

Montana Tech Regional Science and Engineering Fair

Division 2 Bronze Medal Winners

Grade: 5

Behavioral

5B009 **Texting**
Reynolds, Dale

West Elementary

Earth

5E008 **Avalanche Transceivers vs. Average Joe**
Raden, Dawson

Ophir Elementary

Life

5L003 **Cottonwood Crisis**
Lingle, Emmett

Ennis Schools

5L011 **Greasy Potato Chips**
Cashell, Coby

Emerson Elementary

5L014 **Primary Color Perception**
McCabe, Ben

Ophir Elementary

Physical

5P007 **Crystal Radio**
Clark, Leif

Hillcrest Elementary

5P037 **Why is the Sky Blue?**
Hokanson, Joree

Sheridan Middle School

Grade: 6

Behavioral

6B003 **Can You Delay Gratification?**
Calvin, Nicole
Middleton, Kate

Ophir Middle School
Ophir Middle School

Earth

6E010 **Tsunamis**
Wlaysewski, Tristen

West Elementary

Life

6L013 **Cheers To Your Smile**
Oxnam, Kelsie
Peterson, Sydnie

Fred Moodry Middle School
Fred Moodry Middle School

6L018 **Dirty Mouth?**
McDonnell, Grace

Townsend Middle School

6L014 **Impacts of Mining**
Hill, Braxton
McLean, Colin

Fred Moodry Middle School
Fred Moodry Middle School

6L011 **Man vs. Dog**
Neary, Kelliann

Kennedy Elementary

6L007 **Nutrients Away**
Rintala, Leah

Kennedy Elementary

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Division 2 Bronze Medal Winners

Physical

6P038	Avalanche	Omohundro, Charis	Chief Joseph Middle School
6P022	Does the Rusting Process Need Oxygen?	Dickinson, Gus	Ennis Schools
6P049	Light or Dark	Amende, Avery	Chief Joseph Middle School
6P023	What Are Coins Made Of?	Gammons, Tom	Kennedy Elementary

Grade: 7

Behavioral

7B013	Bag Design vs. Carrots Eaten: A Study of Visual Attraction	Landon, Camille	Sacajawea Middle School
7B007	Moody Blues	Hines, Craig	Townsend Middle School

Earth

7E009	A Pervious Concrete Filter	Bough, Dasha Butler, Bella	Ophir Middle School Ophir Middle School
7E008	Elevation vs. Snow Texture	Carson, Athena	Sacajawea Middle School

Life

7L029	Algae Growth vs. Fertilizer Amount	Johnston, Gisele Stabler, Samantha	Chief Joseph Middle School Chief Joseph Middle School
7L035	Bacterial Conjugation	Bradshaw, Mae Mailey, Brooklyn	Chief Joseph Middle School Chief Joseph Middle School
7L037	Extremophiles from the Sky	Bos, Brittany Sveen, Elsa	Chief Joseph Middle School Chief Joseph Middle School
7L023	Nature vs. Nurture	Godoy, Bianca Locker, Luisa	Ophir Middle School Ophir Middle School
7L008	Save the Trees	Story, Zack	Three Forks Middle School
7L028	The Sidewalk Effect	Williams, Cassie	Twin Bridges Middle School
7L009	Water Plants... Who Knew?	Rauser, Madison	Three Forks Middle School
7L024	What Causes Excess Algae Growth?	Quackenbush, Ellie Tatom, Saylor	Ophir Middle School Ophir Middle School

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Physical

7P025	Beacon Design vs. Search Time: A Study of Avalanche Search Techniques	Birkeland, Erika	Sacajawea Middle School
7P033	Blade Sharpness vs. Speed	Patten, Tilby	Sacajawea Middle School
7P013	Cloudy With a Chance of Science	Saltzman, Kara	Townsend Middle School
7P029	Enzyme-Catalyzed Reaction Rates	Kim, Jisue	Sacajawea Middle School
7P003	Let's Get to the Root of the Problem	Jorgensen, Katie	Fred Moodry Middle School
7P018	The Power of Salt	Nabity, Amber	Sacajawea Middle School

Grade: 8

Behavioral

8B008	Can You Classically Condition Fish?	Bartzick, Rachael	Ophir Middle School
8B002	Distracted Reaction	Long, Cayley	Three Forks Middle School

Earth

8E001	Is Green Clean Really Clean?	Dwyer, Frank	Butte Central Schools
		O'Herron, Patrick	Butte Central Schools

