Soap Bubbles

Purpose

The purpose of this project is to determine which are the strongest bubbles so I can blow largest and strongest bubbles of all time!

Question

What will make the strongest bubbles: Glycerin, lemon juice, corn syrup or soap alone?

Hypothesis

I think that glycerin will make the strongest bubbles because of its thickness. The corn syrup would be the smallest, and the ones with the soap would be the largest. This is based off how hard you can blow and what I know about blowing bubbles.

Materials

My materials are: Water, four bowls, measuring cups, measuring spoons, bubble wand, a timer, glycerin, lemon juice, corn syrup, and dish soap

Procedure

1. I mixed water and dish soap with different ingredients to make bubble solutions.
2. I used one solution at a time to blow bubbles.
3. I timed how long each bubble lasted before it popped.
4. I repeated this test ten times for each solution and found the average
5. I recorded my results and compared which bubbles lasted the longest.

Results

The glycerin was the strongest because it lasted the longest time. The lemon juice was the weakest one because the bubbles lasted the shortest time. The bubbles with the lemon juice were the smallest and the bubbles with the soap alone were the largest. The glycerin was the strongest but I was right about the soap being the largest

Conclusion

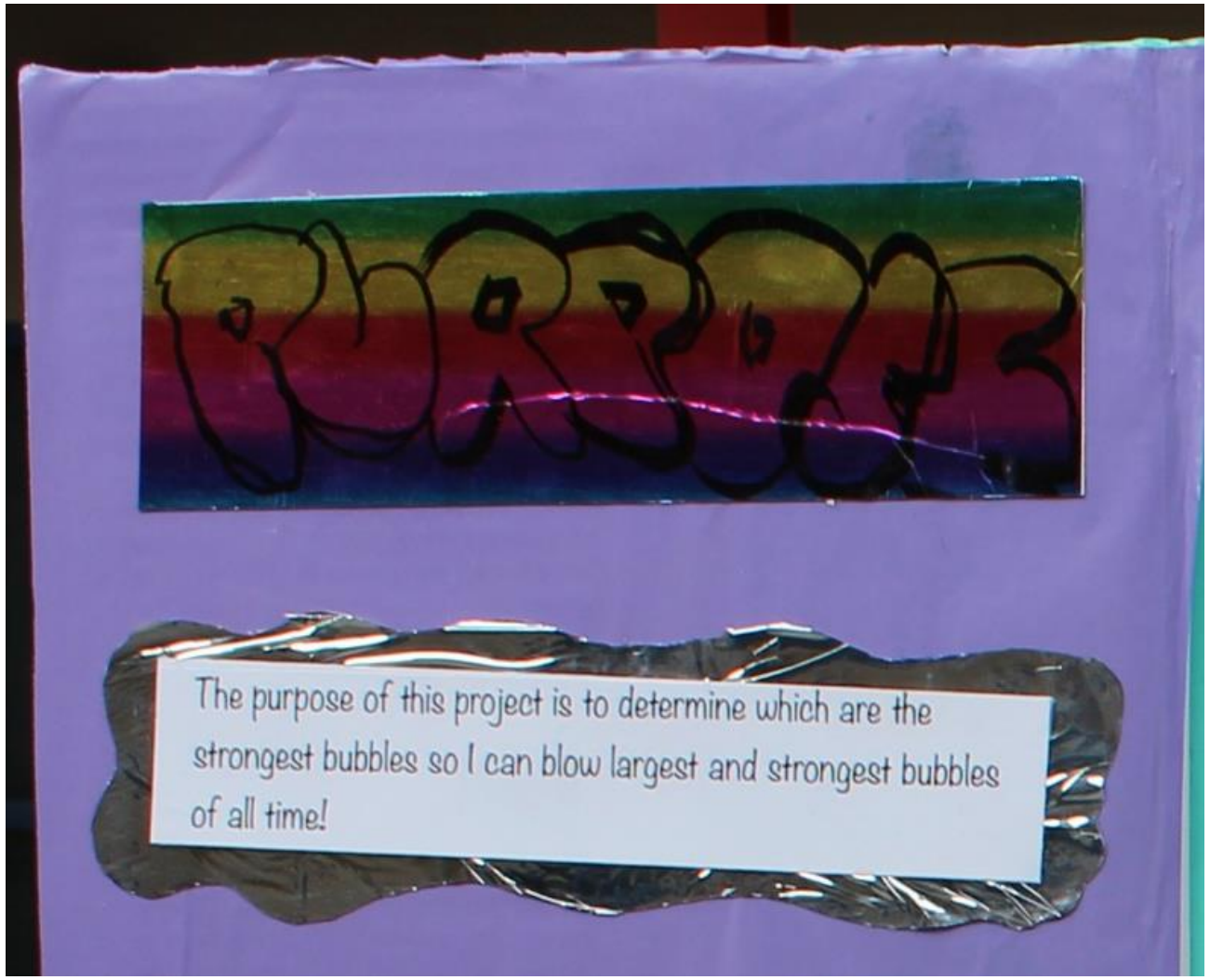
My conclusion is that I was right about the glycerin, it was the strongest. I was not right about the it being the largest.

