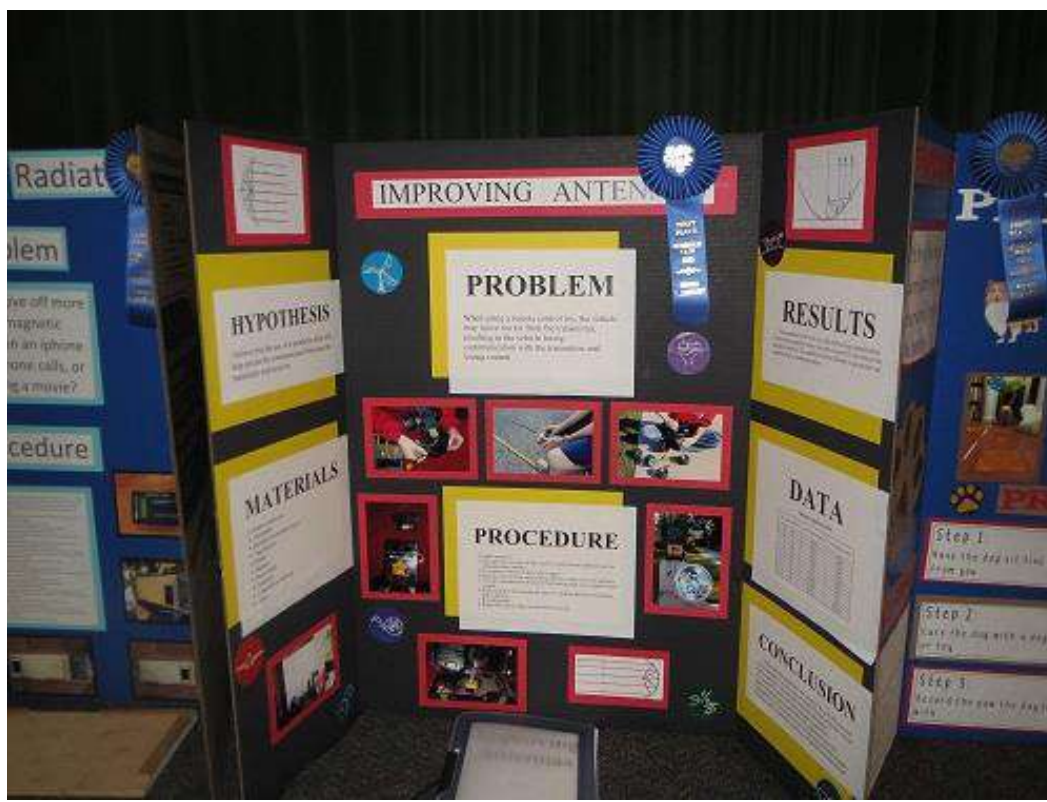
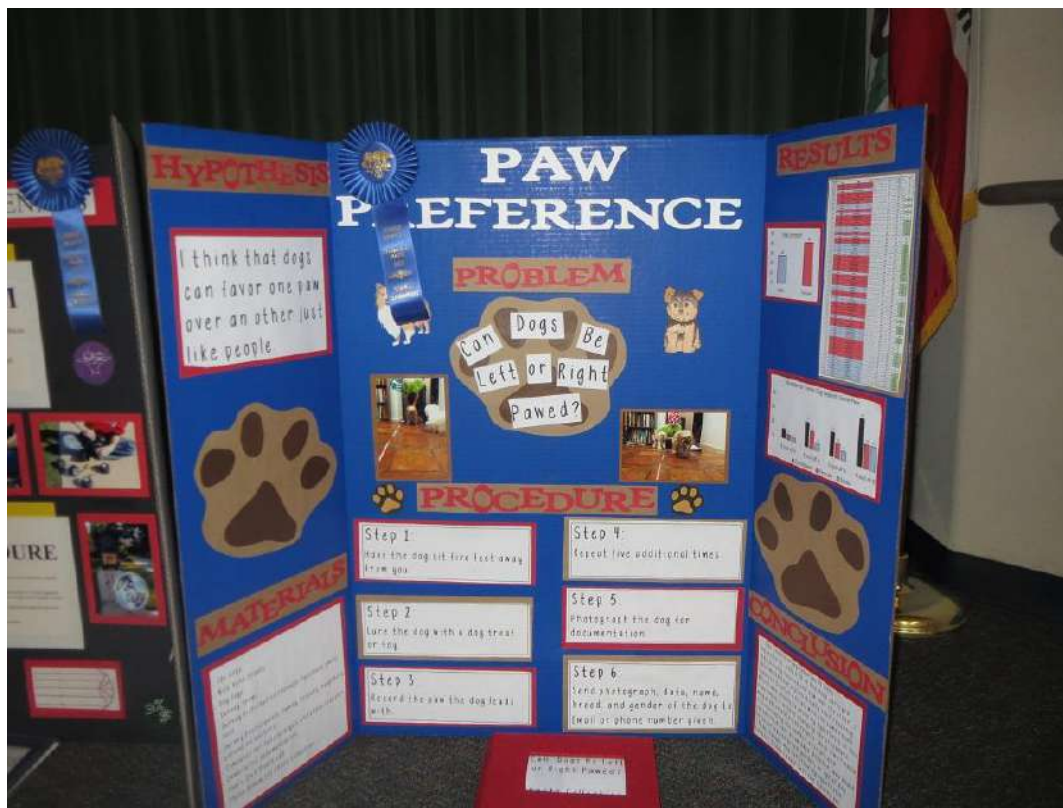
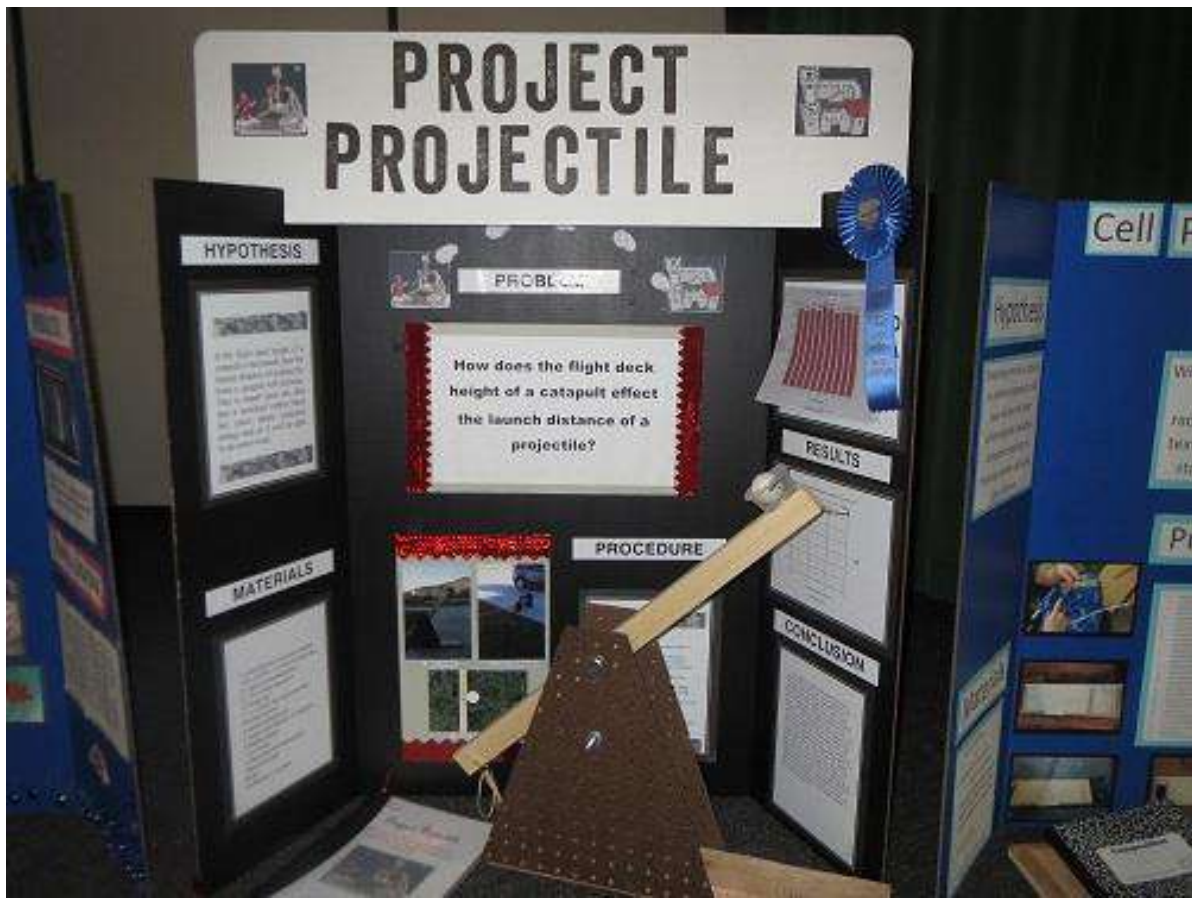
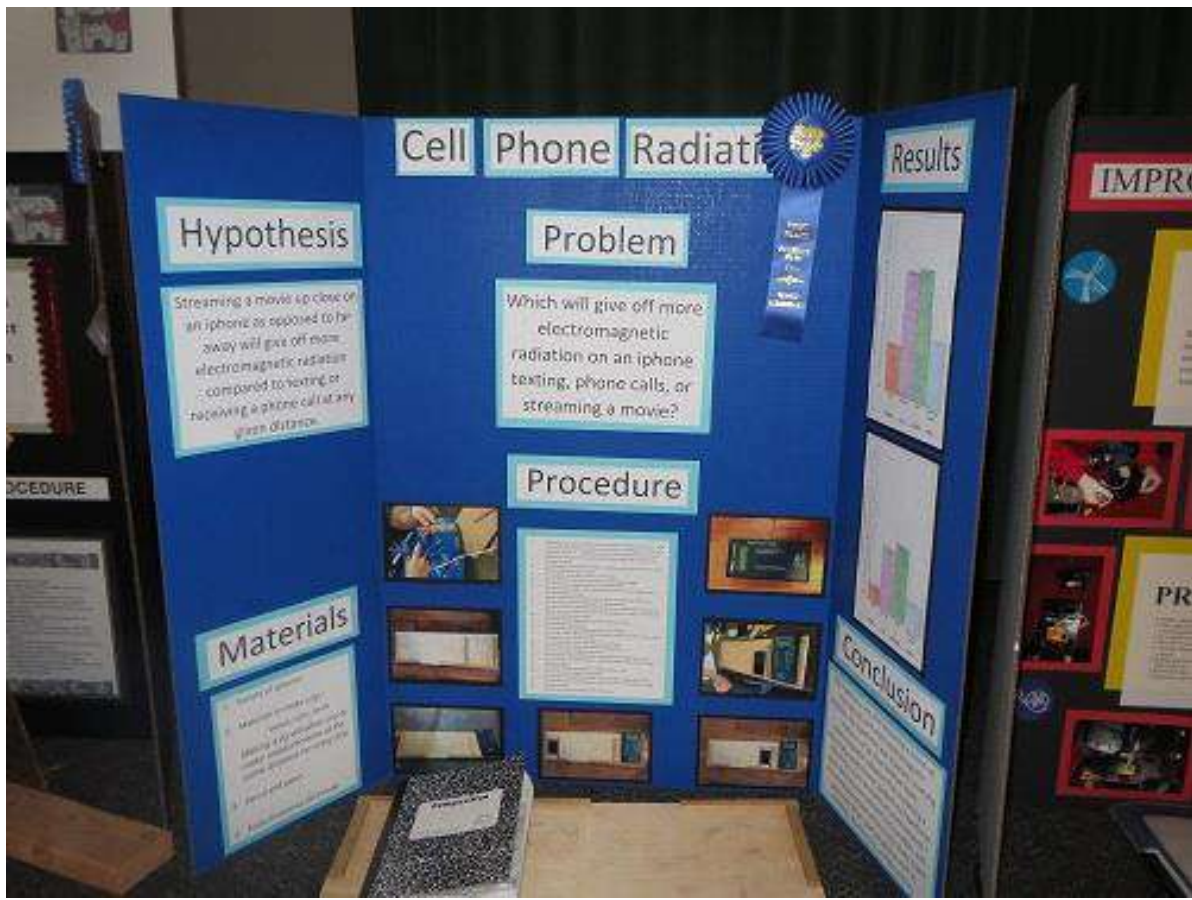
