

**EPSEF 2020**  
**Eastern Panhandle Science and Engineering Fair**  
**Friday, March 6, 2020**  
**at Ranson Civic Center**

# OFFICIAL RESULTS

## ELEMENTARY DIVISION

### Category Awards

#### Animal Sciences:

- 1st Place - What Food Do Squirrels Prefer? by Austin Phelps, Grade 4, Pleasant View Elementary School, Morgan County
- 2nd Place - Straws by Jacob Dahms and Cole Rineheart, Grade 5, Potomack Intermediate School, Berkeley County
- 3rd Place - Do Birds Have a Favorite Color? by Serenity Ambrose, Grade 5, Potomack Intermediate School, Berkeley County

#### Behavioral and Social Sciences

- 1st Place - The Stroop Effect by Marybeth Eyler, Grade 5, Warm Springs Intermediate School, Morgan County
- 2nd Place - Background Noise and Concentration by Makinzi Montanaro, Grade 5, Warm Springs Intermediate School, Morgan County
- 3rd Place - Do Scary Movies Affect Your Heart Rate? by Taylor Andrews, Grade 5, Warm Springs Intermediate School, Morgan County

#### Biomedical and Health Sciences

- 1st Place - You Smoke, You Croak! by Brielle Thames, Grade 5, Potomack Intermediate School, Berkeley County
- 2nd Place - Tappin to the Heart Beat by Adelynn Etherington, Grade 4, Orchard View Intermediate School, Berkeley County
- 3rd Place - How Do Your Lungs Work When You Are Healthy vs. Sick? by Lainey Chadwell, Grade 4, Eagle School Intermediate, Berkeley County

#### Cellular and Molecular Biology

- 1st Place - Modern Mummies by Rhaina Botticher, Grade 5, Warm Springs Intermediate School, Morgan County
- 2nd Place - Gummy Bear Osmosis by Brennan Hoover, Grade 5, Warm Springs Intermediate School, Morgan County
- 3rd Place - Gummy Bear Osmosis by Emma Frederick, Grade 5, Warm Springs Intermediate School, Morgan County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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### Chemistry

- 1st Place - The Clean Off by Ava Kithcart, Grade 4, Potomack Intermediate School, Berkeley County
- 2nd Place - What Are You Drinking? Red Cabbage as a PH Indicator by Shevaun McVearry, Grade 4, Orchard View Intermediate School, Berkeley County
- 3rd Place - Dissolving With Acid by Dakota Keister, Grade 5, Warm Springs Intermediate School, Morgan County

### Earth and Environmental Sciences

- 1st Place - The Story Tree Rings Tell by Jordan Unger, Grade 5, Warm Springs Intermediate School, Morgan County
- 2nd Place - Eruptions by Nykeem Thompson, Grade 5, Eagle School Intermediate, Berkeley County
- 3rd Place - Chemical Vapors Affect on Plant Growth by Willow Rhoten, Grade 5, Warm Springs Intermediate School, Morgan County

### Energy: Sustainable Materials and Design

- 1st Place - Does Wireless Energy Work? by Molly Burton, Grade 4, Mill Creek Intermediate School, Berkeley County
- 2nd Place - Nature's Batteries by Xander Iwanowicz, Grade 4, Mountain Ridge Intermediate School, Berkeley County
- 3rd Place - What's Popping? by Carter Baughman, Grade 3, Tomahawk Intermediate School, Berkeley County

### Engineering Mechanics

- 1st Place - Rube Goldberg Machine by Sylas Lambert, Grade 5, Mountain Ridge Intermediate School, Berkeley County
- 2nd Place - Bridge Types by Hunter Conroe, Grade 4, Mountain Ridge Intermediate School, Berkeley County

