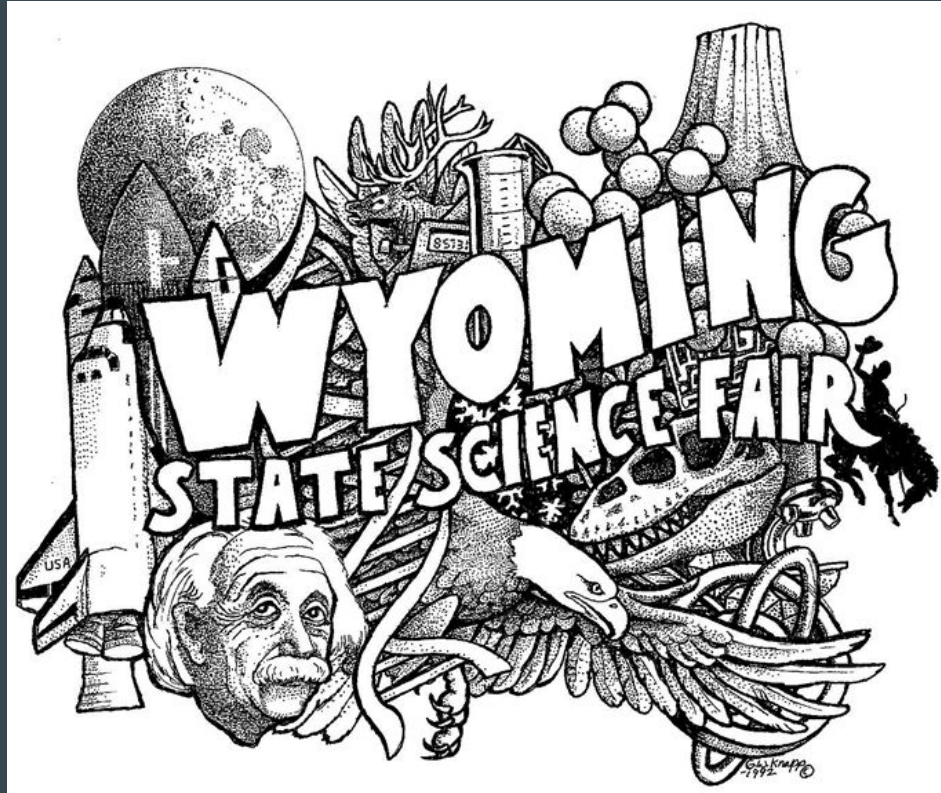
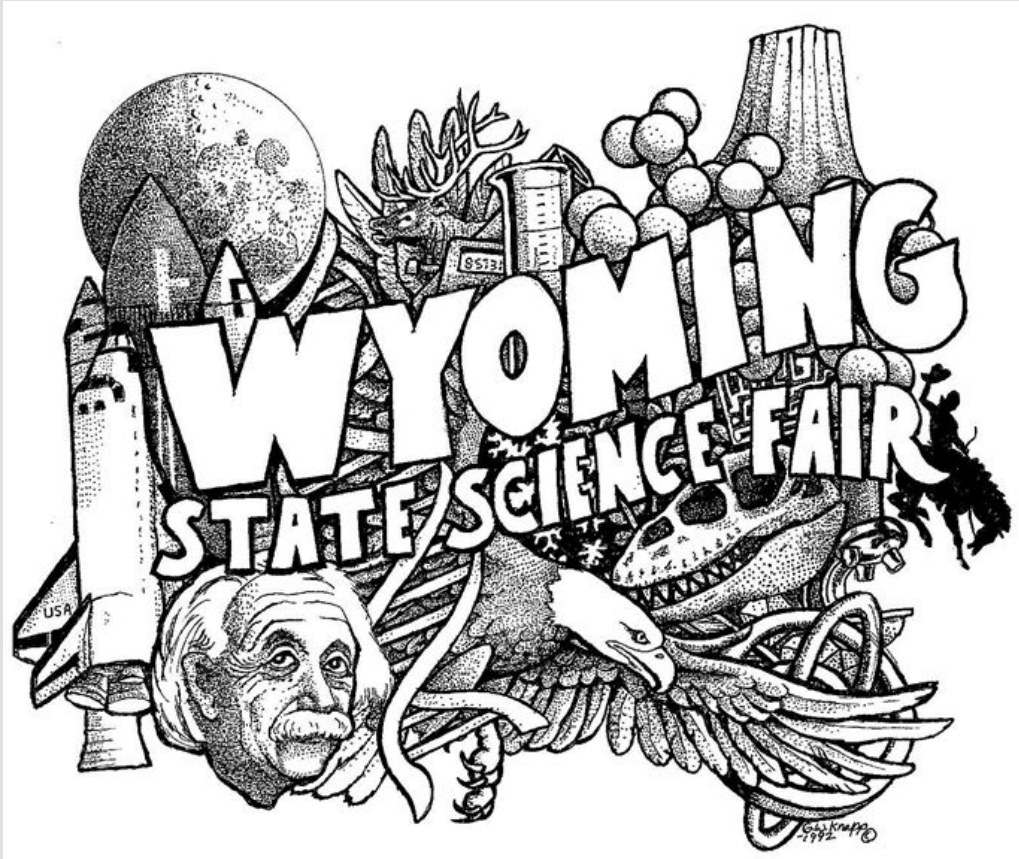


2017 Wyoming State Science Fair Awards





Animal & Plant Sciences

Animal & Plant Sciences -Junior Division



3rd Place

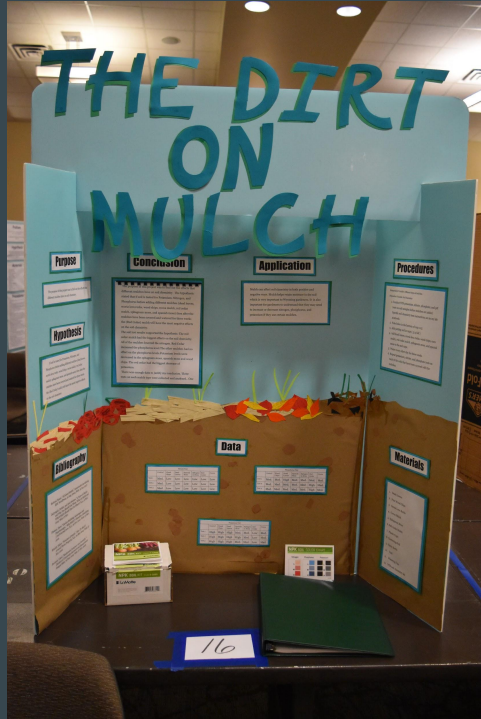
Keeping the Sage in Sage Grouse

Theresa Bautz

Lander Middle School

Lander, WY

Animal & Plant Sciences -Junior Division



2nd Place

The Dirt On Mulch

Tanner Roberts

Pinedale Middle School

Pinedale, WY

Animal & Plant Sciences -Junior Division



1st Place

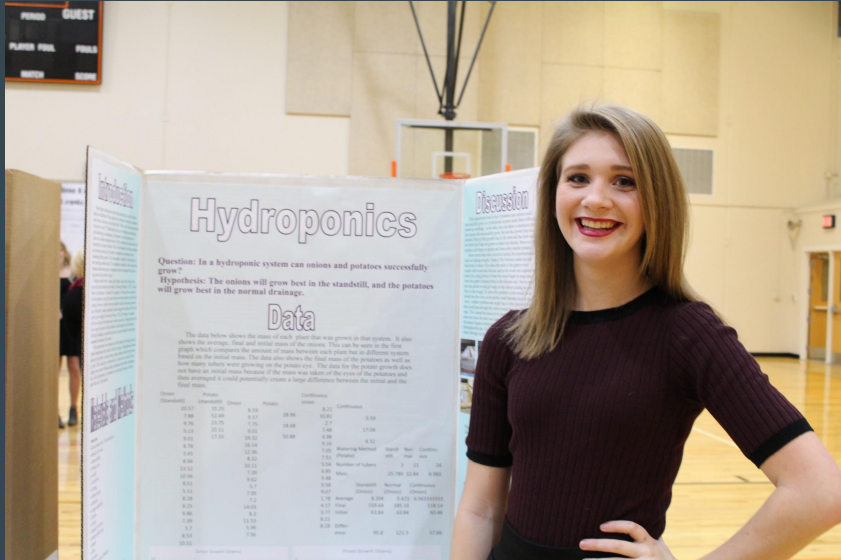
Artificial Insemination Fresh vs. Frozen
Semen

Bree Coxbill

Southeast Jr/Sr High

Torrington, WY

Animal & Plant Sciences -Senior Division



3rd Place

Hydroponics

Kellar Bock

Newcastle High School

Newcastle, WY

Animal & Plant Sciences -Senior Division

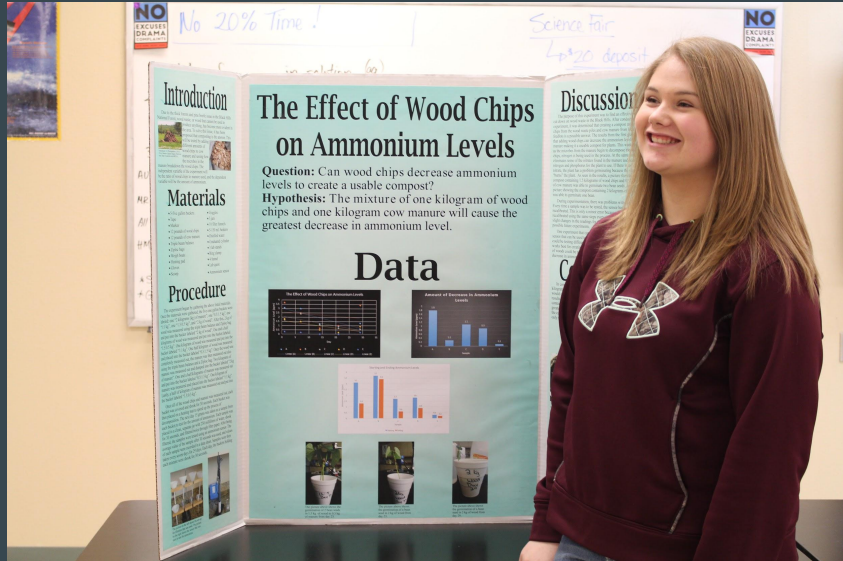
2nd Place

The Effect of Wood Chips on Ammonium Levels

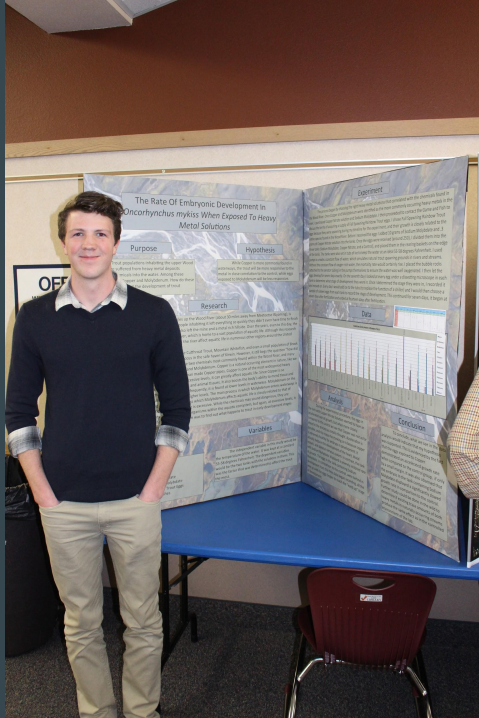
Courtney Rainbolt

Newcastle High School

Newcastle, WY



Animal & Plant Sciences -Senior Division



1st Place

The embryonic development of
Oncorhynchus Mykiss When Exposed
to Heavy Metal Solutions

