

Kentucky Science & Engineering Fair- General Award Script - All Divisions

Animal Sciences

3rd Place

Darby Tassell - LRSEF - High School

Is Nicotine Effective at Manipulating Sleep Patterns in Small Birds?

Darian Wicker - LRSEF - High School

The Effect of Ultraviolet Light on Drosophila Melanogaster

Ayushi Yadav, AnneGracy Liberal - Meyzeek Regional Science Fair - Middle School

The effect of various types of sugars and food-based stimulants on the energy and hyperactivity of ants.

2nd Place

Brody Peters - LRSEF - Middle School

As Safe as they Say? The Effect of SLSA on Mussel Filtration

Nicole Ritchie - East Kentucky Regional Science and Engineering Fair - High School

Regeneration?

1st Place

Emma Natof - Central Kentucky Regional Science & Engineering Fair - Middle School

Who's Chicken? The effect of different bird recordings on domesticated chickens

Lea Yiannikouris - Central Kentucky Regional Science & Engineering Fair - High School

Targeting the Prorenin Receptor (PRR) to Prevent Obesity Associated with Hypertension

Behavioral and Social Sciences

3rd Place

Lucy Doyle - LRSEF - Middle School

The Link Between Bullying, Anxiety, and Childhood Trauma

Julia Werner - duPont Manual Regional Fair - High School

The Effect of Reading Literary Fiction on Theory of Mind in Children Versus Adults

2nd Place

Henry Blyth - Central Kentucky Regional Science & Engineering Fair - High School

Behavioral Economic Solutions to the Opioid Crisis

Annemarie Murr - LRSEF - Middle School

Delicious but Immoral? Food Trace Influences Taste

1st Place

Thomas Kang - Meyzeek Regional Science Fair - Middle School

(Don't!) Forget About it!: Music, Lyrics, and Memory

Sonia Nagpal - duPont Manual Regional Fair - High School

The Effect Of Optical Illusions on Working Memory

Biochemistry

3rd Place

Rohin Dutt - duPont Manual Regional Fair - High School

A Comparative Analysis of Genes on the Dosage of Warfarin

Ellery Reynolds - LRSEF - Middle School

Does inhaling air fresheners affect DNA integrity

2nd Place

Haasini Beeram - Central Kentucky Regional Science & Engineering Fair - Middle School

Shampoo: Friend or Foe?

Mohammad Rashad - Central Kentucky Regional Science & Engineering Fair - High School

Inhibiting the Effects of Chronic Lymphocytic Leukemia Using Ibrutinib and Mithramycin

1st Place

Margaret Beatty - LRSEF - Middle School
Kentucky Native Plants: Agents Against Metastasis
Zoë Jenkins - Central Kentucky Regional Science & Engineering Fair - High School
Investigating the Role of FOXP1 circRNA Stability and Expression in Arsenic-Mediated Carcinogenesis

Biomedical and Health Sciences

3rd Place

Leah Niemann - LRSEF - Middle School
Exploring Neurotoxin Shed in Child Products
Peyton Varney - East Kentucky Regional Science and Engineering Fair - High School
The Effect Cooking Method has on Vitamin C Content in Broccoli

2nd Place

Nasim Mohammadzadeh - Central Kentucky Regional Science & Engineering Fair - High School
The Effects of Insulin-Like Growth Factor-1 on Reelin Expression in the Dentate Gyrus After Traumatic Brain Injury
Chloe Nunn - LRSEF - Middle School
Screen Light Poison: Does Digital Screen Blue Light Impact Health?

1st Place

Ibrahim Jouja - duPont Manual Regional Fair - High School
The correlation of retinal reflectivity with ages and diabetic retinopathy
Prisha Tyagi - Meyzeek Regional Science Fair - Middle School
Can The Garlic Compound "Allyl Sulfide" be a Future Therapeutic for Preventing Alzheimer's Disease?

