

# Montana Tech Regional Science and Engineering Fair

## Division 2 Middle School – Bronze Medal Winners

### Grade: 5

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#### Earth

5E002 **Which Type of Rock Is Most Damaged by Freezing?**

Kennedy, Belle

Montana City School

#### Life

5L013 **Do Essential Oils Kill Germs?**

Norman, Aidan

Hillcrest Elementary

5L010 **Should You Buy Dirt?**

Lukas, Jackie

Ennis Schools

5L004 **The Cat's Meow - Designing an Enrichment Toy**

Harmon, Grace

West Elementary

#### Physical

5P023 **Insulation for Information**

Story, Walker

Ennis Schools

### Grade: 6

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#### Behavioral

6B012 **Cardio Audio**

Laman, Grant

Montana City School

6B006 **Does Age Affect Short Term Memory?**

Phillips II, Trevor

West Elementary

6B016 **Think Fast**

Hundhausen, Miles

Chief Joseph Middle School

#### Earth

6E003 **Can Painting Roofs White Help Reduce Global Warming?**

Sonen, Bella

Ophir

6E005 **Capturing & Storing Solar Energy to Power a Small Car**

Gallicano, Max

West Elementary

#### Life

6L022 **Fingerprints**

Springer, Logan

Monforton School

6L005 **Food?? For Flowers??**

Williams, Mallorie

West Elementary

6L014 **Made for Snow**

Inman, Tanner

Ennis Schools

6L025 **Stayin Alive**

McElroy, Mullanie

Butte Central School

#### Physical

6P066 **Birthday Paradox**

Varady, Meredith

Ramsay

6P010 **Can Limestone Rocks Neutralize the Berkeley Pit?**

Fredlund, Zane

West Elementary

6P034 **Hot Hands**

Godbout, Bryn

Hillcrest Elementary

6P003	<b>Methane: Which Form of Animal Waste Produces More Gas: Cow Manure, Chicken Manure, or</b> Radtke, Jackson	Hall Elementary
6P048	<b>Milk It. How Does Different Types of Milk Effect the Strength of Casein Plastic?</b> Bertelsen, Mozelle Kessenich, Carmen	Chief Joseph Middle School Chief Joseph Middle School
6P025	<b>Oil and Vinegar</b> Groesbeck, Brooke	Emerson Elementary
6P037	<b>Showing Evolution with Conway's Game of Life</b> McKee, Cooper	Hillcrest Elementary
6P024	<b>Which Liquid Evaporates at the Fastest Rate?</b> Dubois, Logan	Emerson Elementary
6P053	<b>Whitening Toothpaste</b> Hankins, Katelyn	Chief Joseph Middle School

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## Grade: 7

### Behavioral

7B001	<b>Lie To Me: Can You Tell if Someone is Lying by Watching Facial Expressions?</b> Stokes, Jaise	Hall Elementary
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### Life

7L020	<b>Silver Solution</b> Kelly, Graves	Chief Joseph Middle School
7L009	<b>Stop the Invasion!</b> Wilcox, Allen	Three Forks Middle School

### Physical

7P040	<b>Are Your Teeth White?</b> Malyevac, Ashley	Ramsay
7P034	<b>Breaking Bones</b> Naprstek, Stella	Chief Joseph Middle School
7P041	<b>Super Cooling and Snap Freezing</b> Hamilton, Leah	Ramsay
7P022	<b>To Burn or Not To Burn, That is the Question</b> Ziegler, Zack	Chief Joseph Middle School
7P031	<b>Wind Energy</b> Gion, Sid	Chief Joseph Middle School

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## Grade: 8

### Behavioral

8B005	<b>Funky Fonts</b> Pierce, Alexandria	Three Forks Middle School
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### Life

8L010	<b>Hog Huddle</b> Braaten, Kadya	Townsend Middle School
8L009	<b>Montana Shrimp?</b> Payne, Trusten	Townsend Middle School

### Physical

8P009	<b>Micro-Wait, Just a Minute</b> Kamps, Ally Three Forks Middle School
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# Montana Tech Regional Science and Engineering Fair