My Own Observations: I also used what I already knew about blowing bubbles, like how gently you blow affects the size, and how thicker solutions usually make stronger bubbles.

Sources Used

Education.com, Longest-Lasting Soap Bubble
https://www.education.com/activity/article/longest-lasting-soap-bubble/

ScienceBuddies.org, Blowing the Best Bubbles
https://www.sciencebuddies.org/science-fair-projects/project-ideas/Chem_p025/chemistry/blowing-the-best-bubbles


PROOF
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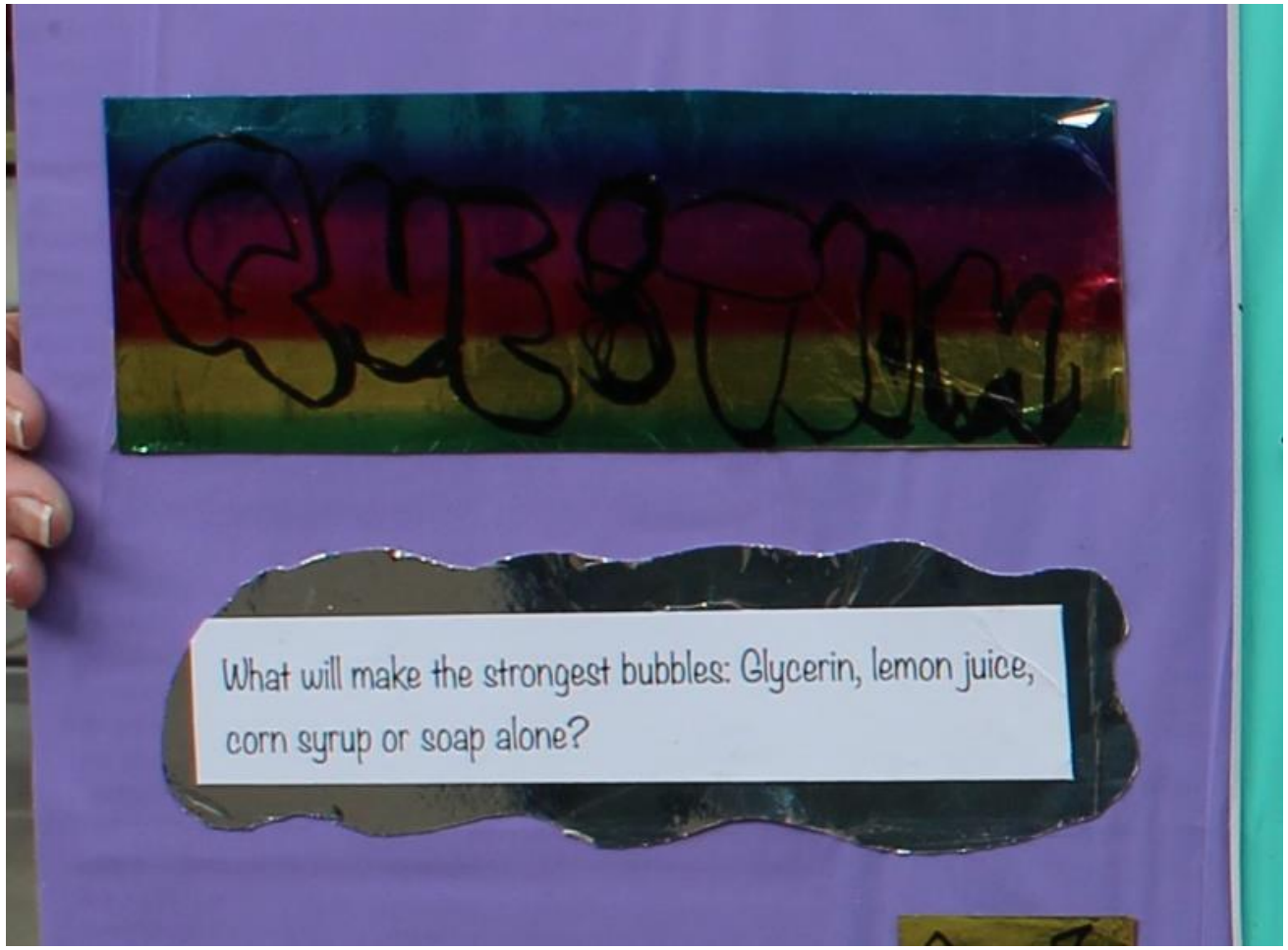
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