Colton Curtis

Meeteetse High School

Meeteetse, WY



Behavioral & Social Sciences

Behavioral & Social Sciences -Junior Division

3rd Place

When Words Fail Music Speaks

Aiden Chandler and Samuel Belmont

Powell Middle School

Powell, WY



Behavioral & Social Sciences -Junior Division



2nd Place

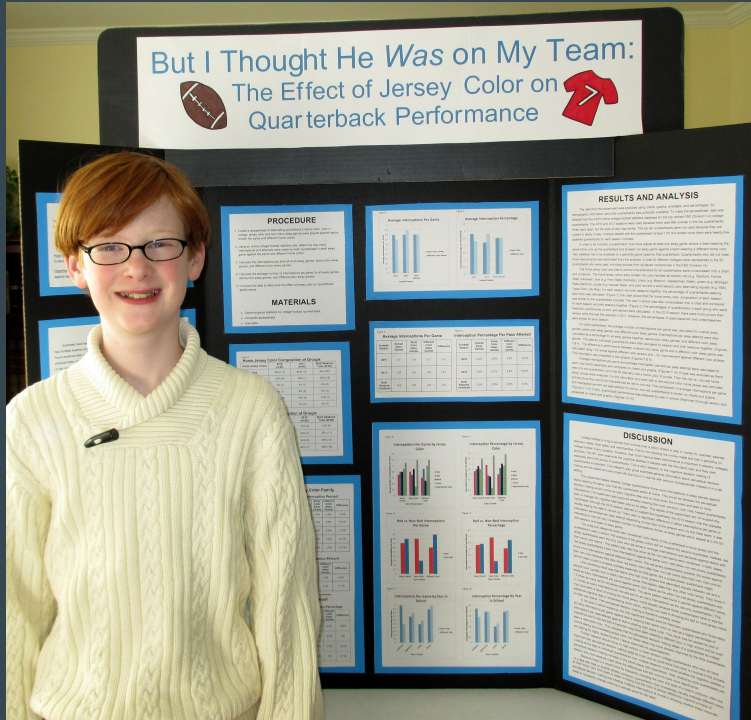
Tall Tales

Gage Gose

Lander Middle School

Lander, WY

Behavioral & Social Sciences -Junior Division



1st Place

But I Thought He Was On My Team!
The Effect of Jersey Color on
Quarterback Performance

Colmcille Rottinghaus

Lander Catholic Home School

Lander, WY

Behavioral & Social Sciences -Senior Division

3rd Place

Liar, Liar

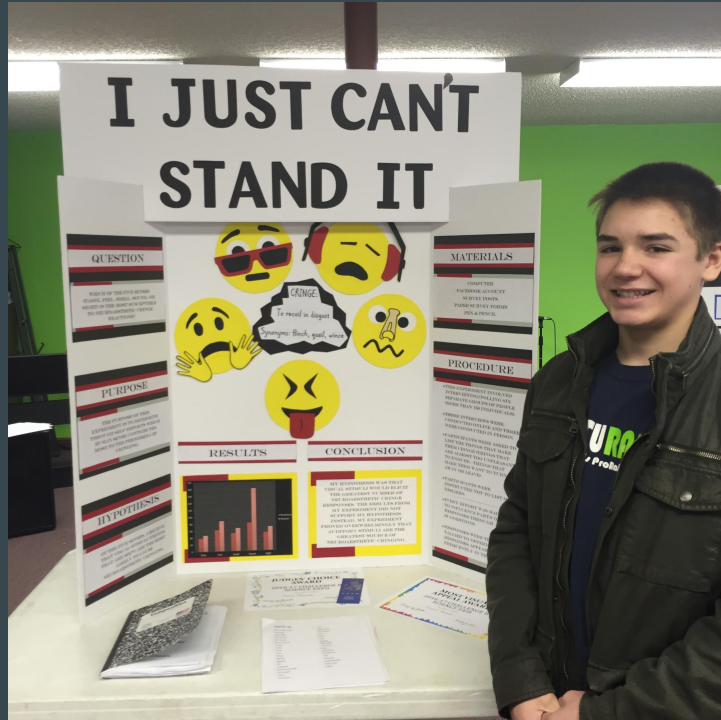
Heather Michaelis and Megan Kenney

Newcastle High School

Newcastle, WY



Behavioral & Social Sciences -Senior Division



2nd Place

I Just Can't Stand It

Samuel Palmer

Casper Homeschool

Casper, WY

Behavioral & Social Sciences -Senior Division

1st Place

The Effect of Digital Media Use On Prospective Memory

Fiachra Rottinghaus

Lander Catholic Homeschool

Lander, WY

The Effect of Digital Media Use On Prospective Memory

Problem

Over the course of the last few years, digital media use has increased significantly. This has led to a decrease in the amount of time spent on other activities, such as reading, which is known to be important for memory.

Hypothesis

Individuals who use digital media will show a decrease in prospective memory performance compared to those who do not use digital media.

Background

Prospective memory is the ability to remember to perform a task at a later date. It is an important component of everyday life, and is affected by a number of factors, including age, education, and health. Digital media use has been shown to be associated with a decrease in prospective memory performance.

Demographic Information

| Characteristic | Control Group (n=20) | Experimental Group (n=20) |
|----------------|--|--|
| Age | Mean: 19.5, SD: 1.2 | Mean: 19.5, SD: 1.2 |
| Gender | Male: 10, Female: 10 | Male: 10, Female: 10 |
| Ethnicity | White: 15, Black: 3, Asian: 1, Hispanic: 1 | White: 15, Black: 3, Asian: 1, Hispanic: 1 |
| Education | High School: 10, College: 10 | High School: 10, College: 10 |
| Employment | Student: 15, Other: 5 | Student: 15, Other: 5 |

Design/Methods

The study was a randomized controlled trial. Participants were assigned to either a control group (no digital media) or an experimental group (digital media). The experimental group used digital media for 30 minutes per day for 30 days. Prospective memory was measured using a diary method.

Results and Analysis

Results showed that the experimental group had a significantly lower prospective memory performance compared to the control group. This was true for both the short-term and long-term prospective memory tasks.

Discussion

The findings of this study suggest that digital media use may be associated with a decrease in prospective memory performance. This could be due to the time spent on digital media, or to the cognitive load associated with digital media use.

References

Smith, J. (2010). Digital media use and memory. *Journal of Memory and Language*, 63(1), 1-15.

Johnson, K. (2011). The effects of digital media on memory. *Journal of Experimental Psychology*, 142(1), 1-10.

... (Additional references omitted for brevity)

Methods

Participants

Participants were recruited from a local university and were screened for any conditions that might affect memory performance.

Procedure

Participants were assigned to either a control group or an experimental group. The experimental group used digital media for 30 minutes per day for 30 days.

Measures

Prospective memory performance was measured using a diary method. Participants were asked to record whether they remembered to perform a task at a later date.

Statistical Analysis

Results were analyzed using a 2x2 ANOVA. The independent variables were group (control vs. experimental) and time (short-term vs. long-term). The dependent variable was prospective memory performance.

Results

Results showed that the experimental group had a significantly lower prospective memory performance compared to the control group. This was true for both the short-term and long-term prospective memory tasks.

Discussion

The findings of this study suggest that digital media use may be associated with a decrease in prospective memory performance. This could be due to the time spent on digital media, or to the cognitive load associated with digital media use.

References

Smith, J. (2010). Digital media use and memory. *Journal of Memory and Language*, 63(1), 1-15.

Johnson, K. (2011). The effects of digital media on memory. *Journal of Experimental Psychology*, 142(1), 1-10.

... (Additional references omitted for brevity)

Effect of Digital Media Use on Short-Term Prospective Memory

| Group | Control | Experimental |
|-------|---------|--------------|
| Mean | 0.85 | 0.75 |
| SD | 0.15 | 0.15 |

Effect of Digital Media Use on Long-Term Prospective Memory

| Group | Control | Experimental |
|-------|---------|--------------|
| Mean | 0.75 | 0.65 |
| SD | 0.25 | 0.25 |

Effect of Digital Media Use on Short-Term Prospective Memory (by Gender)

| Group | Control | Experimental |
|--------|---------|--------------|
| Male | 0.80 | 0.70 |
| Female | 0.90 | 0.80 |

Effect of Digital Media Use on Long-Term Prospective Memory (by Gender)

| Group | Control | Experimental |
|--------|---------|--------------|
| Male | 0.70 | 0.60 |
| Female | 0.80 | 0.70 |

Discussion

The findings of this study suggest that digital media use may be associated with a decrease in prospective memory performance. This could be due to the time spent on digital media, or to the cognitive load associated with digital media use.

Limitations

The study had several limitations. First, the sample size was relatively small. Second, the study did not control for other factors that might affect memory performance, such as sleep and stress.

Future Research

Future research should investigate the effects of digital media use on memory performance in a larger sample. It should also explore the mechanisms by which digital media use affects memory performance.



Biochemistry & Biological Sciences

Biochemistry & Biological Sciences -Junior Division

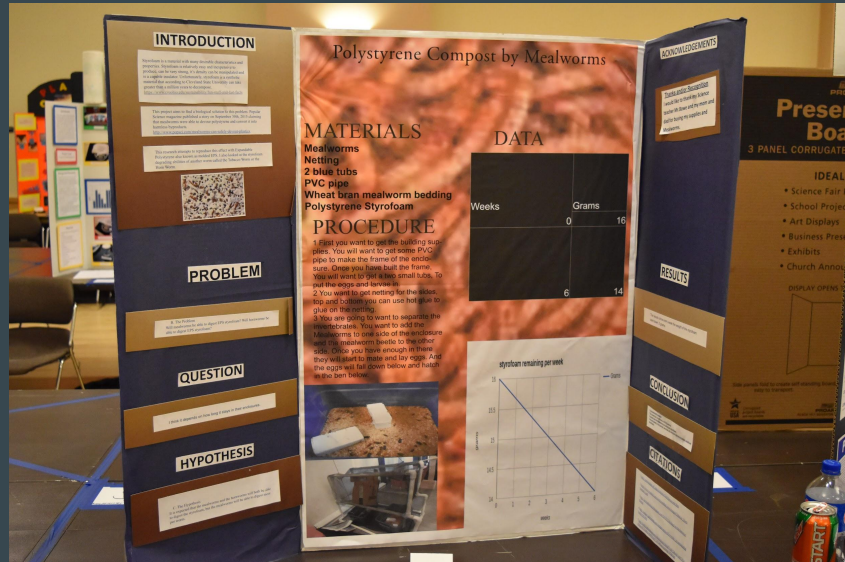
3rd Place

Polystyrene Compost By Mealworms

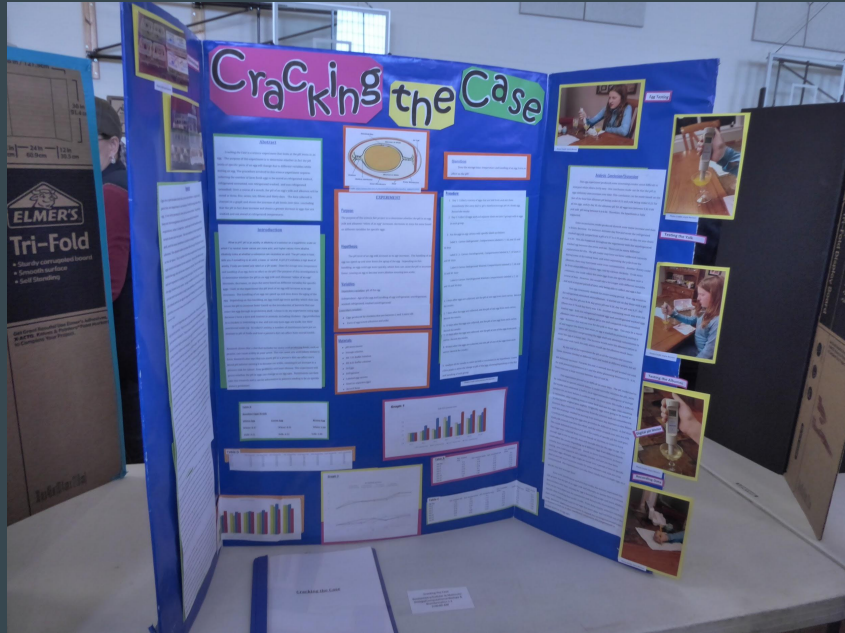
Weston Haley

Greybull Middle School

Greybull, WY



Biochemistry & Biological Sciences -Junior Division



2nd Place

Cracking the Case

Bailey Benson

Wheatland Middle School

Wheatland, WY

Biochemistry & Biological Sciences -Junior Division



1st Place

The 81mg Flip

Riley Shaw

Lusk Middle School

Lusk, WY

Biochemistry & Biological Sciences -Senior Division



2nd Place

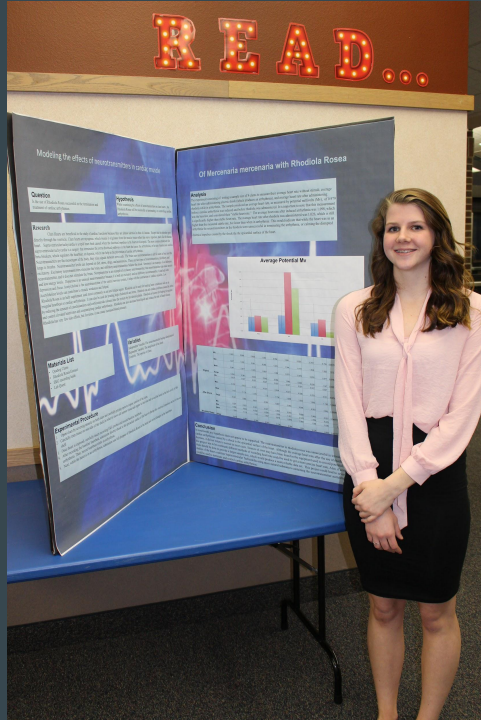
Investigating possible Reduction of Beta-Amyloid Plaques Through the Synergistic Action of Cinnamon and Curcumin