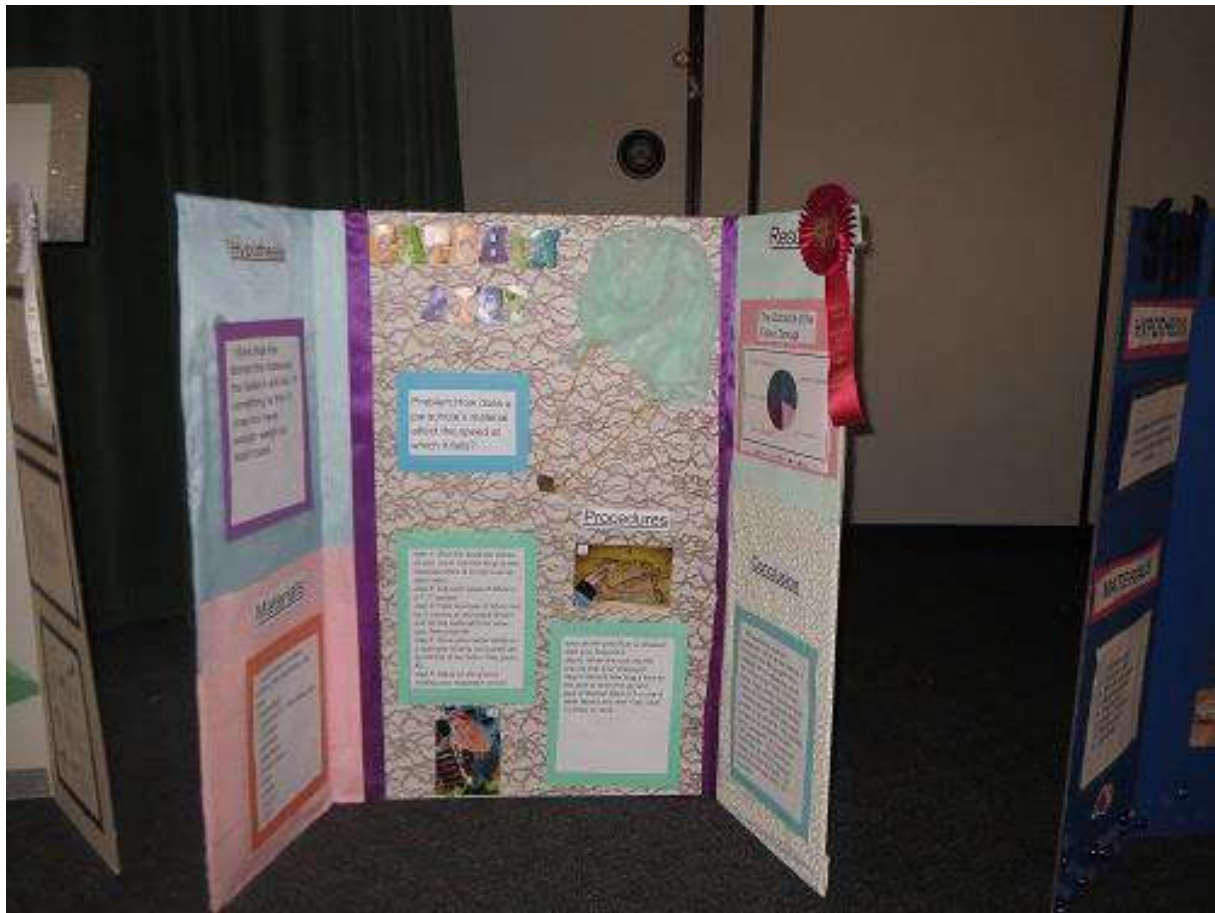
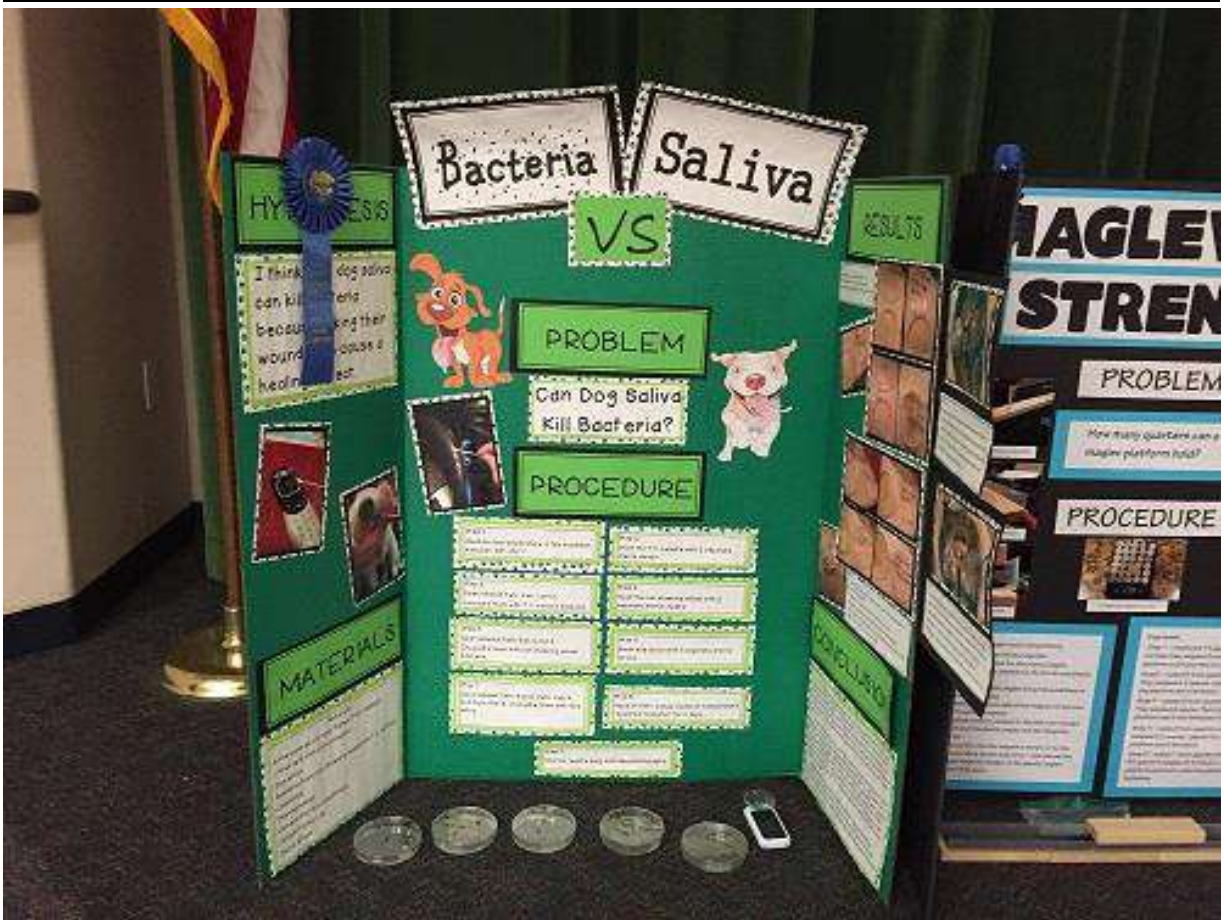
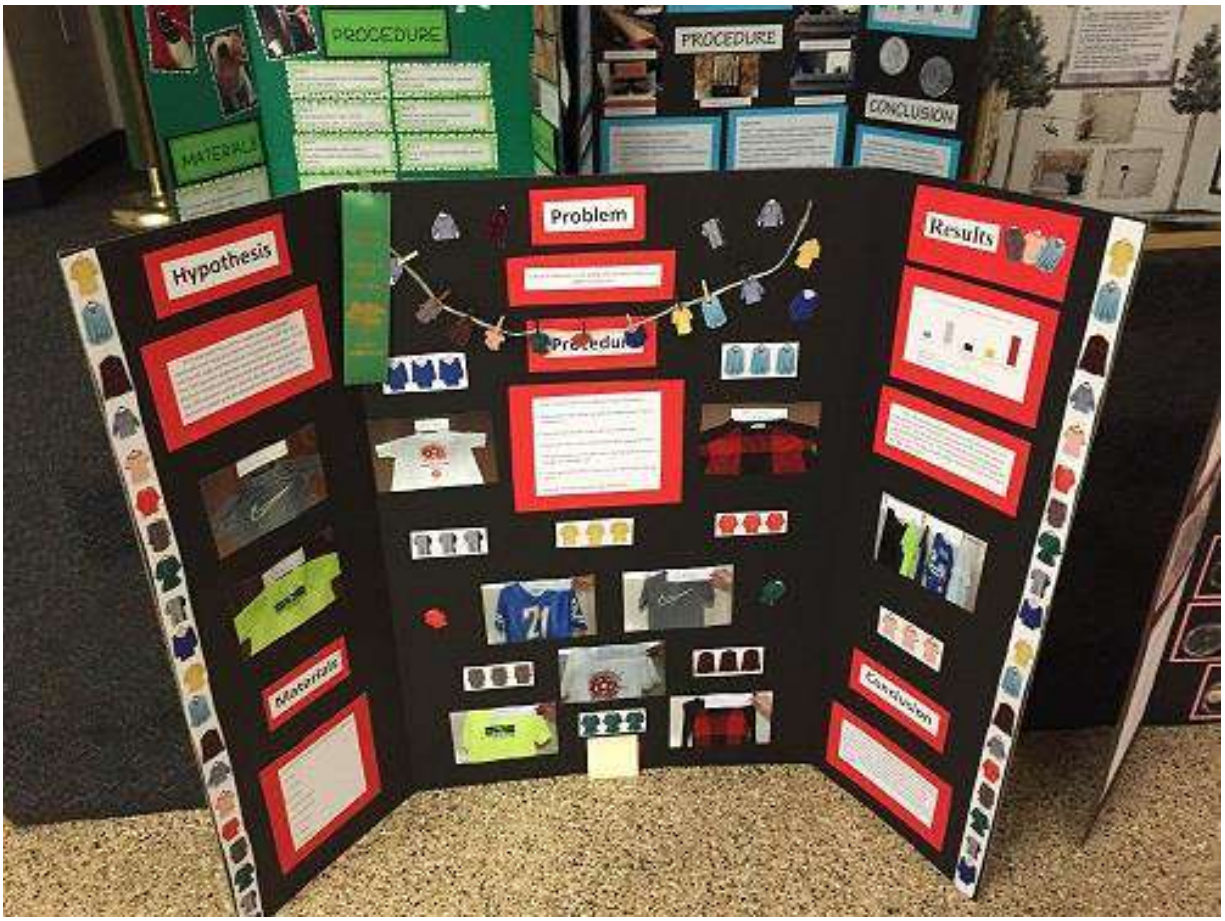