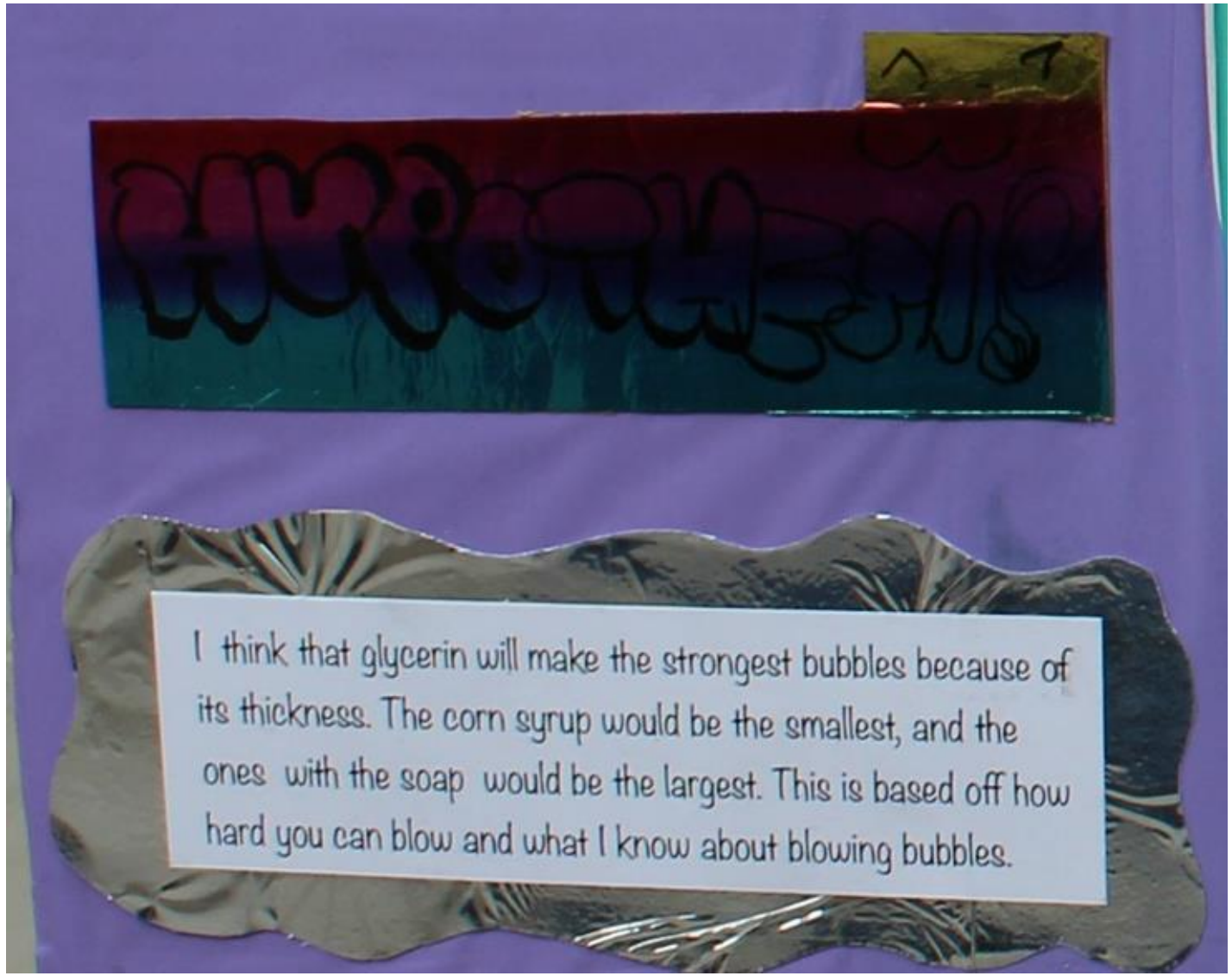
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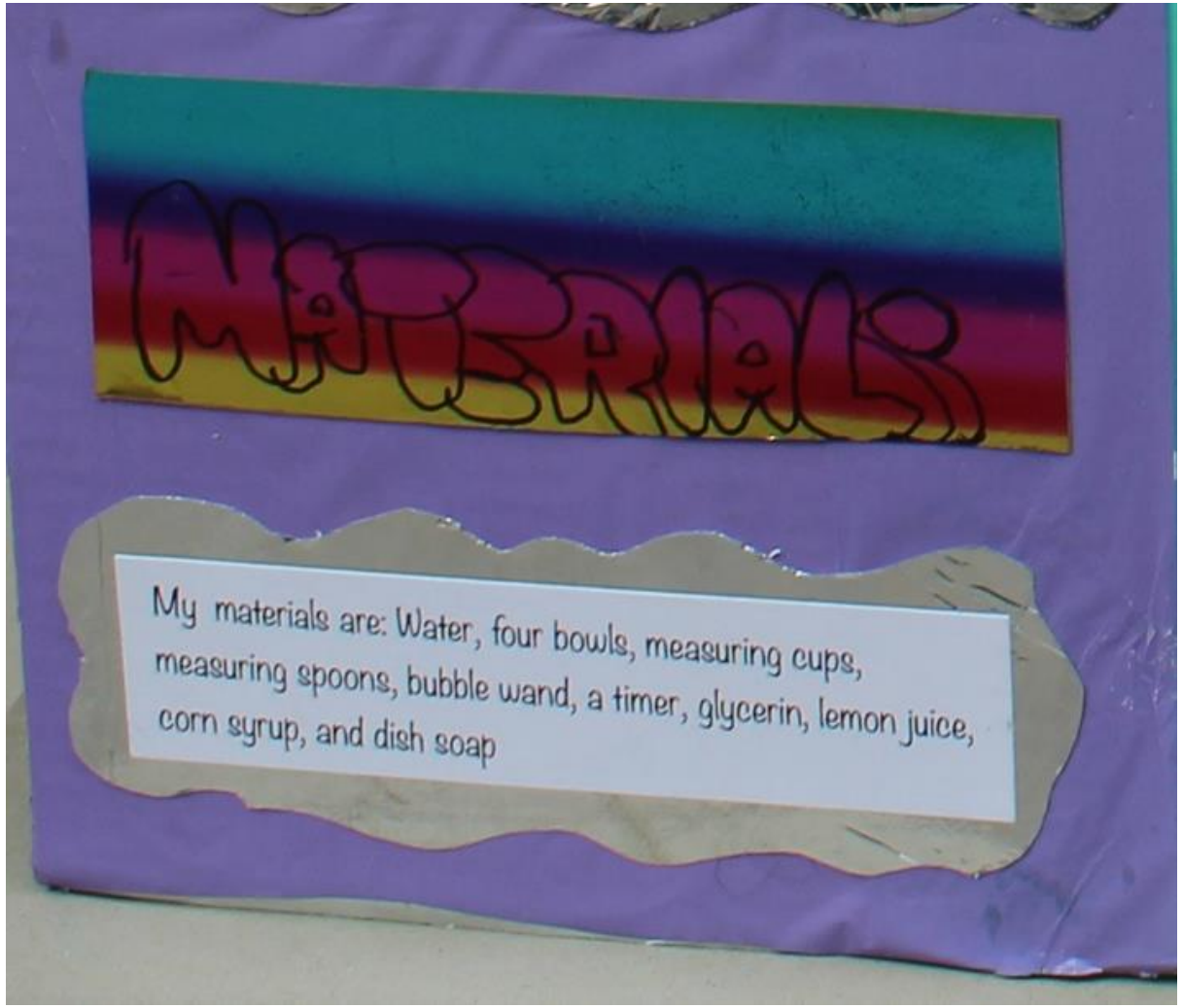
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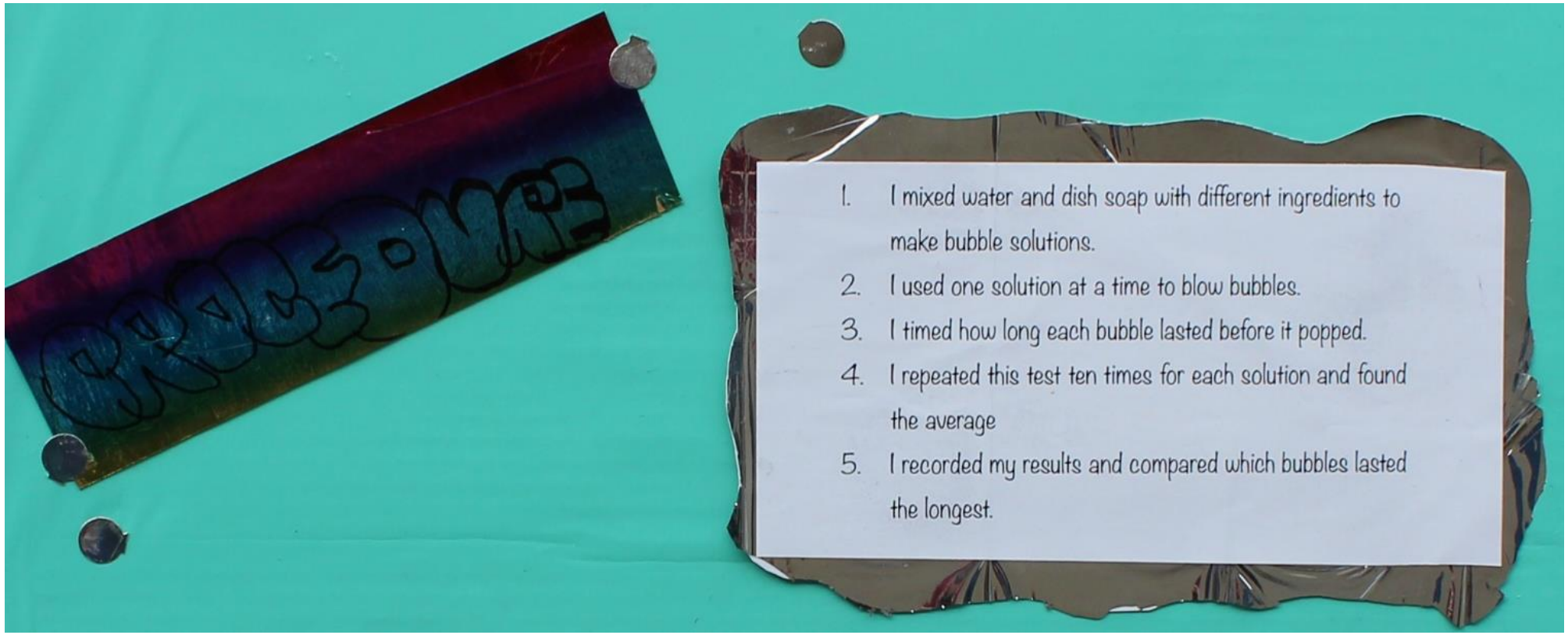
