



# **CEDARCREST STEM/SCIENCE NEWSLETTER FOR MAY/JUNE**

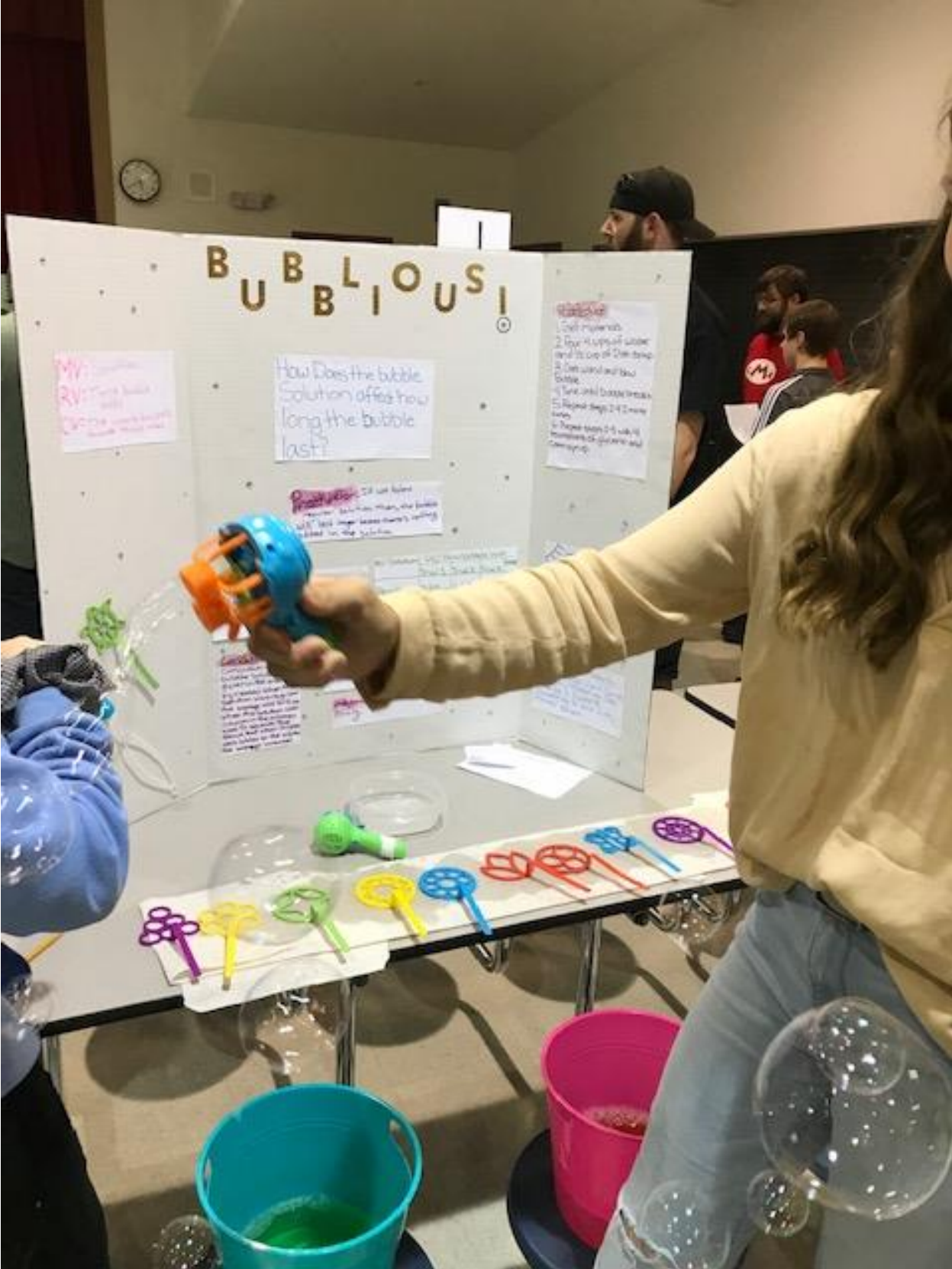
**2019: MORE THINGS...TO HOWL ABOUT**



**IT'S ALMOST SUMMER AND OUR CEDARCREST  
STEM/SCIENCE STUDENTS HAVE BEEN EVEN BUSIER  
DOING ENGAGING, MINDS ON/HANDS ON LESSONS  
HERE AT CEDARCREST TO FINISH THE YEAR STRONG...**

