

# **Missouri Academy of Sciences 58th Annual Meeting**



**Junior Division**

**Central Methodist University  
April 22, 2022**

Sponsored by

# **MISSOURI ACADEMY OF SCIENCE JUNIOR DIVISION OFFICERS**

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**Missouri Southern State University**

**Dr. Teresa Boman**  
**Missouri Southern State University**

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## **MISSOURI ACADEMY OF SCIENCE OFFICE**

Missouri Academy of Sciences  
W.C. Morris 116A  
University of Central Missouri  
Warrensburg, MO 64093

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Welcome to the Missouri Academy of Science Annual Meeting!

Central Methodist University is honored to host the Annual Meeting and the to recognize the hard work of each participant. You have dedicated your time and efforts to research in the sciences and other fields. Throughout this meeting you will engage in the sharing of ideas, theories, and demonstrations of knowledge that will perhaps advance the future of our world.

You will go forth from your experience during this time with gained skills, experiences, and ways of seeing the world around us. Engage with your colleagues, ask questions, and most of all, have fun!

Take a few moments to look around campus, and experience the facilities and culture of DigitalU. We are so glad you are here with us!

Sincerely,

Dr. Rita Gulstad

# Institutional Sponsor



Founded in 1854, Central Methodist University is a four-year, private, liberal arts university. CMU's main campus, home to the College of Liberal Arts and Science (CLAS) is located in Fayette, Missouri, enrolling 1100 students. More than 4,000 students attend CMU's College of Graduated and Extended Studies (CGES), which offers classes online and at sites across Missouri and the region. CMU is affiliated with the United Methodist Church and welcomes students of all faiths

Central Methodist University fosters a diverse and caring community, empowering students to become lifelong learners, committed to academic excellence, prepared to engage in a complex world.

The Central Methodist University community, consisted with its United Methodist heritage, strives for academic excellence, individual achievement and social responsibility. As members of that community, we believe in:

- 1) Seeking knowledge, truth and wisdom;
- 2) Valuing freedom, honesty, civility and diversity;
- 3) Living lives of service and leadership; and
- 4) Taking responsibility for ourselves and the communities in which we live

Central Methodist University is known for its high quality undergraduate and graduate educational programs, its values-centered learning experiences and longstanding church relationship, its strong liberal arts tradition, its emphasis on character and leadership development, and the success of its graduates through their further educational and professional pursuits. Characterized by academic excellence and proactive, personalized student services, programs are offered in Fayette and statewide via distance learning technologies as well as through partnerships with schools, churches, hospitals, and other institutions of higher education

# SCHEDULE OF EVENTS

**Friday, April 22, 2022**

8:30 AM – 10:00 AM	General Registration <b>Stedman Hall of Science, 1<sup>st</sup> Floor Lobby</b>
10:00 AM-10:30 AM	Welcome and Student Orientation <b>Stedman Hall of Science, Inman Lecture Hall</b> Drs. Teresa Boman and Mary Kilmer, State Co-Directors
10:30 AM – 12:30 PM	High School Concurrent Paper Sessions <b>Stedman Hall of Science, Floors 1-3 (see schedule below)</b>
10:30 AM – 12:30 PM	Middle School Concurrent Paper Sessions <b>Stedman Hall of Science, 4<sup>th</sup> Floor (see schedule below)</b>
12:30 PM – 1:45 PM	<b>Break for Lunch</b>
2:00 PM – 3:00 PM	Campus Tours OR Science Improv
3:00 PM – 5:00 PM	Middle School Finalists' Presentations <b>Stedman Hall of Science, Room 305</b>
3:00 PM – 5:00 PM	High School Finalists' Presentations <b>Stedman Hall of Science, Room 307</b>
6:00 PM – 7:00 PM	Middle and High School Awards Ceremony <b>Stedman Hall of Science, Inman Lecture Hall</b>

Please Note: One purple ribbon Finalist from each paper section will normally be chosen for the Finalist Presentations. It is also possible that no purple ribbons will be given from a particular category. The Finalists will be posted in the registration area as they are selected.

## MIDDLE SCHOOL

<b>Agriculture and Plant Science</b>  <b><i>Stedman Hall, Room 404</i></b>	<b>Medicine and Human Health Microbiology/Cell Molecular Biology Behavioral and Social Science</b>  <b><i>Stedman Hall, Room 405</i></b>
10:30 Clare Maloney* 10:45 Cayden Patterson 11:00 Isabel Morris 11:15 Gage Smith 11:30 Ellie Burns 11:45 Madison Cole	10:30 Cora Hatfield 10:45 Keli Dumor 11:00 Nicole Westhusing 11:15 Sebastian Fischer
<b>Engineering and Physics Computer Science and Mathematics</b>  <b><i>Stedman Hall, Room 406</i></b>	<b>Biology and Environmental Science</b>  <b><i>Stedman Hall, Room 407</i></b>
10:30 Loyal Davis 10:45 Larry Quade	10:30 Chloe Runk 10:45 Alton Tellman 11:00 Olivia Leonard 11:15 Clara Harden 11:30 Grace Law 11:45 Roman Stanislawski

\* Virtual Presentation via Zoom

# HIGH SCHOOL

<b>Microbiology and Cell/Molecular Biology</b> <b><i>Stedman Hall, Room 105</i></b>	<b>Medicine and Human Health</b> <b><i>Stedman Hall, Room 107</i></b>
10:30 Andrew Bufalo* 10:45 Nathan Hoenig* 11:00 Lucas Skidmore 11:15 Kaden Luker 11:30 Current Smith 11:45 Hanna Spoon	10:30 Keegan Dowdney* 10:45 Sophie Chang* 11:00 Ritika Jagarlamudi* 11:15 Jacob Arnold* 11:30 Kim Nguyen 11:45 George Jia 12:00 Dakota Agee 12:15 Bailey O'Neal
<b>Engineering and Physics</b> <b>Computer Science and Mathematics</b> <b><i>Stedman Hall, Room 307</i></b>	<b>Biology and Environmental Sciences</b> <b><i>Stedman Hall, Room 203</i></b>
10:30 Noah Patton 10:45 Kieth Bass 11:00 Connor Starkey* 11:15 Clare Tyson* 11:30 Aidan Reed* 11:45 Owen Howser 12:00 Johnathon Westhusing	10:30 Alice Liu* 10:45 Jacob Hogue 11:00 Jonah Visser 11:15 Cheyannah Rincon-Campos 11:30 Emma Shields 11:45 Shrihari Nagarajan
<b>Behavioral and Social Science</b> <b>Chemistry and Biochemistry</b> <b><i>Stedman Hall, Room 108</i></b>	<b>Agriculture and Plant Science</b> <b><i>Stedman Hall, Room 205</i></b>
10:30 Cassie Sun* 10:45 Zackary Cline 11:00 Ayden Meckley	10:30 Josie Kunkel* 10:45 Zoe Martonfi 11:00 Layla Strickland 11:15 Ella Hinson 11:30 Noah Lynch 11:45 Reagan Newell

