# Pikes Peak Regional Science Fair 2018 Final Results

# Grand Awards

## International Science Fair Invitation

- Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ''Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization''
- Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''
- Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## Senior Division Grand Award

- Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ''Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization''

## Senior Division Grand Award Runner Up

- Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''
- Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## Junior Division Grand Award

- Gryphon Patlin[8] [JE9], Classical Academy Junior High/Dawn Ehresman: ''Drop notice''

## Junior Division Grand Award Runner Up

- Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ''Still sitting?''

## Senior Division People's Choice

- Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## Junior Division People's Choice

- Isabella Hodges[7] [JB10], Classical Academy Junior High/Candus Muir: ''Smarty pants take a stance!''

# Senior Awards

## Senior Division Life Sciences

### First Place − Senior Division Life Sciences

• Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ''Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization''

### Second Place − Senior Division Life Sciences

• Emma Palmer[9] [SA8], The Vanguard School/Cheryl Holling: ''The effect of caffeine versus energy drinks on *daphnia*'s heart rate''

### Third Place − Senior Division Life Sciences

• Tyler Nelson[9] [SA7], The Vanguard School/Cheryl Holling: ''The temperature effect on a *Physarum polycephalum*'s diet''

### Fourth Place − Senior Division Life Sciences

• Jessie Zimmermann[9] [SA3], The Vanguard School/Cheryl Holling: ''The best way to disinfect kitchen sponges through household appliances''

## Senior Division Health & Behavioral Sciences

### First Place − Senior Division Behavioral Science

• Paige Carlson[9] [SB2], The Vanguard School/Cheryl Holling: ''Does music affect the speed of tasks''

### Second Place − Senior Division Behavioral Science

• Ariel Bowden[11] [SB3], Miami Yoder Secondary School/Angela Golding: ''iStress: A game of phones''

## Senior Division Physical Sciences

### First Place − Senior Division Physical Sciences

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

### Third Place − Senior Division Physical Sciences

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ''Heating up: Using phase change materials vs. a thermal battery''

### Fourth Place − Senior Division Physical Sciences

• Eric Bauman[9] [SC2], Classical Academy High School/Jennifer Smith: ''In the absence of air revisited''

# Junior Awards − Grades 6-8

## Junior Biological Science

### First Place − Junior Biological Sciences

• Chance Jurkiewicz[8] [JA5], Classical Academy Junior High/Candus Muir: ‘‘To pot or not’’

### Second Place − Junior Biological Sciences

• Blake Bowshot[7] [JA2], Classical Academy Junior High/Candus Muir: ‘‘Nature’s magnificent medicine: Aloe vera’’

### Third Place − Junior Biological Sciences

• Clare Wiersma[7] [JA10], Classical Academy Junior High/Candus Muir: ‘‘The night time to water?’’

### Fourth Place − Junior Biological Sciences

• Ava Connelly[6] [JA3], Monument Academy/Kris Goodman: ‘‘Warmth without the womb’’

## Junior Social & Behavioral Sciences

### First Place − Junior Social & Behavioral Sciences

• Chloe Haerr[7] [JB9], Classical Academy Junior High/Candus Muir: ‘‘Stress test’’

### Second Place − Junior Social & Behavioral Sciences

• Kate Kaczmarek[8] [JB5], Classical Academy Junior High/Candus Muir: ‘‘The effect of classical music tempo on competitive run times’’

### Third Place − Junior Social & Behavioral Sciences

• Chloe Bennett[7] [JB1], Classical Academy Junior High/Candus Muir: ‘‘Zen testing’’

### Fourth Place − Junior Social & Behavioral Sciences

• Isabella Tyler[7] [JB8], Classical Academy Junior High/Candus Muir: ‘‘Learning types: Auditory or visual?’’

# Junior Energy, Earth & Space Sciences

## First Place − Junior Energy, Earth & Space Sciences

• Joshua Vu[7] [JC5], Classical Academy Junior High/Candus Muir: ''Maximizing efficiency when generating clean energy''

## Second Place − Junior Energy, Earth & Space Sciences

• Zakery Snider[8] [JC7], Classical Academy Junior High/Candus Muir: ''Your rubbish my joules''

## Third Place − Junior Energy, Earth & Space Sciences

• Connor Takenaka[7] [JC3], Classical Academy Junior High/Candus Muir: ''Energy efficiency: The new curve''

# Junior Physics, Math & Computer Science

## First Place − Junior Physics, Math & Computer Science

• Gryphon Patlin[8] [JE9], Classical Academy Junior High/Dawn Ehresman: ''Drop notice''

## Second Place − Junior Physics, Math & Computer Science

• Joshua Snyder[7] [JE11], Classical Academy Junior High/Candus Muir: ''Ready, aim, fire!''