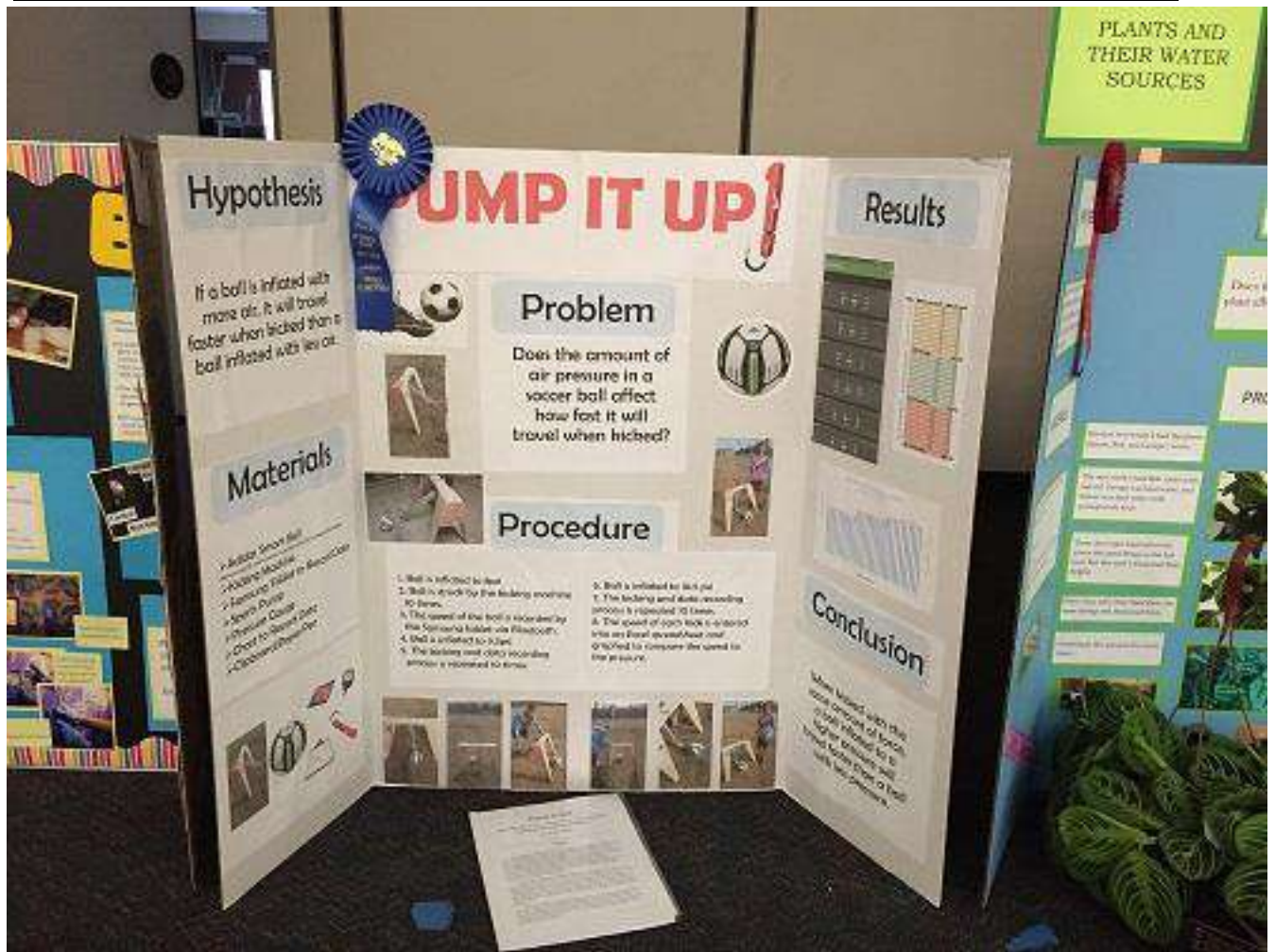
# SCIENCE FAIR SAMPLE PROJECT BOARDS

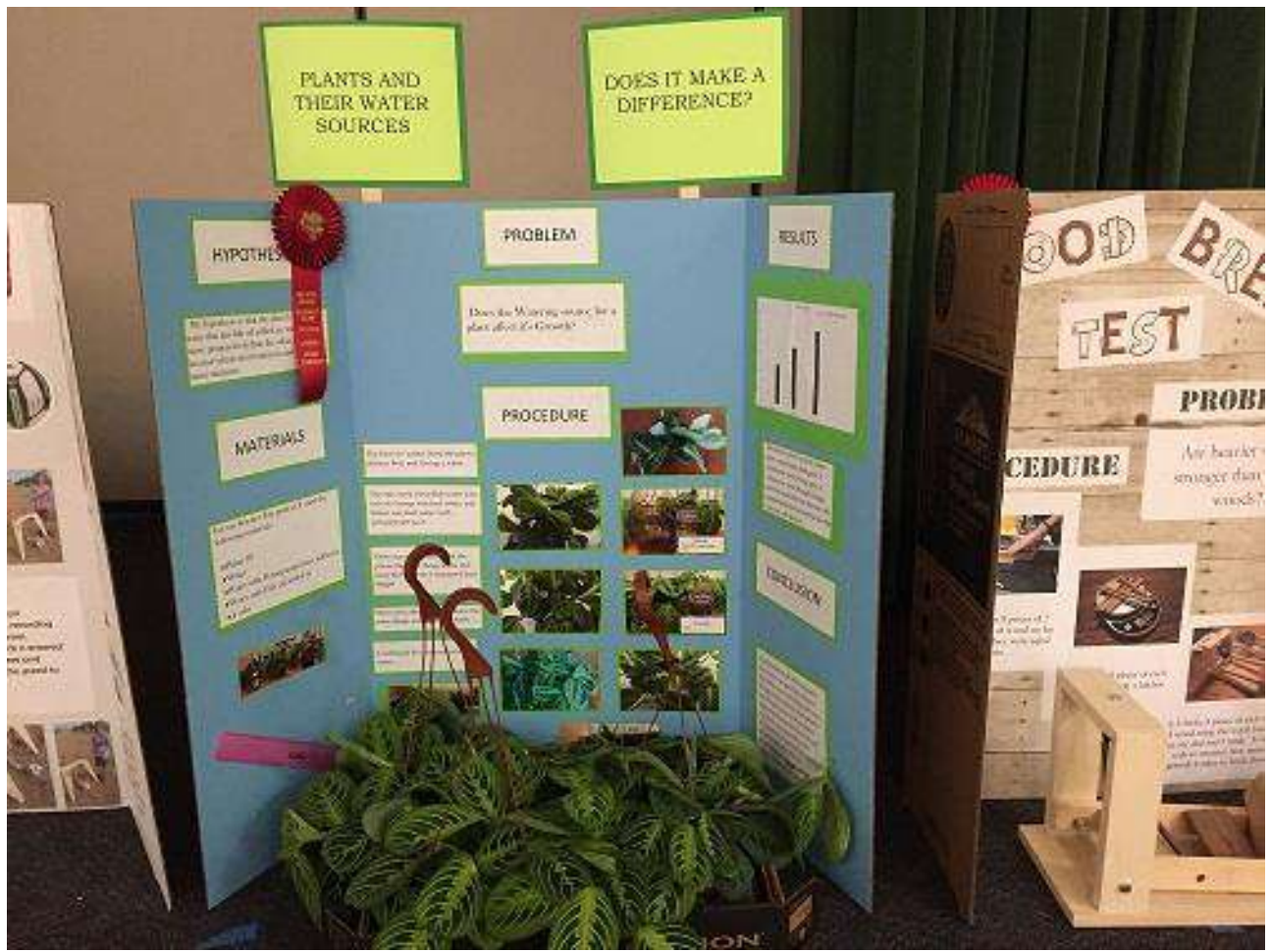


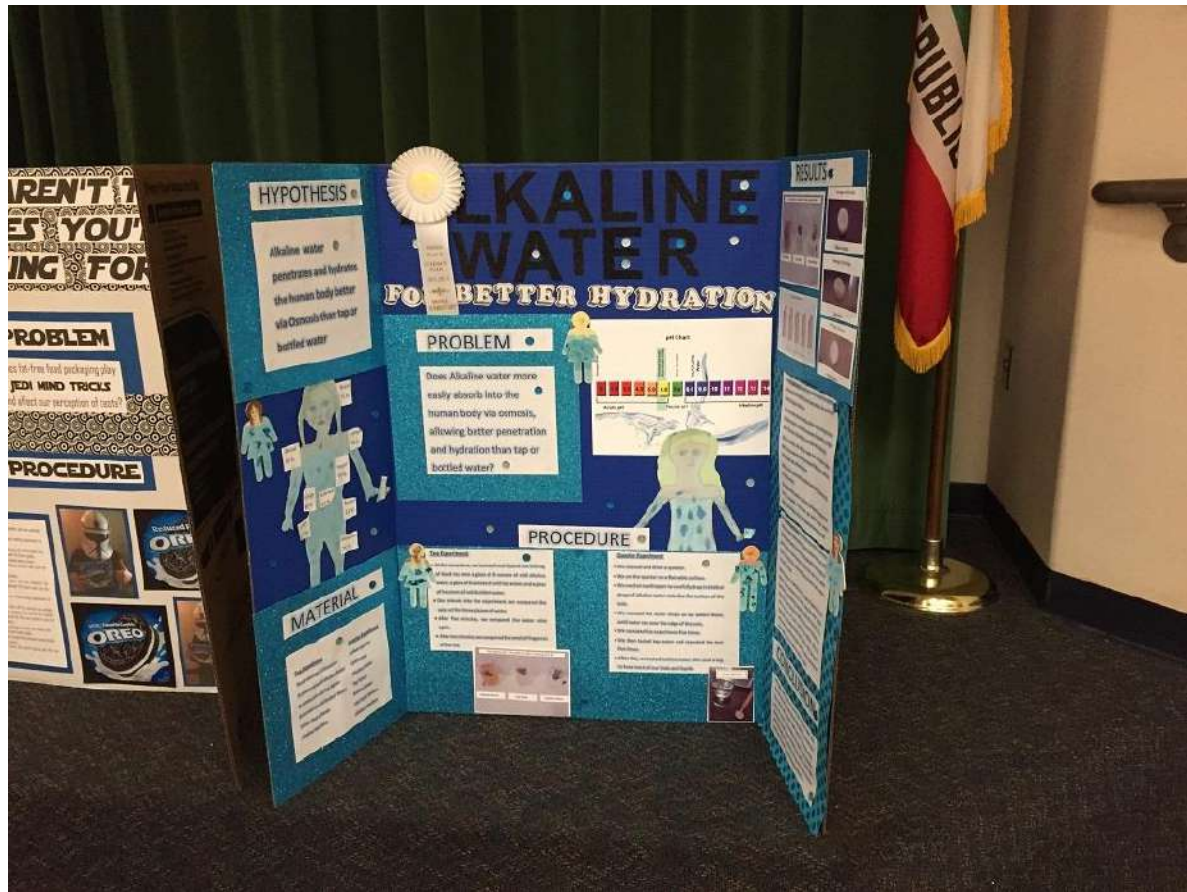


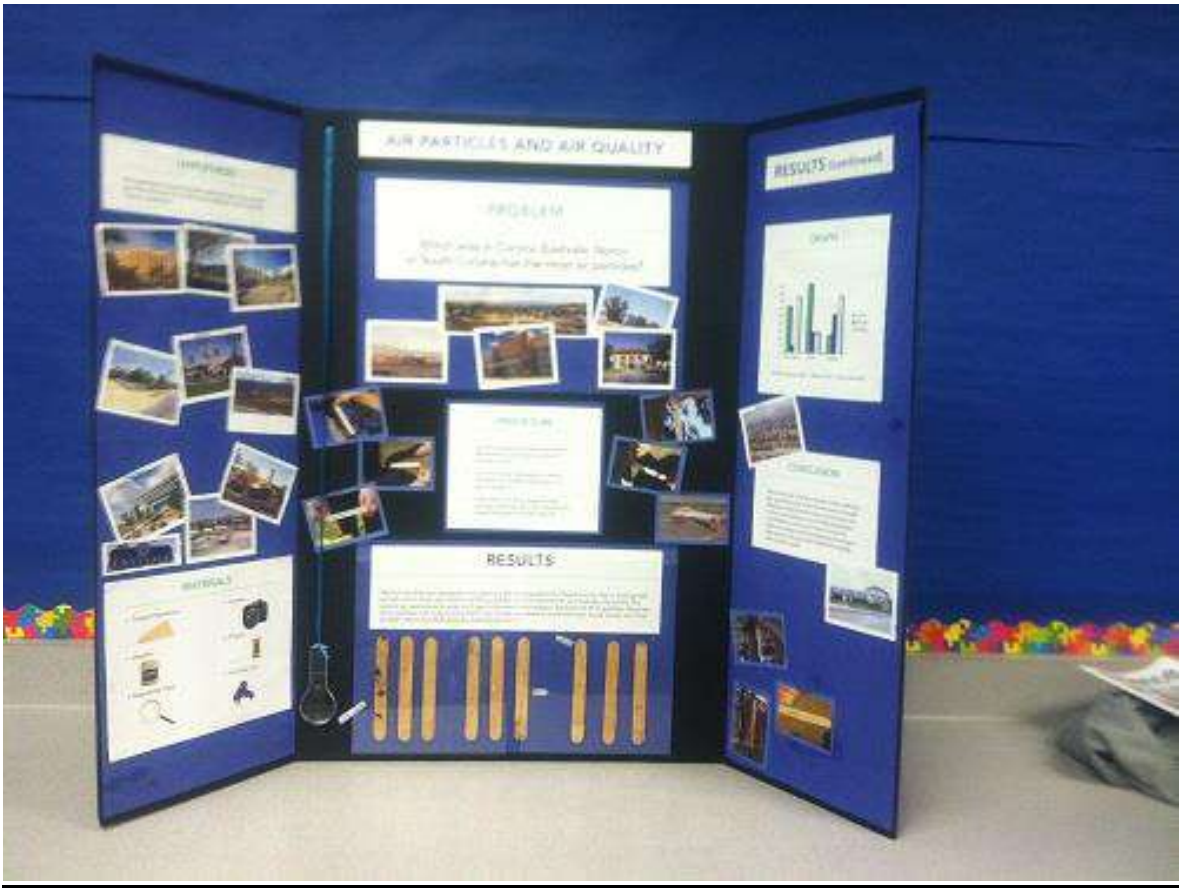














# in Correlation to Divergent Irradiated Environments

## Methods

**Abstract**  
 This project was designed to investigate the effects of different irradiation environments on the growth of a specific organism. The study was conducted over a period of 10 weeks, with data collected and analyzed to determine the correlation between the environment and the organism's growth rate. The results show that the organism's growth rate is significantly affected by the irradiation environment, with the highest growth rate observed in the control group and the lowest growth rate observed in the highest irradiation environment.