Julianne Carlson

Greybull High School

Greybull, WY

Biochemistry & Biological Sciences -Senior Division



1st Place

Modeling the Effects of
Neurotransmitters in the Cardiac
Muscle of Mecenari With
Rhodiolarosea

Devon Curtis

Meeteetse High School

Meeteetse, WY



Chemistry/ Energy: Chemical

Chemistry/ Energy: Chemical -Junior Division

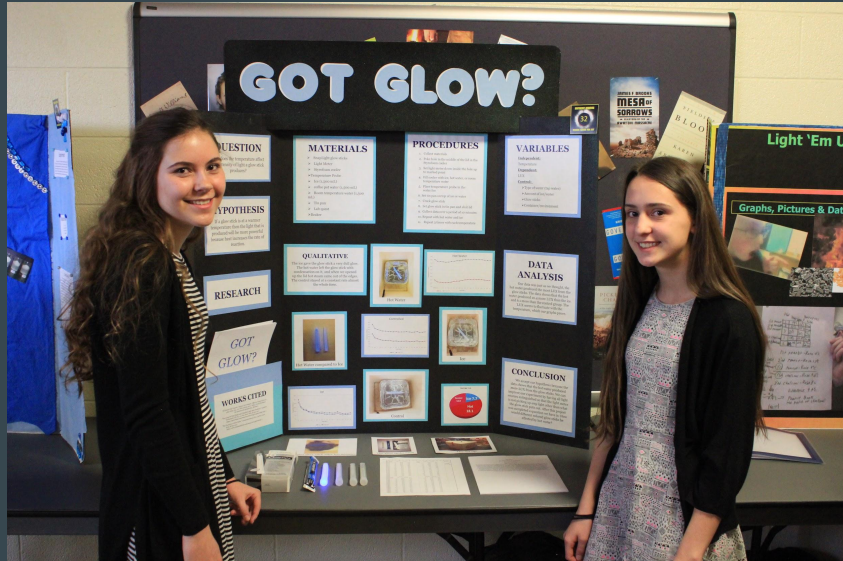
3rd Place

Got Glow?

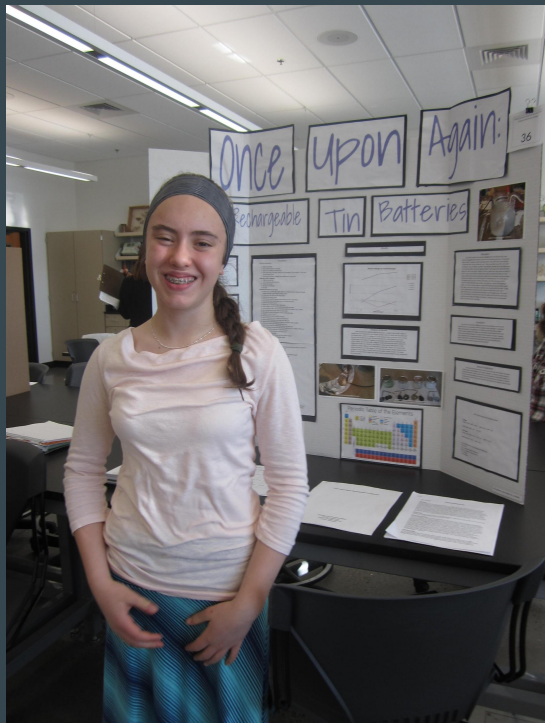
Jaycee Myrtle and Sheela Flury

Southeast School

Torrington, WY



Chemistry/ Energy: Chemical -Junior Division



2nd Place

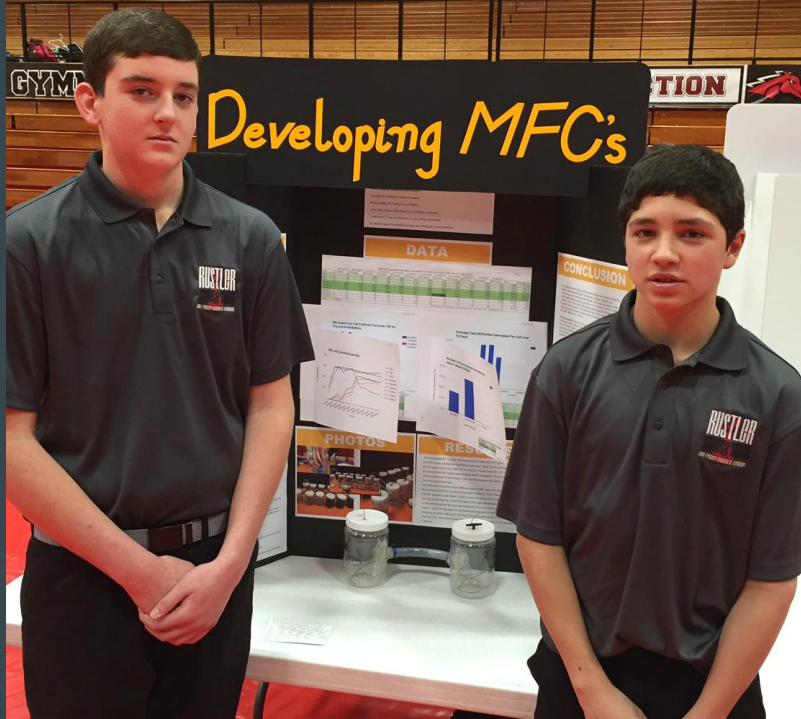
Once Upon Again: Rechargeable Tin Batteries

Abby Copeland

Lander Middle School

Lander, WY

Chemistry/ Energy: Chemical -Junior Division



1st Place

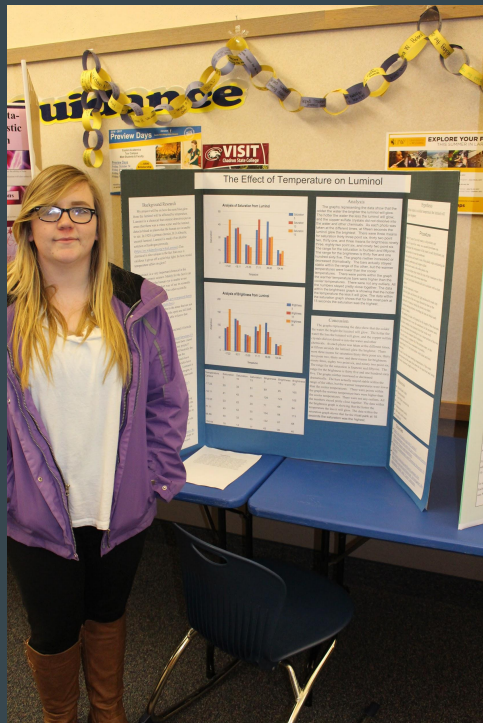
Developing Microbial Fuel Cell

Carlos Munoz and Nathan Maxfield

Big Piney Middle School

Marbleton & Big Piney, WY

Chemistry/ Energy: Chemical -Senior Division



3rd Place

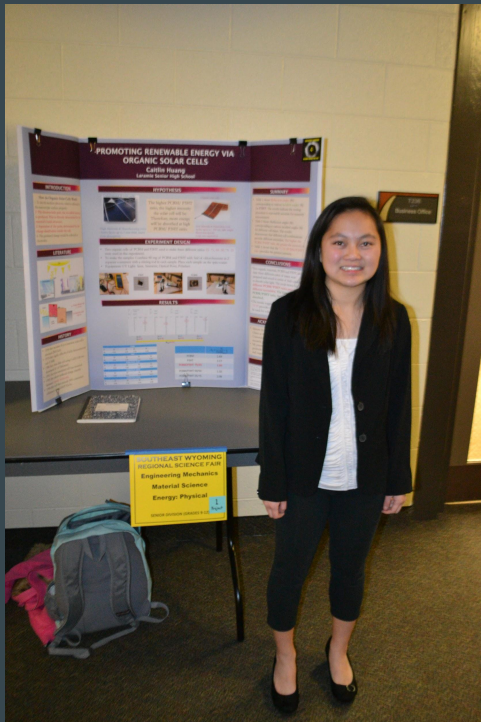
The Effect of Temperature on Alminol

Alicia Brock

Meeteetse High School

Meeteetse, WY

Chemistry/ Energy: Chemical -Senior Division



2nd Place

Promoting Renewable Energy Via
Organic Solar Cells

Caitlin Huang

Laramie High School

Laramie, WY

Chemistry/ Energy: Chemical -Senior Division



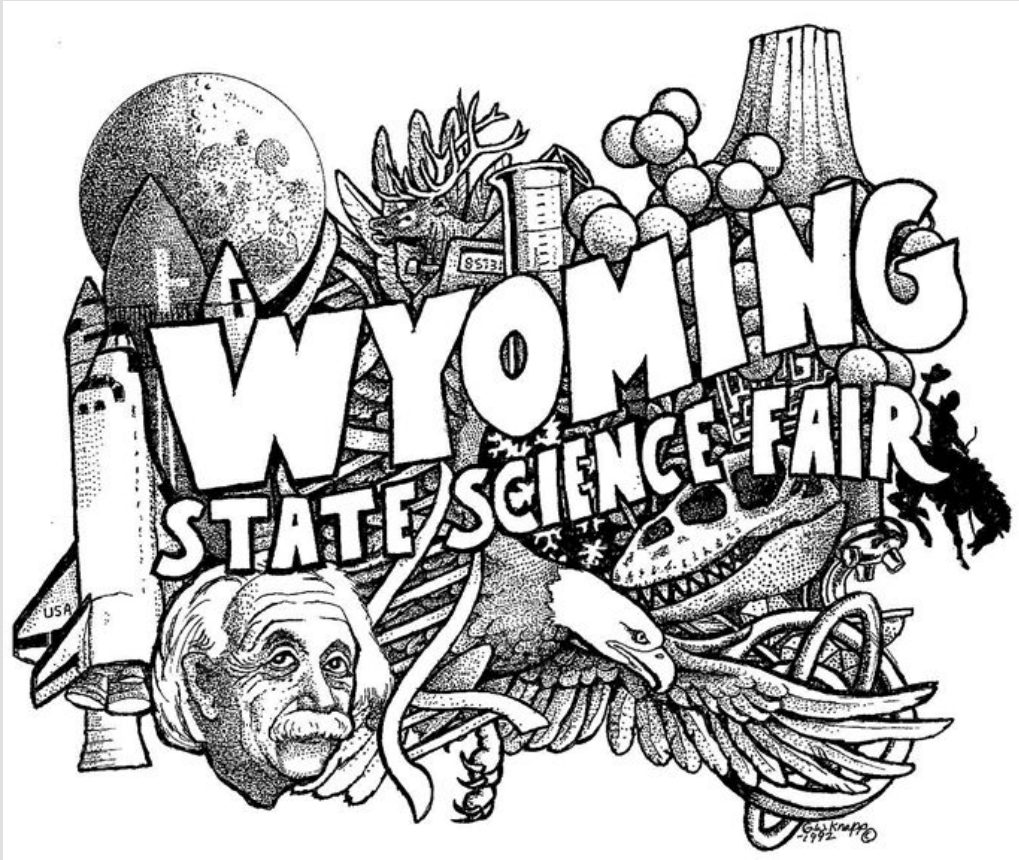
1st Place

Application of Plant Hormones to
Microalgae Cultures to Increase the
Availability of Lipids for Biofuel
Production