**STUDENTS FROM ALL THE SCIENCE AND STEM CLASSES  
AT CEDARCREST PARTICIPATED IN THE SCIENCE/STEM  
FAIR ON WEDNSDAY EVENING.**

**PLEASE ENJOY  
EXAMPLES FROM THE  
STEM/SCIENCE FAIR...**



# BUBBLOUS!

**My Question:**  
RV: How does the  
color of the bubble  
solution affect how long  
the bubble lasts?

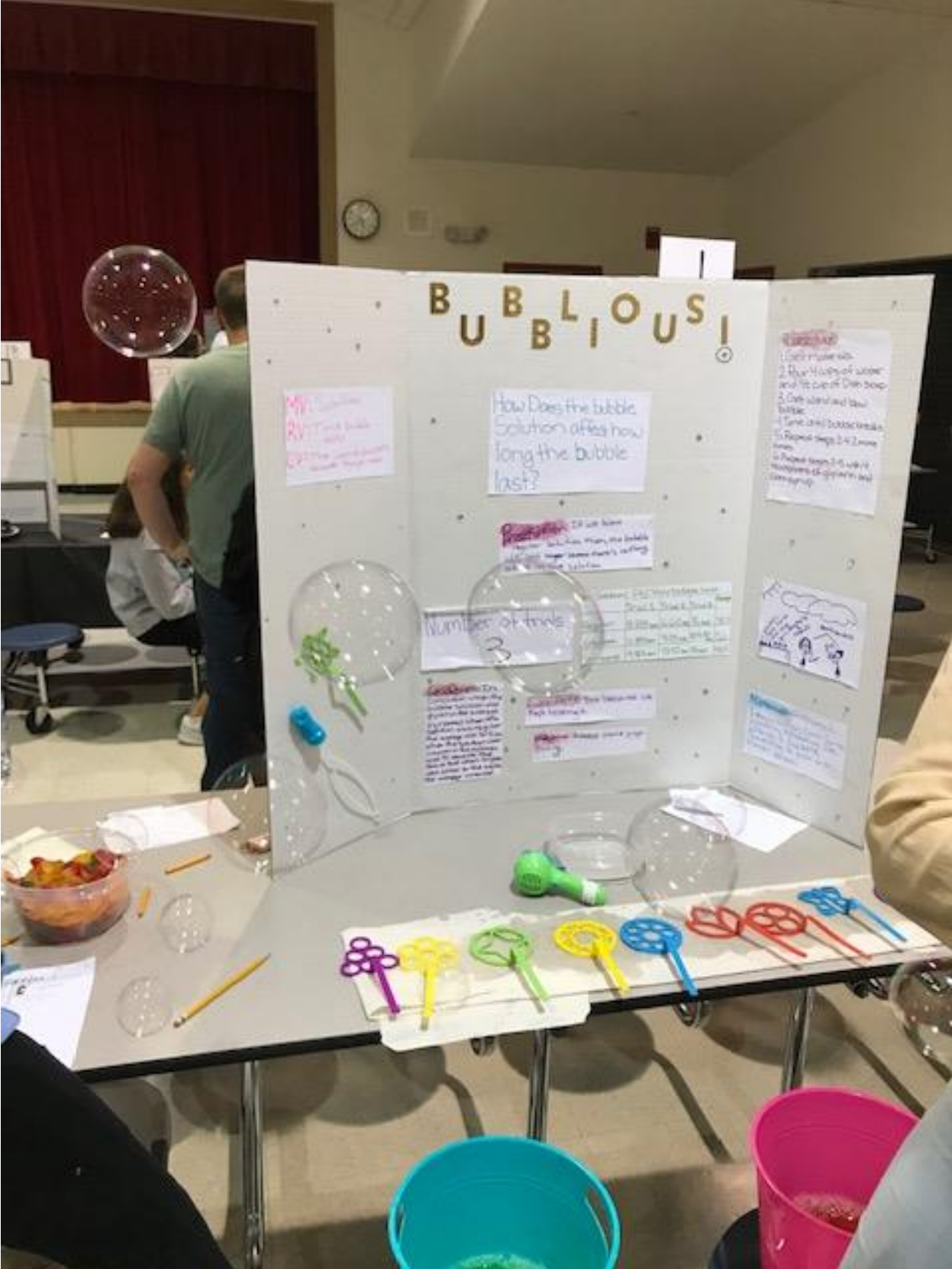
**How Does the bubble  
solution affect how  
long the bubble  
last?**