## Division 2 Middle School – Silver Medal Winners

### Grade: 5

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#### Behavioral

5B007 **Memory, Does it Improve with Age?**

LaFond, Dacelyn

Emerson Elementary

#### Earth

5E001 **Which Materials Cause a Most Reactive Model Volcano?**

Henschel, Haleigh

Pierce, Shelby

Montana City School

Montana City School

#### Life

5L007 **Human vs Animal**

Stecker, Grace

Ennis Schools

5L012 **Turning Food into Light**

Gross, Wyatt

Hillcrest Elementary

#### Physical

5P030 **Catapults: Does Arm Length Matter When It Comes to Distance?**

Keeley, Jack

Hillcrest Elementary

5P017 **Incredible Growing Gummy Bears**

Carpenter, Hannah

West Elementary

5P004 **Produce Power?**

Schuele, Clara

Montana City School

5P031 **Sink or Float**

Parker, Montana

Hillcrest Elementary

5P038 **Which Laundry Detergent is Best?**

Dimet, Elayna

Ramsay

### Grade: 6

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#### Behavioral

6B019 **Does Music Influence Art?**

Omohundro, Sadie

Chief Joseph Middle School

6B017 **Gaming Body**

Lloyd, Addiley

Chief Joseph Middle School

6B014 **Super Tasters**

Bazo, Makenna

Kennedy Elementary

6B009 **The Dog Whisperers**

Oser, Taryn

Montana City School

Thomson, Julia

Montana City School

#### Earth

6E008 **Geode Formation**

Berger, Jaeden

Hillcrest Elementary

6E004 **Oil Spill vs River Bank Plants**

Dickerson, Avery

Ophir

## Life

6L003	<b>Bateria in Your Toothbrush</b>	Racht, Ryan	Townsend Middle School
6L008	<b>Come On, I'm A Fungi</b>	Gutierrez, Bella	Whittier Elementary-Butte
6L035	<b>Keeping Cool with Exercise</b>	Wiseman, Anna	Chief Joseph Middle School
6L030	<b>Root for Microwaved Water</b>	Hinds, Lona	Chief Joseph Middle School

## Physical

6P019	<b>Amped Up Fluids</b>	Struznik, Haden	Emerson Elementary
6P046	<b>An Experiment Testing the Effects of Salt on the Boiling Temperature of Water</b>	Smith, Eliza	Chief Joseph Middle School
6P064	<b>Circuit Circus</b>	Geddes, Steel	Chief Joseph Middle School
6P014	<b>Copper Cementation</b>	Hunt, Nate	Whittier Elementary-Butte
6P029	<b>How "Well" is the Water</b>	Blazer, Josey	Ennis Schools
6P047	<b>Lots of Weight for Right Bridge</b>	Carroll, Elijah Tsukamoto, Kaden	Chief Joseph Middle School Chief Joseph Middle School
6P036	<b>Magnetic Linear Accelerator</b>	Harper, Emma	Hillcrest Elementary
6P020	<b>The Power of Citrus</b>	Littlefield, Penelopy	Emerson Elementary

## Grade: 7

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### Behavioral

7B004	<b>Reward vs Punishment</b>	Veltkamp, Gabryele	Three Forks Middle School
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### Life

7L001	<b>Artificial Photosynthesis</b>	Ide, Cora Nordahl, TJ	Ophir Ophir
7L028	<b>Does Seed Size Matter?</b>	Berg, Jeb	Chief Joseph Middle School
7L022	<b>Trash to Gas</b>	Eddins, Ryann	Chief Joseph Middle School

### Physical

7P006	<b>Bust That Rust</b>	Sangray, Tizer	Townsend Middle School
7P036	<b>Counting Carbon Dioxide</b>	O'Connor, Molly	Chief Joseph Middle School
7P033	<b>Gone Pingin' with a Bunch of Pi</b>	Baker, Thelonious	Chief Joseph Middle School
7P023	<b>Is It Done Yet? The Effect of Surface Area on Heat Transfer</b>	Rath, Tom	Chief Joseph Middle School
7P029	<b>Locked n' Loaded: How Trebuchet Sling Length Affects Projectile Distance</b>	Long, Jackson	Chief Joseph Middle School
7P015	<b>Water Chemistry</b>	Lawerence, Annika	Sacajawea Middle School