## Data Collection

Week	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10
1	100	100	100	100	100	100	100	100	100	100
2	110	105	100	95	90	85	80	75	70	65
3	120	110	105	100	95	90	85	80	75	70
4	130	120	110	105	100	95	90	85	80	75
5	140	130	120	110	105	100	95	90	85	80
6	150	140	130	120	110	105	100	95	90	85
7	160	150	140	130	120	110	105	100	95	90
8	170	160	150	140	130	120	110	105	100	95
9	180	170	160	150	140	130	120	110	105	100
10	190	180	170	160	150	140	130	120	110	100
<b>Average Growth Rate</b>	<b>19.0%</b>	<b>18.0%</b>	<b>17.0%</b>	<b>16.0%</b>	<b>15.0%</b>	<b>14.0%</b>	<b>13.0%</b>	<b>12.0%</b>	<b>11.0%</b>	<b>10.0%</b>

## Results



## Percentage Growth



## Average Growth Rates



## Conclusion



The results of this study show that the growth rate of the organism is significantly affected by the irradiation environment. The highest growth rate was observed in the control group, and the lowest growth rate was observed in the highest irradiation environment. This suggests that the organism is highly sensitive to irradiation, and that the growth rate decreases as the irradiation level increases. The data collected during the study supports this conclusion, showing a clear correlation between the irradiation environment and the organism's growth rate.

## Conclusion



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Aw

# Mediated Environments

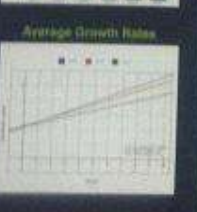
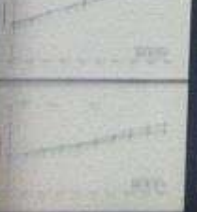
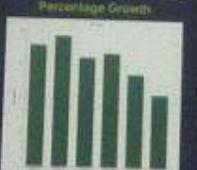
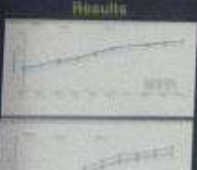
## Methods

The study was conducted in a controlled laboratory setting. Participants were assigned to two groups: a control group and an experimental group. The experimental group used a mediated environment (a virtual reality headset) to interact with a simulated environment. The control group interacted with the same environment using a standard computer mouse and keyboard. The study was conducted over a period of four weeks, with participants using the mediated environment for 30 minutes per day, five days per week. Data was collected at the beginning and end of the study, as well as at two intermediate points. The data was analyzed using statistical software to determine the effects of the mediated environment on the dependent variables.



## Data Collection

Time	Group	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5	Variable 6	Variable 7	Variable 8
0	Control	100	100	100	100	100	100	100	100
1	Control	105	105	105	105	105	105	105	105
2	Control	110	110	110	110	110	110	110	110
3	Control	115	115	115	115	115	115	115	115
4	Control	120	120	120	120	120	120	120	120
0	Experimental	100	100	100	100	100	100	100	100
1	Experimental	105	105	105	105	105	105	105	105
2	Experimental	110	110	110	110	110	110	110	110
3	Experimental	115	115	115	115	115	115	115	115
4	Experimental	120	120	120	120	120	120	120	120



## Results

## Percentage Growth

## Average Growth Rates

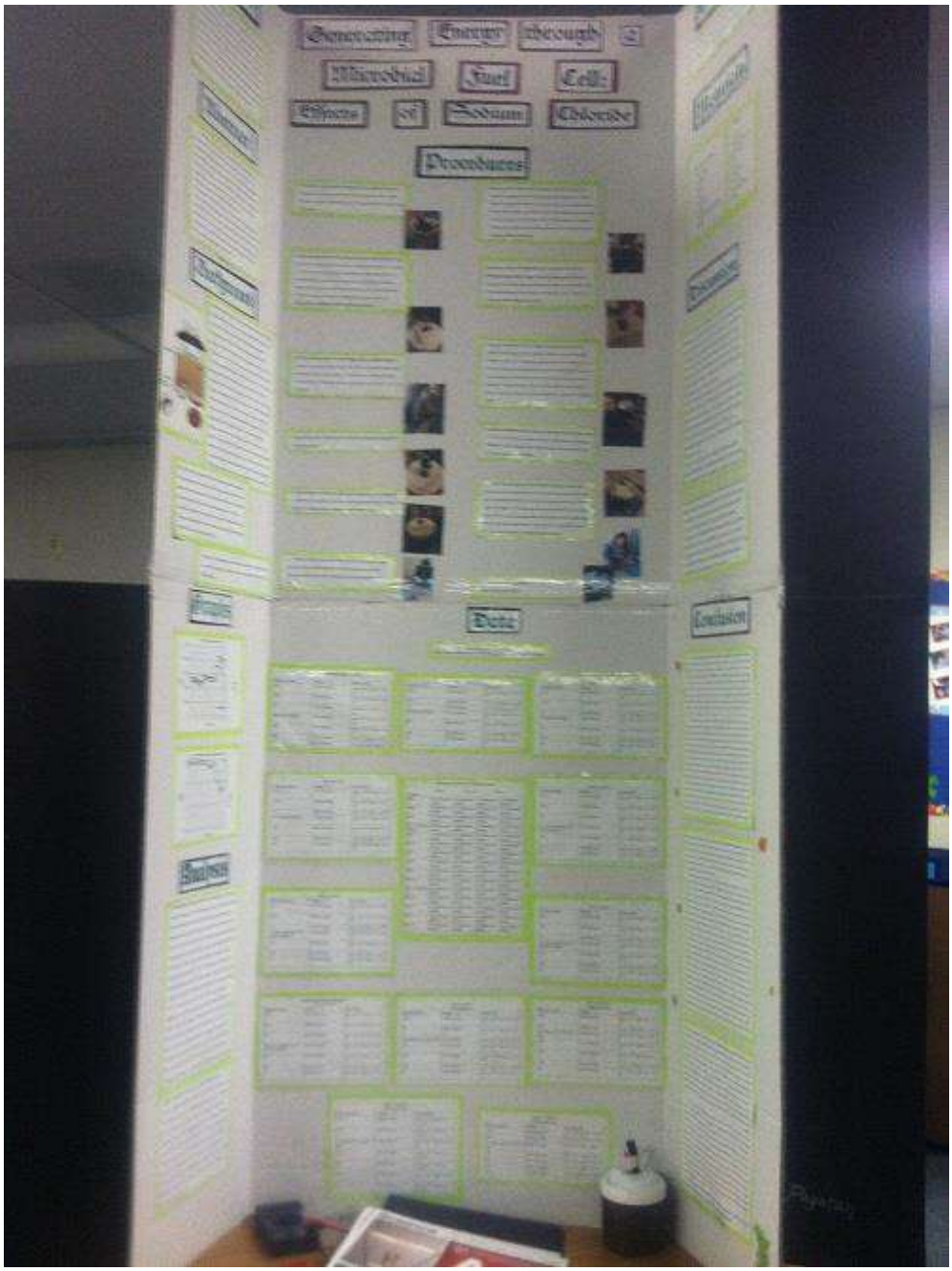
## Conclusion

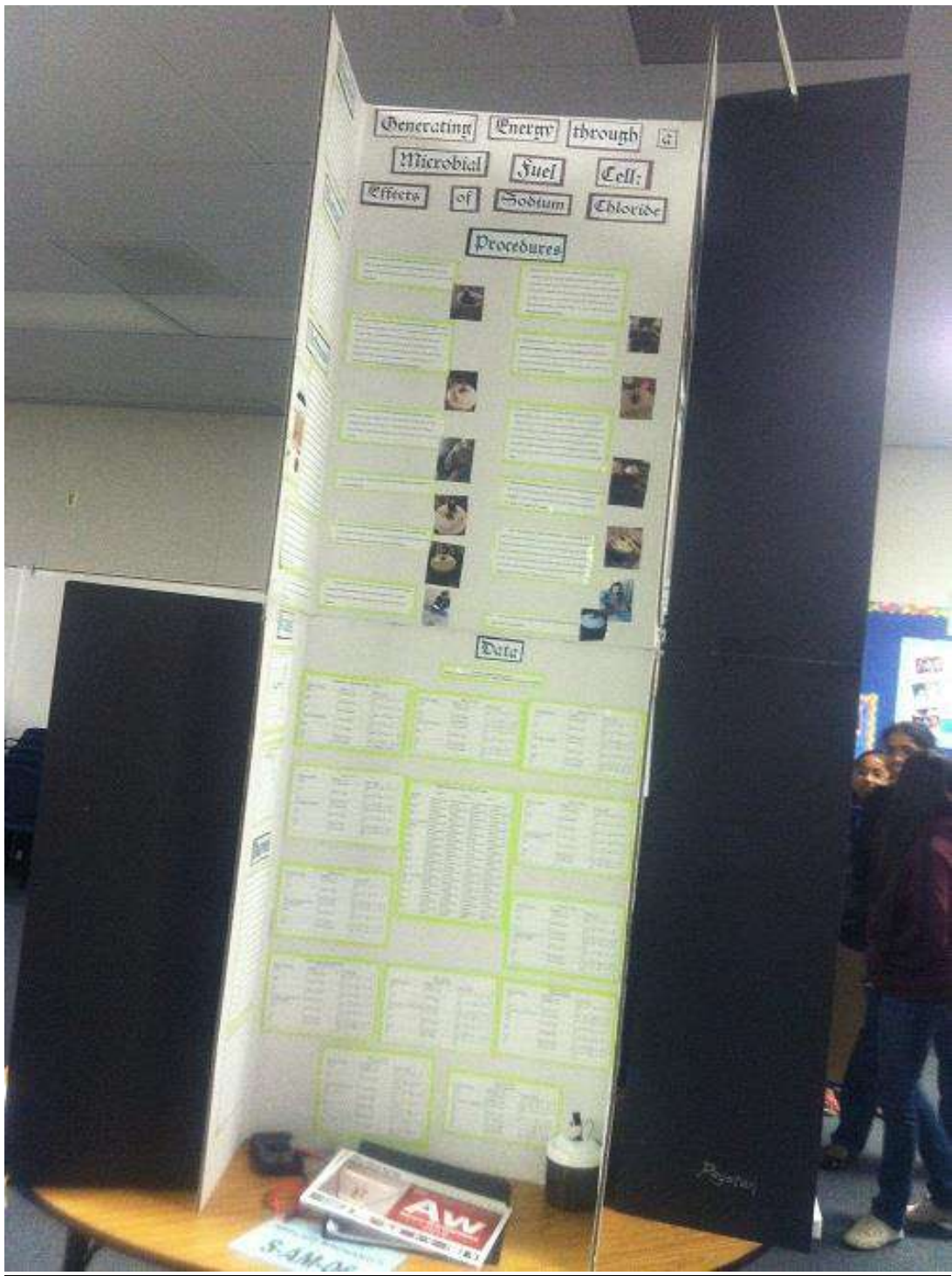


The results of the study indicate that the mediated environment (VR) had a significant positive effect on the dependent variables compared to the control group. The experimental group showed higher growth rates across all variables, particularly in the later stages of the study. This suggests that the mediated environment may be more effective for learning and skill acquisition than traditional methods. The conclusion is that mediated environments can provide a more engaging and effective learning experience, leading to improved performance and growth.