- Procedure:**
1. Get ingredients
  2. Pour 1/2 cup of water
  3. Add 1/2 cup of dish soap
  4. Add 1/2 cup of food coloring
  5. Turn and bubble break
  6. Repeat steps 2-4 2 more times
  7. Repeat steps 2-4 with 1/2  
teaspoons of glycerol and  
cornstarch

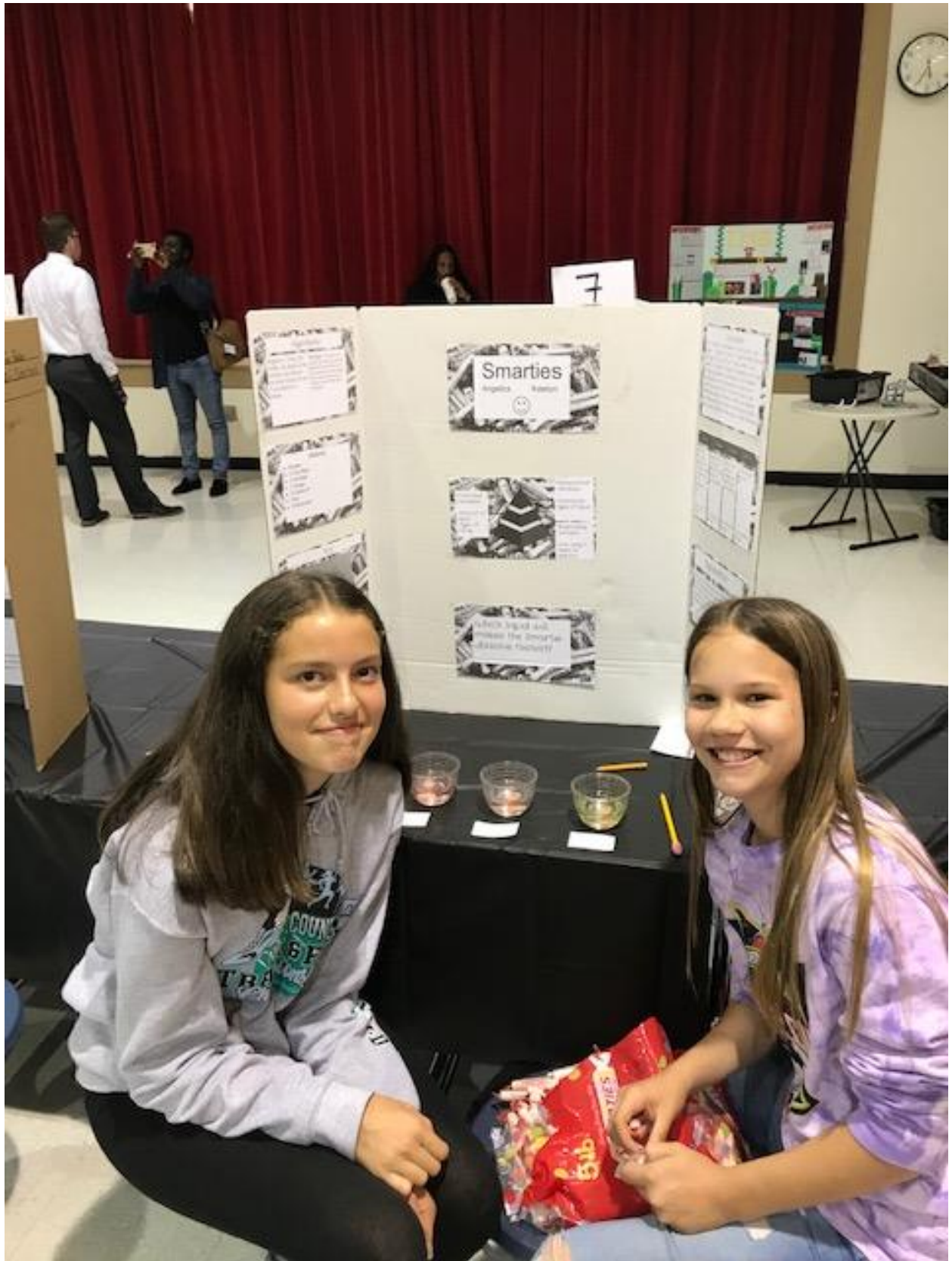
**Hypothesis:** If we have  
different colors then the bubble  
will last longer because they're getting  
added to the solution.