Life

8L021	Beetle Busters	Taylor, Tristen	Townsend Middle School
8L006	Effect of Monster Energy on Running Performance	Raiser, Nicholas	East Middle School - Butte
8L017	Sugar	Bakkum, John	Townsend Middle School
8L019	The Grief of Gluten	Dexter, Lynzee	Townsend Middle School

Physical

8P018	Falling Down	Duval, Chase	Three Forks Middle School
8P031	Salted Results	Scheritng, Braden	Montana City School
8P035	Switch to Motion	Bair, Ryker	Townsend Middle School
8P001	The Big Question: Duct or Duck?	Dupuis, Megan	Divide Elementary
		Kessler, Winchester	Divide Elementary
8P015	To Steam or not to Steam?	Brasher, Griffin	East Middle School - Butte

Montana Tech Regional Science and Engineering Fair

Division 2 Silver Medal Winners

Grade: 5

Behavioral

5B010 **Does My Plate Add Up?**

Manson, Kate

Silver Bow Montessori School

Earth

5E003 **Is One Snow Stability Test Enough?**

Bell, Reece

Boersma, Kodi

Ophir Elementary

Ophir Elementary

Life

5L004 **Horse vs. Human**

Russell, Amanda

Ennis Schools

5L013 **The Effect of Pollution on Plants**

Swenson, Solae

Ophir Elementary

Physical

5P031 **Gauss Rifle**

Schnabel, Patrick

West Elementary

5P014 **Mirror, Mirror**

Wigen, Allison

Hillcrest Elementary

Grade: 6

Behavioral

6B005 **Brain vs. Gender**

Lee, Shaciah

Chief Joseph Middle School

Earth

6E006 **To Fertilize or Not?**

Hufnagel, Ethan

Townsend Middle School

Life

6L016 **Battle of the Sexes-Caffeine Edition**

Eckmann, Josh

Montana City School

6L036 **DNA Forensics**

Dlakic, Amilla

Chief Joseph Middle School

6L005 **Drugged Plants**

Jenkins, Josie

Ennis Schools

6L020 **Geotropism**

Hogan, Abigail

Ophir Middle School

6L037 **Is It Worth It?**

Delger, Ella

Chief Joseph Middle School

Kraus, Claire

Chief Joseph Middle School

6L026 **Is Your Cellphone Dirtier Than a Public Restroom?**

Ball, Calvin

Silver Bow Montessori School

6L001 **The Hiding Games**

McGlynn, Selika

Hillcrest Elementary

6L006 **The Magical Music Mind Connection**

Frey, Kelsie

Ennis Schools

Montana Tech Regional Science and Engineering Fair

Division 2 Silver Medal Winners

Physical

6P042	A Wet Experience McCormick, Derian	West Elementary
6P003	Backspin on a Basketball Casagranda, Erik	Whittier Elementary-Butte
6P026	Build a Dimmer Switch Werkmeister, Nick	Kennedy Elementary
6P048	How Does the Size and Shape of an Airplane Wing Affect Overall Flight? Alan, Samuel Emmons, Deklin	Chief Joseph Middle School Chief Joseph Middle School
6P009	The "Hull" Deal Zora, Niklaus	Hillcrest Elementary
6P051	What is the Effect of Temperature of Tuning of Instruments Cole, Ella Prendergrast, Meriel	Chief Joseph Middle School Chief Joseph Middle School
6P024	Who Needs NorthWestern Energy? Walsh, Riley	Kennedy Elementary

Grade: 7

Behavioral

7B015	Can You Spot a Fake Smile? An Investigation into the Relationship Between Age, Attitude, Chandler, Elaine	Sacajawea Middle School
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Earth

7E012	The Effect of Carbon Dioxide on Infrared Radiation Escape McCau, Ellery	Chief Joseph Middle School
7E005	Water Retention vs. Compost Mixture DesEnfants, Dale	Sacajawea Middle School

Life

7L036	Electo-Culture Spicher, Jack	Chief Joseph Middle School
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Physical

7P054	Hovercraft Forces and Motion Vidmar, Hailey	Chief Joseph Middle School
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Grade: 8

Behavioral

8B004	Are You Stressed Oxnam, Bailee	Fred Moodry Middle School
8B003	Neon Memory Mesenbrink, Ashley	Three Forks Middle School

Life

8L011	Bug Out Broling, Claire	Three Forks Middle School
8L020	Healthy Water, Healthy Cows Hoeffner, Caitlin	Townsend Middle School