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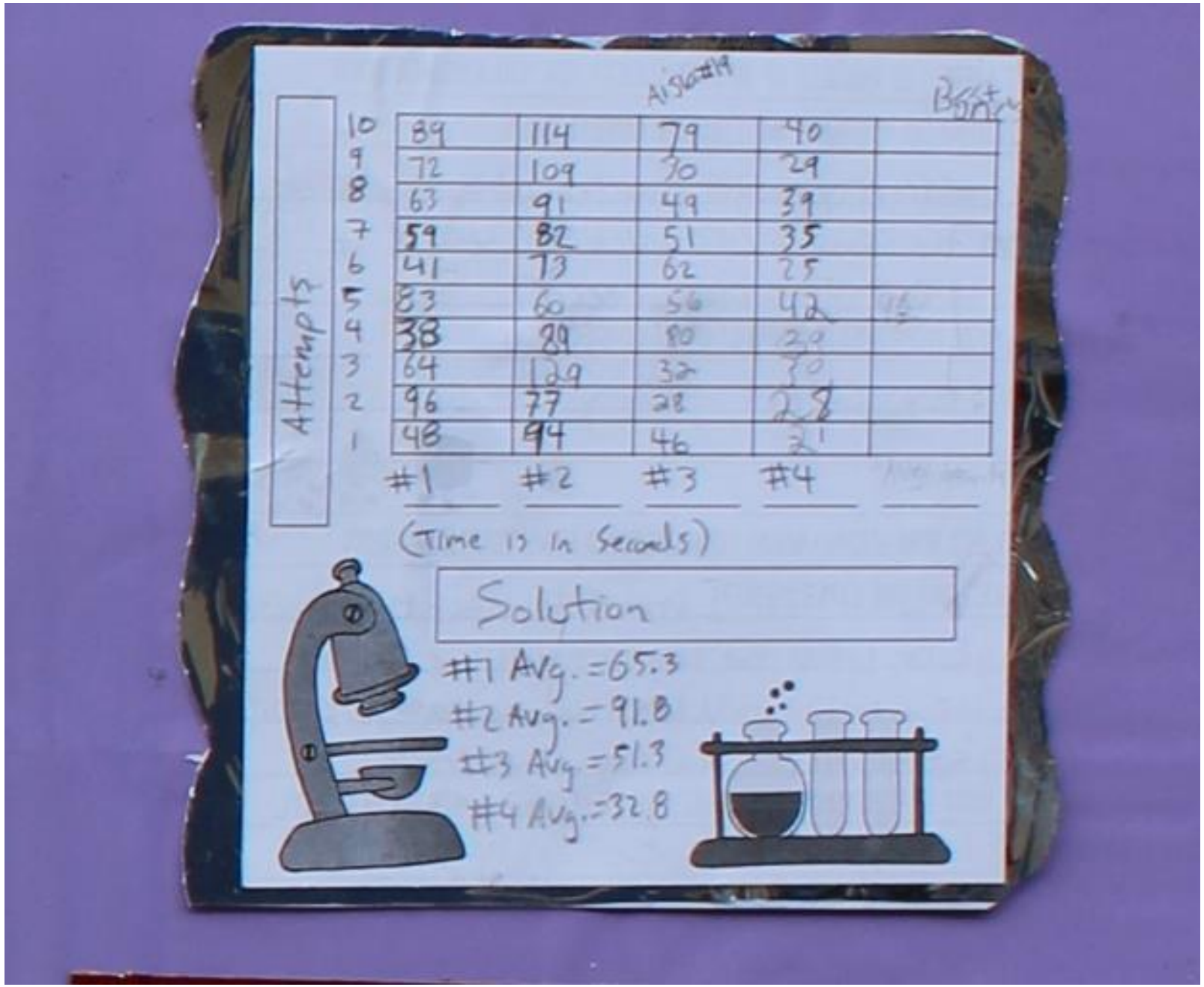
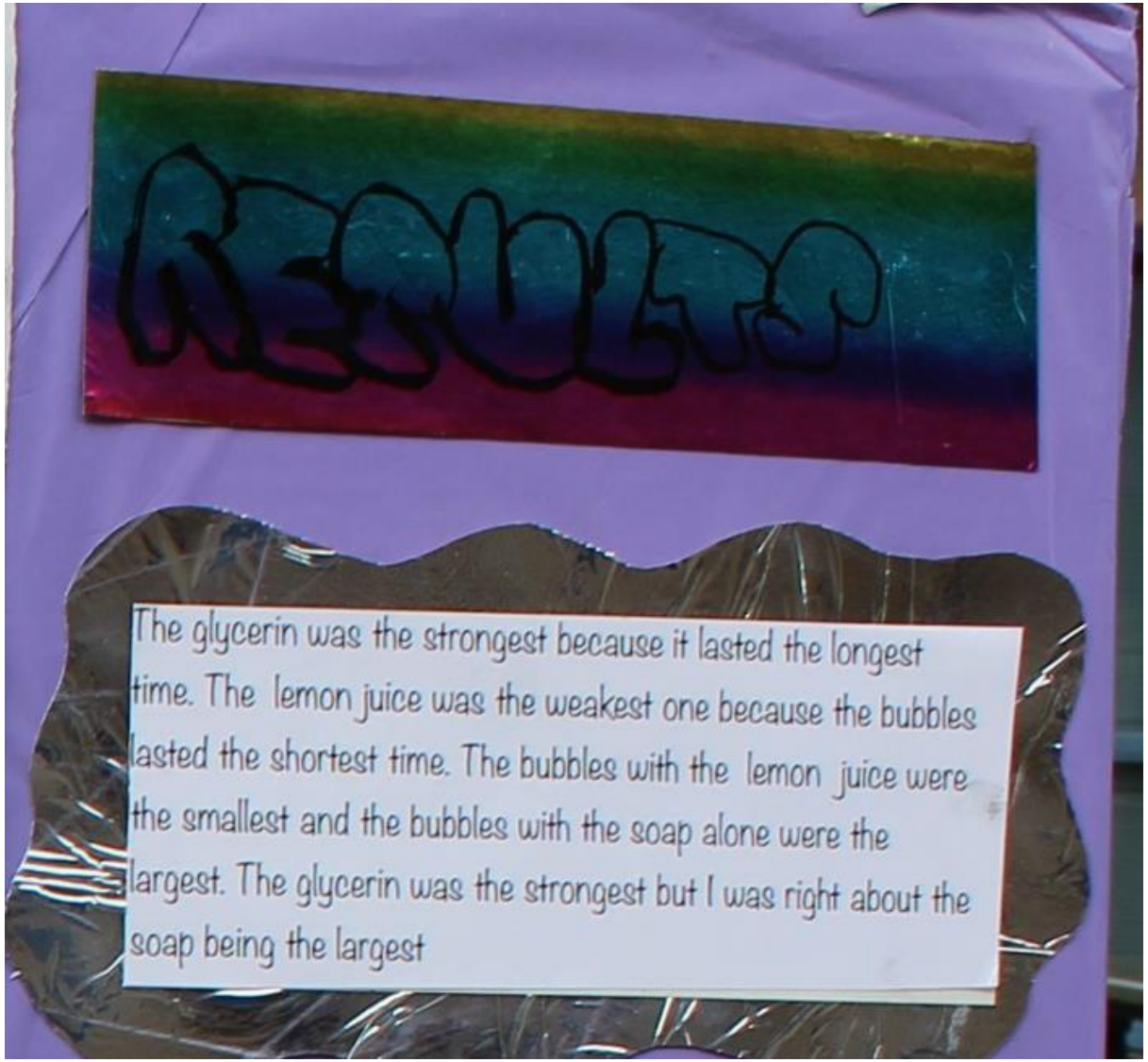
#1
Dish Soap
#2 Glycerin
#3 corn oil