## Third Place − Junior Physics, Math & Computer Science

• Anna Armani[8] [JE12], Classical Conversations/Dayna Armani: ''Dribble it''

## Fourth Place − Junior Physics, Math & Computer Science

• Briana Hillard[7] [JE7], Imagine Classical Academy/Robert Rosenberg: ''Magnetic speaker''

## Fifth Place − Junior Physics, Math & Computer Science

• Evelyn Upchurch[8] [JE1], Classical Academy Junior High/Dawn Ehresman: ''Makey-ing up stories''

# Junior Environmental Science

## First Place − Junior Environmental Science

• Ethan Gavin[7] [JF1], Classical Academy Junior High/Candus Muir: ''A bug's death: A study of diatomaceous earth and pesticides''

## Second Place − Junior Environmental Science

• Faith Roberts[7] [JF7], Classical Academy Junior High/Candus Muir: ''Mold massacre''

## Third Place − Junior Environmental Science

• Abby Klapp[8] [JF5], Monument Academy/Karl Brown: ''Surviving a drought''

## Fourth Place − Junior Environmental Science

• Alex Huerta[8] [JF4], Classical Academy Junior High/Candus Muir: ''To aerate or not to aerate: That is the question''

# Junior Microbiology, Medicine & Health

## First Place − Junior Microbiology, Medicine, & Health Sciences

• Natalia Wright[8] [JG9], Classical Academy Junior High/Candus Muir: ''Battling bacteria''

## Second Place − Junior Microbiology, Medicine, & Health Sciences

• Emily Ciecalone[7] [JG1], Classical Academy Junior High/Candus Muir: ''Sleep tight, but not with blue light''

## Third Place − Junior Microbiology, Medicine, & Health Sciences

• Marin Masters[8] [JG6], Classical Academy Junior High/Candus Muir: ''Back off bacteria''

# Junior Chemistry

## First Place − Junior Chemistry

• Pearl Soundron[8] [JH10], Classical Conversations/Dayna Armani: ''Ions can't fly''

## Second Place − Junior Chemistry

• Radhika Gupta[7] [JH4], Classical Academy Junior High/Candus Muir: ''Analyzing the effectiveness of various whiteboard cleaners''

## Third Place − Junior Chemistry

• Isabella Garcia[7] [JH3], Classical Academy Junior High/Candus Muir: ''Certified cookie monster approved''

## Fourth Place − Junior Chemistry

• Kate Mastrolia[7] [JH7], Classical Academy Junior High/Candus Muir: ''Straighten or shampoo: It's all up to you''

# 8th Grade Engineering

## First Place − 8th Grade Engineering

• Allison Rose[8] [8C13], Classical Academy Junior High/Dawn Ehresman: ''Maxime lingura''

## Second Place − 8th Grade Engineering

• Gabriel Wu[8] [8C1], Classical Academy Junior High/Dawn Ehresman: ''Magnificent mounted magnetic bearings''

## Third Place − 8th Grade Engineering

• Peter Wilson[8] [8C5], Classical Academy Junior High/Dawn Ehresman: ''Postal pods''

## Fourth Place − 8th Grade Engineering

• Miles Johnston[8] [8C9], Classical Academy Junior High/Dawn Ehresman: ''Don't let charging up run you down: A study on portable power''

## Fifth Place − 8th Grade Engineering

• Henry Foisie[8] [8C2], Classical Academy Junior High/Dawn Ehresman: ''Weight for it''

# Junior Awards − Seventh Grade

## Grade 6 & 7 Engineering

### First Place − 7th Grade Engineering

• Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ‘‘Still sitting?’’

### Second Place − 7th Grade Engineering

• Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ‘‘Robotic exoskeleton’’

### Third Place − 7th Grade Engineering

• Austin Cantor[7] [7C6], Classical Academy Junior High/Candus Muir: ‘‘It’s all in the movement’’

### Fourth Place − 7th Grade Engineering

• Norah Quirk[7] [7C15], Classical Academy Junior High/Candus Muir: ‘‘Energy down the drain!’’

### Fifth Place − 7th Grade Engineering

• Chandler Wilburn[7] [7C11], Classical Academy Junior High/Candus Muir: ‘‘What’s the deal about two wheels?’’