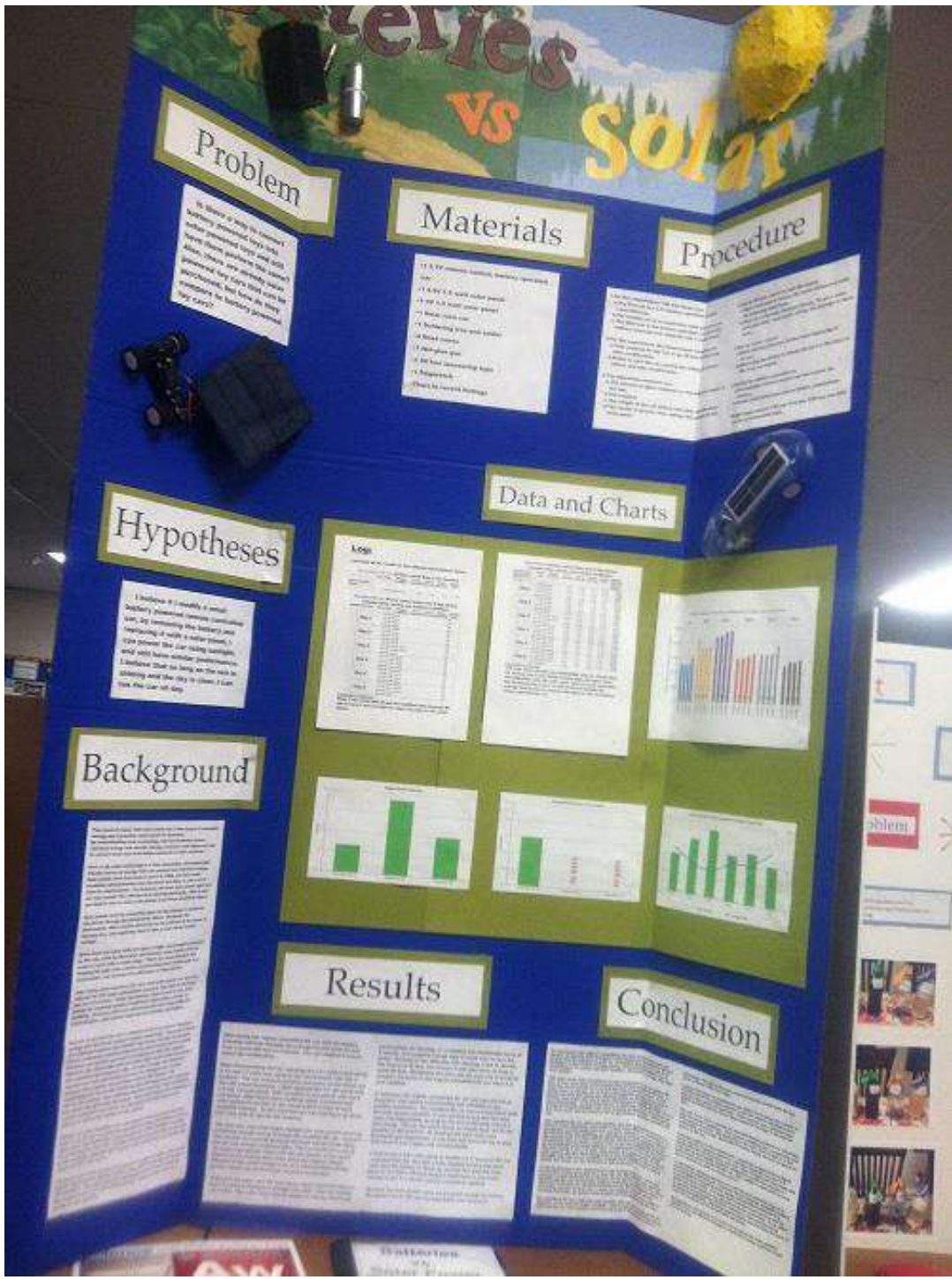
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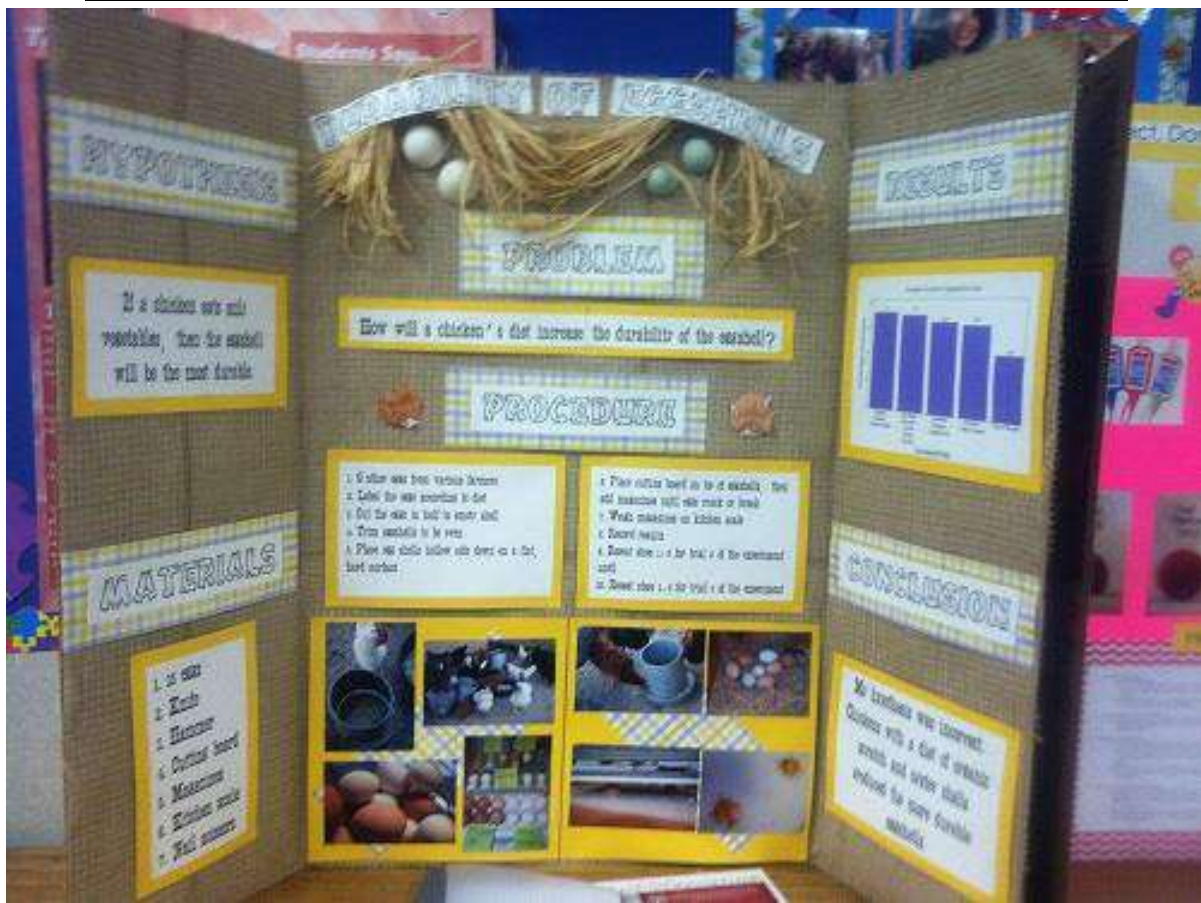
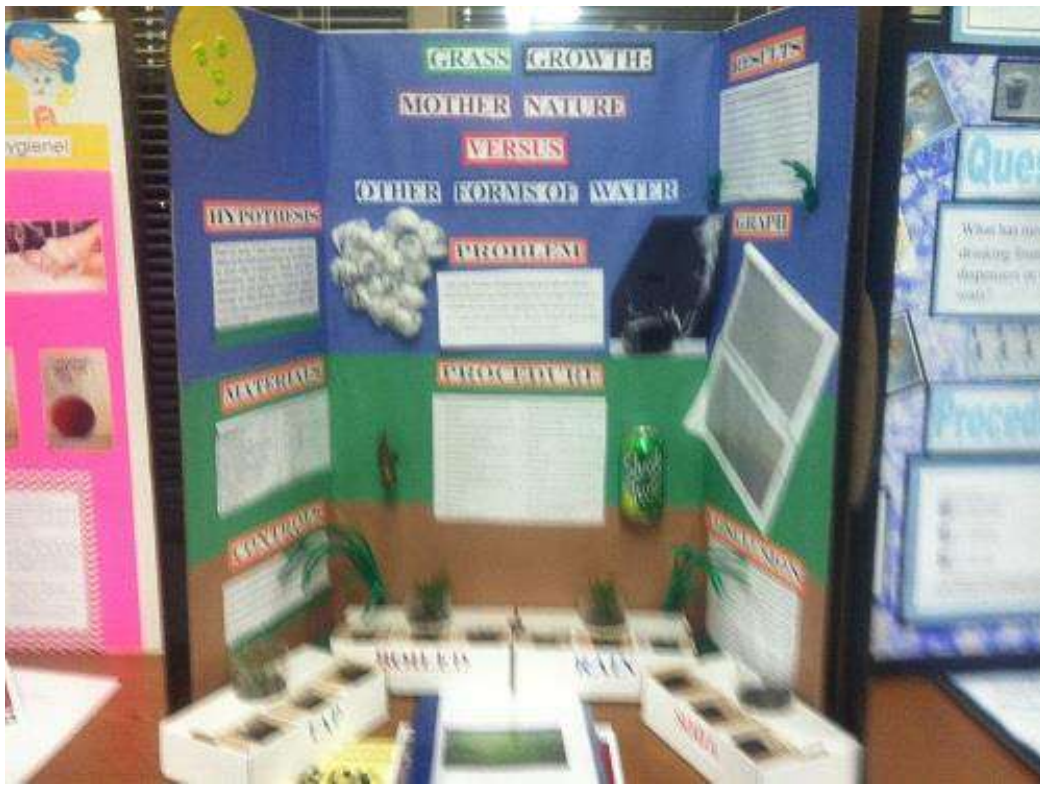














# Are Cats Left or Right Paw Dominant?

## Hypothesis

I think cats do have right or left paw dominance. They may be smaller and fatter than us but cats have personality and intelligence too. Having a toy and food test should show the results for each cat in case they react to only one test. I think the cats will be mostly right handed because people are mostly right handed in studies. I also think cats from the same litter will have the same paw dominance.

## Materials

### Test Subjects

## Problem

Do cats have left or right paw dominance? Are cats left or right handed like people? Studies have shown that between 70-90% of people are right handed, do cats have a similar ratio? Do sibling cats have the same tendencies?

## Procedure

We ran tests that were either toy based or food based, because some cats are motivated by food and others by toys. We wanted the first reaction from each cat, because they would use the paw that they are more coordinated with, their dominant one. We did not run the tests one after another so they had time to relax. We asked for at least a hour, preferably a day between tests.

Since I only have two cats in my house, we needed a larger test group so we got help from volunteers. With the help of friends and family we ended up with 13 cats. We gave them forms to record the results and tubes for the food tests. We asked for information on the subjects like age, breed, and gender. We asked that they run 7 to 9 tests.

**Toy Test**  
For this test, we took a string based toy and hung it right in front of the cat's face, and recorded which paw they used to bat at it first.

**Food Test**  
In the food test we took a cardboard tube, taped one end shut and left the other end open. Then we put a treat inside and see which paw they used first to get the treat out.

## Results

## Conclusion

# The UFC of Memory

## Hypothesis

HYPOTHESIS

## Question

Does a fifth grade boy or girl have a better memory after a 24 hour time lapse?