**Grade: 8**

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**Behavioral**

8B007 **Eyewitness**

Chapman, Marrin

Wilkerson, Aimee

8B012 **Too Hot To Handle**

Payne, Rebecca

Montana City School

Montana City School

Townsend Middle School

**Earth**

8E005 **Is Abestos Among Us?**

Triem, Lenny

Montana City School

**Physical**

8P010 **Jack It Up**

Potts, Devon

Three Forks Middle School

# Montana Tech Regional Science and Engineering Fair

## Division 2 Middle School – Gold Medal Winners

### Grade: 5

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#### Behavioral

5B003 **Does Age Affect Memory?**

Liva, Kaicee

West Elementary

#### Earth

5E006 **Think Outside the Trash**

Luedtke, Maddie

Kennedy Elementary

#### Life

5L015 **How to Save Snow Geese from Landing in the Berkeley Pit**

Landfair, Samantha

Kennedy Elementary

#### Physical

5P022 **Curious Conductivity**

Olson, Elizabeth

Ennis Schools

5P005 **Does Temperature Affect the Glow of Glow Sticks?**

Dare, Maya

Whittier Elementary-Butte

5P040 **Glowing Lava Lamps**

Erickson, Maisey

Ramsay

5P028 **Heat Capacity of Water vs Oil**

Chatriand, Bailey

Hillcrest Elementary

5P025 **In What Solution Can Cut Flowers Stay Fresh the Longest?**

Kluck, Hannah

Hillcrest Elementary

5P013 **Mystery Mirrors**

Meek, Ellianna

Twin Bridges Middle School

5P024 **pH: Pure H<sub>2</sub>O**

Cox, Quinn

Hillcrest Elementary

5P011 **Warmth Through Straw**

Janzen, Ayla

Twin Bridges Middle School

5P035 **Which Metal is Better Conductor: Copper or Steel?**

Stodden, Tyler

Emerson Elementary

### Grade: 6

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#### Behavioral

6B022 **The Canine Heart of Music**

Schenkemeyer, Ruby

Chief Joseph Middle School

6B008 **Which Food Does My Mouse Prefer?**

Bartsch, Toby

Montana City School

#### Life

6L023 **Bill "Wi" the Science "Fi"**

Patton, Bethany

Monforton School

6L031 **EW! Germs When Rock Climbing**

Johnson, Doretta

Chief Joseph Middle School

6L001 **LED Light vs Natural Light**

Romney, Max

Ophir

Saad, Ben

Ophir

6L029	<b>Pumpkins</b>	Hadley, James	Kennedy Elementary
6L034	<b>The Effect of Water Temperature on Brassica rapa</b>	Stenhouse, Audrey	Chief Joseph Middle School

### Physical

6P006	<b>Cell Phones Affect on Avalanche Beacon Functionality</b>	Cone, Maddie Manka, Skylar	Ophir Ophir
6P058	<b>Is There Sound in Space?</b>	Guggenheim, Felix	Chief Joseph Middle School
6P060	<b>Saddle Pad Sensation</b>	McCarty, Isabella	Chief Joseph Middle School
6P049	<b>Size of Your Shoes Matters</b>	Bradbury, Bennett	Chief Joseph Middle School
6P027	<b>Sizzle and Splash</b>	Dvorak, Jake	Sheridan Middle School
6P050	<b>The Greater Insulator</b>	Cook, Chloe	Chief Joseph Middle School
6P054	<b>The Law of the Straw</b>	Jeppson, Serena	Chief Joseph Middle School

## Grade: 7

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### Behavioral

7B011	<b>Time Tribulations</b>	Yovich, Cami	Chief Joseph Middle School
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### Earth

7E001	<b>And They All Fall Down</b>	Vogl, Kennedy	Townsend Middle School
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### Life

7L004	<b>Macro Mania</b>	Taves, Bailey	Townsend Middle School
7L003	<b>Night Crawlers Stewards of the Soil</b>	Noyes, Colton	Townsend Middle School
7L011	<b>Testing an eDNA Marker for Common Snapping Turtles</b>	Ritzdorf, Jakob	Kalispell Middle School
7L017	<b>Video Games vs Blood Pressure</b>	Lewis, Virginia McAninch, Emma	Sacajawea Middle School Sacajawea Middle School

### Physical

7P009	<b>Biofuel Blast</b>	Stone, Colin	Three Forks Middle School
7P037	<b>How Does the Angle of a Solar Panel Affect the Amount of Energy Collected?</b>	Warner, Andrew	Chief Joseph Middle School
7P035	<b>One Bullet, One Bison</b>	Kesner, Sam	Chief Joseph Middle School
7P025	<b>Thermal Light</b>	Casey, Chase	Chief Joseph Middle School