\* Virtual Presentation via Zoom





# MIDDLE SCHOOL Presentations

## STEDMAN HALL ROOM 404

### Agriculture and Plant Science

- 10:30 AM **Clare Maloney (VIRTUAL)**  
*Comparing Changes in Canine Heart Rate and Blood Pressure in Response to Male versus Female Voices*  
St. Joseph Catholic School, Farmington, MO  
Sponsoring Teacher: John England
- 10:45 AM **Cayden Patterson**  
*Mushroom Madness: Comparing Worm Castings to Bokashi Bran as Grain Spawn Supplements for Oyster Mushroom Cultivation*  
Tuscumbia Middle School, Tuscumbia, MO  
Sponsoring Teacher: Constance Wyrick
- 11:00 AM **Isabel Morris**  
*The Effect of Natural Dewormers on Parasitic Worms*  
St. Patrick Catholic School, Rolla, MO  
Sponsoring Teacher: Didi Fischer
- 11:15 AM **Gage Smith**  
*The CNDM*  
Camdenton Middle School, Camdenton, MO  
Sponsoring Teacher: Amy Larrington
- 11:30 AM **Ellie Burns**  
*Nutrients in the Soil*  
Camdenton Middle School, Camdenton, MO  
Sponsoring Teacher: Amy Larrington
- 11:45 AM **Madison Cole**  
*Hormones to Root For: Comparing Rooting Hormones: Natural vs. Commercially Available*  
Tuscumbia Middle School, Tuscumbia, MO  
Sponsoring Teacher: Constance Wyrick

## STEDMAN HALL ROOM 405

### Medicine and Human Health

10:30 AM     **Cora Hatfield**  
*Are Fingerprints in Your Genes?*  
Laura Speed Elliot Middle School  
Sponsoring Teacher: Cassie Goyer

### Microbiology and Cell/Molecular Biology

10:45 AM     **Keli Dumor**  
*The Effect of Plant Extracts on the Growth of Bacteria*  
St. Patrick Catholic School, Rolla, MO  
Sponsoring Teacher: Didi Fischer

11:00 AM     **Nicole Westhusing**  
*Finding an Efficient Way to Lower Escherichia Coli in the Lake of the Ozarks*  
Camdenton Middle School, Camdenton, MO  
Sponsoring Teacher: Amy Larrington

### Behavioral and Social Science

11:15 AM     **Sebastian Fischer**  
*The Effect of the Type of Food on the Time it Takes a Hamster to Get to the Food*  
St. Patrick Catholic School, Rolla, MO  
Sponsoring Teacher: Didi Fischer

## STEDMAN HALL ROOM 406

### Computer Science and Mathematics

10:30 AM

**Loyal Davis**

*The Effect of Different Ways to Roll a Dice on the Distribution of the Rolls*

St. Patrick Catholic School, Rolla, MO

Sponsoring Teacher: Didi Fischer

### Engineering and Physics

10:45 AM

**Larry Quade**

*The Power of Citrus*

Camdenton Middle School, Camdenton, MO

Sponsoring Teacher: Amy Larrington

## STEDMAN HALL ROOM 407

### Biology and Environmental Science

- 10:30 AM **Chloe Runk**  
*Cow vs. Creek: How do the Waste Products of Cattle Affect the Water Quality of a Creek System*  
St. Joseph Catholic School, Farmington, MO  
Sponsoring Teacher: John England
- 10:45 AM **Alton Tellman**  
*Chimney Challenges: Investigating the Relationship Between Burrow Diameter and Chimney Height in Devil Crayfish*  
Tuscumbia Middle School, Tuscumbia, MO  
Sponsoring Teacher: Constance Wyrick
- 11:00 AM **Olivia Leonard**  
*Investigating the Effects of Fertilizer Runoff on Aquatic Life Utilizing Daphnia magna as a Bioindicator: A Baseline Study*  
Seneca Junior High School, Seneca, MO  
Sponsoring Teacher: Natalie Hughes
- 11:15 AM **Clara Harden**  
*The Effect of Substances on the Melting Time of Ice*  
St. Patrick Catholic School, Rolla, MO  
Sponsoring Teacher: Didi Fischer
- 11:30 AM **Grace Law**  
*The Power of Plants*  
Camdenton Middle School, Camdenton, MO  
Sponsoring Teacher: Amy Larrington
- 11:45 AM **Roman Stanislawski**  
*The Effect of Being in a Rural Area and an Urban Area on the Amount of Birds*  
St. Patrick Catholic School, Rolla, MO  
Sponsoring Teacher: Didi Fischer



**HIGH SCHOOL**

**Presentations**

## STEDMAN HALL ROOM 105

### Microbiology and Cell/Molecular Biology

- 10:30 AM     **Andrew Bufalo (VIRTUAL)**  
*Inhibition of p38 Kinase Reduces DUX4-Induced Apoptosis in Human FSHD Patient Myotubes*  
Wentzville Holt High School, Wentzville, MO  
Sponsoring Teacher: Jennifer Hess
- 10:45 AM     **Nathan Hoenig (VIRTUAL)**  
*The Effects of Geographic Location on Formation of Truffle Microbiome*  
Wentzville Holt High School, Wentzville, MO  
Sponsoring Teacher: Jennifer Hess
- 11:00 AM     **Lucas Skidmore**  
*The Effects of Heat and Pressure on Staphylococcus Epidermis Bacteria*  
Jackson Senior High School, Jackson, MO  
Sponsoring Teacher: Leanne Thele
- 11:15 AM     **Kaden Luker**  
*Using Micrococcus Luteus, Lactococcus Lactis and Bacillus Cereus Bacteria and the Breaking Down of Microplastics*  
Jackson Senior High School, Jackson, MO  
Sponsoring Teacher: Leanne Thele
- 11:30 AM     **Current Smith**  
*Bacteria Found in Artificial Formula for Babies/Infants*  
St. Clair High School, St. Clair, MO  
Sponsoring Teacher: Ben Martin
- 11:45 AM     **Hanna Spoon**  
*Bacterial Growth in Running Shoes*  
St. Clair High School, St. Clair, MO  
Sponsoring Teacher: Ben Martin

## STEDMAN HALL ROOM 107

### Medicine and Human Health

- 10:30 AM      **Keegan Dowdy (VIRTUAL)**  
*Otitis Externa (Swimmers Ear): The Development of a Bioactive Glass Based Laminated Ear Plug for Applications in Diving and Swimming*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 10:45 AM      **Sophie Chang (VIRTUAL)**  
*The Effect of Antisense Oligonucleotides on the Expression Level of Human Progranulin Associated with Frontotemporal Dementia*  
Marquette High School, Chesterfield, MO  
Sponsoring Teacher: Cathy Farrar
- 11:00 AM      **Ritika Jagarlamudi (VIRTUAL)**  
*CRISPR Cas9 Mediation of the rtn4b Genome Demonstrates a Nogo-B Dependent Neuronal Tissue Regeneration Mechanism in Zebrafish*  
Marquette High School, Chesterfield, MO  
Sponsoring Teacher: Cathy Farrar
- 11:15 AM      **Jacob Arnold (VIRTUAL)**  
*The Efficacy of Antimicrobial Cleaning Products and Their Impact on the Respiratory System*  
Eldon High School, Eldon, MO  
Sponsoring Teacher: Peggy Veatch
- 11:30 AM      **Kim Nguyen**  
*The Effect of Medicinal Mushrooms on Saccharomyces cerevisiae: Using Saccharomyces cerevisiae as Model Organism for Cancer Research*  
Joplin High School, Joplin, MO  
Sponsoring Teacher: Karisa Boyer
- 11:45 AM      **George Jia**  
*Cow Milk Derived Exosomes and Their Potential Application as Drug Carriers*  
Rock Bridge High School, Columbia, MO  
Sponsoring Teacher: Sarah Laster