## Procedure

Procedure

## Results

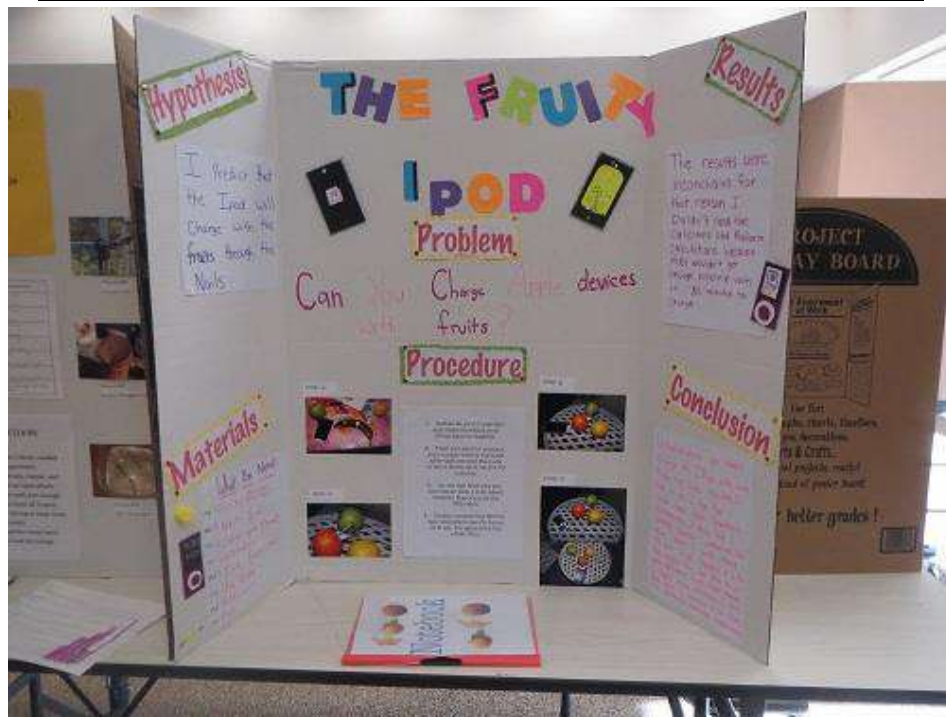
## Conclusion

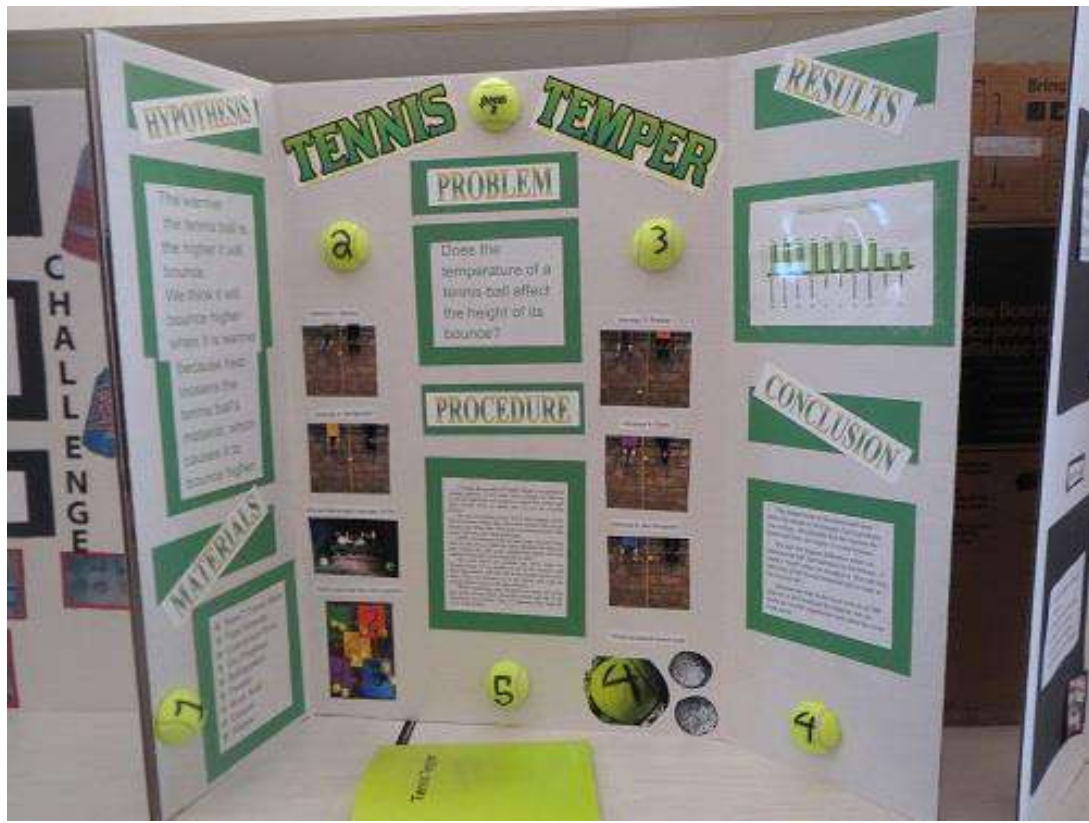
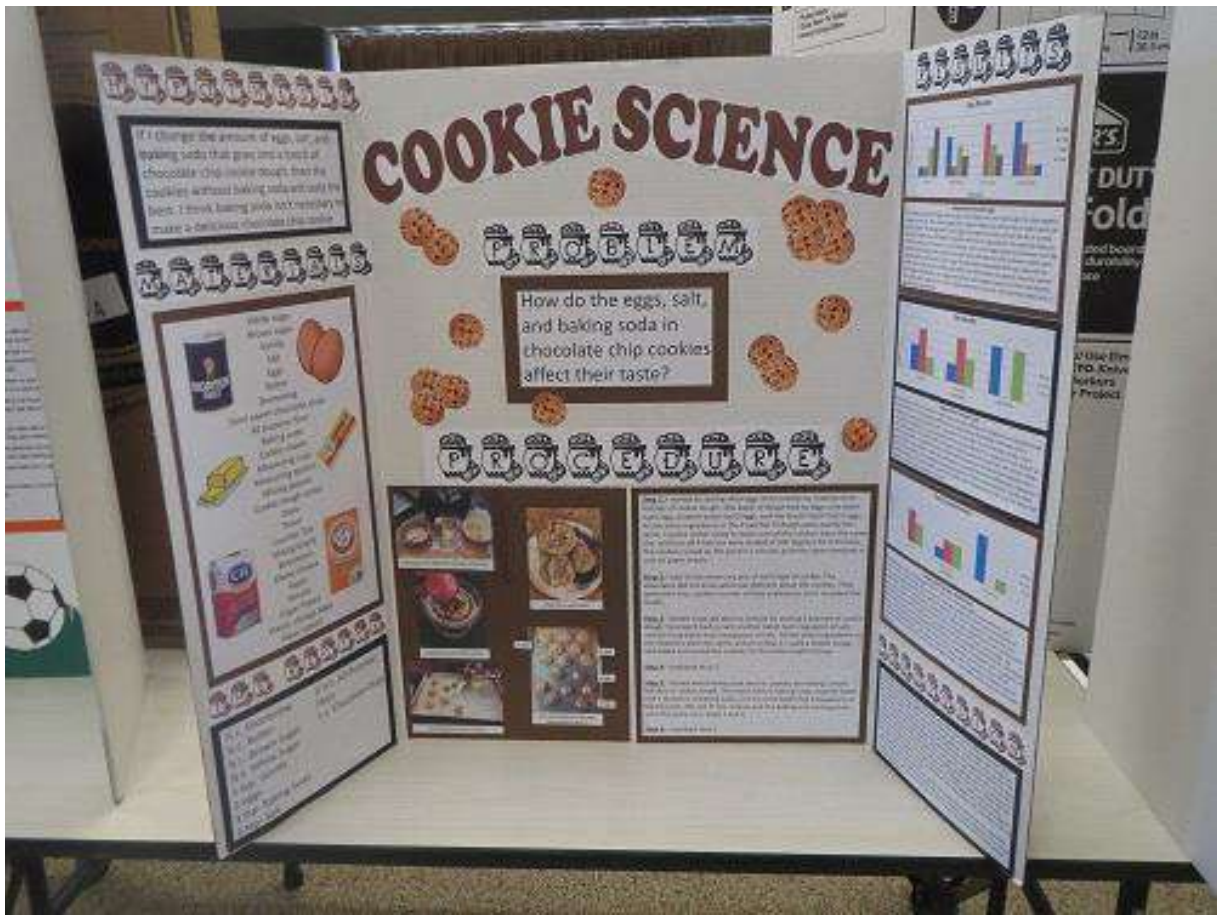
## Materials

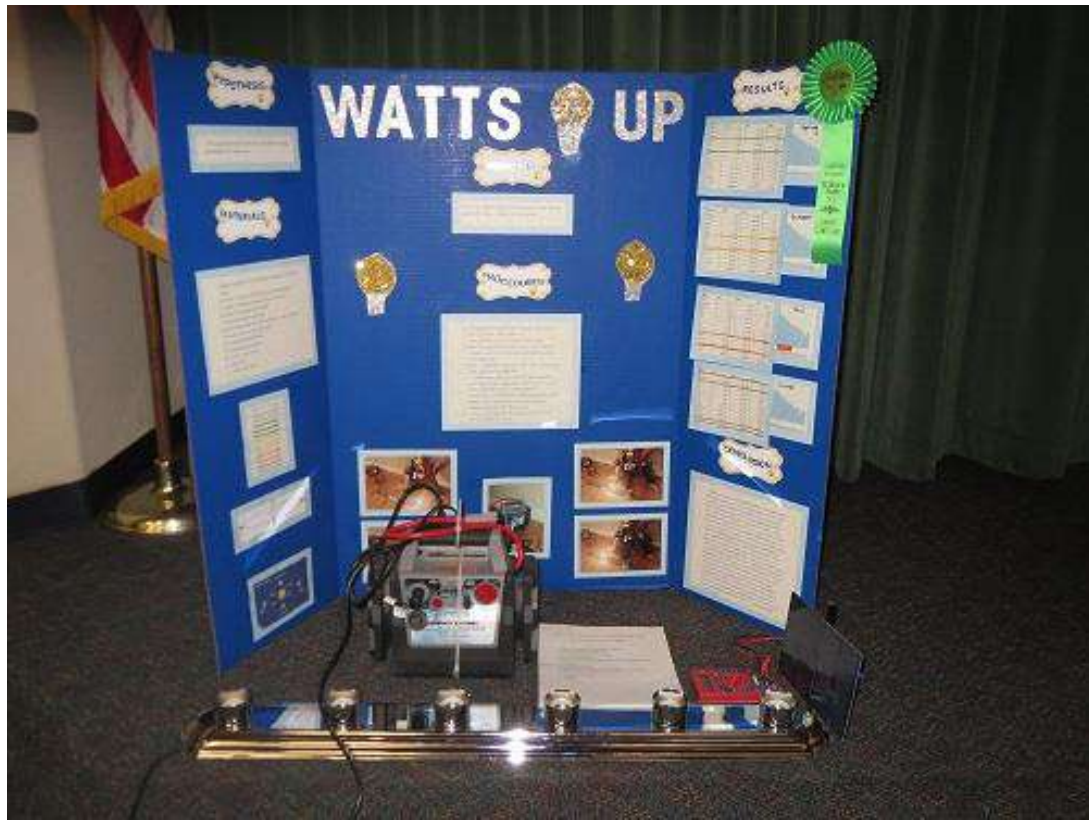
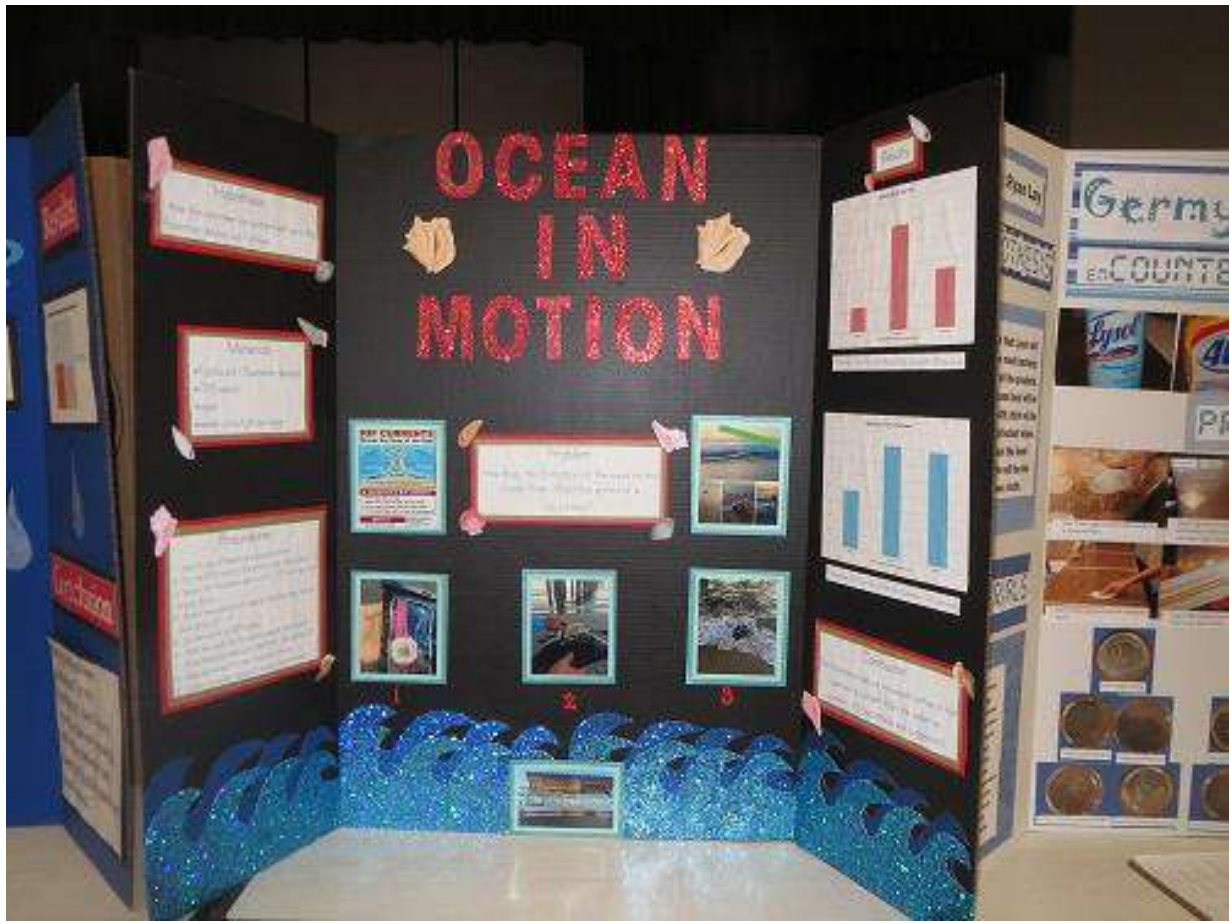
Materials