Makyela Sorensen

Greybull High School

Greybull, WY



Engineering Sciences & Energy: Physical

Engineering Sciences & Energy: Physical -Junior Division

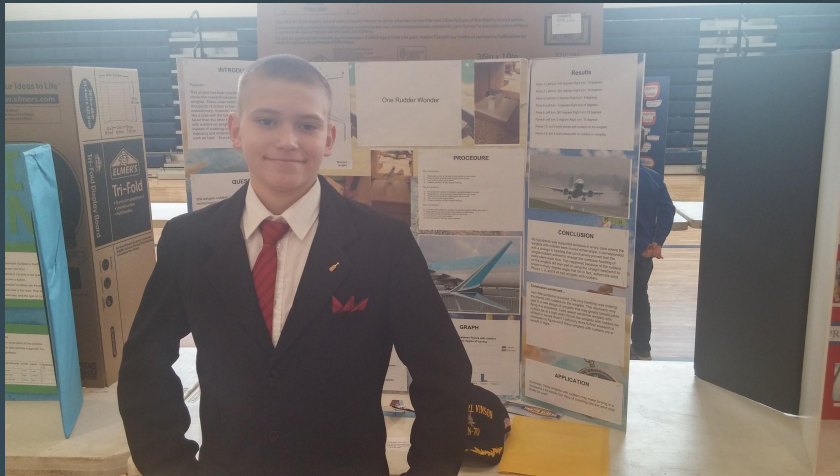
3rd Place

One Rudder Wonder

Charles Koval

Sheridan Junior High

Sheridan, WY



Engineering Sciences & Energy: Physical -Junior Division

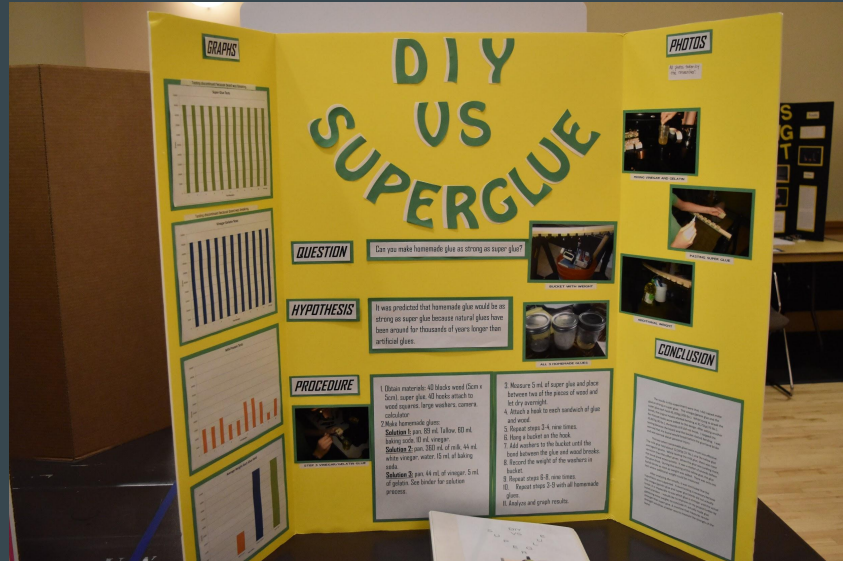
2nd Place

DIY Vs Super Glue

Nathan Ulery

Holy Name Catholic School

Sheridan, WY



Engineering Sciences & Energy: Physical -Junior Division



1st Place

Delta Power

Ethan Adkins

Pinedale Middle School

Pinedale, WY

Engineering Sciences & Energy: Physical -Senior Division

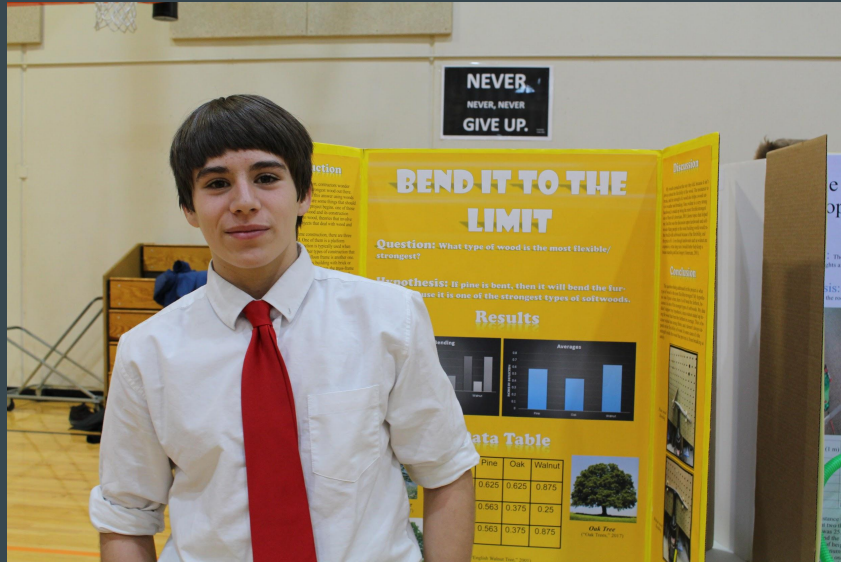
3rd Place

Bend It To The Limit

Bradyn Frye

Newcastle High School

Newcastle, WY



Engineering Sciences & Energy: Physical -Senior Division

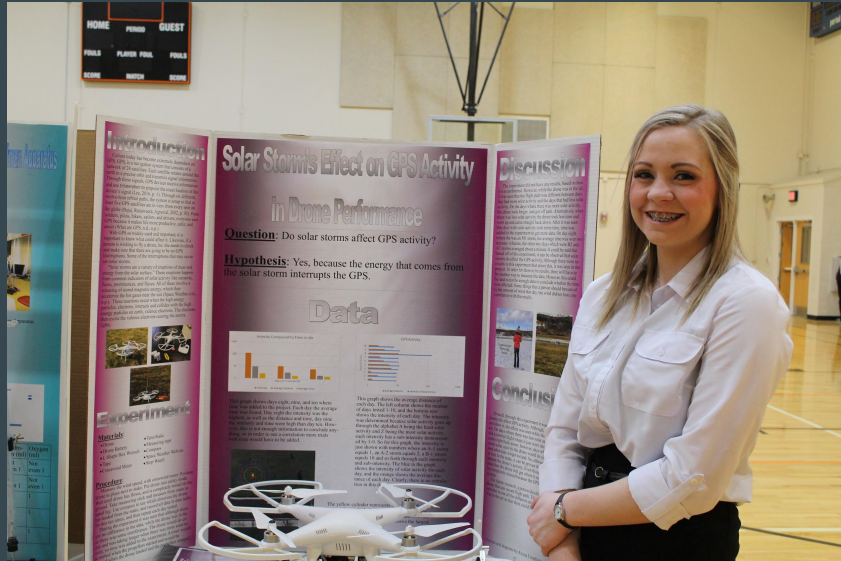
2nd Place

Solar Storm's Effect on GPS Activity in Drone Performance

Alyssa Umphlett

Newcastle High School

Newcastle, WY



Engineering Sciences & Energy: Physical -Senior Division

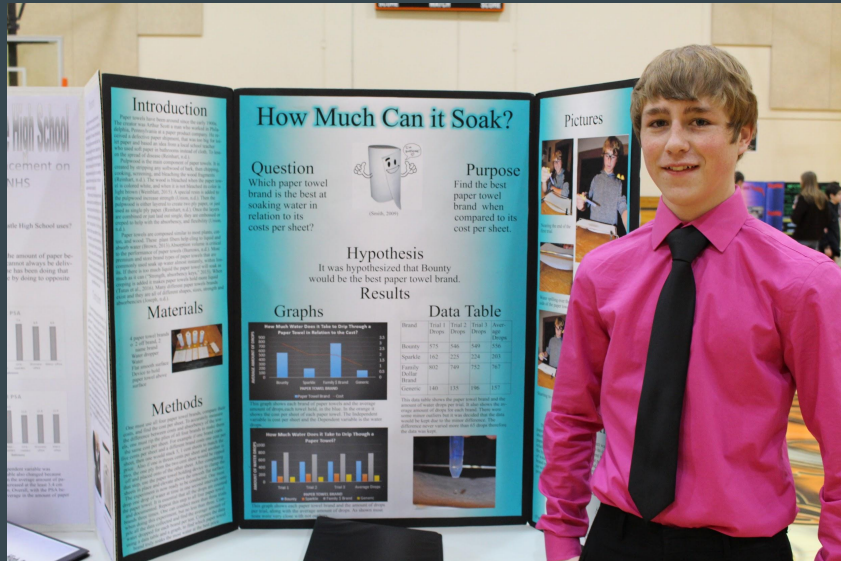
1st Place

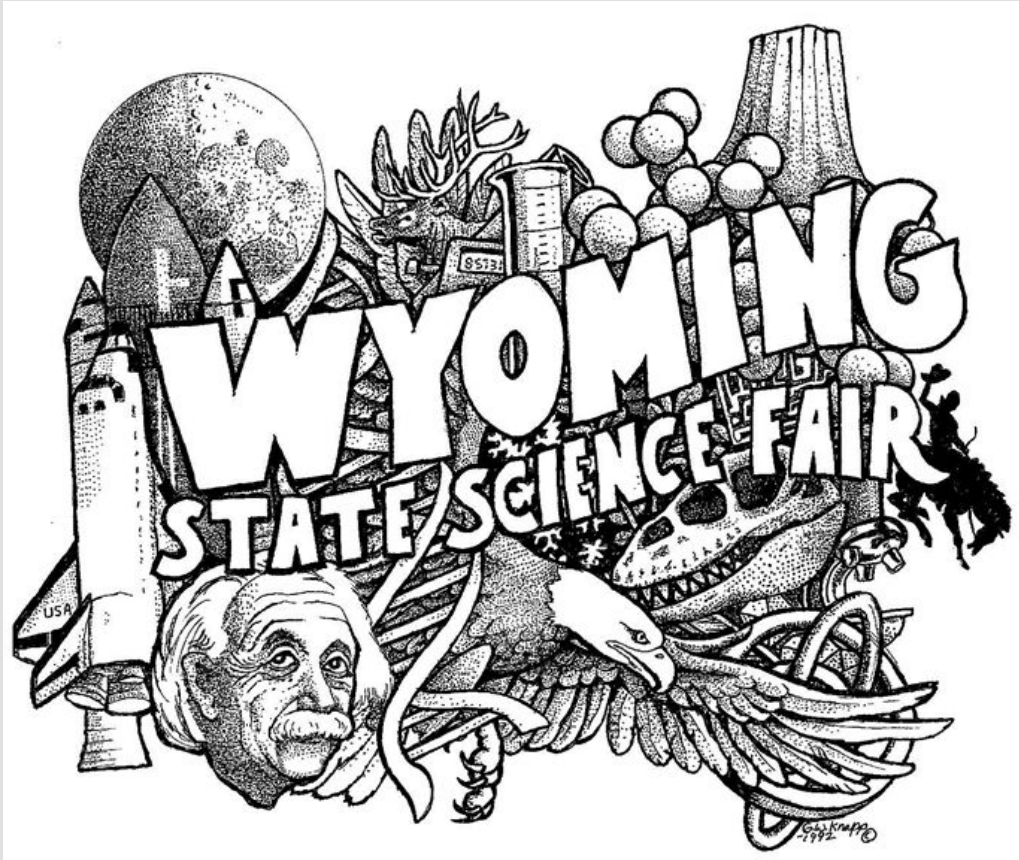
How Much Can it Soak?