## STEDMAN HALL ROOM 107

### Medicine and Human Health (Continued)

12:00 PM

**Dakota Agee**

*The Effect of Cannabidiol Oil on Cortisol Levels in Lab Mice*

Joplin High School, Joplin, MO

Sponsoring Teacher: Karisa Boyer

12:15 PM

**Bailey O'Neal**

*Effects of Heat Damage on DNA Collection from Teeth*

Jackson Senior High School, Jackson, MO

Sponsoring Teacher: Leanne Thele

## STEDMAN HALL ROOM 108

### Behavioral and Social Science

10:30 AM      **Cassie Sun (VIRTUAL)**  
*Ability to Overcome Initial Impulses to Motivational Stimuli Evidenced by PreFrontal Cortex Activity*  
Marquette High School, Chesterfield, MO  
Sponsoring Teacher: Cathy Farrar

10:45 AM      **Zackary Cline**  
*Food Wars: Investigating the Perception of Meat-Based Food vs. Their Plant-Based Alternatives*  
Tuscumbia High School, Tuscumbia, MO  
Sponsoring Teacher: Constance Wyrick

### Chemistry and Biochemistry

11:00 AM      **Ayden Meckley**  
*Surveying Feminine Hygiene Products for Per- and Polufluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) coupled with Supplementary Analytical Testing Methods*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves

## STEDMAN HALL ROOM 203

### Biology and Environmental Science

- 10:30 AM      **Alice Liu (VIRTUAL)**  
*Identifying Relationships Between Weather Factors and Landslide Attributes in the United States Midwest*  
Marquette High School, Chesterfield, MO  
Sponsoring Teacher: Cathy Farrar
- 10:45 AM      **Jacob Hogue**  
*Futuristic Uses of Recycled Plastics*  
Montgomery County R-II High School, Montgomery City, MO  
Sponsoring Teacher: Kiristie Hogue
- 11:00 AM      **Jonah Visser**  
*Now You See It, Now You Don't! Investigating the Effectiveness of Various Agri-Waste Biochars as Adsorbents for Methylene Blue in Aqueous Solutions*  
Tuscumbia High School, Tuscumbia, MO  
Sponsoring Teacher: Constance Wyrick
- 11:15 AM      **Cheyannah Rincon-Campos**  
*Decomposition of Hair in Septic Tank*  
St. Clair High School, St. Clair, MO  
Sponsoring Teacher: Ben Martin
- 11:30 PM      **Emma Shields**  
*The Effect of Replacing Surfactants with Fossil Fuel Free Alternatives on the Toxicity of Ceriodaphnia dubia*  
Jackson Senior High School, Jackson, MO  
Sponsoring Teacher: Leanne Thele
- 11:45 PM      **Shrihari Nagarajan**  
*The Utilization of Biochar and Bacillus subtilis to Remove Regionally Prevalent Heavy Metals from Wastewater*  
Thomas Jefferson Independent School, Joplin, MO  
Sponsoring Teacher: Christopher Rupar

## STEDMAN HALL ROOM 205

### Agriculture and Plant Science

- 10:30 AM     **Josie Kunkel (VIRTUAL)**  
*Determining the Potential to Utilize Artificial Light as a Method of Control for the Agricultural Pest *Spodoptera frugiperda*: A Study of Insect Immunology with Applications in Integrated Pest Management*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 10:45 AM     **Zoe Martonfi**  
*The Effect of Organic Oil on the Residual Action and Efficacy of Insecticidal Soap*  
Eldon High School, Eldon, MO  
Sponsoring Teacher: Peggy Veatch
- 11:00 AM     **Layla Strickland**  
*Study and Application of Polarization-Based Traps for Use Against Blood-Sucking *Tabanidae**  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 11:15 AM     **Ellan Hinson**  
*The Effects of Different Conditions on Ozark Chinquapin Trees*  
St. Clair High School, St. Clair, MO  
Sponsoring Teacher: Ben Martin
- 11:30 AM     **Noah Lynch**  
*Testing the Effects of Cold Plasma on the Germination Rate of Seeds*  
Immaculate Conception High School, Jackson, MO  
Sponsoring Teacher: Leanne Thele
- 11:45 AM     **Reagan Newell**  
*Using Invasive Species *Typha* Cattail Plant as a Safe and Effective Plant Fertilizer*  
Jackson Senior High School, Jackson, MO  
Sponsoring Teacher: Leanne Thele

## STEDMAN HALL ROOM 307

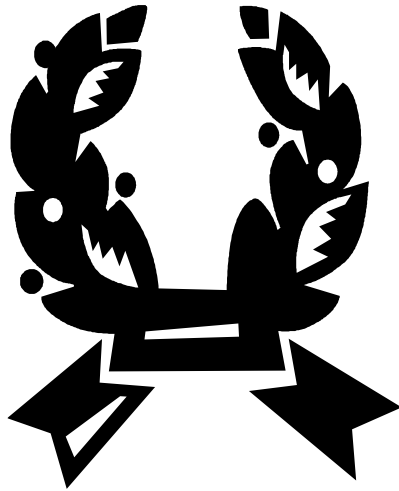
### Computer Science and Mathematics

- 10:30 AM     **Noah Patton**  
*The Effect of Bit Parallelization on Throughput of 4 kiB at Low Clock Frequencies*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 10:45 AM     **Keith Bass**  
*Utilization of Artificial Intelligence (AI) Software for Development of an Optimal Use Model for Reduction of Commercial Pesticide Application Rates*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 11:00 AM     **Connor Starkey (VIRTUAL)**  
*Discovering the Potential of LiDAR Field Detection to Improve Space Debris Recognition and Evasion*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves

## STEDMAN HALL ROOM 307

### Engineering and Physics

- 11:15 AM     **Clare Tyson (VIRTUAL)**  
*Comparing the Relative Seismic Resistance of Different Structural Aspects of the Pantheon*  
Wentzville Holt High School, Wentzville, MO  
Sponsoring Teacher: Jennifer Hess
- 11:30 AM     **Aidan Reed (VIRTUAL)**  
*The Viability of Hydrogen and Oxygen as a Replacement Fuel for Gasoline-based IC Engines*  
Wentzville Holt High School, Wentzville, MO  
Sponsoring Teacher: Jennifer Hess
- 11:45 AM     **Owen Howser**  
*Quieting the Rumble: Engineering a Noise Reduction Rumble Strip Design Utilizing Destructive Interference*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves
- 12:00 PM     **Johnathon Westhusing**  
*Testing the Implementation of Morphing Winglet Designs with the Use of Computational Fluid Dynamics in Order to Determine its Efficiency*  
Camdenton High School, Camdenton, MO  
Sponsoring Teacher: Christopher Reeves



# AWARDS

## KIRKPATRICK SENIOR EAGLE AWARD

Eva and Kemp's Kirkpatrick have supported the Junior Division from its historical beginnings. Eva served in the past as State director for the Junior Division for two consecutive three-year terms (a record). In recognition of the Kirkpatrick family's tireless efforts to build the Junior Division from the ground up to what it is today, the two top Senior High papers are recognized each year with this trophy donated by the Kirkpatricks.