Attempts
10
9
8
7
6
5
4
3
2
1
#1
#2
#3
#4
(Time is in Seconds)
Solution
#1 Avg. = 65.3
#2 Avg. = 91.8
#3 Avg. = 51.3
#4 Avg. = 32.8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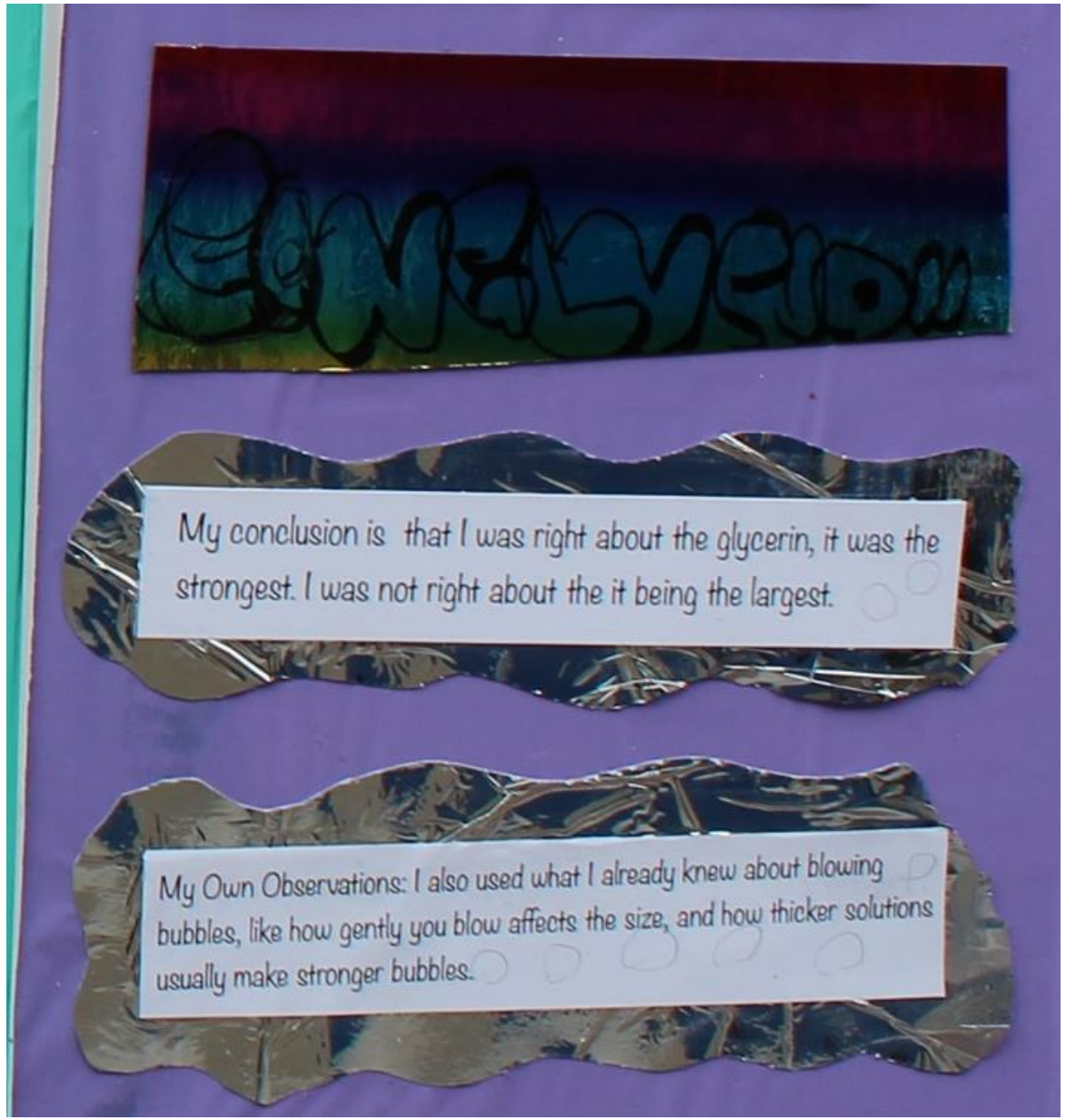