Jacob Rhoades

Newcastle High School

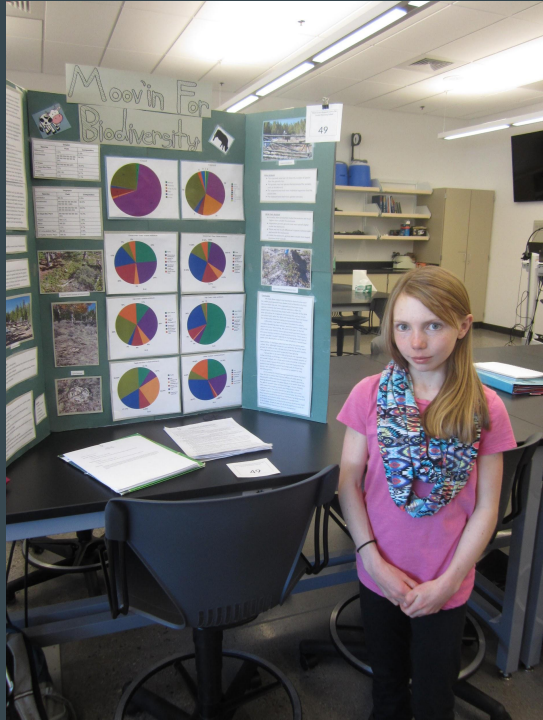
Newcastle, WY





Environmental Sciences & Engineering

Environmental Sciences & Engineering -Junior Division



3rd Place

Moovin' For Biodiversity

Sierra Lloyd

Lander Middle School

Lander, WY

Environmental Sciences & Engineering -Junior Division

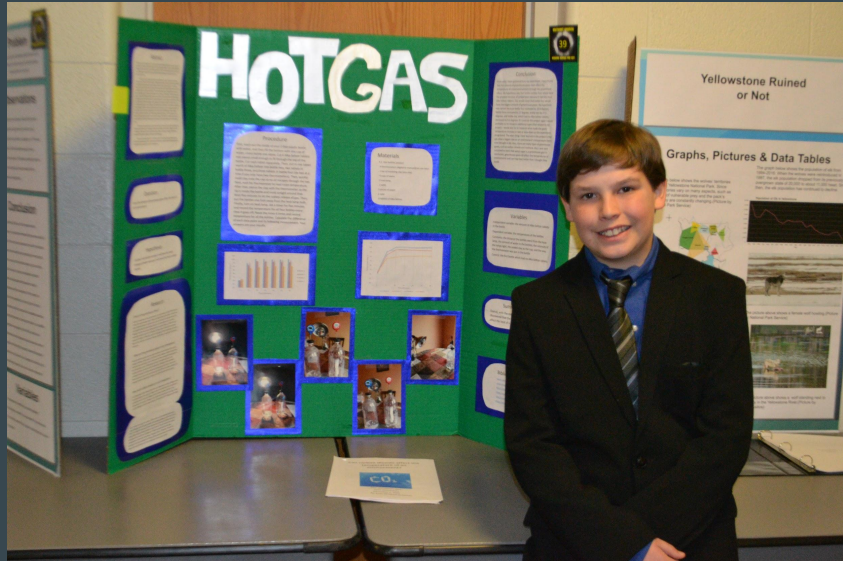
2nd Place

Hot Gas

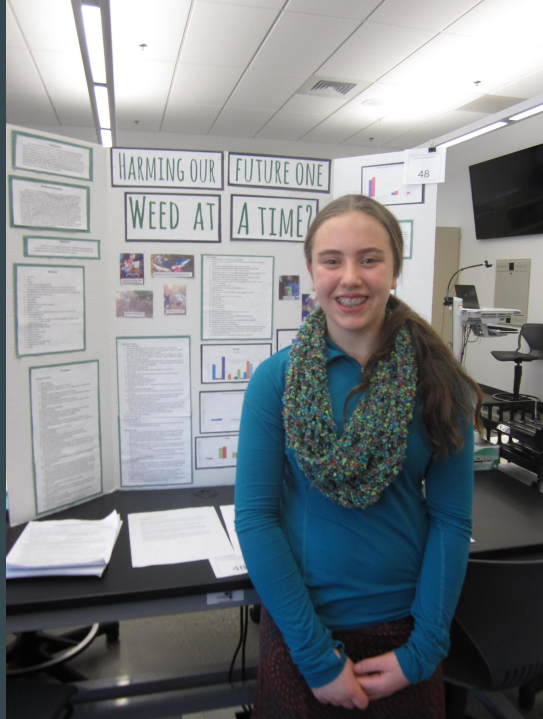
Evan Anderson

Davis Elementary

Cheyenne, WY



Environmental Sciences & Engineering -Junior Division



1st Place

Harming Our Future One Weed At A Time

Mia Copeland

Lander Middle School

Lander, WY

Environmental Sciences & Engineering -Senior Division



3rd Place

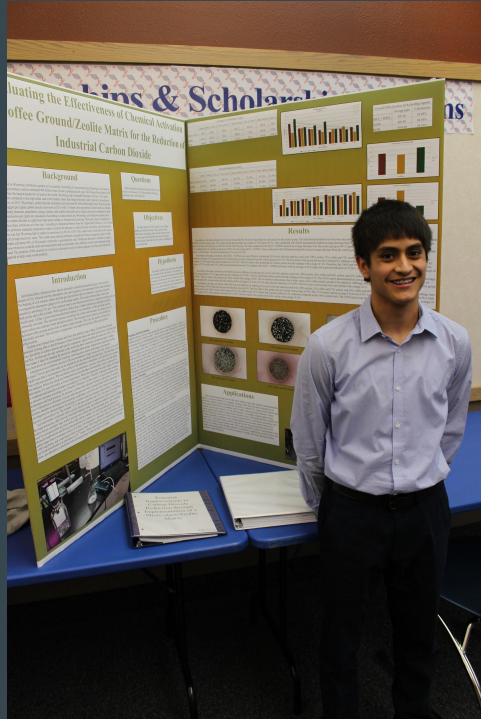
Evaluating The Effectiveness Of A
Hydrogel-Fertilizer Matrix To Improve
Seed Germination

Dante Sylvester

Greybull High School

Greybull, WY

Environmental Sciences & Engineering -Senior Division



2nd Place

Evaluating The Effectiveness Of Chemical Activation Of Coffee Ground/Zelite Matrix For The Reduction Of Industrial Carbon Dioxide

Eduardo Burgos

Greybull High School

Emblem, WY

Environmental Sciences & Engineering -Senior Division



1st Place

Determination Of Soil VOC Content
Due To Coal Dust Deposition Along
Major Railroad Transportation Routes

Sierra Spears

Lingle-Fort Laramie High

Lingle, WY

Mathematics



Mathematics -Junior Division



3rd Place

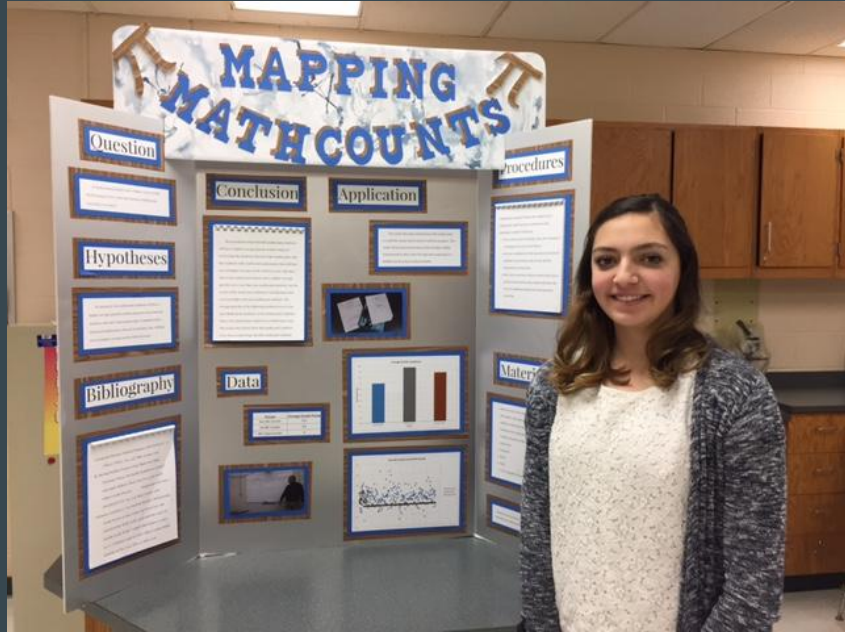
Stepping High

Benjamin Browning

Lander Middle School

Lander, WY

Mathematics -Junior Division



2nd Place

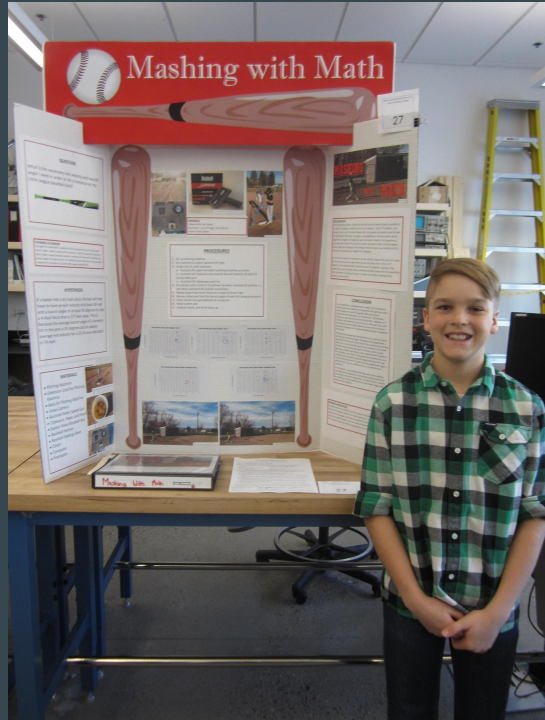
Mapping Math Counts

Preslie Simkins

Pinedale Middle School

Pinedale, WY

Mathematics -Junior Division



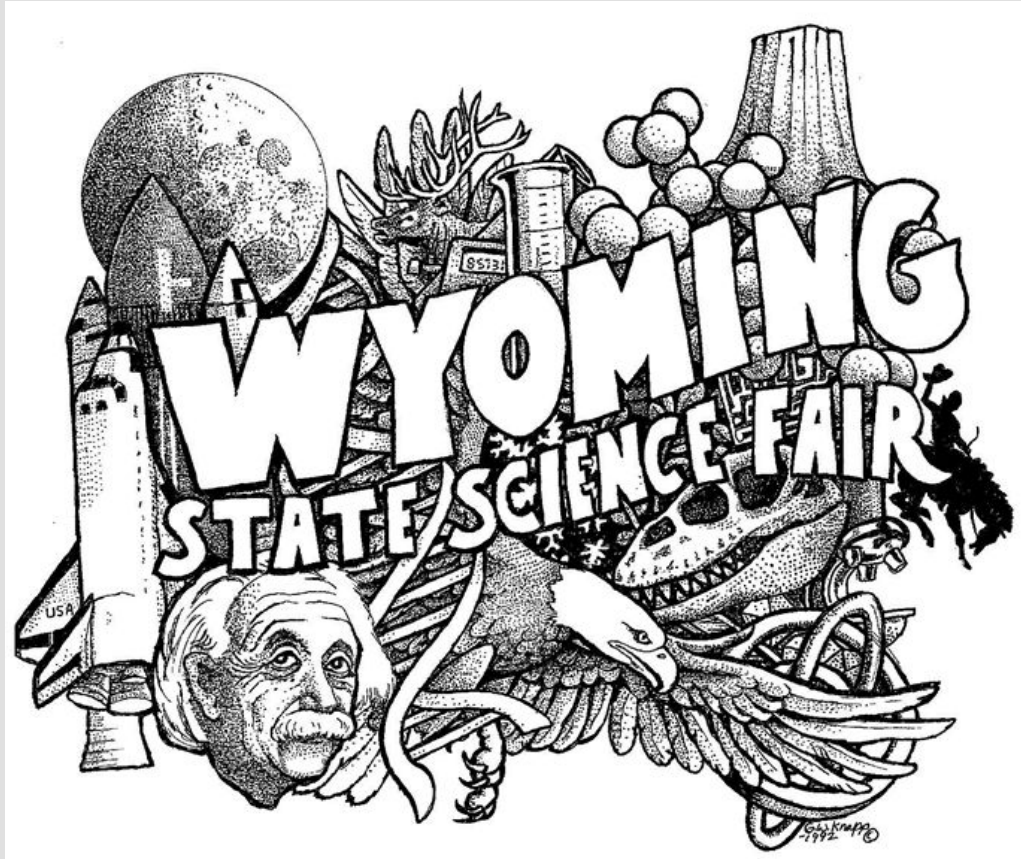
1st Place

Smashing With Math

Gabriel Harris

Lander Middle School

Lander, WY



Medical Sciences

Medical Sciences -Junior Division



3rd Place

To Mars & Back Again : Designing A
Medical 3D Print To Advance Long
Term-Human Space Exploration

Jakobi Hibbert

Big Piney Middle School

Big Piney, WY

Medical Sciences -Junior Division

2nd Place

Protecting A Bull Riders Spine

Isabella Lungren

Greybull Middle School

Greybull, WY

Introduction

The U.S. professional rodeo circuit averages one or two deaths annually. Several more riders suffer serious spinal or brain injuries each year, according to the World Health Organization's latest initiative. It is coordinated by the Center for Injury Control at the Rollins School of Public Health at Emory University in Atlanta, Georgia. The latest initiative has hoped protect bull riders from head injuries, but will not likely prevent spinal injuries. This is the problem that this science fair project aims to address.