### Materials Science

- 1st Place - Balloons vs Air by Isabella Hoffman, Grade 4, Pleasant View Elementary School, Morgan County
- 2nd Place - Which Diaper Brand is Most Absorbant? by Olivia Allis, Grade 5, Mountain Ridge Intermediate School, Berkeley County
- 3rd Place - Bubble Buddies by Carson Rose and Braylen Paul, Grade 4, Paw Paw Elementary School, Morgan County

### Microbiology

- 1st Place - Boys vs Girls: Who is the Dirtiest? by Kamryn Buck, Grade 5, Warm Springs Intermediate School, Morgan County
- 2nd Place - Moldy Bread by Jackson Davison and Isabella Bingaman, Grade 5, Warm Springs Intermediate School, Morgan County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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### Physics and Astronomy

- 1st Place - What's the Angle on Pepper's Ghost? by Zachary Dawson, Grade 4, Eagle School Intermediate, Berkeley County
- 2nd Place - Plop Plop Fizz Fizz Boom! by Nathan Rouse, Grade 4, Orchard View Intermediate School, Berkeley County
- 3rd Place - Eley .22 Ammo Testing by Jeremiah Clark, Grade 5, Warm Springs Intermediate School, Morgan County

### Plant Sciences

- 1st Place - What Makes Seeds Grow the Best? by Kayden McCarty, Grade 5, Mountain Ridge Intermediate School, Berkeley County
- 2nd Place - Does Soil Type Affect Plant Growth? by Wyatt Bartley, Grade 5, Warm Springs Intermediate School, Morgan County

### **Special Awards**

- Best Data Visualization - What's the Angle on Pepper's Ghost? by Zachary Dawson, Grade 4, Eagle School Intermediate, Berkeley County
- Best Graphic Design - How Do Your Lungs Work When You Are Healthy vs. Sick? by Lainey Chadwell, Grade 4, Eagle School Intermediate, Berkeley County
- Most Creative Model/Physical Apparatus - You Smoke, You Croak! by Brielle Thames, Grade 5, Potomack Intermediate School, Berkeley County
- Best Application of the Scientific Method - Chemical Vapors Affect on Plant Growth by Willow Rhoten, Grade 5, Warm Springs Intermediate School, Morgan County

### **Grand Prize / Best of Show:**

- Most Surprising Results - Boys vs Girls: Who is the Dirtiest? by Kamryn Buck, Grade 5, Warm Springs Intermediate School, Morgan County

## MIDDLE SCHOOL DIVISION

### **Category Awards**

#### Animal Sciences

- 1st Place - Composting Styrofoam with Mealworms by Andrew Stone, Grade 7, Harpers Ferry Middle School, Jefferson County
- 2nd Place - Is it Really the Cats Meow? by Allison McDonald and Ian Saylor, Grade 7, Saint Joseph School, Berkeley County
- 3rd Place - What Feed Helps My Chickens Lay Better Eggs? by Ross Hicks, Grade 6, Romney Middle School, Hampshire County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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### Behavioral and Social Sciences

- 1st Place - Judging a Book by it's Cover by Leland Lusk, Grade 7, Warm Springs Middle School, Morgan County
- 2nd Place - Baffling Your Brain by Abigail Snider, Grade 7, Hedgesville Middle School, Berkeley County
- 3rd Place - Can You See Me? A Study of Pareidolia by Sarah Barthlow, Grade 6, Mountain Ridge Middle School, Berkeley County

### Biochemistry

- 1st Place - Full vs Low Fat From a Taste Bud's Perspective by Elisabeth Gottlieb, Grade 7, Harpers Ferry Middle School, Jefferson County
- 2nd Place - Gummy Bear Osmosis by Gerald Reed Parsons, Grade 6, Hedgesville Middle School, Berkeley County
- 3rd Place - Is the Juice Worth the Squeeze? by Isaac Jones, Grade 6, Keyser Middle School, Mineral County