1980	Peggy Sue Nelson	Highland HS, Ewing	1981	Lei Ann Laster John Phillips	Cooter HS, Cooter Southland HS, Cardwell
1982	Yvette Barera	Cor Jesu Academy, St. Joseph	1983	Richard Roberts	Central HS, St. Joseph
1984	Karen Stoll Albert Fook Ming Chew	Poplar Bluff HS, Poplar Bluff Carl Junction HS, Carl Junction Carl Junction HS, Carl Junction	1985	Karen Stoll William Clifton	Poplar Bluff HS, Poplar Bluff Neosho HS, Neosho
1986	Anna Miller Anna Joern	Carl Junction HS, Carl Junction Ursuline Academy, St. Louis	1987	Charisse Hills Jeff Zweerink	Glendale HS, Springfield Central HS, St. Joseph
1988	Kim Shaw Jamal Green	Clearwater HS, Piedmont Benton HS, St. Joseph	1989	Andrew Gordon Jamal Green	Glendale HS, Springfield Benton HS, St. Joseph
1990	John Dyer Vijay Sreenarasimhaiah	Central HS, St. Joseph Nevada HS, Nevada	1991	Brenda Fite Joshua Summers	Central HS, St. Joseph Liberty HS, Liberty
1992	Amy Lawson Sheela Sathyanarayana	Central HS, Joplin Pembroke Hill, Kansas City	1993	Amy Lawson Jennifer Runsey	Central HS, Joplin Liberty HS, Liberty
1994	Amy Lawson Connie Cheung	Central HS, Joplin Pembroke Hill, Kansas City	1995	Chad Evans Keith Bowe	Central HS, St. Joseph Grundy County HS, Laredo
1996	Rhea Gertken Ian Wann	Ursuline Academy, St. Louis Central HS, St. Joseph	1997	Terry Baynes Deepa Mangalat	Pembroke Hill, Kansas City Joplin HS, Joplin
1998	Deepa Mangalat Mallik Tella	Joplin HS, Joplin Pembroke Hill, Kansas City	1999	Jonathan Newport Amity Pecenka	Glendale HS, Springfield Osage HS, Kaiser
2000	Brandon Lang Matthew Murphy	New Franklin HS, New Franklin Lafayette HS, St. Joseph	2001	Eric Rahm Robbie Hart	Jefferson City HS, Jefferson City Cole HS, Eldon
2002	Siir Kilkis Krishnan Pabniappan	Greenwood HS, Springfield Hickman HS, Columbia	2003	Daniel Castle Adam Vogel	St. Joseph Christian HS, St. Joseph St. Charles West HS, St. Charles
2004	Chelsea Grigory Derrick Helton	Sikeston HS, Sikeston Tuscumbia HS, Tuscumbia	2005	Chelsey Hall Kristen Wright	Seneca HS, Seneca Tuscumbia HS, Tuscumbia
2006	Elena Ovaitt Hazar Kidir	West Platte HS, Weston Jefferson City HS, Jefferson City	2007	Alyssa Ovaitt Meghna Srinath	West Platte HS, Weston Hickman HS, Columbia
2008	Michelle Kropf Michael Stockwell	Seneca HS, Seneca Tuscumbia HS, Tuscumbia	2009	Sirish Veligati Jay Gulshen	Central HS, St. Joseph Camdenton HS, Camdenton
2010	Jay Gulshen Sonia Rao	Camdenton HS, Camdenton Camdenton HS, Camdenton	2011	Bailee Slack Kori Haley	Camdenton HS, Camdenton Tuscumbia HS, Tuscumbia
2012	Cindy Jiang Thomas Palmer	Central HS, St. Joseph Camdenton HS, Camdenton	2013	Ashley Wyrick Tara Humphreys	Tuscumbia HS, Tuscumbia Tuscumbia HS, Tuscumbia
2014	Tyler Carpenter Elsa Kunz	Camdenton HS, Camdenton Central HS, St. Joseph	2015	NOT AWARDED	
2016	Anthony Eckdahl Brock Andreasen	Central HS, St. Joseph Camdenton HS, Camdenton	2017	Dustin Bax Vincent Khor	Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton
2018	Miranda Sauer River Wise	Camdenton HS, Camdenton Camdenton HS, Camdenton	2019	Charles Stone Lucas Mosher	Wentzville HS, Wentzville Camdenton HS, Camdenton
2020	Competition cancelled due to COVID-19 pandemic		2021	Emma Price Elijah Jones	Camdenton HS, Camdenton Jackson HS, Jackson



## KIRKPATRICK JUNIOR EAGLE AWARDS

In 1993, Eva and Kems Kirkpatrick, long-time supporters of Junior Division activities, chose to extend their Senior High "Eagle" trophy recognition already in place for the two top Senior High finalists to include as well the two top Junior High finalists. The following are recipients of these awards in past years (first awarded, 1993.)