**Conclusion:**  
The bubble  
solution that  
I made last  
longer than  
the other two  
because it had  
the most  
ingredients  
in it. I think  
the more  
ingredients  
the better  
the bubble  
will be.

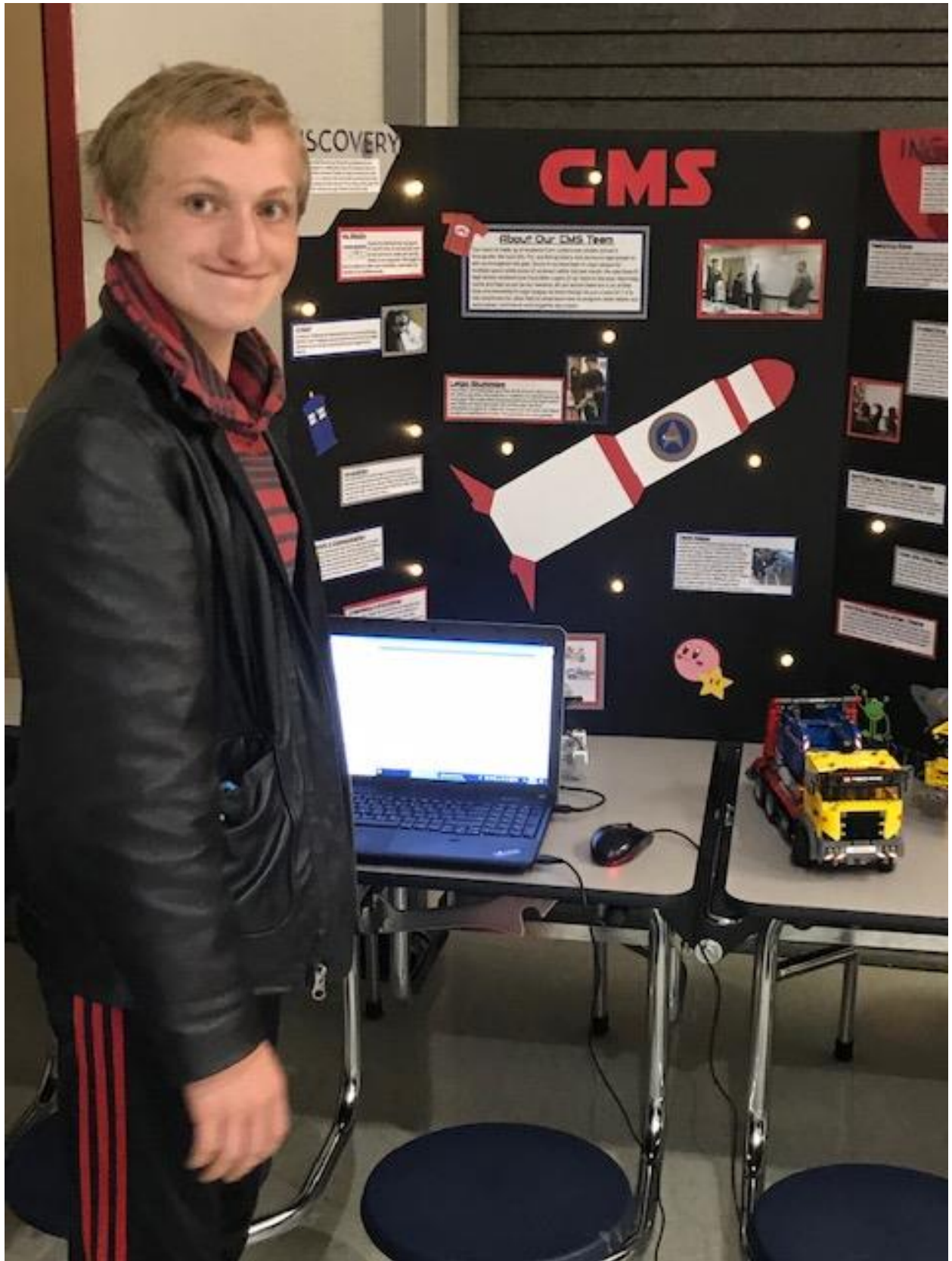
















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# TORNADOS

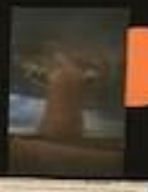
Did you know that the deadliest tornado ever in the United States happened in 1925 in Okla. It was called the Doolittle-Duane F5 and it killed 692 people.