**Behavioral**

8B004 **Is It Magic?**

Lamb, Emma

Three Forks Middle School

8B011 **One Brain or the Other**

Bauman, Macey

Townsend Middle School

8B006 **The Sounds of Success**

Zody, Samantha

Montana City School

8B015 **You Can't Always Believe What You See**

Walsh, Ryen

Ramsay

**Earth**

8E003 **Biofuel, Clean, Renewable Energy**

Boyd, Michael

Three Forks Middle School

**Life**

8L006 **Seeing Echoes**

Cook, Rebekah

Ennis Schools

Lee, Ella

Ennis Schools

8L007 **The Outlast Effect**

Jenkins, Jarrett

Ennis Schools

Severeid, Cordell

Ennis Schools

**Physical**

8P007 **Radon Be Gone**

Bartsch, Olivia

Montana City School

8P016 **Shred It! A Plastic Recycling Alternative**

Lane, Sam

Townsend Middle School



# Montana Tech Regional Science and Engineering Fair

## Division 2 Middle School Special Awards

### **Award:** Berkeley Pit Educational Advisory Committee Award

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Nate Hunt	Copper Cementation	Whittier Elementary-Butte
Samantha Landfair	How to Save Snow Geese from Landing in the Berkeley Pit	Kennedy Elementary
Zane Fredlund	Can Limestone Rocks Neutralize the Berkeley Pit?	West Elementary

### **Award:** Big Hole River Foundation Award

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Bailey Taves	Macro Mania	Townsend Middle School
Jessica Bough	Look Out Below	Ophir
Kate King	Look Out Below	Ophir

### **Award:** Navy

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Bodee Butterworth	What is the Best Way to Clean Up Oil Spills?	Ophir
Brooke Badovinac	Earth Battery	Butte Central School
Clara Schuele	Produce Power?	Montana City School
Delilah Puckett	More Power	Twin Bridges Middle School
Henry Pritham	Tripping the Transceiver: Don't Interfere with Your Own Rescue	Chief Joseph Middle School
Michael Boyd	Biofuel, Clean, Renewable Energy	Three Forks Middle School
Thelonious Baker	Gone Pingin' with a Bunch of Pi	Chief Joseph Middle School

**Award: Clark Fork Watershed Education Program**

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Allen Wilcox	Stop the Invasion!	Three Forks Middle School
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**Award: Dr. Gordon Haaland Memorial**

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D.J. Singh	What is Your Lung Capacity?	Whittier Elementary-Butte
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**Award: George Grant Trout Unlimited**

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Trusten Payne	Montana Shrimp?	Townsend Middle School
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**Award: Montana Fish, Wildlife & Parks**

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Jakob Ritzdorf	Testing an eDNA Marker for Common Snapping Turtles	Kalispell Middle School
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Tanner Inman	Made for Snow	Ennis Schools
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Trusten Payne	Montana Shrimp?	Townsend Middle School
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Will Inman	Nocturnal vs Diurnal	Ennis Schools
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**Award: Montana Tech "Best of the Best Award" (Biological Sciences)**

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Jakob Ritzdorf	Testing an eDNA Marker for Common Snapping Turtles	Kalispell Middle School
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**Award: Montana Tech Electrical Engineering Department Award**

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Jimmy Blow	Hydrogen Bubbles	Silver Bow Montessori School
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Olivia Bartsch	Radon Be Gone	Montana City School
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**Award: Montana Tech Institutional Research - Most Innovative Project**

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Ryann Eddins	Trash to Gas	Chief Joseph Middle School
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**Award: Montana Tech Mining Department**

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Jaeden Berger	Geode Formation	Hillcrest Elementary
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**Award: Montana Tech Mining Department**

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Lenny Triem	Is Asbestos Among Us?	Montana City School
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**Award: Montana Tech Math Department**

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Emma McAninch	Video Games vs Blood Pressure	Sacajawea Middle School
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Maisie Prendergast	Bac in the Microwave with 6125 Data Points	Chief Joseph Middle School
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Virginia Lewis	Video Games vs Blood Pressure	Sacajawea Middle School
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**Award: Professional & Technical Communications Award**

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Colton Noyes	Night Crawlers Stewards of the Soil	Townsend Middle School
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Kailey Knaub	Frigid Fuels & Fire	Townsend Middle School
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**Award: Montana Tech Mineral Museum**

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Maddie Luedtke	Think Outside the Trash	Kennedy Elementary
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**Award: Montana Tech Petroleum Engineering Department Award**

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Piage Lear	From Trash to Gas	Three Forks Middle School
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**Award: Highland College, Medical Assistant Program**

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Emma McAninch	Video Games vs Blood Pressure	Sacajawea Middle School
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Lily MacFayden	Feeling Sick? Use Garlic!	Chief Joseph Middle School
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Virginia Lewis	Video Games vs Blood Pressure	Sacajawea Middle School
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**Award: Dr. Wilbur Held Memorial Award**