Montana Tech Regional Science and Engineering Fair

Division 2 Silver Medal Winners

Physical

8P036 **Mirror Power**

Bruner, Robert Lee

Homeschool

8P017 **Soak It Up Baby**

Pruett, Janelle

Three Forks Middle School

8P008 **Solar Panel Heat Efficiency**

Holm, Desmond

East Middle School - Butte

8P010 **The Making of Hydrogen**

Bingham, Harrison

East Middle School - Butte

Montana Tech Regional Science and Engineering Fair

Division 2 Gold Medal Winners

Grade: 5

Behavioral

5B004 **Mom I Hate Generic Food**

Freebourn, Hope

Emerson Elementary

5B005 **The Nose Knows**

Seitz, Mahri

Montana City School

Earth

5E001 **Seasons of Water**

Klein, Jourdain

Ennis Schools

Life

5L001 **Germes Can End with You**

McCloskey, Dan

Hillcrest Elementary

5L012 **Is Cleaning Lupine Seeds Necessary?**

Bough, Kolya

Ophir Elementary

5L021 **Take a Breather**

Tierney, Brittney

Silver Bow Montessori School

Physical

5P041 **Cloud Chamber and Magnetism**

Steiger, Heidi

Silver Bow Montessori School

5P036 **Hot Air Balloon**

Lee, Moxen

Sheridan Middle School

5P009 **Move It, Move It**

Connors, Clint

Hillcrest Elementary

Grade: 6

Behavioral

6B006 **Doing Two Things at Once**

Krishna, Pushya

Chief Joseph Middle School

6B010 **The Effect of Age on Short Term Memory**

McMakin, Wilson

Chief Joseph Middle School

Earth

6E004 **The Key to Germination**

Noyes, Tyler

Townsend Middle School

6E005 **Townsend School's Carbon Footprint**

Hatfield, Easton

Townsend Middle School

Life

6L033 **Bacteria Builders**

Stewart, Savanna

Twin Bridges Middle School

6L022 **Can Headphones Harm Hearing?**

Raden, Jackson

Ophir Middle School

Samuels, Holden

Ophir Middle School

6L025 **Microbes in Canned Dog Food**

Markovics, Leanna

Silver Bow Montessori School

Montana Tech Regional Science and Engineering Fair

Division 2 Gold Medal Winners

Life

6L012	Out on a Limb	Heffernan, Riley Kellegher, Kynan	Fred Moodry Middle School Fred Moodry Middle School
6L019	Vermicomposting	Holder, Kuka	Ophir Middle School
6L021	Water Transpiration	Barton, Julia	Ophir Middle School

Physical

6P006	Bridge Design Loading	McClafferty, Kaidy	Hillcrest Elementary
6P011	The Glowing Pickle	Weldon, Isaiah	Hillcrest Elementary
6P021	The Pulse Motor	Germain, Liam	Ennis Schools
6P034	This Bed is Just Right	Leachman, Abby	Townsend Middle School
6P040	Water Distillation	Madison, Shanna	West Elementary
6P052	What Frenzies of Light Do Solar Panels Use the Most?	Hall, Laina Swenson, Lenka	Chief Joseph Middle School Chief Joseph Middle School

Grade: 7

Behavioral

7B004	Am I Scared of You?	Broling, Collette	Three Forks Middle School
7B010	Angry You, Angry Me, Does That Make You Feel Blue?	Mahoney, Devin	Sacajawea Middle School
7B011	Would You Conform? An Investigation of the Conforming Rates of 7th Graders	Brauch, Hannah	Sacajawea Middle School

Earth

7E013	How Earth's Magnetic Field is Affected by Solar Storms	Bertelsen, Malia Petitt, Erin	Chief Joseph Middle School Chief Joseph Middle School
7E004	Turbine Design	Graveley, Jaden	Townsend Middle School

Life

7L032	Comparing Water Fountain Bacteria through Genomic Fingerprinting	Vilhauer, Maddy	Chief Joseph Middle School
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Division 2 Gold Medal Winners

Physical

7P051 Light Scattering in a Suspension

Zelver, Marcos

Zetzer, Alan

Chief Joseph Middle School

Chief Joseph Middle School

7P060 The Power of Water

Norick, Colin

Deer Park Middle School

7P053 Water Amount vs. Rocket Height

Feigle, Holt

Jahner, Tanner

Chief Joseph Middle School

Chief Joseph Middle School

Grade: 8

Behavioral

8B006 Wait What?