1993	Beth Lawson Tara Thiermann	South MS, Joplin Versailles MS, Versailles	1994	Beth Lawson Jesse Blomberg	South MS, Joplin Versailles MS, Versailles
1995	Deborah Sieberg Jason Squires	Spring Garden MS, St. Joseph Bode MS, St. Joseph	1996	Karli Echterling Stanley W. Grinter	Bode MS, St. Joseph Liberty JH, Liberty
1997	Ami Patel Brandon Lang	Bode MS, St. Joseph New Franklin MS, New Franklin	1998	Jay Archer John Hornaday	St. Francis MS, St. Joseph Bode MS, St. Joseph
1999	Samir Sheth Megan Varma	Bode MS, St. Joseph Bode MS, St. Joseph	2000	Cody Conner Sarah Moreau	Robidoux MS, St. Joseph New Franklin MS, New Franklin
2001	Lindsey Williams John Dunham	Spring Garden MS, St. Joseph Bode MS, St. Joseph	2002	Mindy Briscoe Michael Stockwell	Moberly MS, Moberly Russellville MS, Russellville
2003	Nathan Kinast Elena Ovaitt	Thomas Jefferson IDS, Joplin West Platte MS, Weston	2004	Michael Stockwell Chaz Robbins	Tuscumbia MS, Tuscumbia Mid-Buchanan MS, Faucet
2005	Josh Habermehl Tyler Dietzschold	Moberly MS, Moberly Chillicothe MS, Chillicothe	2006	Zach Beattie Andrew Kozminski	Savannah MS, Savannah Savannah MS, Savannah
2007	Victoria Fritchey Taylor Gaines	Tuscumbia MS, Tuscumbia Seneca MS, Seneca	2008	Taylor Gaines Tara Humphreys	Seneca MS, Seneca Tuscumbia MS, Tuscumbia
2009	Jacob Cogan Cindy Jiang	West Platte JH, Weston Bode MS, St. Joseph	2010	Ashley Wyrick Matthew Estes	Tuscumbia MS, Tuscumbia Seneca MS, Seneca
2011	Rachel Butterfield Lauren Haley	Seneca MS, Seneca Chillicothe MS, Chillicothe	2012	Lydia Reitzel Andrew Benckendorf	Delta R-V MS, Delta McKinley CLA, St. Louis
2013	NOT AWARDED		2014	Collin Gentry Madison Wade	Bode MS, St. Joseph Seneca MS, Seneca
2015	NOT AWARDED		2016	Shelby Miller Isabella Wiebelt-Smith	Chillicothe MS, Chillicothe Bode MS, St. Joseph
2017	Isabella Wiebelt-Smith Daniel Read	Bode MS, St. Joseph St. Patrick Catholic, Rolla	2018	Nicky Dawes Leah Laurencio	St. Patrick Catholic, Rolla Chillicothe MS, Chillicothe
2019	Jacob Hogue Andrew Haas	Montgomery City MS, Montgomery City Camdenton MS, Camdenton	2020	Competition cancelled due to COVID-19 pandemic	
2021	Libby Buchheit Sennam Dumor	Jackson MS, Jackson St. Patrick MS, Rolla			

## AMY AND BETH LAWSON MICROBIOLOGY AWARD

This award recognizes the best bacteriology project by a middle level student. Amy and Beth Lawson, daughters of the District Director, Mike Lawson, participated and excelled in the Junior Academy program throughout their middle school and high school years. Amy and Beth have built upon their successes in the Junior Academy as they enter their careers. This award serves to encourage our next generation of doctors and researchers. The following Junior High students received this award in past years (first awarded, 2004)

2004	Haley Daus	Thomas Jefferson IDS, Joplin	2005	Nicloe Molumby	Mid-Buchanan HS, Faucett
2007	Haleigh White	Mid-Buchanan HS, Faucett	2006	Shaylyn Cooksey	Moberly MS, Moberly
2008	Emily Wilson	Parkway Central MS, St. Louis	2009	Taylor Gaines	Seneca MS, Seneca
2010	Matthew Estes	Seneca MS, Seneca	2011	Ashley Wyrick	Tuscumbia MS, Tuscumbia
2012	NOT GIVEN		2013	Emma Leamer	Chillicothe MS, Chillicothe
2014	NOT GIVEN		2016	Isabella Wiebelt-Smith	Bode MS, St. Joseph
2017	Isabella Wiebelt-Smith	Bode MS, St. Joseph	2018	Connor Stockam	South Middle MS, Joplin
2019	Andrew Haas	Camdenton MS, Camdenton	2020	Competition cancelled due to COVID-19 pandemic	
2021	Hailey Henderson	Jackson MS, Jackson			

## PAULA MACY MEMORIAL AWARD

This award recognizes the best project that has been done without using the resources of a university of university-based sponsor. It is to honor a woman, Paula, whose courage and determination as well as dedication to the sciences should inspire us all.

2014	Mary Meyers	Mid-Buchanan HS, Faucett	2016	NOT AWARDED	
2017	Ben Meyer	Wentzville Holt HS, Wentzville	2018	Charles Stone	Wentzville HS, Wentzville
2019	Leah Gihring	Home-schooled	2020	Competition cancelled due to COVID-19 pandemic	
2021	Isabella Sotlar	Joplin HS, Joplin			

## MIDDLE SCHOOL PRESENTATION AWARDS

These awards recognized the middle school students who are considered to have the best oral presentation in their specific category. Winning students receive a certificate and a cash prize.

2018	Life Sciences I	Lewis Page	Smithton MS, Columbia	Sponsored by MO-SCI Corporation
	Life Sciences II	Leah Laurencio	Chillicothe MS, Chillicothe	Sponsored by MO-SCI Corporation
	Physical Sciences	Nicky Dawes	St. Patrick MS, Rolla	Sponsored by MO-SCI Corporation
	Engineering	Robbie Criddle	Immaculate Conception MS, Jackson	Sponsored by MO-SCI Corporation
2019	Life Science I	Eve Jones	Immaculate Conception MS, Jackson	Sponsored by MO-SCI Corporation
	Chemistry	Jacob Hogue	Montgomery City MS, Montgomery City	Sponsored by MO-SCI Corporation
	Physics and Engineering	Hailey Burnett	Immaculate Conception MS, Jackson	Sponsored by MO-SCI Corporation
	Environmental Science	Nicky Dawes	St. Patrick MS, Rolla	Sponsored by MO-SCI Corporation
	Agriculture and Plant Science	Troy Zeilstra	Brunswick MS, Brunswick	Sponsored by MO-SCI Corporation
	Behavioral and Social Science	Eyram Dumor	St. Patrick MS, Rolla	Sponsored by MO-SCI Corporation
2020	Competition cancelled due to COVID-19 pandemic			
2021	Agriculture and Plant Science	Zackary Cline	Tuscumbia MS, Tuscumbia	Sponsored by Columbia College
	Microbiology/Cell and Molecular Biology/Environmental Science	Hailey Henderson	Jackson MS, Jackson	Sponsored by Columbia College
	Engineering/Physics	Libby Buchheit	Jackson MS, Jackson	Sponsored by Columbia College
	Chemistry and Biochemistry	Grace Law	Camdenton MS, Camdenton	Sponsored by Columbia College
	Medicine and Human Health	Aidyn O' Daniel	Jackson MS, Jackson	Sponsored by Columbia College
	Behavioral and Social Science	Seenam Dumor	St. Patrick MS, Rolla	Sponsored by Columbia College
		Brooklyn Pendleton	Tuscumbia MS, Tuscumbia	Sponsored by Columbia College

## HIGH SCHOOL PRESENTATION AWARDS

These awards recognized the high school students who are considered to have the best oral presentation in their specific category. Winning students receive a certificate and a cash prize. (first awarded, 2018).