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Sadie Omohundro	Does Music Influence Art?	Chief Joseph Middle School
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**Award: CTEC Award**

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Ace Beattie	Desalinating Water	Ophir
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**Award: WET Award**

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Andrew From	Our Dream for a Clean Stream	Kennedy Elementary
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**Award: Reach Higher Montana**

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Tizer Sangray	Bust That Rust	Townsend Middle School
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**Award: Charles Pascavage**

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Ben Saad	LED Light vs Natural Light	Ophir
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Max Romney	LED Light vs Natural Light	Ophir
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**Award: Paul & Paulette Miller Award**

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Sam Lane	Shred It! A Plastic Recycling Alternative	Townsend Middle School
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**Award: Broadcom MASTERS**

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Andrew Warner	How Does the Angle of a Solar Panel Affect the Amount of Energy Collected?	Chief Joseph Middle School
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Audrey Stenhouse	The Effect of Water Temperature on Brassica rapa	Chief Joseph Middle School
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Bailey Taves	Macro Mania	Townsend Middle School
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Ben Saad	LED Light vs Natural Light	Ophir
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Bennett Bradbury	Size of Your Shoes Matters	Chief Joseph Middle School
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Bethany Patton	Bill "Wi" the Science "Fi"	Monforton School
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Cami Yovich	Time Tribulations	Chief Joseph Middle School
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Chase Casey	Thermal Light	Chief Joseph Middle School
Chloe Cook	The Greater Insulator	Chief Joseph Middle School
Colin Stone	Biofuel Blast	Three Forks Middle School
Colton Noyes	Night Crawlers Stewards of the Soil	Townsend Middle School
Cordell Severeid	The Outlast Effect	Ennis Schools
Doretta Johnson	EW! Germs When Rock Climbing	Chief Joseph Middle School
Ella Lee	Seeing Echoes	Ennis Schools
Emma Lamb	Is It Magic?	Three Forks Middle School
Emma McAninch	Video Games vs Blood Pressure	Sacajawea Middle School
Felix Guggenheim	Is There Sound in Space?	Chief Joseph Middle School
Isabella McCarty	Saddle Pad Sensation	Chief Joseph Middle School
Jake Dvorak	Sizzle and Splash	Sheridan Middle School
Jakob Ritzdorf	Testing an eDNA Marker for Common Snapping Turtles	Kalispell Middle School
James Hadley	Pumpkins	Kennedy Elementary
Jarrett Jenkins	The Outlast Effect	Ennis Schools
Kennedy Vogl	And They All Fall Down	Townsend Middle School
Macey Bauman	One Brain or the Other	Townsend Middle School
Maddie Cone	Cell Phones Affect on Avalanche Beacon Functionality	Ophir
Max Romney	LED Light vs Natural Light	Ophir

Michael Boyd	Biofuel, Clean, Renewable Energy	Three Forks Middle School
Olivia Bartsch	Radon Be Gone	Montana City School
Rebekah Cook	Seeing Echoes	Ennis Schools
Ruby Schenkemeyer	The Canine Heart of Music	Chief Joseph Middle School
Ryen Walsh	You Can't Always Believe What You See	Ramsay
Sam Kesner	One Bullet, One Bison	Chief Joseph Middle School
Sam Lane	Shred It! A Plastic Recycling Alternative	Townsend Middle School
Samantha Zody	The Sounds of Success	Montana City School
Serena Jeppson	The Law of the Straw	Chief Joseph Middle School
Skylar Manka	Cell Phones Affect on Avalanche Beacon Functionality	Ophir
Toby Bartsch	Which Food Does My Mouse Prefer?	Montana City School
Virginia Lewis	Video Games vs Blood Pressure	Sacajawea Middle School

**Award: Division 2 - Top 6**

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Cami Yovich	Time Tribulations	Chief Joseph Middle School
Ella Lee	Seeing Echoes	Ennis Schools
Jakob Ritzdorf	Testing an eDNA Marker for Common Snapping Turtles	Kalispell Middle School
Macey Bauman	One Brain or the Other	Townsend Middle School
Rebekah Cook	Seeing Echoes	Ennis Schools
Sam Lane	Shred It! A Plastic Recycling Alternative	Townsend Middle School

**Award:** Small School 2<sup>nd</sup> Place

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Kennedy Elementary

**Award:** Small School 1<sup>st</sup> Place

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Ophir

**Award:** Large School 2<sup>nd</sup> Place

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Chief Joseph Middle School

**Award:** Large School 1<sup>st</sup> Place

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Townsend Middle School