

★ ★ ★ 2019 CATEGORY WINNERS ★ ★ ★

[Animal Science & Plant Sciences]

Place	First Name	Last Name	Grade	School	Project Title
1st	Robert	Boyce	8	St. Albert The Great	Sugar Crash
2nd	Isabella	Zaffiro	6	West Geauga Middle School	Farm Fresh Fertilizer
3rd	Nysha	Gupta	7	Hathaway Brown	Aluminum Effect on Seed Germination

[Behavioral and Social Sciences]

Place	First Name	Last Name	Grade	School	Project Title
1st	Clara	Rykaczewski	12	Mentor High School	The Advancement of Emotional Intelligence in Doctoral Physical Therapy Students
2nd	Aiden James	Dumm	8	The University School	How Blue Light Affects Comprehension
3rd	Julia	Olle	8	St. Albert The Great	That's a real smile! Or is it?

[Biochemistry]

Place	First Name	Last Name	Grade	School	Project Title
1st	Claire	Wolf	10	Beaumont School	Can Yeast Ferment Polysaccharides as Efficiently as Disaccharides?
2nd	Keegan	Barnhart	10	West Geauga High School	Save the Planet: The Need for Bioplastics
3rd	Jaylee	Conrad	8	Holy Family	Eating Water

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

Place	First Name	Last Name	Grade	School	Project Title
1st	Jonathan	Jang	10	The University School - College Prep	The Feasibility of hiPSC-RPE Cells as a Surrogate for Human RPE
2nd	Sohum	Kapadia	10	The University School - College Prep	Anatomical Correlation Between Mitral and Tricuspid Valve Dimensions
3rd	Isaac	Jang	11	Orange High School	Effect of Dietary iron on the Intestinal Tumorigenesis

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[Chemistry]

Place	First Name	Last Name	Grade	School	Project Title
1st	Tingzhang	Li	12	St. Vincent St. Mary	The Study of Dynamics of Rigid Nanoparticle Rolling on a Soft Substrate
2nd	Michelle	Reitz	12	Firestone High School	Caffeine Extraction from Tea
3rd	Maeve	Galla	8	Sts. Joseph & John Interparochi	Does Formaldehyde in Nail Polish Impact Its Durability?

[Earth and Environmental Science & Environmental Engineering]

Place	First Name	Last Name	Grade	School	Project Title
1st	Bryan	Rego	12	The University School - College Prep	ASSESSING THE OCCURRENCE OF MICROPLASTIC UPTAKE BY UNIONID FRESHWATER MUSSELS
2nd	Ryan	Tyler	9	The University School - College Prep	The Power of the Future
3rd	Lucy	Chmura	10	St. Vincent St. Mary	Reducing Phosphate Runoff Through a Mixture of Common Ground Covers

[Energy: Chemical & Energy: Physical]

Place	First Name	Last Name	Grade	School	Project Title
1st	Regan	Houser	7	St. Hilary	Vicosity Sinuosity
2nd	Michael	Wynne	7	St. Raphael	The Chilling Truth: The Effect of Temperature on Alkaline Battery Performance
3rd	Michael	Scheeser	10	Hudson High School	Maximizing Efficiency of Geothermal Power

[Engineering Mechanics & Robotics and Intelligent Machines]

Place	First Name	Last Name	Grade	School	Project Title
1st	Edward	Dan	11	Solon High School	Designing a New Coating Device and Fabrication Process to Develop Ceramic Microtubes
2nd	Sachin	Singh	8	The University School	How does the number of grooves influence a golf shot?
3rd	Isabelle	Strobel	6	National Inventors Hall of Fame School Center for STEM	Exoskin to Improve the Sense of Touch in juvenile Prosthetics

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

Place	First Name	Last Name	Grade	School	Project Title
1st	Neel	Agarwal	11	The University School - College Prep	Modeling The Prescription Drug Epidemic With Mathematical Functions
2nd	Patrick	Li	10	Hudson High School	Smart Midnight Care: Development of a Control Module for an Auto-blanketing System
3rd	Ian	Swain	10	The University School - College Prep	Pathogenetic Mechanisms Associated with Barrett's Esophagus

[Materials Science]

Place	First Name	Last Name	Grade	School	Project Title
1st	Jing-Jing	Shen	12	Beachwood High School	Investigation of Thin-Film Silver as Top Electrode Material for Transparent Organic Solar Cells
2nd	Tejal	Pendekanti	11	Hathaway Brown	Thrombus-Directed Drug Delivery Systems for Targeted Fibrinolysis
3rd	Jacklyn	Rulison	6	Notre dame School	Making a Better Brush

[Microbiology & Cellular and Molecular Biology]

Place	First Name	Last Name	Grade	School	Project Title
1st	Daniel	Kotrebai	11	Hawken School	Calcium Signaling in Induced Pluripotent Stem Cell Derived Schizophrenic Hippocampal Neurons and Neurons Derived From a Novel Shortcut Differentiation Protocol
2nd	Isabella	Rambler	7	National Inventors Hall of Fame School Center for STEM	Why I Ordered E.coli Off the Internet
3rd	Zoe	Virant	7	St. Mary	Effect of Bone Chewing on Bacteria Growth

[Physics and Astronomy]

Place	First Name	Last Name	Grade	School	Project Title
1st	Adam	Khan	7	Stanton Middle School	The Interaction of Temperature and Liquid Crystals
2nd	Sophie	Georgiandis	7	St. Raphael	Does This Drag Have Swag?
3rd	Eileen	Faulk	12	West Geauga High School	Optical Rotation of Plane Polarized Light Through a Mixture of Different Enantiomers