Some tornadoes are caused by the Doppler effect. This is when the wind speed is 100 mph. According to that rate, damage occurring is around \$20 million.

In the future, scientists are trying to find out if tornadoes can be prevented or if they can be made to stop.



The purpose of my research project is to help people understand more about tornadoes and that these things are very dangerous. This topic is important to me because I want people to stay safe.



Tornado (from Old English) is measured in miles with all the great, wide sweeping the record. The highest wind ever observed was 301 mph (485 km/h) measured by mobile Doppler radar (the Doppler radar was used in the project). The most powerful on Earth.

It has been on the ground for 40 years and is 14.2 miles with people and the loss of 8 people and 2 of them were in the air.



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Four large sheets of paper with handwritten text, likely a script or a detailed report, are laid out on the table in front of the display.



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# HOW DOES PLASTIC AFFECT THE WORLD

1419

Plastic is a synthetic material made from natural resources, such as petroleum, natural gas, and coal. It is a polymer, which means it is made of long chains of repeating molecules. Plastic is used in a wide variety of products, from bottles and containers to clothing and electronics. It is a versatile material that can be molded into many different shapes and sizes.

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# WHAT'S POPPIN?

## HYPOTHESIS

Orville Ultimate Butter popcorn will pop more kernels than Act II butter popcorn.

## SEARCH

## DATA



## CONCLUSION

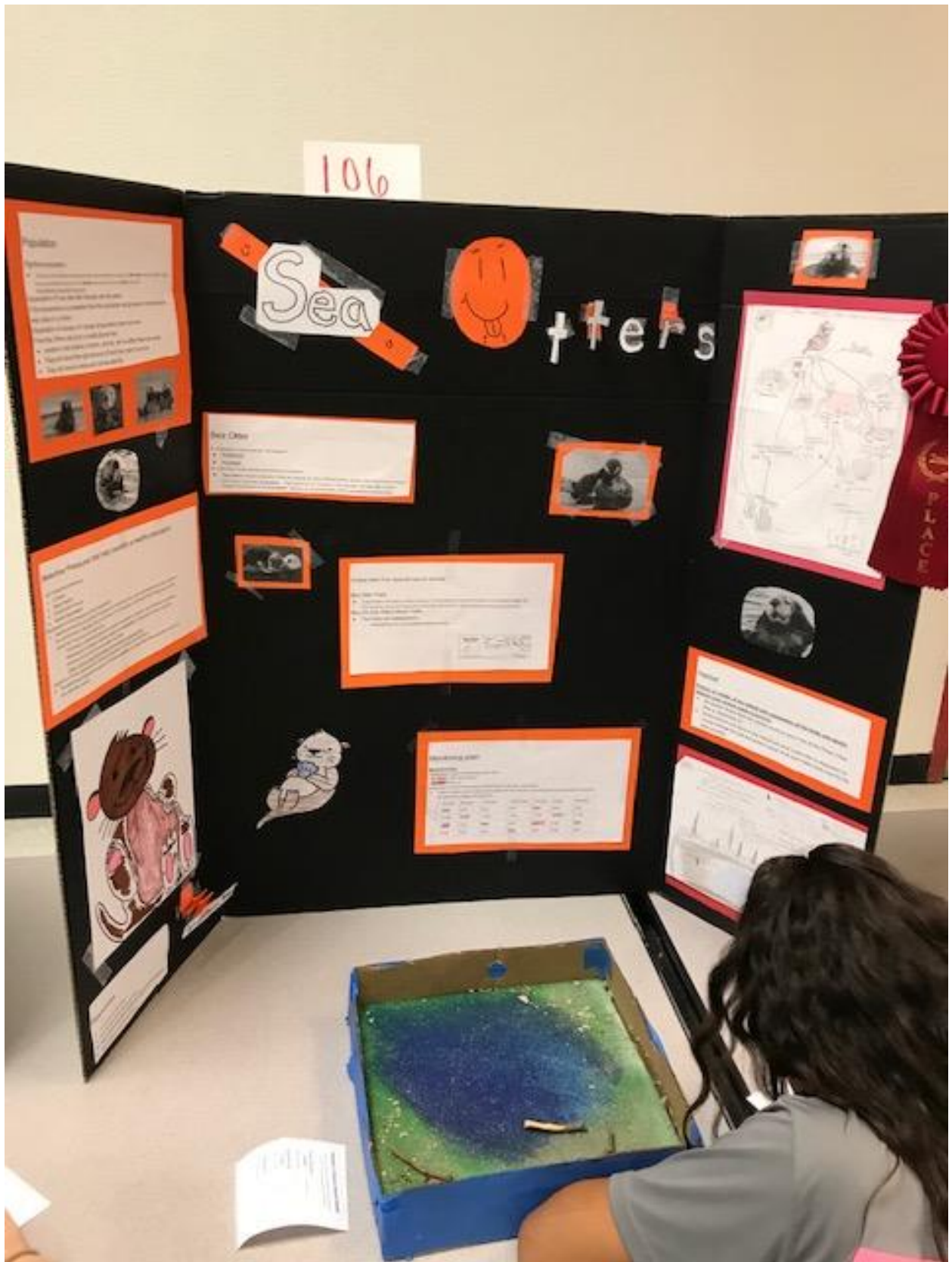
Based on our data, we can conclude that Orville Ultimate Butter popcorn will pop more kernels than Act II butter popcorn.