# State Fair

## State Fair Invitations

### State Fair Invitation

- Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ''Robotic exoskeleton''
- Austin Cantor[7] [7C6], Classical Academy Junior High/Candus Muir: ''It's all in the movement''
- Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ''Still sitting?''
- Norah Quirk[7] [7C15], Classical Academy Junior High/Candus Muir: ''Energy down the drain!''
- Gabriel Wu[8] [8C1], Classical Academy Junior High/Dawn Ehresman: ''Magnificent mounted magnetic bearings''
- Peter Wilson[8] [8C5], Classical Academy Junior High/Dawn Ehresman: ''Postal pods''
- Allison Rose[8] [8C13], Classical Academy Junior High/Dawn Ehresman: ''Maxime lingura''
- Blake Bowshot[7] [JA2], Classical Academy Junior High/Candus Muir: ''Nature's magnificent medicine: Aloe vera''
- Ava Connelly[6] [JA3], Monument Academy/Kris Goodman: ''Warmth without the womb''
- Chance Jurkiewicz[8] [JA5], Classical Academy Junior High/Candus Muir: ''To pot or not''
- Clare Wiersma[7] [JA10], Classical Academy Junior High/Candus Muir: ''The night time to water?''
- Chloe Bennett[7] [JB1], Classical Academy Junior High/Candus Muir: ''Zen testing''
- Kate Kaczmarek[8] [JB5], Classical Academy Junior High/Candus Muir: ''The effect of classical music tempo on competitive run times''
- Chloe Haerr[7] [JB9], Classical Academy Junior High/Candus Muir: ''Stress test''
- Connor Takenaka[7] [JC3], Classical Academy Junior High/Candus Muir: ''Energy efficiency: The new curve''
- Joshua Vu[7] [JC5], Classical Academy Junior High/Candus Muir: ''Maximizing efficiency when generating clean energy''
- Zakery Snider[8] [JC7], Classical Academy Junior High/Candus Muir: ''Your rubbish my joules''
- Gryphon Patlin[8] [JE9], Classical Academy Junior High/Dawn Ehresman: ''Drop notice''
- Joshua Snyder[7] [JE11], Classical Academy Junior High/Candus Muir: ''Ready, aim, fire!''
- Anna Armani[8] [JE12], Classical Conversations/Dayna Armani: ''Dribble it''
- Ethan Gavin[7] [JF1], Classical Academy Junior High/Candus Muir: ''A bug's death: A study of diatomaceous earth and pesticides''
- Alex Huerta[8] [JF4], Classical Academy Junior High/Candus Muir: ''To aerate or not to aerate: That is the question''
- Abby Klapp[8] [JF5], Monument Academy/Karl Brown: ''Surviving a drought''
- Faith Roberts[7] [JF7], Classical Academy Junior High/Candus Muir: ''Mold massacre''
- Emily Ciecalone[7] [JG1], Classical Academy Junior High/Candus Muir: ''Sleep tight, but not with blue light''
- Marin Masters[8] [JG6], Classical Academy Junior High/Candus Muir: ''Back off bacteria''
- Natalia Wright[8] [JG9], Classical Academy Junior High/Candus Muir: ''Battling bacteria''
- Isabella Garcia[7] [JH3], Classical Academy Junior High/Candus Muir: ''Certified cookie monster approved''
- Radhika Gupta[7] [JH4], Classical Academy Junior High/Candus Muir: ''Analyzing the effectiveness of various whiteboard cleaners''
- Pearl Soundron[8] [JH10], Classical Conversations/Dayna Armani: ''Ions can't fly''
- Jessie Zimmermann[9] [SA3], The Vanguard School/Cheryl Holling: ''The best way to disinfect kitchen sponges through household appliances''
- Tyler Nelson[9] [SA7], The Vanguard School/Cheryl Holling: ''The temperature effect on a *Physarum polycephalum*'s diet''
- Emma Palmer[9] [SA8], The Vanguard School/Cheryl Holling: ''The effect of caffeine versus energy drinks on *daphnia*'s heart rate''
- Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ''Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization''

- Paige Carlson[9] [SB2], The Vanguard School/Cheryl Holling: ‘‘Does music affect the speed of tasks’’
- Ariel Bowden[11] [SB3], Miami Yoder Secondary School/Angela Golding: ‘‘iStress: A game of phones’’
- Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ‘‘Heating up: Using phase change materials vs. a thermal battery’’
- Eric Bauman[9] [SC2], Classical Academy High School/Jennifer Smith: ‘‘In the absence of air revisited’’
- Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ‘‘Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction’’
- Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ‘‘Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo’’

# Special Awards

## AFCEA Junior 1st

• Peter Wilson[8] [8C5], Classical Academy Junior High/Dawn Ehresman: ‘‘Postal pods’’

## AFCEA Junior 2nd

• Ganin Rodriguez[8] [8C4], Corpus Christi Catholic School/Maxine Hennessey: ‘‘Charge your mobile devices while mobile’’

## AFCEA Junior 3rd

• Norah Quirk[7] [7C15], Classical Academy Junior High/Candus Muir: ‘‘Energy down the drain!’’

