

★ ★ ★ 2018 CATEGORY WINNERS ★ ★ ★

[Animal Science & Plant Sciences]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|------------|-------|------------------------------|--|
| 1st | Lucy | Chmura | 9 | St. Vincent St. Mary - Akron | Effects of Phosphate Fertilizer on Eisenia fetida (Red Worm) Population Growth |
| 2nd | Colin | Doss | 7 | Holy Family - Stow | Freeze, Seed! A Soybean Project |
| 2nd | Spencer | Rettkowski | 7 | Holy Family - Stow | Freeze, Seed! A Soybean Project |
| 3rd | Kassandra | Franzmann | 5 | Windemere CLC - Akron | Blooming Roses: What Makes Flowers Last The Longest? |

[Behavioral and Social Sciences]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|--|
| 1st | Eliana | Wolf | 7 | Gross Schechter Day School - Pepper Pike | Can A Growth Mindset Improve Your Memory? |
| 2nd | Petra | Vidovic | 12 | Mentor High School - Mentor | The Effects of Gesture on the Comprehension and Application of the Concept of Standard Deviation |
| 3rd | Johnathan | Abdoo | 10 | Hudson High School - Hudson | Does Fidgeting Help You Focus? |
| 3rd | Fergus | Gomersal | 10 | Hudson High School - Hudson | Does Fidgeting Help You Focus? |

[Biochemistry]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|---------------------------------------|--|
| 1st | Eileen | Faulk | 11 | West Geauga High School - Chesterland | Effect of the Presence of a Magnetic Field on the Permeability of the Blood Brain Barrier and Intestinal Lining to Magnetic Ferrofluid for Drug Delivery |
| 2nd | Landry | McVicker | 10 | St. Vincent St. Mary - Akron | Hydrogels: Drug Release |
| 3rd | Kaitlin | Kemp | 10 | St. Vincent St. Mary - Akron | How Starch and Sugar Contents Change in Ripening Bananas |

[Biomedical Engineering & Biomedical and Health Sciences & Translational Medical Science]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|--------------|-------|-------------------------------------|---|
| 1st | Amanda | Blatz | 11 | Mentor High School - Mentor | The Implications of Changing the Legal Age of Purchasing Tobacco Products and Electronic Cigarettes to 21 Years Old |
| 2nd | Katherine | Bagley | 10 | Beaumont School - Cleveland Heights | Ankle Tear or Ankle Repair |
| 3rd | Shruthi | Ravichandran | 9 | Hathaway Brown - Shaker Heights | Learning to Detect Malignant Skin Lesions from Photographic Images Using Deep Neural Networks |

★ ★ ★ 2018 CATEGORY WINNERS ★ ★ ★

[Chemistry]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|------------|-------|-----------------------------|---|
| 1st | Nina | Bauman | 12 | Mentor High School - Mentor | How Citizens Can Better Protect Themselves From The Harmful Effects Of Radon Emissions Found In Residential Homes |
| 2nd | Nathan | Dando | 6 | St. Raphael - Bay Village | Jui"C"y Science: How to Get the "Max" Vitamin C from your Orange Juice |
| 3rd | Ella | Boehringer | 6 | St. Raphael - Bay Village | Into Thin Air |

[Earth and Environmental Science & Environmental Engineering]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|--|
| 1st | Alexander | Novitski | 11 | West Geauga High School - Chesterland | Future Farms |
| 2nd | Michael | Scheeser | 9 | Hudson High School - Hudson | Increasing Solar Power Using Reflective Surfaces |
| 3rd | Melania | Tymosch | 7 | Incarnate Word Academy - Parma Heights | Heat Up a Room with a Homemade Solar Heater |

[Energy: Chemical & Energy: Physical]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|-------------------------------------|
| 1st | Marie | Musbach | 7 | St. Paschal Baylon - Cleveland | Shine Bright |
| 2nd | Nicholas | Cribbet | 6 | National Inventors Hall of Fame School Center for STEM - Akron | Weight of Roller Coaster Trains |
| 3rd | Jamie | Park | 8 | Beachwood Middle School - Beachwood | Mushrooms as Solar Steam Generators |

[Engineering Mechanics & Robotics and Intelligent Machines]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|---|--|
| 1st | Adityasai | Pakki | 12 | Mentor High School - Mentor | Physicomimetics: A Machine Learning Approach |
| 2nd | Rae | Ehrbar | 8 | West Geauga Middle School - Chesterland | Can You Hear Me Now? |
| 3rd | Cory | Breiding | 10 | Ellet High School - Akron | Web Shooters |

★ ★ ★ 2018 CATEGORY WINNERS ★ ★ ★

[Mathematics & Computational Biology and Bioinformatics & Embedded Systems & System Software]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|---|
| 1st | Patrick | Li | 9 | Hudson High School - Hudson | Smarter Midnight Care |
| 2nd | Neel | Agarwal | 10 | University School - College Prep - Chagrin Falls | Modeling the Prescription Drug Epidemic with Mathematical Functions |
| 3rd | Kristen | Buse | 12 | Mentor High School - Mentor | Quantifying Spatial Structure in Herbaceous-Layer Plant Communities |

[Materials Science]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|---|
| 1st | Edward | Dan | 10 | Solon High School - Solon | A Novel Hot-Melt-Pressure-Sensitive-Adhesive for Reusable Mail Envelopes and Packages |
| 2nd | Charles | Pafford | 7 | Incarnate Word Academy - Parma Heights | Preparing for Space Exploration: Additive Manufacturing at Point of Use |
| 3rd | Daniel | Anthony | 7 | Academy of St. Adalbert - Berea | The Effect of Magnetic Field Strength on Ferrofluid and Its Weight Bearing Capacity |

[Microbiology & Cellular and Molecular Biology]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|------------|-------|--|---|
| 1st | Jackson | Tankersley | 12 | National Inventors Hall of Fame School Center for STEM - Akron | Bioelectricity Changes in Urine Microbial Fuel Cells Inoculated with Livestock Solid Waste Slurry |
| 2nd | Sukhmani | Kaur | 12 | Hathaway Brown - Shaker Heights | Therapeutic Potential of Umbilical Cord Tissue Derived Mesenchymal Stem Cells |
| 3rd | Matthew | Taylor | 9 | Hudson High School - Hudson | Natural vs. Artificial Preservatives |

[Physics and Astronomy]

| Place | First Name | Last Name | Grade | School | Project Title |
|-------|------------|-----------|-------|--|---|
| 1st | Megan | Collins | 10 | Hudson High School - Hudson | Experimental Verification of Stokes' Law |
| 2nd | Melinda | Savio | 8 | Incarnate Word Academy - Parma Heights | How can we avoid harmful leaks of microwave radiation? |
| 3rd | Adam | Khan | 6 | Stanton Middle School - Kent | The Interaction of The Electric Field and Liquid Crystals |