### Biomedical and Health Sciences

- 1st Place - Testing the Waters by Jacob Scott, Grade 7, Saint Joseph School, Berkeley County
- 2nd Place - Can Cardio Jog Your Memory? by Julia Stedman, Grade 7, Saint Joseph School, Berkeley County
- 3rd Place - The Effects of Beverages on Our Teeth by Claire Burkhardt, Grade 7, Harpers Ferry Middle School, Jefferson County

### Cellular and Molecular Biology

- 1st Place - Prints Passed Down? by Colleen Power, Grade 7, Saint Joseph School, Berkeley County
- 2nd Place - How Sensitive Are You? by Julia Carter, Grade 7, Saint Joseph School, Berkeley County
- 3rd Place - How Does What You Drink Affect Your Teeth? by Holden Custer, Grade 6, Hedgesville Middle School, Berkeley County

### Chemistry

- 1st Place - Raisin Hydration by Rylee Delauter, Grade 6, Martinsburg North Middle School, Berkeley County
- 2nd Place - Slimeinator: Stretch vs. Safety by Emily Willer, Grade 7, Martinsburg South Middle School, Berkeley County
- 3rd Place - Copper Reaction by Grace Deschenes, Grade 6, Paw Paw Elementary School, Morgan County

### Earth and Environmental Sciences

- 1st Place - Which Wood is Fire Most Effective Against? by Carter Wilson, Grade 8, Spring Mills Middle School, Berkeley County
- 2nd Place - Road Science by Dominic Reed, Grade 7, Morgan Academy, Jefferson County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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- 3rd Place - Deadly Fertilizer Pollution by Ella Murphy, Grade 6, Martinsburg South Middle School, Berkeley County

### Embedded Systems

- 1st Place - Liquid Amplifiers by Trista Johnston, Grade 6, Paw Paw Elementary School, Morgan County
- 2nd Place - Juice and More Juice by Baily Nichols and Jolie Jenkins, Grade 6, Capon Bridge Middle School, Hampshire County

### Energy: Sustainable Materials and Design

- 1st Place - Solar Can Heat by Ben Whitmoyer, Grade 8, Morgan Academy, Jefferson County
- 2nd Place - Keep Calm and Crayon by Jerin Billmeyer, Grade 7, East Hardy Early Middle School, Hardy County
- 3rd Place - Veggie Voltage: How Much Voltage Comes from Different Vegetables by Peyton Milleson, Grade 6, Romney Middle School, Hampshire County

### Engineering Mechanics

- 1st Place - Electrohydrodynamic Engines by Ralph Wojtowicz, Grade 7, Moorefield Middle School, Hardy County
- 2nd Place - What's Cookin': Which Homemade Stove is Most Efficient? by Brody Fishel, Grade 6, Martinsburg South Middle School, Berkeley County
- 3rd Place - Does Height Matter? by Noah Shegogue, Grade 8, Harpers Ferry Middle School, Jefferson County

### Materials Science

- 1st Place - Diaper Time! by Skyla Nelson, Grade 8, East Hardy Early Middle School, Hardy County
- 2nd Place - That's Ironic by Audrey Hasley, Grade 8, Martinsburg North Middle School, Berkeley County
- 3rd Place - A King is Crowned by Adam Sherman, Grade 7, Moorefield Middle School, Hardy County

### Mathematics

- 1st Place - Yahtzee! by William Wojtowicz, Grade 7, Moorefield Middle School, Hardy County
- 2nd Place - Going to Boston: An Old Dice Game with Older Probabilities by Mason Garrett, Grade 8, Martinsburg North Middle School, Berkeley County

### Microbiology

- 1st Place - Dogs vs. Humans Which Mouth Is Cleaner? by Reghan Miller, Grade 8, Mountain Ridge Middle School, Berkeley County
- 2nd Place - Keeping it Clean by Lydia Hayes, Grade 7, Saint Joseph School, Berkeley County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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- 3rd Place - Germs by Hannah Haines, Grade 6, Capon Bridge Middle School, Hampshire County