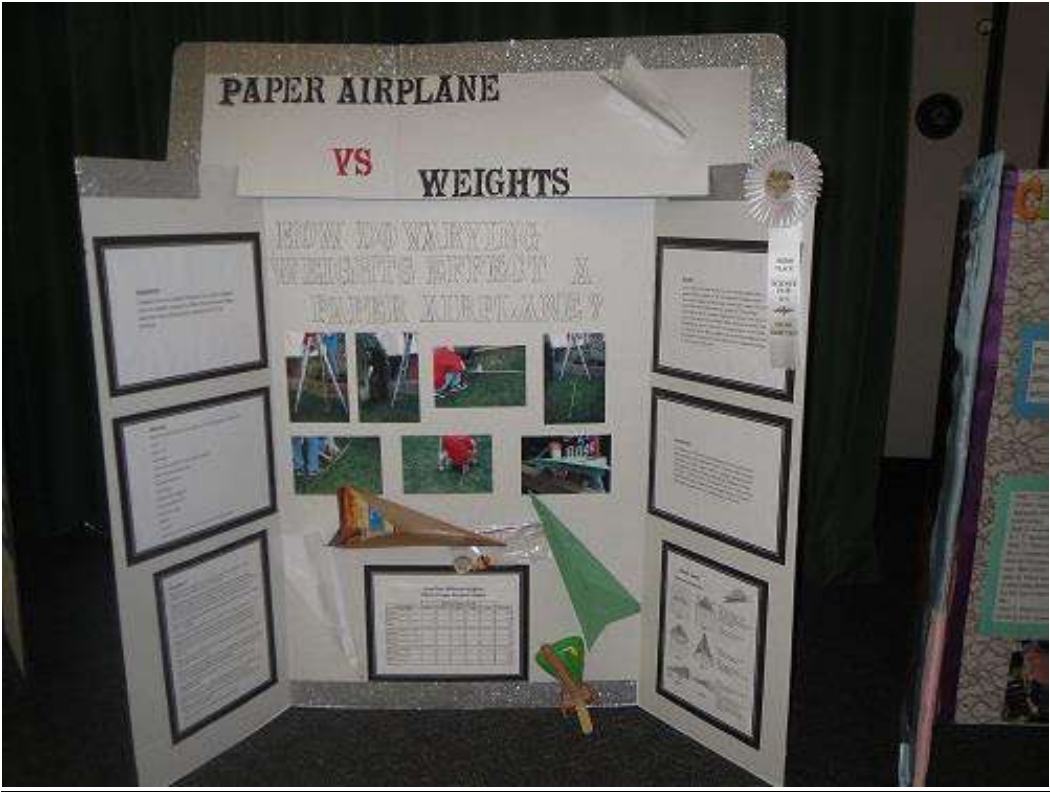
Volunteer Subjects Used

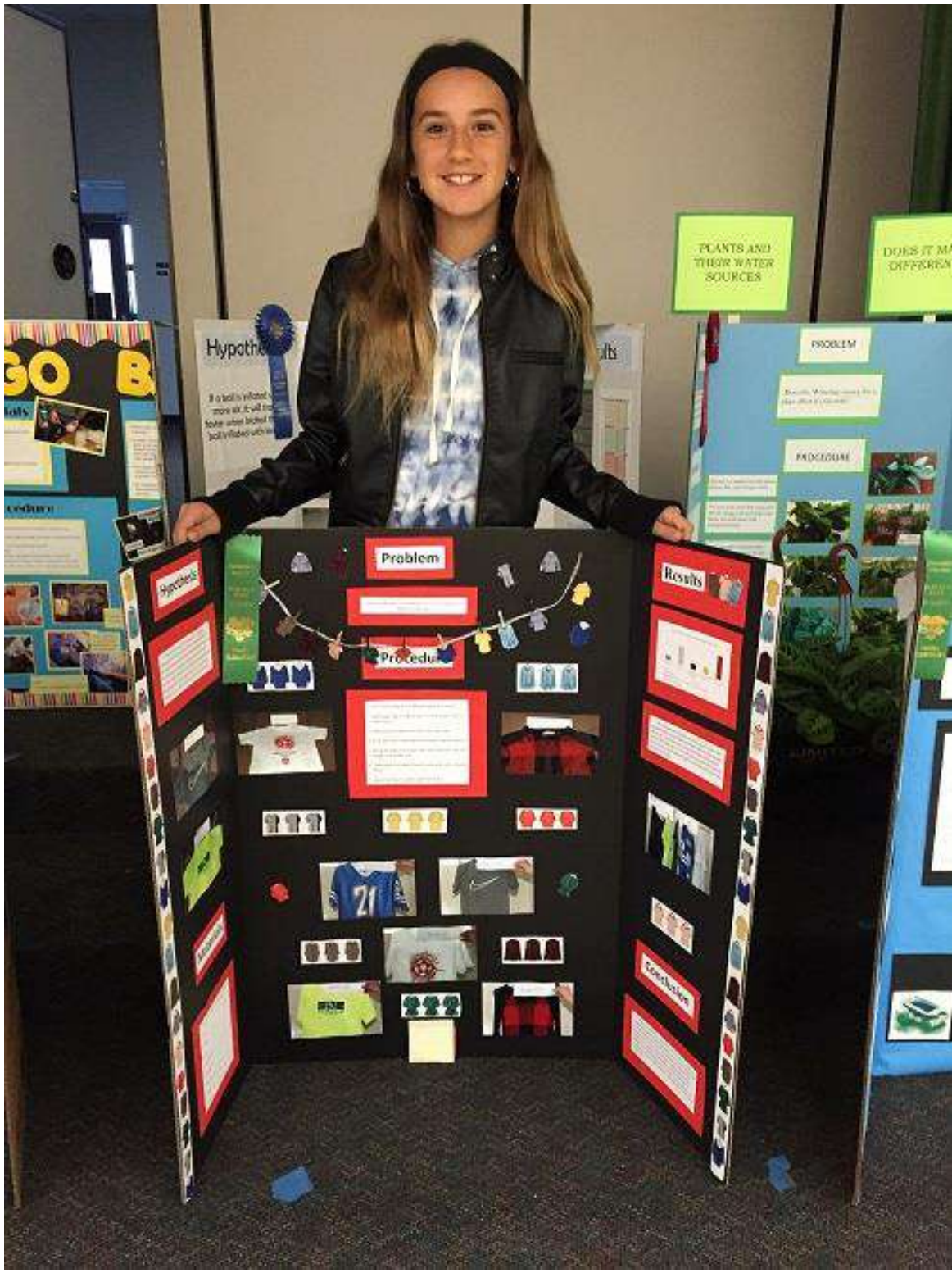












PLANTS AND  
THEIR WATER  
SOURCES

## Hypothesis

If a ball is inflated with more air, it will travel faster when kicked than a ball inflated with less air.

## Materials

- Adidas Smart Ball
- Measuring Tape
- Stopwatch
- Sports Pump
- Pressure Gauge
- Chart to Record Data
- Clipboard/Pencil

# PUMP IT UP!

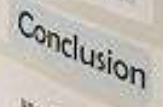
## Problem

Does the amount of air pressure in a soccer ball affect how fast it will travel when kicked?

## Procedure

1. Ball is inflated to 8 psi
2. Ball is kicked by the kicking machine 10 times.
3. The speed of the ball is recorded by the timing robot via Bluetooth.
4. Ball is inflated to 9 psi
5. The kicking and data recording process is repeated 10 times.
6. Ball is inflated to 10 psi
7. The kicking and data recording process is repeated 10 times.
8. The speed of each kick is entered into an excel spreadsheet and graphed to compare the speed to the pressure.

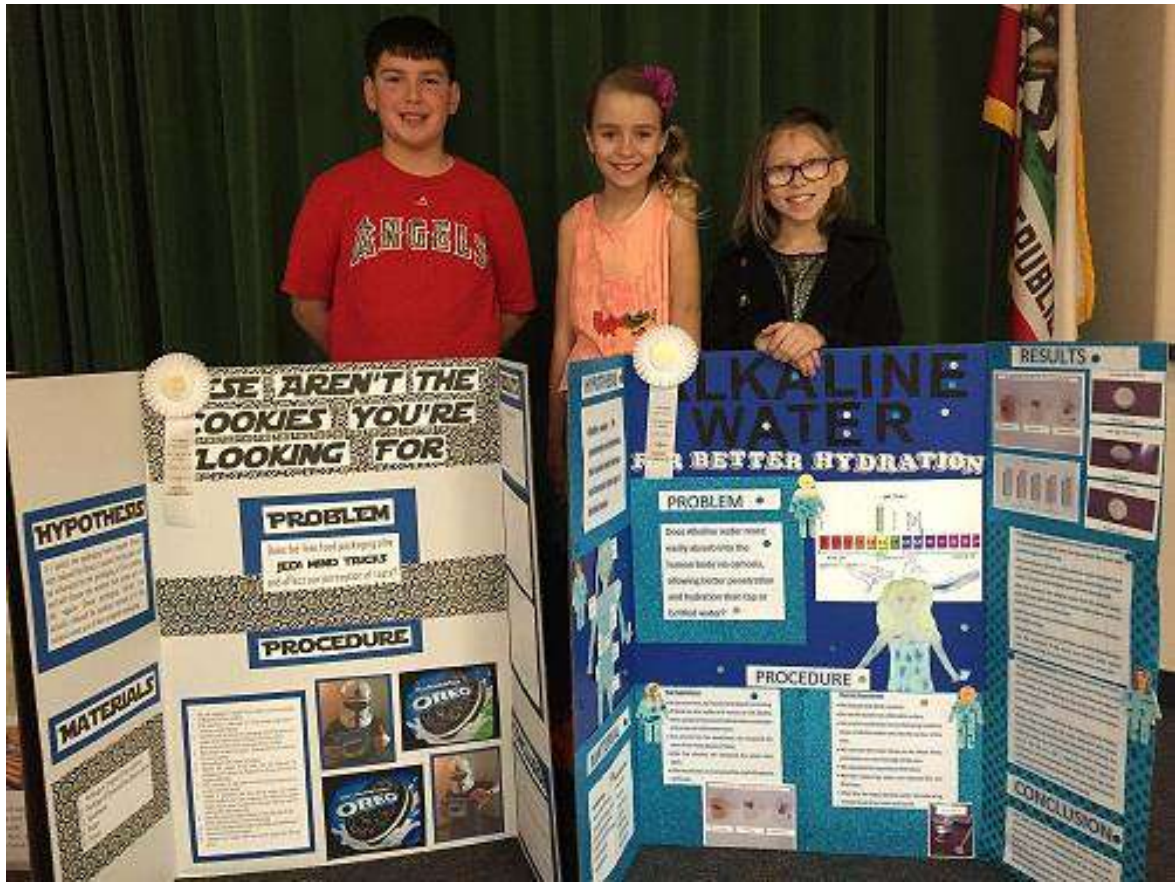
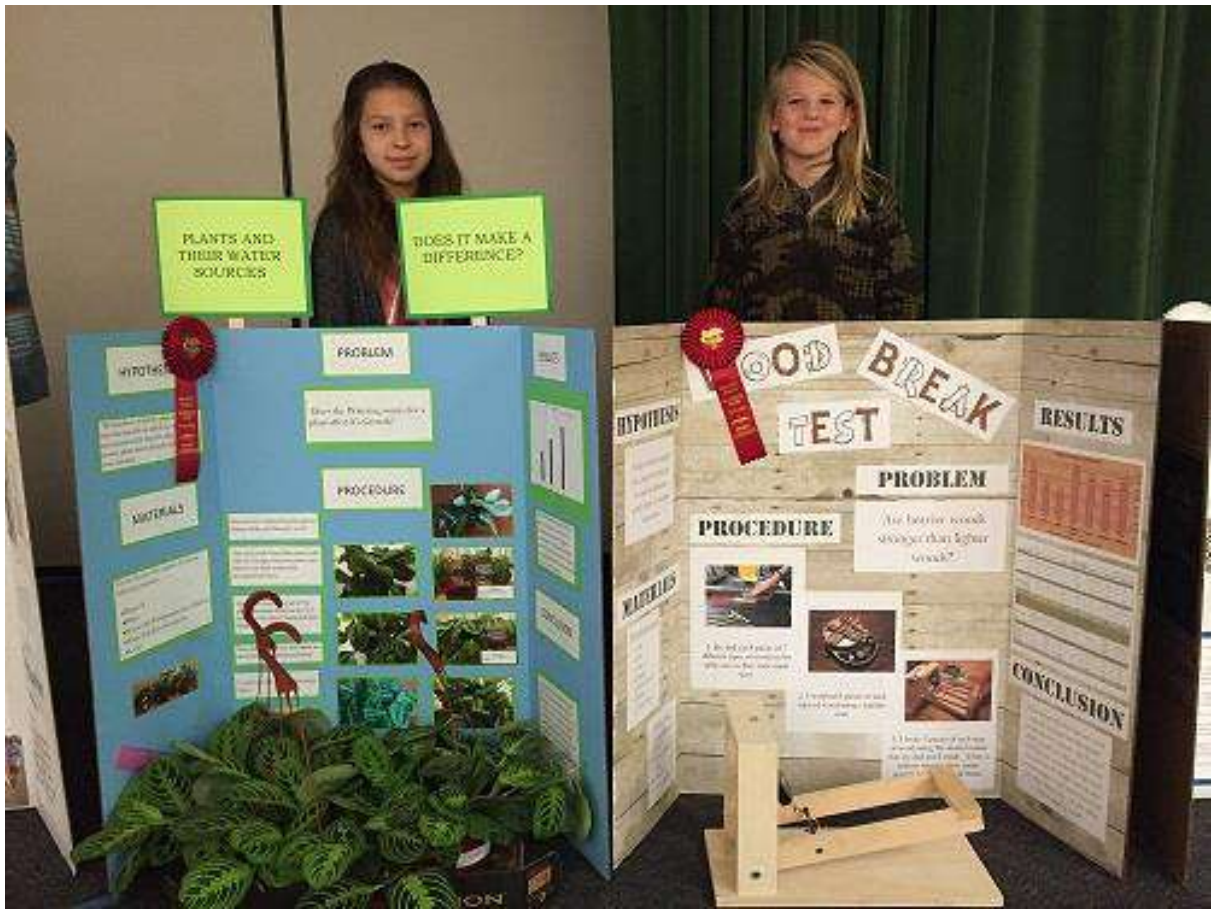
## Results