2018	Life Sciences I	Andrew Vehige	Timberland HS, Wentzville	Sponsored by MO-SCI Corporation
	Life Sciences II	Charles Stone	Wentzville HS, Wentzville	Sponsored by MO-SCI Corporation
	Life Sciences III	Miranda Sauer	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
	Environmental Science	Hannah Rogers	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
	Physical Sciences/Engineering	River Wise	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
2019	Agriculture and Plant Sciences	Ryan Dodds	Eldon HS, Eldon	Sponsored by MO-SCI Corporation
	Behavioral Science	Grace Nielson	Joplin HS, Joplin	Sponsored by MO-SCI Corporation
	Chemistry and Computer Science	Lucas Mosher	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
	Environmental Science	Preston Barron	Moberly HS, Moberly	Sponsored by MO-SCI Corporation
	Medicine and Human Health	Charles Stone	Wentzville HS, Wentzville	Sponsored by MO-SCI Corporation
	Microbiology	Jillian Bernabe	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
	Life Science	Destinie Turis	Eldon HS, Eldon	Sponsored by MO-SCI Corporation
	Engineering and Physics	Drake Snyder	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
2020	Competition cancelled due to COVID-19 pandemic			
2021	Engineering and Physics I	Ethan Dunsworth	Wentzville HS, Wentzville	
	Engineering and Physics II	Emily Willis	Camdenton HS, Camdenton	
	Biology and Environmental Science	Emma Price	Camdenton HS, Camdenton	
	Agriculture and Plant Science	Maya Irvine	Camdenton HS, Camdenton	
	Microbiology and Cell/Molecular Biology	Nicholas Faiferlick	Camdenton HS, Camdenton	
	Behavioral and Social Science	Oviya Srihari	Ladue Horton Watkins HS, St. Louis	
	Chemistry and Biochemistry	Elijah Jones	Jackson HS, Jackson	
Medicine and Human Health	Jillian Bernabe	Camdenton HS, Camdenton		

## STUDENT ACHIEVEMENT AWARD (ORAL PRESENTATION)

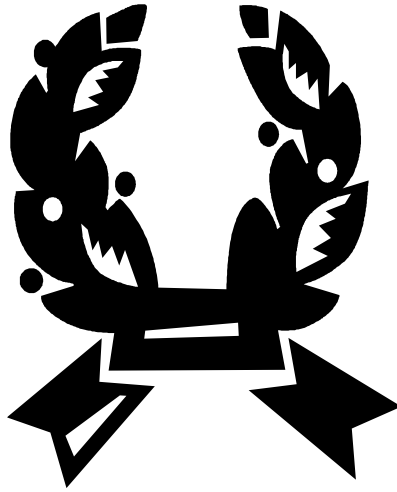
This award of a plaque recognizes the best oral presentation by a high school student. The winning student also receives funding to help cover the cost of registration for the National Association of the Academies of Science meeting, as well as to provide funding to travel to this meeting.

2018	Hannah Rodgers	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
2019	Charles Stone	Wentzville HS, Wentzville	Sponsored by MO-SCI Corporation
2020	Competition cancelled due to COVID-19 pandemic		
2021	Emma Price	Camdenton HS, Camdenton	Sponsored by Columbia College

## OUTSTANDING MIDDLE AND HIGH SCHOOL TEACHER AWARD

This award of a plaque and \$50 cash recognizes outstanding teachers who have made significant contribution to students' participation at the Missouri Junior Academy of Science. Teachers are also awarded research funding to be used for future student research projects.

2016	Mrs. Gail Drallmeier	St. Patrick Catholic School, Rolla	Sponsored by MO-SCI Corporation
	Mr. Chris Reeves	Camdenton High School, Camdenton	Sponsored by MO-SCI Corporation
2017	Mrs. Paula Burkhart	Moberly Middle School, Moberly	Sponsored by MO-SCI Corporation
	Ms. Teresa Freeman	Mid-Buchanan High School, Faucett	Sponsored by MO-SCI Corporation
2018	Mr. Tim Mulford	Camdenton Middle School, Camdenton	Sponsored by MO-SCI Corporation
	Mrs. Karisa Boyer	Joplin High School, Joplin	Sponsored by MO-SCI Corporation
2019	Ms. Abbie Durr	South Middle School, Joplin	Sponsored by MO-SCI Corporation
	Ms. Peggy Veatch	Eldon High School, Eldon	Sponsored by MO-SCI Corporation
2020	Competition cancelled due to COVID-19 pandemic 2021		
2021	Ms. Amy Larrington	Camdenton Middle School, Camdenton	Sponsored by Columbia College
	Ms. Jennifer Hess	Wentzville High School, Wentzville	Sponsored by Columbia College



**RETIRED  
AWARDS**

## THE PAUL SCHAMBURG MEMORIAL AWARD

This award recognizes the best testing apparatus built by a middle level student. Paul Schamburg did not have the benefit of a college education, but worked effectively as a carpenter and skilled technician until he died while still in his 50's. Mr. Schamburg saw that all three of his children were able to obtain an education beyond high school, and he delighted in working with the children in his hometown of Perryville, Missouri. This award will be given to the best testing apparatus, honoring Mr. Schamburg's skills in carpentry and technology. The following Junior High students received this award in past years (first awarded, 1990, retired 2019)

1990	Jared Welch	NE Nodaway R-V, Ravenwood	1991	Jaime Fuldner	Monett Middle School, Monett
1992	Adam Gerber	Versailles MS, Versailles	1993	NOT GIVEN	
1994	Josh Wiederholt	Nodaway R-V, Ravenwood	1995	Jacob Wyrick	Miller County R-IV, Tuscumbia
1996	Derick Berry	Grundy Co. R-V, Galt	1997	Karli Echterling	Bode MS, St. Joseph
1998	Dustin Bauer	Bode MS, St. Joseph	1999	Tyler Rummens	Mansfield MS, Mansfield
2000	Kristen Ream	Pattonsville MS, Maryland Heights	2001	John Dunham	Bode MS, St. Joseph
2002	Nicholas Reinsvold	Thomas Jefferson IDS, Joplin	2003	Kirsten Chodrick	Carl Junction MS, Carl Junction
2004	Chaz Robbins	Mid-Buchanan MS, Faucet	2005	NOT AWARDED	
2006	Ashley Piland	Mansfield MS, Mansfield	2007	Ethan Davis	Mansfield MS, Mansfield
2008	Trevor Job	St. Joseph MS, Scott City	2009	Jacob Cogan	West Platte JH, Weston
2010	Jacob McCullough	Chillicothe MS, Chillicothe	2011	Van Hopkins	Bode MS, St. Joseph
2012	Dawson Jarrett	Tuscumbia MS, Tuscumbia	2013	Jonathan Cronk	Bode MS, St. Joseph
2014	William Gentry	Bode MS, St. Joseph	2016	Taylor Wise	Camdenton MS, Camdenton
2017	Ben Higgins	Immaculate Conception, Jackson	2018	Leah Laurenco	Chillicothe MS, Chillicothe
2019	Connor Starkey	Camdenton MS, Camdenton			

## THE DR. JOHN PAUL MORRIS AWARD

A plaque and a \$25 check are presented each year to a young woman interested in physical science in memory of Dr. John Paul Morris. Dr. Morris was an early member and strong supporter of the MAS Junior Division and was interested in the encouragement of young women in the sciences. The following young women have received this award (first awarded in 1976, retired 2019)