Biomedical Engineering

3rd Place

Varun Chandrashekhar - duPont Manual Regional Fair - High School
Automatic Portable Phoropter and Autofocus Glasses using an Integrated Variable Focal Liquid Lens
Adam Lapinski - duPont Manual Regional Fair - High School
A Biomechanical Device to Reduce Ambulatory Injuries from Peripheral Neuropathy
Laura Petruska - LRSEF - Middle School
Establishing PC12 Cells as a Model to Observe Stimulated Axon Growth

2nd Place

Anna Engelman, Abigail Wilbers - Science & Engineering Fair of Northern Kentucky - High School
Senior Struggles
Sargun Kaur - Meyzeek Regional Science Fair - Middle School
How does time effect the growth and smell of Synthetic DNA

1st Place

Shreyas Kar - duPont Manual Regional Fair - High School
Early Stage Detection of Parkinson's Disease: Engineering Machine Learning Algorithms using Logistic Regression, an Artificial Neural Network and a Support Vector Machine
Anirudh Srinivasan - Meyzeek Regional Science Fair - Middle School
Analyzing human movement and the detection of falls

Cellular and Molecular Biology

3rd Place

Kiran Koul - Central Kentucky Regional Science & Engineering Fair - Middle School
Fruit Enzyme Mediated Coagulation Compared to Rennet Based Milk Curdling
Luke Mo - duPont Manual Regional Fair - High School
How Does Ambient Particulate Matter Induce Lung Cancer? miR-21 is Involved in Malignant Transformation of Human Bronchial Epithelial Cells by Particulate Matter Exposure

2nd Place

Aditi Kona - LRSEF - High School
Examining Mechanisms of Resistance in Palbociclib-Resistant Estrogen Receptor-Positive Breast Cancer Cells

Katie Quinn - LRSEF - Middle School
Exploring the Cause of Atrazine's Impact on the Nervous System

1st Place

Saisha Dhar - Central Kentucky Regional Science & Engineering Fair - High School
The Role of Apoptosis Signal-Regulating Kinase 1 in Hyperoxia-Induced Lung Injury
Emerson Wyatt - LRSEF - Middle School
Hyssop: a Kentucky Native Cancer Treatment

Chemistry

3rd Place

Maria Becraft - Science & Engineering Fair of Northern Kentucky - Middle School
Flakelicious Fats
Fernando Macchiavello Cauvi - Central Kentucky Regional Science & Engineering Fair - High School
Synthesis and Characterization of Nanofiltration Membranes for Water Treatment

2nd Place

Lauren Cail - LRSEF - High School
Reducing False Positives in Kastle-Meyer Presumptive Blood Tests
Mahallah Saadiq - Central Kentucky Regional Science & Engineering Fair - Middle School
Egg Fiasco

1st Place

Liam Amick - LRSEF - Middle School
Wastewater Remediation Using Chitin Coagulation
Gia Mendiratta - duPont Manual Regional Fair - High School
Selenium Speciation

Computational Biology and Bioinformatics

3rd Place

Dhiraj Kanneganti - duPont Manual Regional Fair - High School
The Use of MRIs to successfully diagnose Autism

2nd Place

Sarvesh Babu, Pranav Kanmadikar - duPont Manual Regional Fair - High School
Development of a Holistic Real-Time Computer-Aided Neurodiagnostic Model

1st Place

Alan Luo - Central Kentucky Regional Science & Engineering Fair - High School
A Regional Structure Evaluation of ATP Ligands in Worldwide Protein Data Bank Entries

Earth and Environmental Science

3rd Place

Phoebe Boylan - duPont Manual Regional Fair - High School
The Effects of Noise Barriers on Near-Road Air Quality
Brian Schwartz - duPont Manual Regional Fair - High School
What is the Effect of Ladder Fuel Treatments on the Burn Area of Forest Fires in a Semi-Arid High Elevation Climate?
Aiden Vilo - Meyzeek Regional Science Fair - Middle School
Finding Which Substance will be Most Efficient at Melting Ice and be the Least Harmful to the Environment

2nd Place

Sivani Babu, Nivedha Ramabadran - Meyzeek Regional Science Fair - Middle School
Identification of the best type of vessel to store drinking water
Tharani Subramaniam - Central Kentucky Regional Science & Engineering Fair - High School
Soil-Water Relationships in Different Soil Horizons and Landscape Positions

1st Place

Gokul Achaththekoot - duPont Manual Regional Fair - High School

The Effect of Brand and Exposure of Disinfectant Wipes on the Growth of Mealworms

Gerald Winkler - Central Kentucky Regional Science & Engineering Fair - Middle School

Urban vs. Rural: Exposing the Biggest Culprits in the Problem of Nutrient Pollution in Our Water

Embedded Systems

3rd Place

Richard Lian - Meyzeek Regional Science Fair - Middle School

Implementing an Efficient, Automated Carpool Line Dispatch System using RFID

Mason Steineker - LRSEF - High School

A project relating to analyzing the hazardous gases produced by toasters through the utilization of an embedded system.