## RESULTS



## RESOURCES





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# pH TEST OF DIFFERENT BRANDS OF DRINKING WATER

**Introduction:**  
pH is a measure of the acidity or basicity of an aqueous solution. It is defined as the negative logarithm of the concentration of hydrogen ions in the solution. The pH scale ranges from 0 to 14, with 7 being neutral. Solutions with a pH below 7 are acidic, and solutions with a pH above 7 are basic.

**Objective:**  
To determine the pH of various brands of drinking water and compare the results.

**Materials:**  
pH indicator solution, pH paper, pH meter, distilled water, various brands of drinking water.

**Procedure:**  
1. Prepare the pH indicator solution by adding a few drops of the indicator to a small amount of distilled water.  
2. Add a small amount of the indicator to a glass of the first brand of drinking water.  
3. Observe the color change and record the pH value.  
4. Repeat steps 2 and 3 for each brand of drinking water.



Adding pH indicator to water.



Fiji Water



Arquata

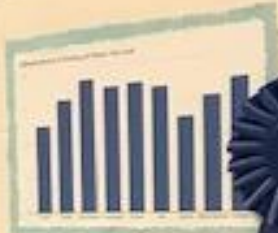


Core



VCSS

**Results:**  
The pH values for the different brands of drinking water are as follows:  
1. Fiji Water: 7.2  
2. Arquata: 7.5  
3. Core: 7.8  
4. VCSS: 7.1  
5. Aquatina: 7.4  
6. Kirkland Signature: 7.3  
7. Tap Water: 7.6



**Conclusion:**  
The pH values for the different brands of drinking water are very close to neutral (pH 7). This indicates that these brands of drinking water are safe to drink.

Brand	pH
Fiji Water	7.2
Arquata	7.5
Core	7.8
VCSS	7.1
Aquatina	7.4
Kirkland Signature	7.3
Tap Water	7.6

**Discussion:**  
The pH values for the different brands of drinking water are very close to neutral (pH 7). This indicates that these brands of drinking water are safe to drink.



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# BALLOON

## TACK EXPERIMENT

**Objectives**  
To determine the effect of the number of tacks on the number of balloons that can be supported by a string.

### Variables

**Independent Variable:** Number of tacks  
**Dependent Variable:** Number of balloons supported  
**Controlled Variable:** The number of balloons used for each trial.

**Question**  
How does the number of tacks affect the number of balloons that can be supported?



### Procedure

1. Attach the string to the balloons.  
2. Place the string over the tacks.  
3. Add balloons to the string until it sags.  
4. Record the number of balloons supported.  
5. Repeat the experiment with a different number of tacks.  
6. Compare the results.

### Data Table

Number of Tacks	Number of Balloons Supported
1	1
2	2
3	3
4	4
5	5

### Graph



**All of these activities were designed by the STEM/Science staff at Cedarcrest to encourage Engineering and Science concepts with fun, engaging activities that may help students throughout their careers.**

**On behalf of the Staff in the STEM/Science Department, we are committed to making this the best year ever for your child here at Cedarcrest Middle School.**

Sincerely,

**The STEM/Science Staff at Cedarcrest**

**Ms Kukull, MS Koznek. Ms. Dainard, Mrs Delazzari, Mr. Schaufler, Mr. Overland, Mr. Deschaine, Mrs. Mack, and Mr. Shreeve**