## AFCEA Senior 1st

• Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ‘‘Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization’’

## AFCEA Senior 2nd

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ‘‘Heating up: Using phase change materials vs. a thermal battery’’

## AFCEA Senior 3rd

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ‘‘Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction’’

## AFCEA Teacher Junior

• Maxine Hennessey, Corpus Christi

## AFCEA Teacher Senior

• Angela Golding, Miami Yoder Secondary School

## American Association of University Women, Junior

• Hailey Kressin[7] [7C2], Classical Academy Junior High/Candus Muir: ‘‘Sayonara tsunami: Reducing a tunami’s damaging impact’’

## American Association of University Women, Senior

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ‘‘Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction’’

## American Meteorological Society

• Abby Klapp[8] [JF5], Monument Academy/Karl Brown: ‘‘Surviving a drought’’

• Manuel Flores[12] [SC4], Miami Yoder Secondary School/Angela Golding: ‘‘Purification of water’’

## American Psychological Association

• Ariel Bowden[11] [SB3], Miami Yoder Secondary School/Angela Golding: ‘‘iStress: A game of phones’’

## American Statistical Association, Jr.

• Lauren Martins[7] [JG5], Classical Academy Junior High/Candus Muir: ‘‘UPF swim shirts: Truth or bare’’

## American Statistical Association, Sr.

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ‘‘Heating up: Using phase change materials vs. a thermal battery’’

## Arizona State University Walton Sustainability

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ‘‘Heating up: Using phase change materials vs. a thermal battery’’

• Eric Bauman[9] [SC2], Classical Academy High School/Jennifer Smith: ‘‘In the absence of air revisited’’

## Association for Women Geoscientists

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## BSCS Senior Award

• Owen Beute[9] [SA2], The Vanguard School/Kimberly Price: ''Coliform bacteria in front range water''

## Broadcom MASTERS

• Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ''Still sitting?''

• Chandler Wilburn[7] [7C11], Classical Academy Junior High/Candus Muir: ''What's the deal about two wheels?''

• Gabriel Wu[8] [8C1], Classical Academy Junior High/Dawn Ehresman: ''Magnificent mounted magnetic bearings''

• Peter Wilson[8] [8C5], Classical Academy Junior High/Dawn Ehresman: ''Postal pods''

• Allison Rose[8] [8C13], Classical Academy Junior High/Dawn Ehresman: ''Maxime lingura''

• Chance Jurkiewicz[8] [JA5], Classical Academy Junior High/Candus Muir: ''To pot or not''

• Kate Kaczmarek[8] [JB5], Classical Academy Junior High/Candus Muir: ''The effect of classical music tempo on competitive run times''

• Gryphon Patlin[8] [JE9], Classical Academy Junior High/Dawn Ehresman: ''Drop notice''

• Ethan Gavin[7] [JF1], Classical Academy Junior High/Candus Muir: ''A bug's death: A study of diatomaceous earth and pesticides''

• Natalia Wright[8] [JG9], Classical Academy Junior High/Candus Muir: ''Battling bacteria''

## Citizens Project

• Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ''Robotic exoskeleton''

• Chloe Haerr[7] [JB9], Classical Academy Junior High/Candus Muir: ''Stress test''

## Colorado Associates in Medical Physics

• Ganin Rodriguez[8] [8C4], Corpus Christi Catholic School/Maxine Hennessey: ''Charge your mobile devices while mobile''

## Colorado Chapter of the Soil and Water Conservation Society, Junior 1

• Eirik Hedges[8] [JF3], Classical Academy Junior High/Dawn Ehresman: ''Erosion explosion''

## Colorado Chapter of the Soil and Water Conservation Society, Junior 2

• Kyra Shaner[7] [7C14], Classical Academy Junior High/Candus Muir: ''Flood prevention device''

## Colorado Chapter of the Soil and Water Conservation Society, Senior 1

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## Colorado Chapter of the Soil and Water Conservation Society, Senior 2

• Cyan Johnson[9] [SA6], The Vanguard School/Kimberly Price: ''Angle effects on plants''

## Colorado College Excellence in Community and Social Justice First

• Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ''Still sitting?''