Problem

Bull riding is a dangerous sport and bull riders can suffer significant injuries including paralysis if they break their spine. Dale Huttenlock, a professor of kinesiology at the University of Calgary and Sports Medicine Centre in Alberta, Canada, and president of the Canadian Tack Riders Sports Medicine Team knows that cowboys are often laid off for life because of spinal injuries. Dismemberment is a consequence to protect themselves. Dismemberment stands that "... the cowboy culture is certainly to increase bull riding safety in an unobtrusive and hidden way which may help cowboys be safe without compromising their performance or their perceived toughness.

Question

Can the design of the protective vest worn by bull riders be augmented to better protect their against spinal injury?

Hypothesis

It is expected that the spine protection device will increase the amount of force a spine must deal with regardless will be able to withstand before breaking.

PROTECTING A BULL RIDERS SPINE

Materials

Dell Computer
 Printbot 3-D printer
 Silicone Rubber
 Polystyrene Styrofoam
 Polyactic Acid (PLA) 3-D thermoplastic
 Garofalo Spaghetti
 Vernier Force Probe
 Hot glue gun
 Hot glue sticks

Procedure

1. A new design for the internal protective structure of a bull rider vest was created using Tinkercad, which is an online three-dimensional computer aided design program. The design is meant to provide support and impact protection along the spine of a cowboy.
2. The design was exported as a .stl file at 1:6 human scale.
3. The .stl file was printed on a Printbot Simple Metal 3D printer in polylactide (PLA).
4. The PLA printed model will be encased in silicone rubber.
5. The spinal column will be modelled by four strands of 10 mm Garofalo brand spaghetti held together on one end with hot glue.
6. The first tests were done with just the spaghetti spinal cord model without any protection. The spaghetti will fall several circular openings in a plywood board and pulled by a Vernier force probe from the center as shown in the images to the right. 10 trials were completed and recorded.
7. The same test was then completed with the engineered device.

Results

The device reliably provided increased protection for the model spine. Experimentation found that the spine models were able to withstand 17% more force with the device than they could without any protection.

Conclusion

My hypothesis was confirmed. The device I designed was able to provide added protection for the spine. Whether the 3.7% would be enough to prevent injury of spinal injuries occurred in the real world is unknown. Repeat protection will decrease because any added spine forces. The spaghetti spine was approximately one half the size of a human spine. Researcher could use one 25% of the time. The lack of force probe support to hold about 22% each time the probe is held about the thickness of human spine at 3.75N.

Acknowledgements

I would like to give a thank to my science teacher for his help and support in this project.

Citations

Center for Injury Control at the Rollins School of Public Health at Emory University in Atlanta, Georgia.

Medical Sciences -Junior Division



1st Place

Concussion Effects

Riley Schiller and Jace Bohlman

Powell Middle School

Powell, WY

Medical Sciences -Senior Division



3rd Place

A Swell In “Solution For Obesity”

Arundathi Nair

Laramie High School

Laramie, WY

Medical Sciences -Senior Division



2nd Place

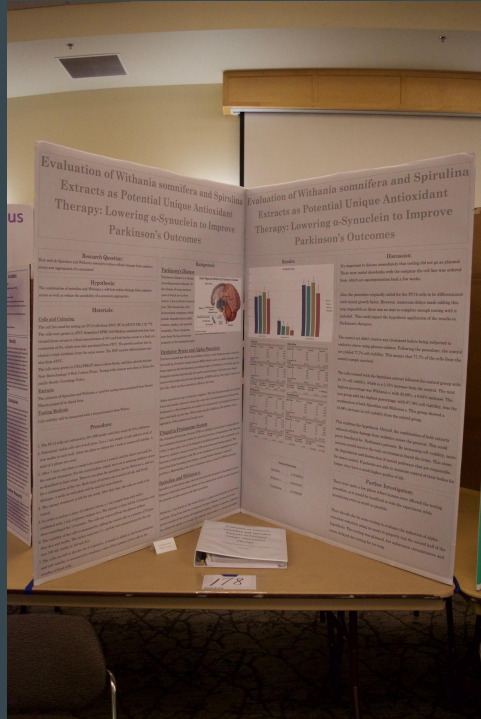
Cutting Edge Engineering: The Engineering Project Focused On Creating A Scalpel That Will Prevent Artery Nicks In Surgery

Adrianna Ruby and Destiny Reed

Big Piney Middle High School

Big Piney, WY

Medical Sciences -Senior Division



1st Place

Extracts As Potential Unique Antioxidant Therapy: Lowering α -synuclein to Improve Parkinson's Outcomes

Anna Savage

Greybull High School

Greybull, WY

Microbiology



Microbiology -Junior Division

3rd Place

Glo-Away Germs

Sabrina Donaldson

Pinedale Middle School

Pinedale, WY



Microbiology -Junior Division

2nd Place

CO₂ Removal with a Photobioreactor

Torrey Sanford

Greybull Middle School

Greybull, WY

Results

The average amount of carbon dioxide with the photobioreactor was 44.0 ppm and the average amount of carbon dioxide without the photobioreactor was 112.4 ppm. The photobioreactor was able to reduce the carbon dioxide by 68.4 ppm.

Conclusion

The hypothesis predicted that the amount and frequency of CO₂ removal was confirmed by the data. This is really exciting result. The photobioreactor captured CO₂ and converted it into biomass. The ability to scrub carbon dioxide from the air is an important area of research today. Converting CO₂ into oxygen in the classroom is really interesting and the impact on reducing heating cost of a class.

Also, increasing carbon dioxide levels in the atmosphere are believed to be contributing to global warming and climate change. In Wyoming we have some of the world's largest coal deposits which has become difficult to sell because it is believed to contribute to increased levels of CO₂ in the atmosphere. Perhaps algae and photobioreactors have a solution to this problem. Algae can have a lot of potential to power these devices in the state.

Acknowledgments

I would like to thank Mr. Torrey Sanford for his help in building the photobioreactor and making it all possible. I would also like to thank Alissa Terry for helping me with my board and my classmate Mr. James for helping me with my data.

Citations

Calibration of Algal - Photobioreactor - Oregon State University
 OR State Algal - Algal - Retrieved November 18, 2014, from <http://www.oregonstate.edu/~plantphys/algae/algae.htm>
 Health Alert: Cyanobacteria (Blue-Green Algae) - Retrieved November 18, 2014, from <http://www.cdc.gov/healthypeople/topics/healthy/healthyalerts/bluealgae.htm>
 Algal - Retrieved November 18, 2014, from <http://www.oregonstate.edu/~plantphys/algae/algae.htm>
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 Algal - Retrieved November 18, 2014, from <http://www.oregonstate.edu/~plantphys/algae/algae.htm>
 Algal - Retrieved November 18, 2014, from <http://www.oregonstate.edu/~plantphys/algae/algae.htm>

Introduction

Algae is a highly investigated organism in the scientific community. Some algae species have been found to have valuable characteristics for use in energy production, carbon sequestration, and environmental remediation. The culture of *Chlorella* and *Spirulina* algae has been investigated as a potential source of protein and other nutrients for use in aquaculture. The photobioreactor is a closed system that allows for the culture of algae in a controlled environment. The photobioreactor is a closed system that allows for the culture of algae in a controlled environment. The photobioreactor is a closed system that allows for the culture of algae in a controlled environment.

Problem

Increased carbon dioxide levels are identified as one of the main causes of global warming. Algae, through photosynthesis, is one source of atmospheric carbon dioxide, responsible for the maintenance of atmospheric carbon dioxide levels. Algae can capture and store carbon dioxide from the atmosphere and use the light energy from the sun to produce oxygen and biomass. This process is called photosynthesis. Algae can be used to produce biofuels and other products that are more sustainable than fossil fuels.

Question

Can a photobioreactor be used to reduce the carbon dioxide levels in a room?

Hypothesis

I hypothesized that the photobioreactor will be able to reduce the carbon dioxide levels in a room. The photobioreactor will be able to reduce the carbon dioxide levels in a room. The photobioreactor will be able to reduce the carbon dioxide levels in a room. The photobioreactor will be able to reduce the carbon dioxide levels in a room.

Materials

Photobioreactor
 1. Tube of Acrylic, Clear, 1/2 inch diameter, 1/2 inch thick
 2. 1/2 inch diameter, 1/2 inch thick
 3. 1/2 inch diameter, 1/2 inch thick
 4. Commercial Air pump
 5. Air filter

Procedure

1. Cut the acrylic tube into four 1/2 meter sections.
 2. Connect the sections together with the acrylic caps.
 3. Connect the air pump to the acrylic tube.
 4. Add the algae culture to the acrylic tube.
 5. Turn on the air pump.

Graphs

Amount of Carbon Dioxide (ppm)

| Time (min) | CO ₂ (ppm) |
|------------|-----------------------|
| 0 | 112.4 |
| 5 | 100.0 |
| 10 | 90.0 |
| 15 | 80.0 |
| 20 | 70.0 |
| 25 | 60.0 |
| 30 | 50.0 |
| 35 | 44.0 |
| 40 | 44.0 |
| 45 | 44.0 |
| 50 | 44.0 |
| 55 | 44.0 |
| 60 | 44.0 |
| 65 | 44.0 |
| 70 | 44.0 |
| 75 | 44.0 |
| 80 | 44.0 |
| 85 | 44.0 |
| 90 | 44.0 |
| 95 | 44.0 |
| 100 | 44.0 |

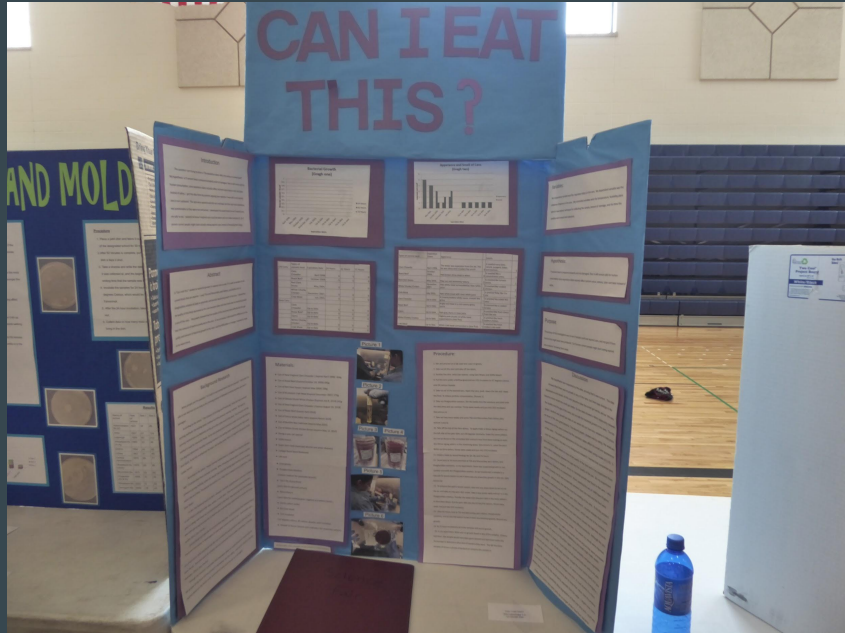
Data

| Time (min) | CO ₂ (ppm) |
|------------|-----------------------|
| 0 | 112.4 |
| 5 | 100.0 |
| 10 | 90.0 |
| 15 | 80.0 |
| 20 | 70.0 |
| 25 | 60.0 |
| 30 | 50.0 |
| 35 | 44.0 |
| 40 | 44.0 |
| 45 | 44.0 |
| 50 | 44.0 |
| 55 | 44.0 |
| 60 | 44.0 |
| 65 | 44.0 |
| 70 | 44.0 |
| 75 | 44.0 |
| 80 | 44.0 |
| 85 | 44.0 |
| 90 | 44.0 |
| 95 | 44.0 |
| 100 | 44.0 |

Pictures

Photographs showing the photobioreactor setup and the algae culture.