### Physics and Astronomy

- 1st Place - Battle of the Bats by Kaylie Hall, Grade 7, Romney Middle School, Hampshire County
- 2nd Place - Is it Hot in Here, or Is it My Clothes? by Kylie Keplinger, Grade 7, Keyser Middle School, Mineral County
- 3rd Place - Deflategate by Kendall Ava Kelly, Grade 7, Frankfort Middle School, Mineral County

### Plant Sciences

- 1st Place - Hungry, Hungry Algae by Lucas Robak, Grade 6, Mountain Ridge Middle School, Berkeley County
- 2nd Place - Synthetic vs. Natural Fertilizer by Phoebe McCann Weaver, Grade 7, Frankfort Middle School, Mineral County
- 3rd Place - What Water is Best for Your Plants? by Brooke Kesner, Grade 8, Keyser Middle School, Mineral County

### Robotics and Intelligent Machines

- 1st Place - All by Myself by Kyle Anderson, Grade 6, Spring Mills Middle School, Berkeley County
- 2nd Place - Robotics and Daily Living by Anthony Carter, Grade 6, Warm Springs Middle School, Morgan County
- 3rd Place - What Can a Robotic Arm Do? by Nathaniel Kerr, Grade 6, Musselman Middle School, Berkeley County

### Systems Software

- 1st Place - Mobile Spy Stops Cyber Bullies by Sydney Bostic, Grade 7, Hedgesville Middle School, Berkeley County
- 2nd Place - Kids vs. Adults: Who's More Secure Online by Joseph Burton, Grade 6, Hedgesville Middle School, Berkeley County
- 3rd Place - The RetroFlag Game Console of the Future by Gavin Kline, Grade 8, Capon Bridge Middle School, Hampshire County

### **Special Awards**

- Best Data Visualization - Going to Boston: An Old Dice Game with Older Probabilities by Mason Garrett, Grade 8, Martinsburg North Middle School, Berkeley County
- Best Graphic Design - Testing the Waters by Jacob Scott, Grade 7, Saint Joseph School, Berkeley County
- Most Creative Physical Model/Apparatus - Electrohydrodynamic Engines by Ralph Wojtowicz, Grade 7, Moorefield Middle School, Hardy County

## EPSEF 2020 OFFICIAL RESULTS (cont.)

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- Best Application of the Scientific Method - Can You See Me? A Study of Pareidolia by Sarah Barthlow, Grade 6, Mountain Ridge Middle School, Berkeley County
- Most Surprising/Unexpected Results - Liquid Amplifiers by Trista Johnston, Grade 6, Paw Paw Elementary School, Morgan County
- ISEF Alumni (Two Awards) - Yahtzee! by William Wojtowicz, Grade 7, Moorefield Middle School, Hardy County
- ISEF Alumni - Electrohydrodynamic Engines by Ralph Wojtowicz, Grade 7, Moorefield Middle School, Hardy County
- Lemelson Early Inventor Prize - Electrohydrodynamic Engines by Ralph Wojtowicz, Grade 7, Moorefield Middle School, Hardy County

### ***Grand Prize / Best of Show:***

- Composting Styrofoam with Mealworms by Andrew Stone, Grade 7, Harpers Ferry Middle School, Jefferson County

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### **ENDNOTES:**

EPSEF, the [Eastern Panhandle Science and Engineering Fair](#) is affiliated with the [Society for Science and the Public](#) (the “Society”).

The [Lemelson Early Inventor Prize](#), sponsored by the [Lemelson Foundation](#) and presented by the Society, includes a \$100 cash award.

As a Society Affiliated fair, the first place award winners in each category are nominated to the [Broadcom MASTERS](#) (Math, Applied Science, Technology, and Engineering for Rising Stars), the premier science and engineering competition for middle school students.

More information about the Eastern Panhandle Science and Engineering Fair can be found online at [www.epsef.org](http://www.epsef.org)

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