1976	Marlene Drag	Bishop LeBlond HS, St. Joseph	1977	Glenda Farrar Nancy Seavage	Bishop LeBlond HS, St. Joseph Central HS, St. Joseph
1978	Michelle Bellow	Truman HS, Independence	1979	Susan Weimer	Neosho HS, Neosho
1980	Tracy David	Maryville HS, Maryville	1981	Tammy Sue Rolofson	Lafayette HS, St. Joseph
	Lova Whited	Maryville HS, Maryville			
1982	Stacey Fennewald	Bishop LeBlond HS, St. Joseph	1983	Susan Ullensvang	John Burroughs HS, St. Joseph
1984	Tina Chancy	Benton HS, St. Joseph	1985	Marilyn Thompson	Central HS, St. Joseph
1986	Katherine Geoffeney	Central HS, St. Joseph	1987	Christine Boutwell	Central HS, St. Joseph
	Kathleen Fetters	Central HS, St. Joseph			
1988	Michelle Fay	Parkhill HS, Kansas City	1989	Susan Neeley	South Nodaway HS, Barnard
1990	Elizabeth Roth	Liberty HS, Liberty	1991	Brenda Fite	Central HS, St. Joseph
1992	Erika Anderson	Glendale HS, Springfield	1993	Valerie Bartlett	Central HS, St. Joseph
1994	Christy Collins	McCluer HS, Florissant	1995	Rachel Popelka	Ladue Horton HS, St. Louis
1996	Shana Holloway	Charles Sumner HS, St. Louis	1997	Lucie B. Johannua	Jefferson City HS, Jefferson City
1998	Deepa Mangalat	Joplin HS, Joplin	1999	NOT AWARDED	
2000	Mary Cowherd	Chillicothe HS, Chillicothe	2001	Katie Leiter	Carthage Technical Center, Carthage
2002	Siir Kilkis	Greenwood HS, Springfield	2003	Katharine Chitwood	School of the Osage, Kaiser
2004	Chelsea Grigery	Sikeston HS, Sikeston	2005	Chelsea Grigery	Sikeston HS, Sikeston
2006	Swathi Bhaskaran	Hickman HS, Columbia	2007	Haley Daus	Thomas Jefferson IDS, Joplin
2008	Haley Daus	Thomas Jefferson IDS, Joplin	2009	Cameron Nunn	Seneca HS, Seneca
2010	NOT AWARDED		2011	NOT AWARDED	
2012	Koren Haley	Tuscumbia HS, Tuscumbia	2013	Rachel Harmon	Camdenton HS, Camdenton
2014	Shelby Huey	Camdenton HS, Camdenton	2016	NOT AWARDED	
2017	Emily Mouser	Dexter HS, Dexter	2018	Hannah Rodgers	Camdenton HS, Camdenton
2019	Kelli Alford	Camdenton HS, Camdenton			

## THE JAN BULGER MEMORIAL AWARD

This award of a plaque and \$25 cash recognizes the best expository writing in a paper by a middle level student. Jan Bulger was taken in her prime by cancer. In the few years that she was allowed to teach she gave so much to her reading and English students. Jan stands tall among teachers, and a paper reflecting her expository writing will receive this award. The following Junior High students received this award in past years (first awarded, 1990, retired 2019)

1990	Kate Daly	Moberly Jr. High, Moberly	1991	Julie Koutz	Moberly Jr. High, Moberly
1992	Amy Vandeven	Leopold R-III, Leopold	1993	Beth Lawson	South MS, Joplin
1994	Nigel Cooney	Sarcoxie JHS, Sarcoxie	1995	Emily Wann	Bode MS, St. Joseph
1996	Tosha Robert	Pleasant View R-6, Trenton	1997	John Persaud	Bode MS, St. Joseph
1998	Anna Berkowitz	Bode MS, St. Joseph	1999	Pamela Smith	Academy MS, High Ridge
2000	Whitney Lang	New Franklin MS, New Franklin	2001	Heather Mitchell	Robidoux MS, St. Joseph
2002	Derek Thompson	Potosi MS, Potosi	2003	Paul Huang	Central, Springfield
2004	Colin Turk	Moberly MS, Moberly	2005	Alyssa Ovaitt	West Platte MS, Weston
2006	Andrew Kosminski	Savannah MS, Savannah	2007	Victoria Fritchey	Tuscumbia MS, Tuscumbia
2008	Taylor Gaines	Seneca MS, Seneca	2009	Emily Hoover	Seneca MS, Seneca
2010	Elsa Kunz	Bode MS, St. Joseph	2011	Matthew Stockwell	Tuscumbia MS, Tuscumbia
2012	Haley Grier	Bode MS, St. Joseph	2013	Alex Eftink	St. Ambrose School, Chaffe
2016	Jayden Olson	South MS, Joplin	2017	Emma Higgins	Immaculate.Conception, Jackson
2018	Solana Rivera	Truman MS, St. Joseph	2019	NOT AWARDED	

## THE ALLHOFF MEMORIAL AWARD

This award recognizes the best earth science paper by a middle level student. Francis and Margaret Allhoff, born at the turn of the last century, did not understand the importance of girls learning science, nor even leaving the house to work in the scientific world. Yet, they allowed all their daughters and their one son to train and work in this field. Their forward acceptance of the pace of our world has not only allowed their children to be scientists, but their grandchildren now include a female doctor, a female geologist, and other scientists. The best earth science paper by a middle level student will receive this award. (If there is no earth science paper, this award may be given to a related paper.) The following Junior High students received this award in past years (first awarded, 1990, retired 2019)

1990	Janell Meyer	Joplin Jr. High, Joplin	1991	Justin Oaks	Grundy Co. R-V, Galt
1992	Justin Oaks	Grundy Co. R-V, Galt	1993	Summer Talley	Joplin Jr. High, Joplin
1994	Deborah Siebern	Spring Garden MS, St. Joseph	1995	Aaeon Gregory	Holmes School, Kansas City
1996	Karli Echterling	Bode MS, St. Joseph	1997	Johnathan Minor	Grundy Co. R-V, Galt
1998	Shil Patel	Bode MS, St. Joseph	1999	Samir Sheth	Bode MS, St. Joseph
2000	Karelee Mantei	St. Agnus MS, Springfield	2001	John Dunham	Bode MS, St. Joseph
2002	Colt Snapp	Spring Garden MS, St. Joseph	2003	Mary Mantei	St. Agnes MS, Springfield
2004	Alyssa Ovaitt	West Platte MS, Weston	2005	Alyssa Ovaitt	West Platte MS, Weston
2006	Bryce Shields	Truman MS, St. Joseph	2007	Jacob Wilson	West Platte JH, Weston
2008	Taylor Gregory	Mid-Buchanan MS, Faucett	2009	Nathan Coulson	West Platte JH, Weston
2010	Eman Ascensio	West Platte JH, Weston	2011	Melinda Groves	High Point R-3, High Point
2012	Trey Bayte	Chillicothe MS, Chillicothe	2013	Dustin Bax	Tuscumbia MS, Tuscumbia
2014	NOT AWARDED		2016	Charlie Carlton	Delta MS, Delta
2017	Nicky Dawes	St. Patrick Catholic, Rolla	2018	Nicky Dawes	St. Patrick Catholic, Rolla
2019	Nicky Dawes	St. Patrick Catholic, Rolla			

## STUDENT ACHIEVEMENT AWARD (POSTER PRESENTATION)

This award of a plaque and \$50 cash recognizes the overall best poster presented by a high school student. (first awarded, 2016, retired 2019).