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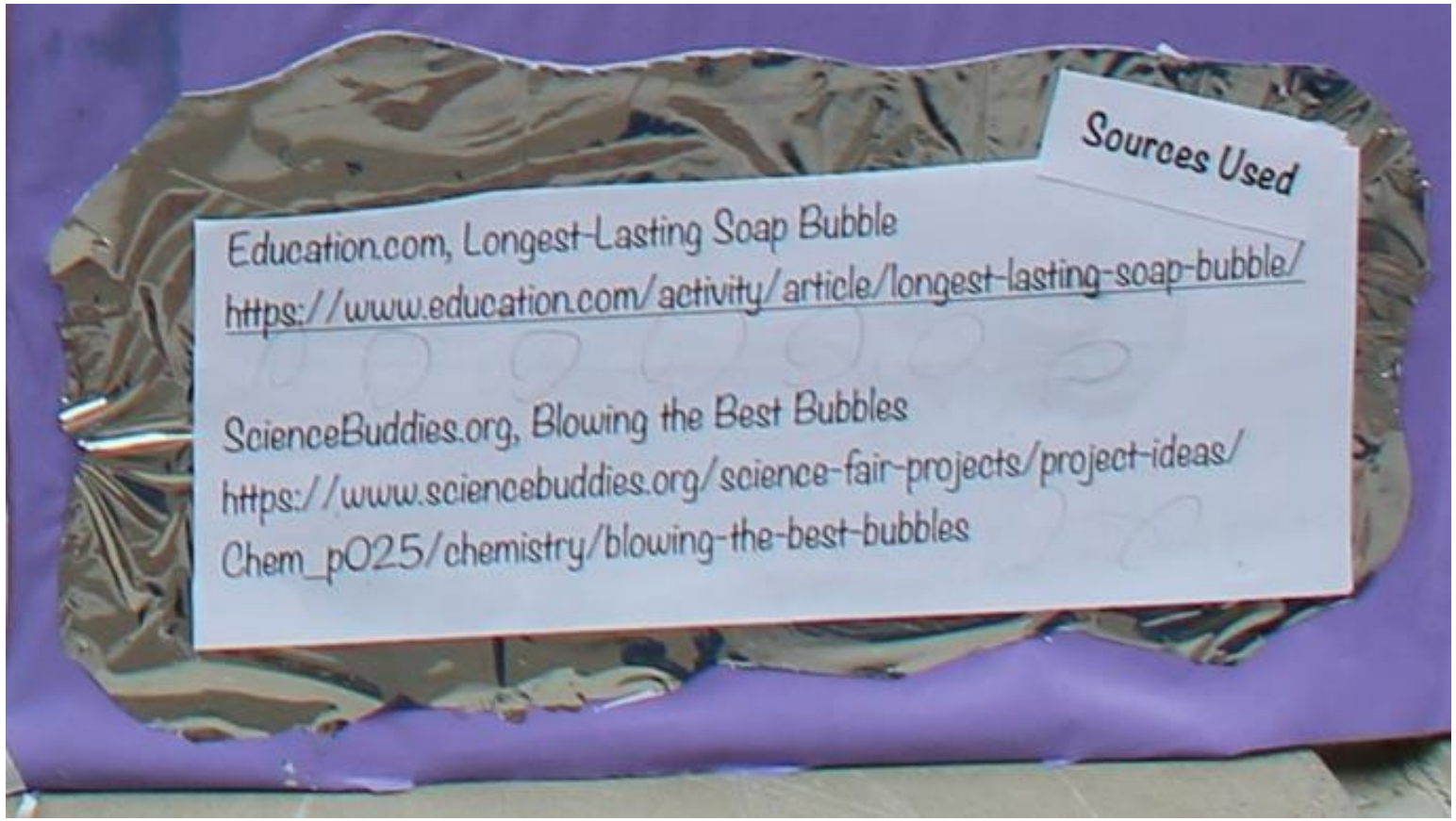
Sources Used
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Chem_p025/chemistry/blowing-the-best-bubbles