Wood, Amelia

Fred Moodry Middle School

Earth

8E005 Water Wonders

McDonnell, Katherine

Townsend Middle School

Life

8L026 Geobacter - The Future of Energy

Fisher-Dykman, Sierra

Chief Joseph Middle School

8L005 How Temperature Changes the Structures of Bacteriophage P22

Tu, Karissa

Chief Joseph Middle School

8L027 Investigating the Abundance and Diversity of Ice Nucleation Active Bacteria

Jordan, Chase

Chief Joseph Middle School

Physical

8P006 Do Model Rocket Engines Actually Have the Thrust That the Packages Say They Do?

Dean, Seth

East Middle School - Butte

8P016 Get the Lead Out! (of Crystal Glass)

Gammons, Maggie

East Middle School - Butte

8P012 Radon

Clark, Gunther

East Middle School - Butte

8P011 Solar Power Battery Power in Simple Motors

Simon, Mario

East Middle School - Butte

8P022 Velocity or Mass

Everett, Bridger

Fred Moodry Middle School

Montana Tech Regional Science and Engineering Fair

Division II Special Awards

Award: Berkeley Pit Educational Advisory Committee Award (\$25 Cash Award)

Jade Summers	Lead	West Elementary
Katherine McDonnell	Water Wonders	Townsend Middle School
Madison Rauser	Water Plants... Who Knew?	Three Forks Middle School
Solae Swenson	The Effect of Pollution on Plants	Ophir Elementary

Award: Big Hole River Foundation Award (\$25 Cash Award & Newsletter Subscription)

Halley Bennett	Rainbow Trout Feeding Habits: Point Source vs. Hand Spreading	Sacajawea Middle School
Jourdain Klein	Seasons of Water	Ennis Schools

Award: Clark Fork Watershed Education Program (cfwep.org) (\$50 Cash Award)

Claire Broling	Bug Out	Three Forks Middle School
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Award: Dr. Gordon Haaland Memorial

Amanda Russell	Horse vs. Human	Ennis Schools
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Award: George Grant Trout Unlimited (\$50 Cash Award and one-year Membership to Trout Unlimited)

Claire Kraus	Is It Worth It?	Chief Joseph Middle School
Ella Delger	Is It Worth It?	Chief Joseph Middle School

Award: Montana Fish, Wildlife & Parks (One Year Subscription to Montana Outdoors)

Claire Broling	Bug Out	Three Forks Middle School
Emmett Lingle	Cottonwood Crisis	Ennis Schools
Halley Bennett	Rainbow Trout Feeding Habits: Point Source vs. Hand Spreading	Sacajawea Middle School

Montana Tech Regional Science and Engineering Fair

Division II Special Awards

Kaybrea Ray	Are You Warm?	Three Forks Middle School
Kynan Kellegher	Out on a Limb	Fred Moodry Middle School
Michael Bruner	Goats and Weed Buffet	West Elementary
Riley Heffernan	Out on a Limb	Fred Moodry Middle School
Sam Steele	Snow Study: An Investigation of Factors Affecting Snow Density	Sacajawea Middle School
Selika McGlynn	The Hiding Games	Hillcrest Elementary
Tristin Coates	Can We Protect Our Forest From the Mountain Pine Beetle?	East Middle School - Butte

Award: Montana Orthopedics (\$25 Cash Award)

Kelsie Oxnam	Cheers To Your Smile	Fred Moodry Middle School
Lynzee Dexter	The Grief of Gluten	Townsend Middle School
Sydney Peterson	Cheers To Your Smile	Fred Moodry Middle School

Award: Montana Tech Electrical Engineering Department Award (Sweatshirt)

Jack Spicher	Electo-Culture	Chief Joseph Middle School
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Award: Montana Tech Institutional Research - Most Innovative Project (\$25 Cash Award)

Carlin Kempt	Prosthetics: Exercise vs. Swelling	Sacajawea Middle School
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Award: Montana Tech Math Department Award (Book)

Matthew Morgan	What Part of the Bat Produces the Greatest Exit Speed?	Montana City School
Trey Kopp	Catapult	Kennedy Elementary

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Division II Special Awards

Award: Montana Tech Mineral Museum (Discover Display Kit)

Dawson Raden	Avalanche Tranceivers vs. Average Joe	Ophir Elementary
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Award: Montana Tech Petroleum Engineering Department Award (Sweatshirt)

Riley Jensen	Propeller Power	Three Forks Middle School
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Award: Pioneer Technical

Colton Ely-Ross	Erosion	Fred Moodry Middle School
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Easton Hatfield	Townsend School's Carbon Footprint	Townsend Middle School
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Frank Dwyer	Is Green Clean Really Clean?	Butte Central Schools
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Kuka Holder	Vermicomposting	Ophir Middle School
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Patrick O'Herron	Is Green Clean Really Clean?	Butte Central Schools
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Award: Bureau of Land Management