## Colorado College Excellence in Community and Social Justice Second

• Zachary Frederic[7] [JB2], Classical Academy Junior High/Candus Muir: ''The effect of pet ownership on children's compassion''

## Colorado College Excellence in Field-Based Research First

• Benjamin Rubin[8] [JG8], Cheyenne Mountain Junior High/David Eick: ‘‘The medicine in the venom’’

## Colorado College Excellence in Field-Based Research Second

• Devin Conn[9] [SA11], The Vanguard School/Cheryl Holling: ‘‘Canine behavior in clear versus obscured sightline enclosure’’

## Colorado College Excellence in Rocky Mountain Regional Research First

• Blake Bowshot[7] [JA2], Classical Academy Junior High/Candus Muir: ‘‘Nature’s magnificent medicine: Aloe vera’’

## Colorado College Excellence in Rocky Mountain Regional Research Second

• Owen Beute[9] [SA2], The Vanguard School/Kimberly Price: ‘‘Coliform bacteria in front range water’’

## Colorado College Excellence in Sustainability and Conservation First

• Manuel Flores[12] [SC4], Miami Yoder Secondary School/Angela Golding: ‘‘Purification of water’’

## Colorado College Excellence in Sustainability and Conservation Second

• Connor Takenaka[7] [JC3], Classical Academy Junior High/Candus Muir: ‘‘Energy efficiency: The new curve’’

## Duvall Family Curiosity Award

• Tim Grammer[6] [7C5], Imagine Classical Academy/Robert Rosenberg: ‘‘Cardboard bridges falling down’’

## Economic Impact Award

• Amir Laaraj[7] [JH6], Imagine Classical Academy/Robert Rosenberg: ‘‘Shocking electricity from saltwater’’

## Estes Industries, Sr.

• John Borders[7] [7C8], Home School/Susie King: ‘‘Shapes of stealth’’

• Kyle Schoonover[9] [SC9], The Vanguard School/Cheryl Holling: ‘‘Potato guns’’

## Flagline.com Young Scientist, Junior 1st Place

• Ava Connelly[6] [JA3], Monument Academy/Kris Goodman: ‘‘Warmth without the womb’’

• Delilah Williams[6] [JF11], Monument Academy/Kris Goodman: ‘‘Plant vs. metal’’

## Flagline.com Young Scientist, Junior 2nd Place

• Tim Grammer[6] [7C5], Imagine Classical Academy/Robert Rosenberg: ‘‘Cardboard bridges falling down’’

• Ethyn Ruiz[6] [7C13], Imagine Classical Academy/Robert Rosenberg: ‘‘Hydraulic overload’’

## Flagline.com Young Scientist, Senior 1st Place

• Jessie Zimmermann[9] [SA3], The Vanguard School/Cheryl Holling: ‘‘The best way to disinfect kitchen sponges through household appliances’’

## Flagline.com Young Scientist, Senior 2nd Place

• Kyle Schoonover[9] [SC9], The Vanguard School/Cheryl Holling: ‘‘Potato guns’’

## Georgia & Charlie Matteson Award, Junior

• Eirik Hedges[8] [JF3], Classical Academy Junior High/Dawn Ehresman: ‘‘Erosion explosion’’

## Georgia & Charlie Matteson Award, Senior

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ‘‘Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo’’

## Huntington Learning Center, Junior

• Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ''Robotic exoskeleton''

## Huntington Learning Center, Senior

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ''Heating up: Using phase change materials vs. a thermal battery''

## Intel Corp. Excellence in Computer Science

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## Mu Alpha Theta

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ''Heating up: Using phase change materials vs. a thermal battery''

## NASA EARTH System Science Award

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ''Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo''

## NOAA Award

• Hailey Kressin[7] [7C2], Classical Academy Junior High/Candus Muir: ''Sayonara tsunami: Reducing a tunami's damaging impact''

## National Defense Industrial Association, 6th First

• Ethyn Ruiz[6] [7C13], Imagine Classical Academy/Robert Rosenberg: ''Hydraulic overload''

## National Defense Industrial Association, 6th Second

• Tim Grammer[6] [7C5], Imagine Classical Academy/Robert Rosenberg: ''Cardboard bridges falling down''

## National Defense Industrial Association, 7th First

• Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ''Robotic exoskeleton''

## National Defense Industrial Association, 7th Second

• Joshua Snyder[7] [JE11], Classical Academy Junior High/Candus Muir: ''Ready, aim, fire!''

