: More borax will result in larger crystals.

Procedure:

1. Put on safety goggles.
2. Fill a class jar with a fixed amount of Borax, depending on the test, measured in tablespoons.
3. Add 200 mL of boiling water.
4. Insert a pipe cleaner into the middle of the water mixture and suspend it by twirling it on a pencil that is left outside of the jar.
5. Wait 48 hours.
6. Measure the size of the crystal in centimeters, if there is one, that is now attached to the pipe cleaner, using a clear ruler.



Background:

I chose this project because I like the way the crystals look – they look cool.

In my research I found out that more Borax produces larger crystals.

This project is important because understanding concentration is an important step to learning more about Chemistry.

Constant Conditions:

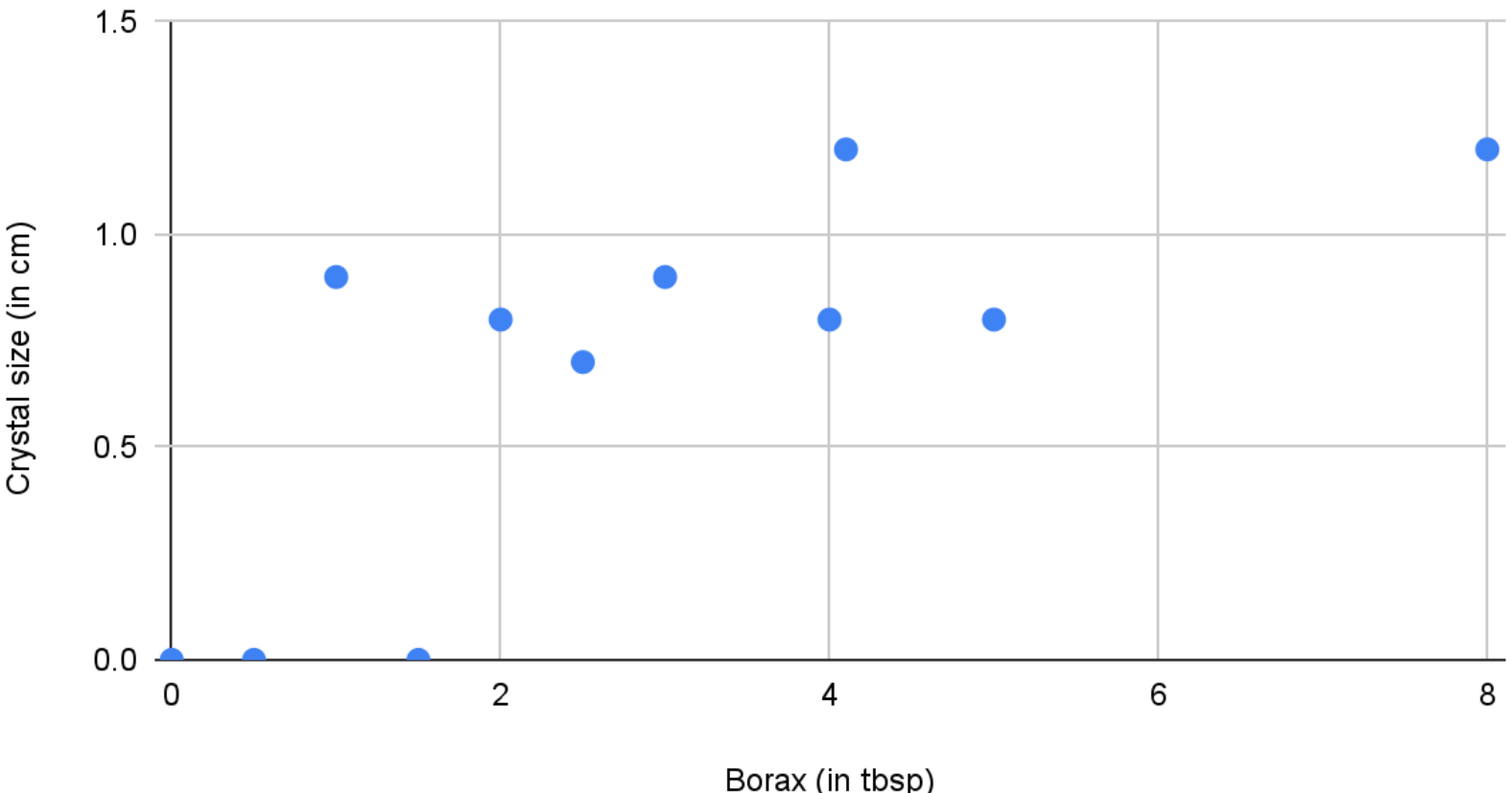
Independent Variable: The amount of Borax changes the concentration of Borax in the water. We measure Borax in tbsp.

Dependent Variable: We measure the size of the crystal that is produced in centimeters.

Constant Conditions: Each time we use the same amount of water, the same brand and style of pipe cleaner, and the same brand of Borax.

Data and Trials:

Crystal size (in cm) vs. Borax (in tbsp)



Conclusion and Reflection:

I found out that most of the time putting in more Borax made larger crystals.

I was surprised that stirring would make such a difference and that such a small amount of Borax would still make a pretty good sized crystal.

If I did this project again I would stir the jars after I added the boiling water.