Microbiology -Junior Division



1st Place

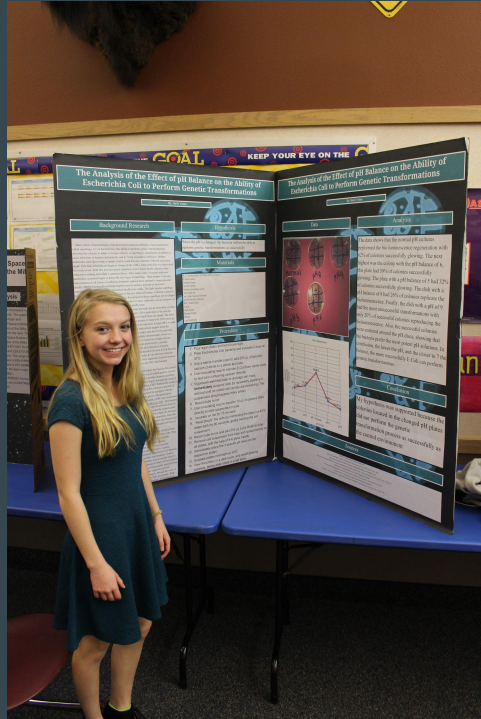
Can I eat this?

Anna Cecil

Wheatland Middle School

Wheatland, WY

Microbiology -Senior Division



3rd Place

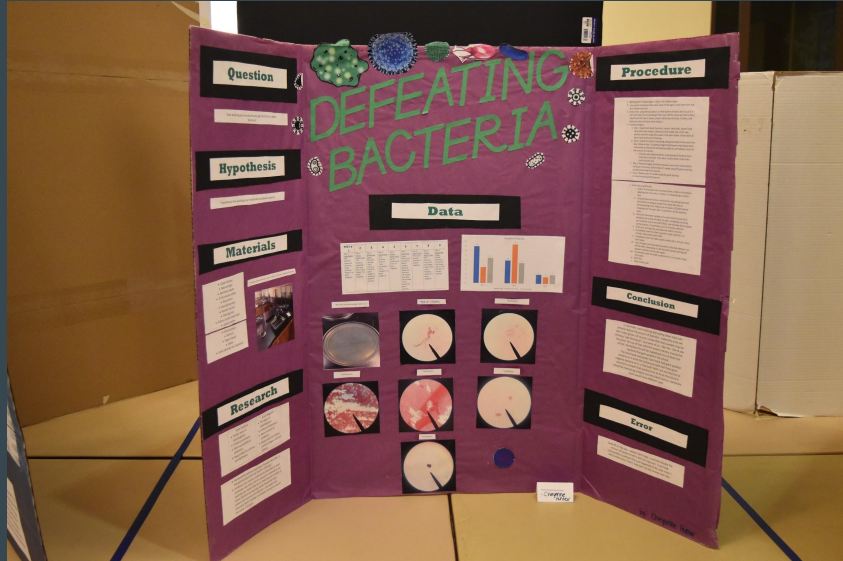
The Analysis of the Effect of pH Balance on the Ability of Escherichia Coli to Perform Genetic Transformations

Merik Votaw

Meeteetse High School

Meeteetse, WY

Microbiology -Senior Division



2nd Place

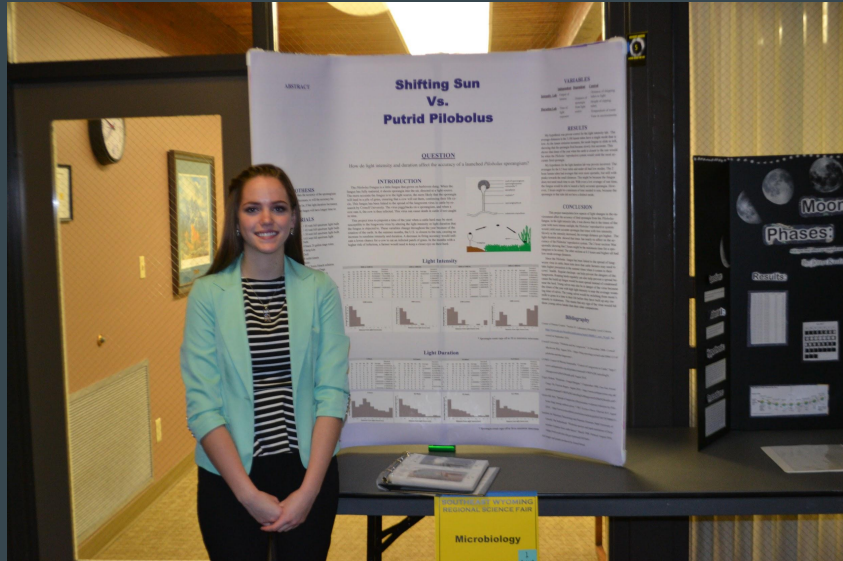
Defeating Bacteria

Cheyenne Hunter

HEM Jr./Sr. High School

Hanna, WY

Microbiology -Senior Division



1st Place

Shifting Sun v.s. Putrid Pilobolus

Jennel Mead

Cheyenne South High School

Cheyenne, WY



Physics & Astronomy

Physics & Astronomy -Junior Division

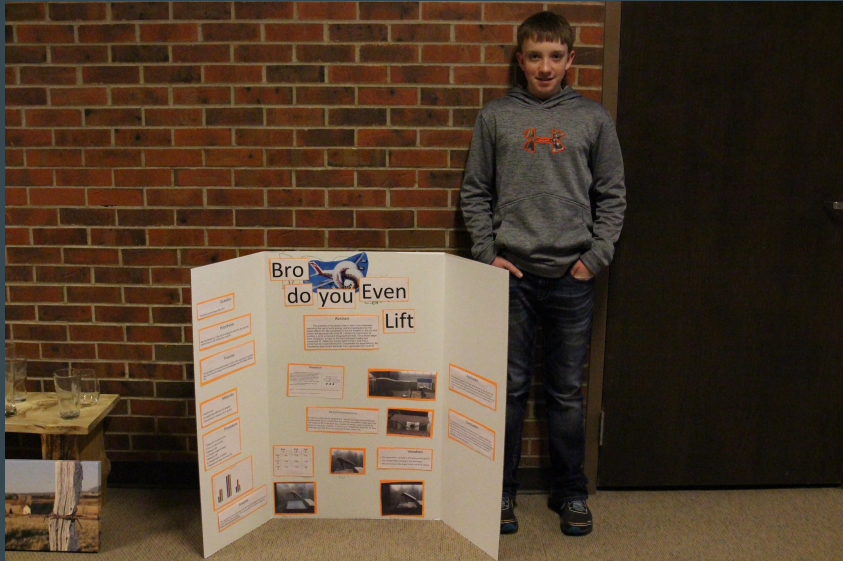
3rd Place

Bro, Do You Even Lift?