2016	Jamde Samanta	Joplin Jr. High, Joplin	Sponsored by MO-SCI Corporation
2017	Dustin Bax	Tuscumbia HS, Tuscumbia	Sponsored by MO-SCI Corporation
2018	Miranda Sauer	Camdenton HS, Camdenton	Sponsored by MO-SCI Corporation
2019	Isabella Wiebel-Smith	Central HS, St. Joseph	Sponsored by MO-SCI Corporation
2020	Competition cancelled due to COVID-19 pandemic		

## SENIOR HIGH POSTER COMPETITION AWARDS

Fifty dollars cash and a certificate are awarded to the best posters selected by a special judging team. The following students have received these awards in past years (first awarded, 1988, retired in 2019)

1988	Theodore Kardis Michelle Wiggins Jamal Green Lisa Moser	Horton Watkins HS Ladue Parway West HS, Baldwin Benton HS, St. Joseph Benton HS, St. Joseph	1989	Lori Cobb Anita Rao Jason Sutin Zoomer Truong	Carl Junction HS, Carl Junction Horton Watkins HS, Ladue Horton Watkins HS, Ladue Ursuline Academy, St. Louis
1990	Angela Nickelson Lisa Pearman Stephanie White Rebecca Wiggins	Potosi HS, Potosi Salisbury R-IV, Salisbury Carl Junction HS, Carl Junction Parkway West HS, Baldwin	1991	Jennifer Henry Amy Lawson Ray Myers Michael Wiggins	South Pemiscot HS, St. Louis Joplin JH, Joplin Eldon HS, Eldon Parkway West HS, Baldwin
1992	Monica Crane Amy Lawson Jenne Simmons Elizabeth Wiggins	Horton Watkins HS, Ladue Joplin HS, Joplin Monroe City HS, Monroe City Parkway West HS, Baldwin	1993	Amy Lawson Janelle Meyer Kamafi Byrd Jason Talley Renee Pope	Joplin HS, Joplin Joplin HS, Joplin Beaumont HS, St. Louis Joplin HS, Joplin Eldon HS, Eldon
1994	Reagan Oswald Laura Clinkingbeard Janelle Meyer Amy Lawson Jesse Kharbanda	Eldon HS, Eldon Francis Howell HS, St. Charles Joplin HS, Joplin Joplin HS, Joplin Parkway West HS, Baldwin	1995	Terry Baynes James Blomberg Thomas Newman Ian Wann	Pembroke Hill, Kansas City Versailles HS, Versailles Joplin HS, Joplin Central HS, St. Joseph
1996	Holly Hawkins Dorothea Lasky Melinda Lawrence Beth Lawson	Jefferson City HS, Jefferson City Ladue HS, St. Louis Joplin JH, Joplin Joplin HS, Joplin	1997	Deepa Mangalat Amy Matthew Brook Weber Beth Lawson	Joplin HS, Joplin Pembroke Hill, Kansas City Central HS, St. Joseph Joplin HS, Joplin
1998	Deepa Mangalat Millik Tella Amity Pecenka Julie Robinett	Joplin HS, Joplin Pembroke Hill, Kansas City Osage HS, Kaiser Osage HS, Kaiser	1999	Chris Byrd Brandon Lang Todd Miller Amity Pecenka	Osage HS, Kaiser New Franklin HS, New Franklin Lafayette HS, St. Joseph Osage HS, Kaiser
2000	John Fisher Ross Ruele Jennifer West Robbie Hart	Osage HS, Kaiser Central HS, St. Joseph Osage HS, Kaiser Cole R-V, Eugene	2001	NO AWARDS GIVEN	
2002	Siir Kilkis Mary Earnhart Tyler Lipp Chelsea Grigery	Greenwood HS, Springfield Lafayette HS, St. Joseph Osage HS, Kaiser Sikeston JH, Sikeston	2003	Michelle Whitesides Lainee Sybert Susan Brock	Hickman HS, Columbia School of the Osage, Kaiser Benton HS, St. Joseph
2004	Paul Whiteside Chelsea Grigery Kyle Tolbert Derrick Helton	Thomas Jefferson IDS, Joplin Sikeston HS, Sikeston School of the Osage, Kaiser Tuscumbia HS, Tuscumbia	2005	Chelsea Grigery Drew Sanning Anand Palaniappan Kristen Wright	Sikeston HS, Sikeston Tuscumbia HS, Tuscumbia Hickman HS, Columbia Tuscumbia HS, Tuscumbia
2006	Michael Stockwell Valerie Beu Katie Patterson Casey Freeman	Tuscumbia HS, Tuscumbia Tuscumbia HS, Tuscumbia Tuscumbia HS, Tuscumbia Mid-Buchanan HS, Faucett	2007	Kacie Wright Jordan Stevens Haleigh Wright Alyssa Ovaitt	Tuscumbia HS, Tuscumbia West Platte HS, Weston Mid-Buchanan HS, Faucett West Platte HS, Weston



## SENIOR HIGH POSTER COMPETITION AWARDS (CONT.)

2008	Brittany King Clayton Coulson Michelle Kropf Jordanne Wright	Tuscumbia HS, Tuscumbia West Platte HS, Weston Seneca HS, Seneca Seneca HS, Seneca	2009	Kayla Foulk Ethan Musick Sonia Rao	Camdenton HS, Camdenton Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton
2010	Dylan Lyle Heather Lovell Jay Gulshen Jordanne Wright Jacob Byrne	Tuscumbia HS, Tuscumbia Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton Seneca HS, Seneca Camdenton HS, Camdenton	2011	Bailee Slack Alexis Ash	Camdenton HS, Camdenton Tuscumbia HS, Tuscumbia
2012	Kelly Barnes Mingu Kim Koren Haley Thomas Palmer	St. Clair HS, St. Clair Hickman HS, Columbia Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton	2013	Alexis Ash Rachel Harmon Bryant Heckart Cindy Jiang	Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton Seneca HS, Seneca Central HS, St Joseph
2014	Bryant J. Heckart Shelby Huey Vincent Marco Monica Singh	Seneca HS, Seneca Camdenton HS, Camdenton Hartville HS, Hartville Central HS, St Joseph	2016	Kallie Davis Jade Samanta Jameson Gentry	Camdenton HS, Camdenton Saxony Lutheran HS, Jackson Mid-Buchanan HS, Faucett
2017	Dustin Bax Olivia Kline Vincent Khor Abigail Grimwood	Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton Camdenton HS, Camdenton Tuscumbia HS, Tuscumbia	2018	Preston McDowell Je'anne Wegner Paige Ellefsen River Wise	Tuscumbia HS, Tuscumbia Camdenton HS, Camdenton Camdenton HS, Camdenton Camdenton HS, Camdenton
2019	Je'Anne Wagner Destinie Tunis Caleb Martonfi Lucas Mosher	Camdenton HS, Camdenton Eldon HS, Eldon Eldon HS, Eldon Camdenton HS, Camdenton			