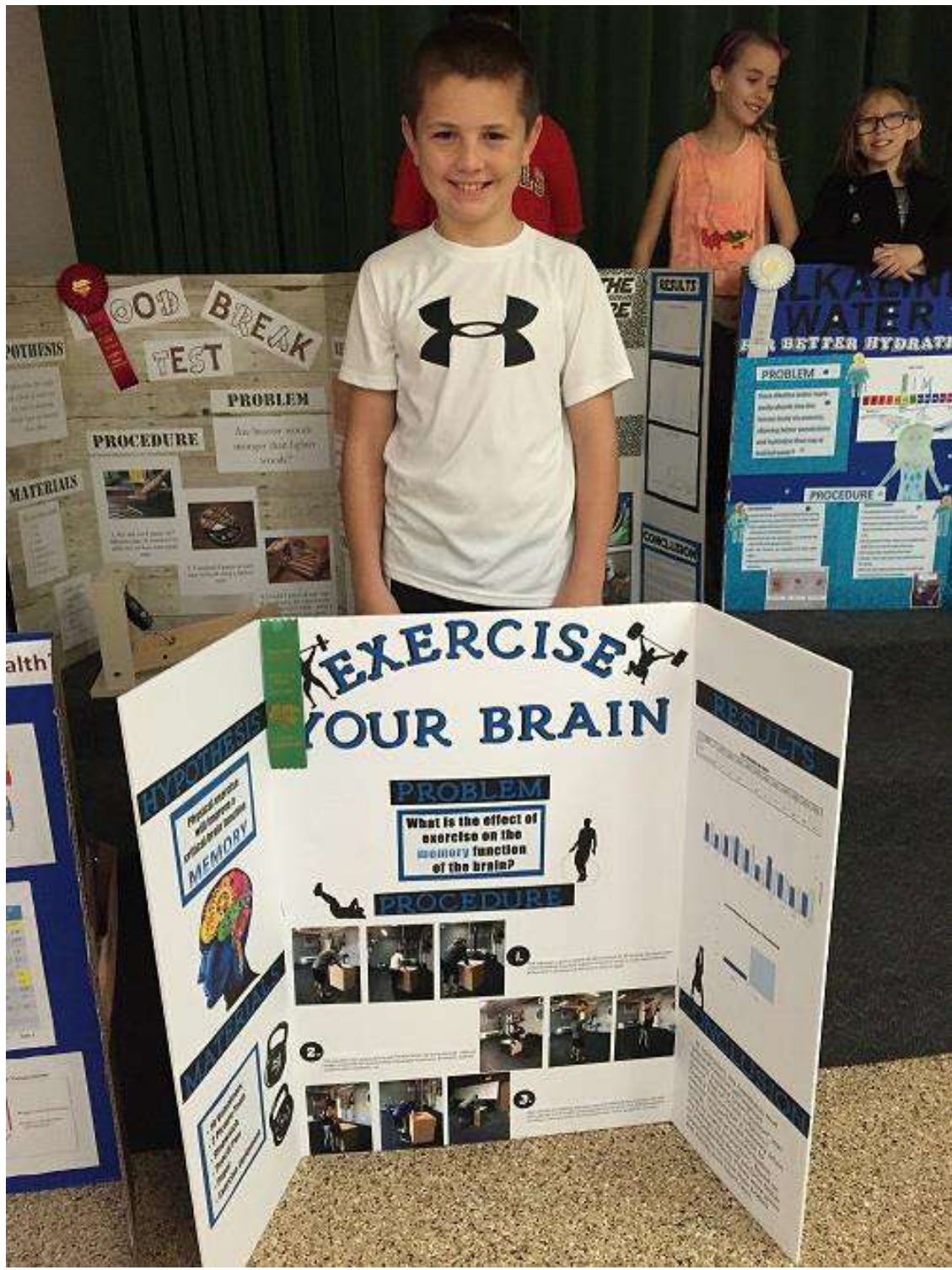


When tested with the same amount of force, a ball inflated to a higher pressure will travel faster than a ball with less pressure.









**GOOD BREAK TEST**

**HYPOTHESIS**

**PROBLEM**

**PROCEDURE**

**MATERIALS**

**KAYAK WATER FOR BETTER HYDRATION**

**PROBLEM**

**PROCEDURE**

**RESULTS**

**EXERCISE YOUR BRAIN**

**HYPOTHESIS**

Physical exercise will improve a child's memory.

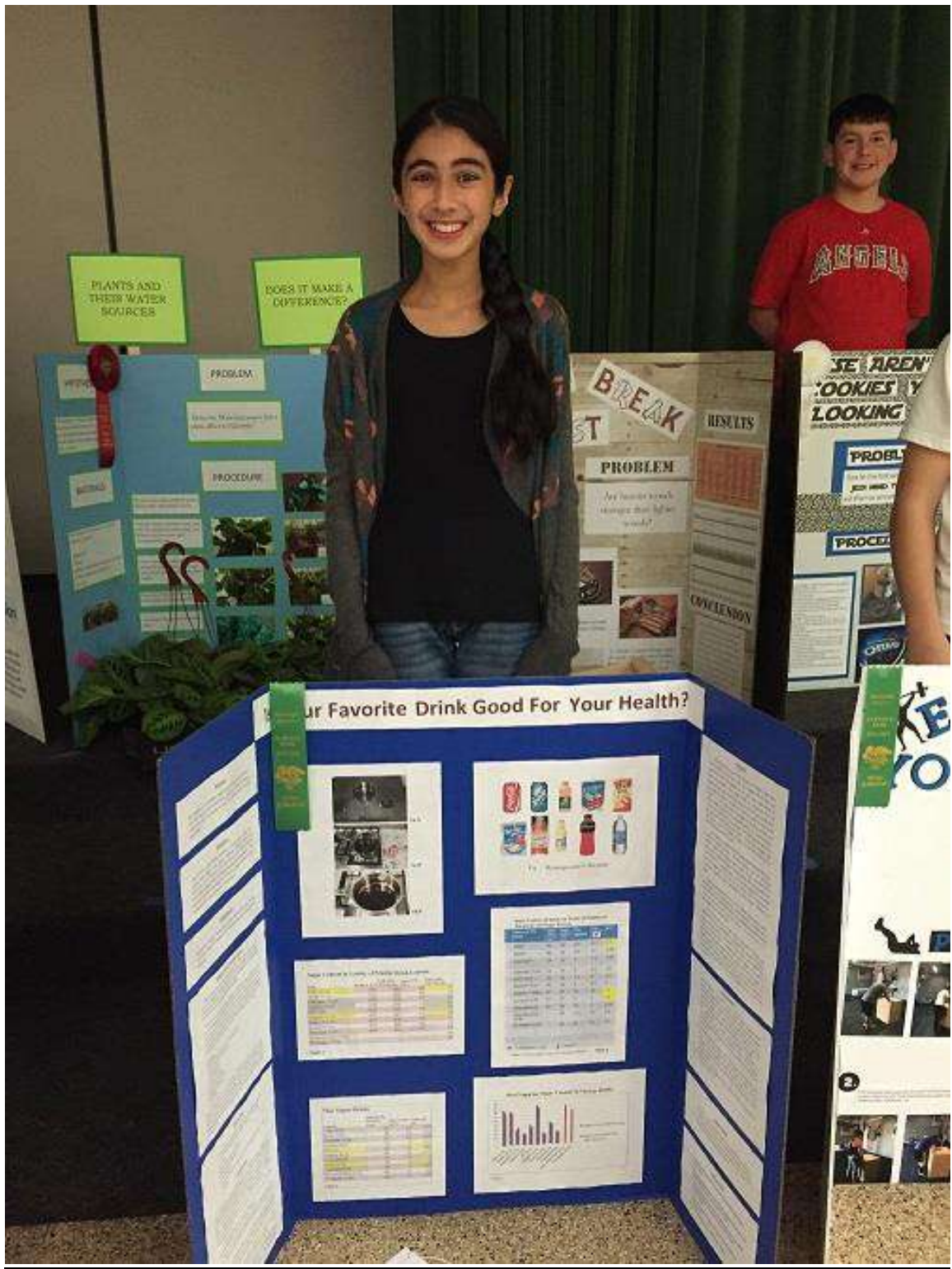
**MEMORY**

**PROBLEM**

What is the effect of exercise on the memory function of the brain?

**PROCEDURE**

**RESULTS**





Hypothesis

It is hypothesized that more air pressure will affect how far the ball will travel with the kick.

Materials

1. Soccer ball  
2. Air pressure gauge  
3. Stopwatch  
4. Field



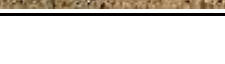
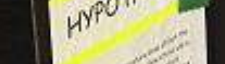
Problem

Does the amount of air pressure in a soccer ball affect how far it will travel when kicked?



Procedure

1. Inflate a soccer ball to 10 psi.  
2. Kick the ball 10 times.  
3. Record the distance of each kick.  
4. Repeat steps 1-3 for 10 psi, 12 psi, 14 psi, and 16 psi.  
5. Calculate the average distance for each pressure level.



# LIGHTS OUT GLOW ON!

## HYPOTHESIS

It is hypothesized that higher temperatures will cause a glow stick to glow brighter.

## MATERIALS

- 1. Glow sticks
- 2. Ice water
- 3. Room temperature water
- 4. Hot water
- 5. Stopwatch

## PROBLEM

Does temperature affect the brightness of a glow stick?

## PROCEDURE

1. Place a glow stick in a beaker with the following temperatures: ice water, room temperature, and hot water.
2. Observe the glow stick in each beaker for 10 minutes.
3. Record the brightness of the glow stick in each beaker.
4. Repeat steps 1-3 for 10 different glow sticks.
5. Calculate the average brightness for each temperature.

## RESULTS



## CONCLUSION

The results of the experiment show that the glow stick is brightest in hot water and dimmest in ice water. This supports the hypothesis that higher temperatures will cause a glow stick to glow brighter.