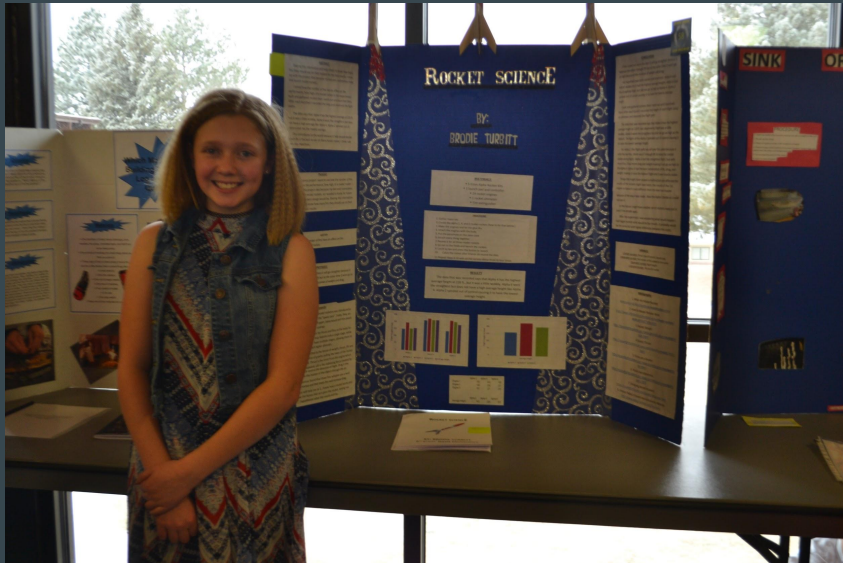
Tristan Smith

Saratoga Middle School

Saratoga, WY



Physics & Astronomy -Junior Division



2nd Place

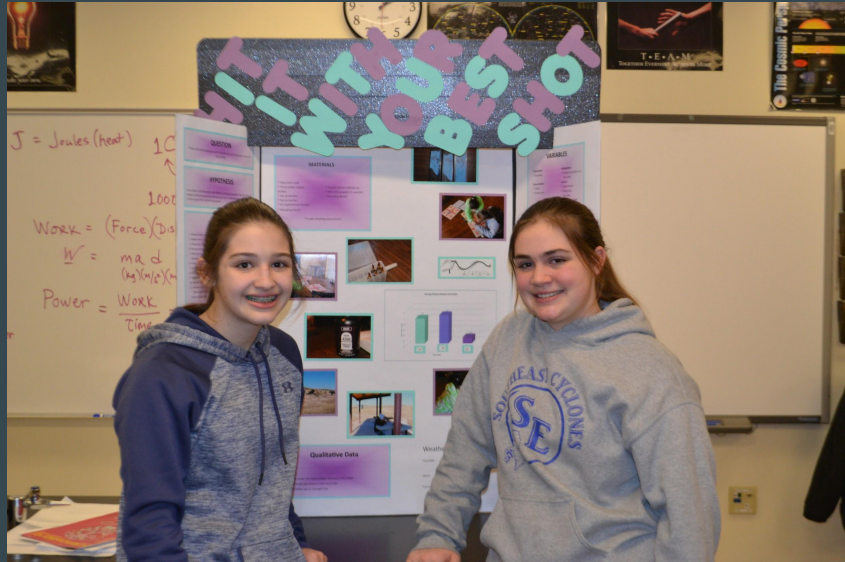
Rocket SciencE

Brodie Turbitt

Davis Elementary

Cheyenne, WY

Physics & Astronomy -Junior Division



1st Place

Hit It With Your Best Shot

Danielle Clapper & Carly Keller

Southeast Schools

Veteran & Torrington, WY

Physics & Astronomy -Senior Division

3rd Place

The Effect of Potassium Nitrate on Rocket Fuel

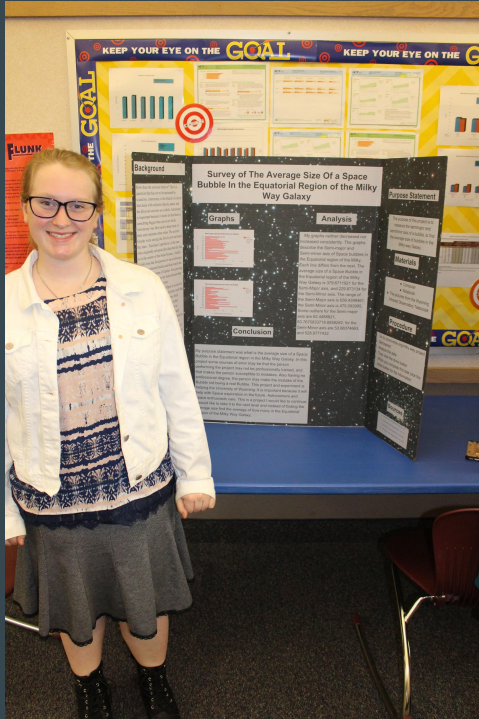
Hunter Liggett

Newcastle High School

Newcastle, WY



Physics & Astronomy -Senior Division



2nd Place

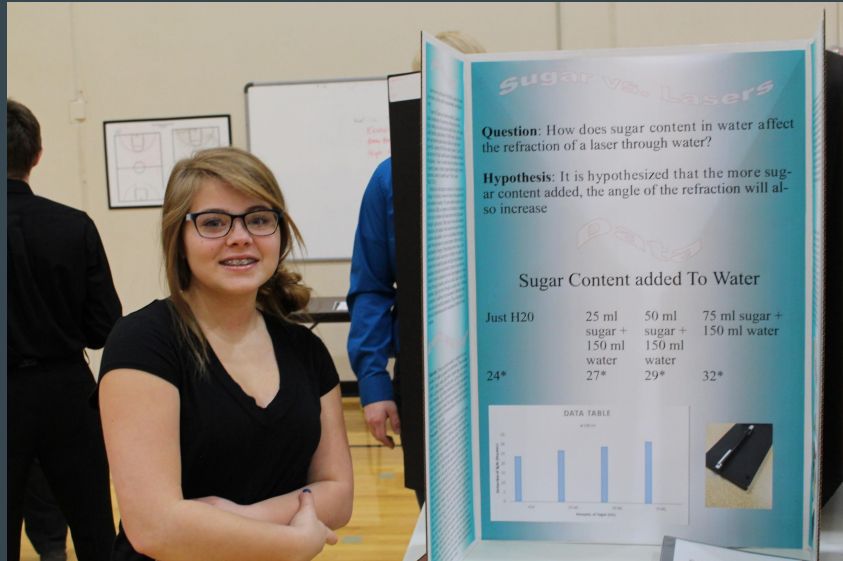
The Average Size of the Space Bubbles
in the Equatorial Region of the Milky
Way Galaxy

Amanda Cooley

Meeteetse

Meeteetse, WY

Physics & Astronomy -Senior Division



1st Place

Sugar vs. Lasers

Johnna Dawson

Newcastle High School

Newcastle, WY



Robotics & Computer Sciences

Robotics & Computer Sciences -Junior Division

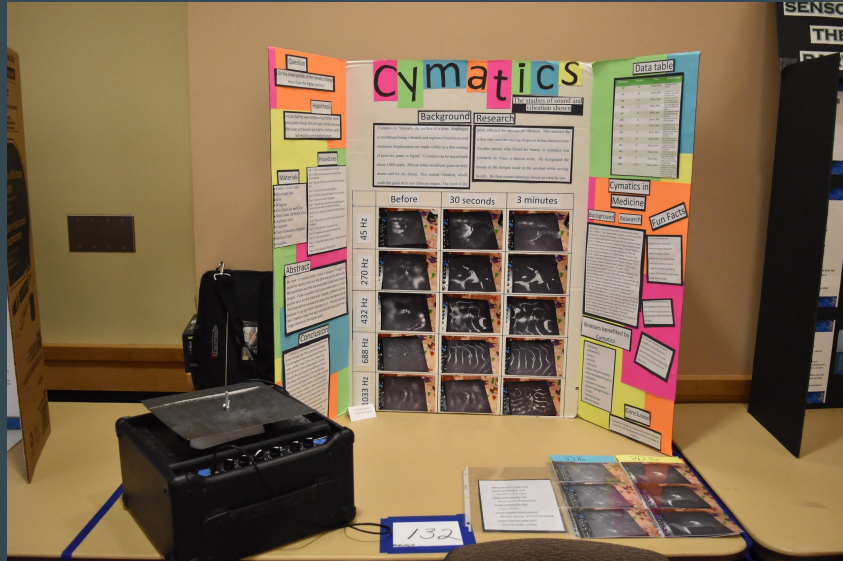
3rd Place

Cymatics

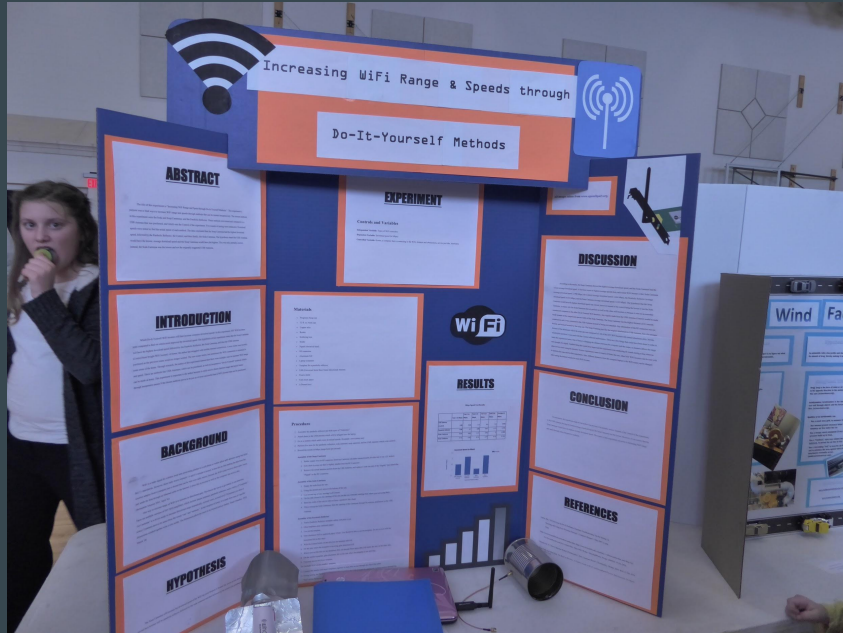
Addison Braten

Powell Middle School

Powell, WY



Robotics & Computer Sciences -Junior Division



2nd Place

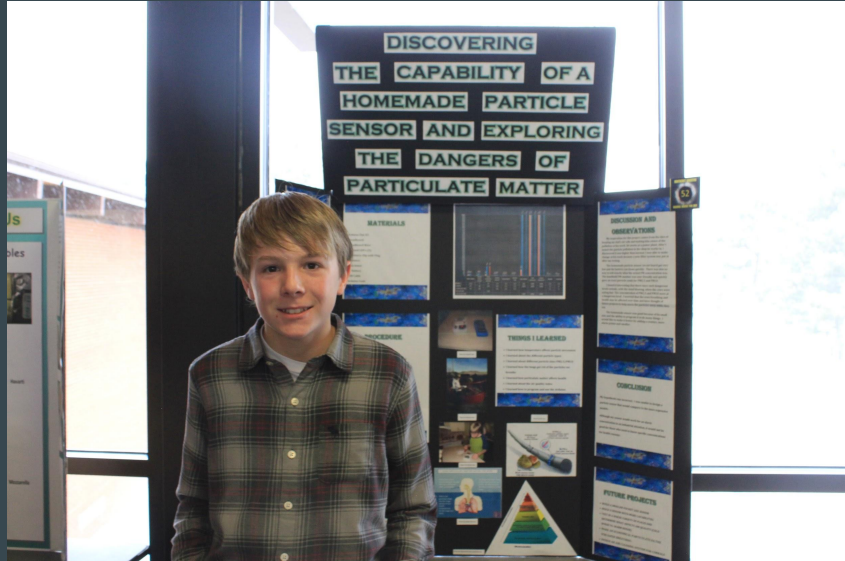
Increasing WiFi Range and Speeds
through Do-It-Yourself Methods

Quinton Lawrence

Wheatland Middle School

Wheatland, WY

Robotics & Computer Sciences -Junior Division



1st Place

Discovering the Capability of a
Homemade Particle Sensor and
Exploring the Dangers of Particulate
Matter

Kyland Fuller

Lingle-Ft.Laramie Schools

Ft. Laramie, WY

Robotics & Computer Sciences -Senior Division

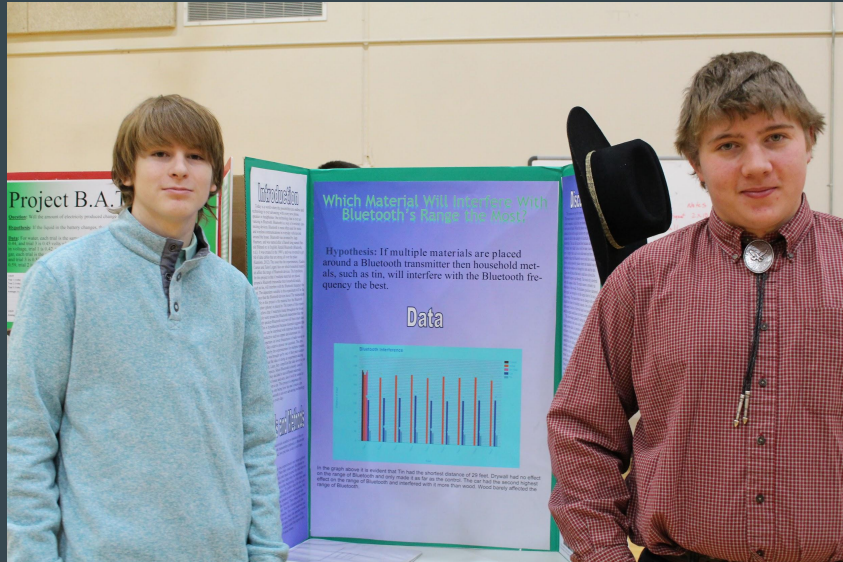
3rd Place

Which Material Will Effect The Bluetooth Range The Most?

Kaden Curren & Talon Logan

Newcastle High School

Newcastle, WY



Robotics & Computer Sciences -Senior Division

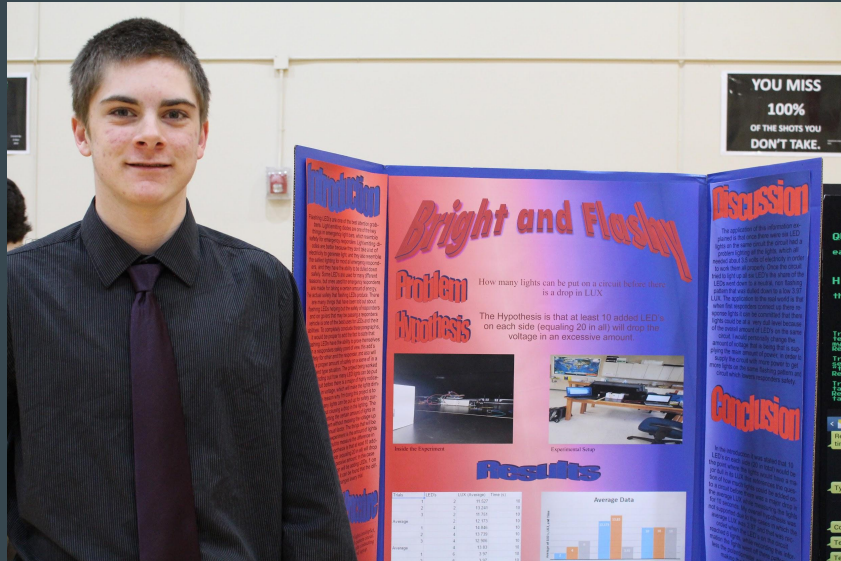
2nd Place

Bright and Flashy

Garrett Merchen

Newcastle High School

Newcastle, WY



Robotics & Computer Sciences -Senior Division

1st Place

Implementing New Methods of
Prosthetic Control

Qingfeng Li

Laramie High School

Laramie, WY