## National Defense Industrial Association, 8th First

• Gabriel Wu[8] [8C1], Classical Academy Junior High/Dawn Ehresman: ''Magnificent mounted magnetic bearings''

## National Defense Industrial Association, 8th Second

• Jordan Kitch[8] [JB6], Classical Academy Junior High/Candus Muir: ''Cell phone use: The effect on cognitive recall''

## Northrop Grumman Excellence in Computer Science

• Peter Wilson[8] [8C5], Classical Academy Junior High/Dawn Ehresman: ''Postal pods''

## Northrop Grumman Excellence in Science & Engineering (7th Grade)

• Nicholas Foster[7] [7C1], Classical Academy Junior High/Candus Muir: ''Robotic exoskeleton''

• Austin Cantor[7] [7C6], Classical Academy Junior High/Candus Muir: ''It's all in the movement''

## Northrop Grumman Excellence in Science & Engineering (Sr. Div.)

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ''Heating up: Using phase change materials vs. a thermal battery''

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ‘‘Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo’’

## Old Town Bike Shop

• Norah Quirk[7] [7C15], Classical Academy Junior High/Candus Muir: ‘‘Energy down the drain!’’

• Delilah Williams[6] [JF11], Monument Academy/Kris Goodman: ‘‘Plant vs. metal’’

• Simon Schultz[7] [JF12], Classical Academy Junior High/Candus Muir: ‘‘Sunny side up’’

## Pikes Peak Justice and Peace Commission

• Abby Klapp[8] [JF5], Monument Academy/Karl Brown: ‘‘Surviving a drought’’

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ‘‘Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo’’

## Ricoh Americas

• Joshua Vu[7] [JC5], Classical Academy Junior High/Candus Muir: ‘‘Maximizing efficiency when generating clean energy’’

## Society for In-Vitro Biology

• Jessie Zimmermann[9] [SA3], The Vanguard School/Cheryl Holling: ‘‘The best way to disinfect kitchen sponges through household appliances’’

## Society of Women Engineers Jr. Division

• Allison Rose[8] [8C13], Classical Academy Junior High/Dawn Ehresman: ‘‘Maxime lingura’’

## Society of Women Engineers Sr. Division

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ‘‘Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction’’

## Stockholm Water Prize

• Owen Beute[9] [SA2], The Vanguard School/Kimberly Price: ‘‘Coliform bacteria in front range water’’

• Manuel Flores[12] [SC4], Miami Yoder Secondary School/Angela Golding: ‘‘Purification of water’’

• Kathryn Kummel[9] & Michelle Kummel[12] [SC12], Palmer High School/Geoffrey Lewis & Reed Carlson: ‘‘Using 3D drone-based digital models to investigate the fluvial geomorphology of an actively eroding arroyo’’

## U. S. Air Force

• John Borders[7] [7C8], Home School/Susie King: ‘‘Shapes of stealth’’

• Gabriel Wu[8] [8C1], Classical Academy Junior High/Dawn Ehresman: ‘‘Magnificent mounted magnetic bearings’’

• Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ‘‘Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization’’

• Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ‘‘Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction’’

## U. S. Metric Association Certificate of Achievement

• Mark Bloomfield[10] [SC1], Coronado High School/David Bloomfield: ‘‘Heating up: Using phase change materials vs. a thermal battery’’

## U. S. Navy Science Award, Jr.

• Hailey Kressin[7] [7C2], Classical Academy Junior High/Candus Muir: ‘‘Sayonara tsunami: Reducing a tunami’s damaging impact’’

• Luke Nielsen[7] [7C9], Classical Academy Junior High/Candus Muir: ‘‘Still sitting?’’

## U. S. Navy Science Award, Sr.

- Will Stone[9] [SA12], The Vanguard School/Cheryl Holling: ''Effects of cleaning supplies on *staphococcus epidermis*''
- Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''

## UCCS Dept. of Chemistry & Biochemistry

- Jenna Salvat[11] [SC11], Coronado High School/Lynne Williams: ''Geophone Phase 1: Synthesis and characterization of a ZnO NiO P-N type semiconductor junction''

## Yale Science & Engineering Association

- Katelynn Salmon[11] [SA10], Palmer Ridge High School/Tom Salmon: ''Synthesis of perfluorinatedpyridine-acetylene for click-coupled linear polymerization''