Bailey Mays	Which Bread Molds Faster?	Twin Bridges Middle School
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Caitlyn Todd	From Juice to Alcohol	Three Forks Middle School
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Carsten Quam	Static Electricity	Hillcrest Elementary
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Emily Svendsen	Achooh	Fred Moodry Middle School
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Isaiah Waldman	Can I Make Quicksand?	West Elementary
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Jace Maroney	Bulls Eye	East Middle School - Butte
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Jordan Nelson	Achooh	Fred Moodry Middle School
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Montana Tech Regional Science and Engineering Fair

Division II Special Awards

Award: Bureau of Land Management

Keanan Fitzpatrick	Cool Junctions	West Elementary
Kylie Noack	Crazy Colors!	Ennis Schools
Kyra Moreni	Humidity and Evaporation	Fred Moodry Middle School
Mami Scherman	Will It Bake?	Ramsay
Nathaniel Morin-Ferguson	Going Through the Motions: Does Mental Rehearsal Improve Your Free-Throw Percentage?	Silver Bow Montessori School

Award: Student Assistance Foundation Award

Halley Bennett	Rainbow Trout Feeding Habits: Point Source vs. Hand Spreading	Sacajawea Middle School
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Award: NRD Award (\$50 Savings Bond)

Kynan Kellegher	Out on a Limb	Fred Moodry Middle School
Riley Heffernan	Out on a Limb	Fred Moodry Middle School

Award: Professional & Technical Communications Award (\$25 Cash Award)

Evette Morgan	Do Elite Male and Female Players Have the Same Swings?	Montana City School
Rebecca Schnabel	Vanishing Stars?	East Middle School - Butte

Award: Sigma Xi Award (5th Grade Female Student) (Book)

Allison Wigen	Mirror, Mirror	Hillcrest Elementary
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Award: Montana Tech "Best of the Best Award" (Biological Sciences)

Karissa Tu	How Temperature Changes the Structures of Bacteriophage P22	Chief Joseph Middle School
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Montana Tech Regional Science and Engineering Fair

Division II Special Awards

Award: PPL Montana Award (\$25 Cash Award)

Colin Norick	The Power of Water	Deer Park Middle School
Desmond Holm	Solar Panel Heat Efficiency	East Middle School - Butte
Liam Germain	The Pulse Motor	Ennis Schools
Robert Lee Bruner	Mirror Power	Homeschool

Award: Paul & Paulette Miller Award (Top 7th-8th) (\$50 Cash Award & Sweatshirt)

Karissa Tu	How Temperature Changes the Structures of Bacteriophage P22	Chief Joseph Middle School
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Award: Charles Pascavage (Top 5th-6th) (\$50 Cash Award & Sweatshirt)

Easton Hatfield	Townsend School's Carbon Footprint	Townsend Middle School
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Award: Top "10" Award - Yellowstone Trip (All expense paid trip to Yellowstone Park)

Alan Zetzer	Light Scattering in a Suspension	Chief Joseph Middle School
Amelia Wood	Wait What?	Fred Moodry Middle School
Colin Norick	The Power of Water	Deer Park Middle School
Devin Mahoney	Angry You, Angry Me, Does That Make You Feel Blue?	Sacajawea Middle School
Erin Petitt	How Earth's Magnetic Field is Affected by Solar Storms	Chief Joseph Middle School
Gunther Clark	Radon	East Middle School - Butte
Karissa Tu	How Temperature Changes the Structures of Bacteriophage P22	Chief Joseph Middle School
Katherine McDonnell	Water Wonders	Townsend Middle School

Montana Tech Regional Science and Engineering Fair

Division II Special Awards

Award: Top "10" Award - Yellowstone Trip (All expense paid trip to Yellowstone Park)

Maddy Vilhauer	Comparing Water Fountain Bacteria through Genomic Fingerprinting	Chief Joseph Middle School
Malia Bertelsen	How Earth's Magnetic Field is Affected by Solar Storms	Chief Joseph Middle School
Marcos Zelter	Light Scattering in a Suspension	Chief Joseph Middle School
Sierra Fisher-Dykman	Geobacter - The Future of Energy	Chief Joseph Middle School

Award: 2nd Place School Award

Townsend Middle School Townsend, Montana

Award: 1st Place School Award

Chief Joseph Middle School Bozeman, Montana