2nd Place

Mayukha Bhamidipati - duPont Manual Regional Fair - High School

Preventing Ultraviolet Radiation Through Windows Using an IoT Sensor

Saveer Jain - Meyzeek Regional Science Fair - Middle School

Blind Eye: Robotic Aid for Blind

1st Place

Nimish Mathur, Demos Negash - duPont Manual Regional Fair - High School

Assessing the Structural Strength of Concrete Members Using a Low-Cost, Non-Invasive Monitoring System

Fahmeeda Mohammad - LRSEF - Middle School

Voice Recognition Modules

Energy: Sustainable Materials and Design

3rd Place

Jackson Gabbard, Parker Stewart - Central Kentucky Regional Science & Engineering Fair - High School

Mono-Axis Solar Tracker to Maximize Photovoltaic Cell Production

2nd Place

Shirlin Kingston - duPont Manual Regional Fair - High School

Electrospinning Lignin into Nanofibers for Use as Anode Material in Lithium-ion Batteries

Shazia Shaik, Amina Albarqawi - LRSEF - Middle School

Living Plant Battery

1st Place

Kai Bauer - Central Kentucky Regional Science & Engineering Fair - Middle School

Solar Energy

Viyathma Hapuarachchi - duPont Manual Regional Fair - High School

The Optimal Annealing Temperatures to Create Carbon Nanoshells from Metal Precursor Treatments for the Use of Electrodes in Supercapacitors

Engineering Mechanics

3rd Place

Ananya Polepalli - Meyzeek Regional Science Fair - Middle School

Active Shooter and Intruder Alert System

Cameron Watson, Ashrith Garimella - duPont Manual Regional Fair - High School

The effects of electro adhesion on surveillance systems

2nd Place

Douglas Lin - Meyzeek Regional Science Fair - Middle School

SafeDoor: Security Attachments for doors

Murari Srinivasan - duPont Manual Regional Fair - High School

Construction of a 6-Axis Accelerometer Based Wave Analysis Buoy With Wave Function Prediction

1st Place

William Ding - Central Kentucky Regional Science & Engineering Fair - High School

Additive Manufactured Sound Absorbers

Lars Myrup - Central Kentucky Regional Science & Engineering Fair - Middle School

Taking Wing: How a Plane's Wing Size Affects Flight

Environmental Engineering

3rd Place

Charlotte Blevins - Central Kentucky Regional Science & Engineering Fair - Middle School

The Mystery of Mist: Effectiveness of air temperature reduction through rapid atomized water droplet evaporation

Aditi Talegaonkar - duPont Manual Regional Fair - High School

Energy Efficient Blinds: Using Arduino to Create a Temperature-Controlled Feedback Loop That Dictates the Movement of Infrared Blocking Blinds

2nd Place

Jordan Balsamo - LRSEF - Middle School

Exploring Dye Remediation with Activated Charcoal

Kiera Fehr - Central Kentucky Regional Science & Engineering Fair - High School

Powered by Termites - A novel approach to methane production for renewable biofuel

1st Place

Shraman Kar - Meyzeek Regional Science Fair - Middle School

Machine Learning Algorithm (Convolutional Neural Networks) to Detect Icebergs From Satellite Images to Help Reduce Global Warming, Oil Spill and Improve Safety of Arctic Navigation

Lauren Sotingeanu - Central Kentucky Regional Science & Engineering Fair - High School

The Future of Plastic

Materials Science

3rd Place

Natalie Janzaruk - Science & Engineering Fair of Northern Kentucky - High School

How the Density of Liquids in Hydraulic Actuators Affect the Strength of an Armature

Lucy Vanderhoff - Meyzeek Regional Science Fair - Middle School

Field Hockey Sticks for the Biggest Hits

2nd Place

Oliver Carmack - LRSEF - Middle School

Improving Rigidity in Bioplastics

Sowmyan Viswanathan - duPont Manual Regional Fair - High School

Battery Electrolytes from waste Polyethylene terephthalic acid

1st Place

Elizabeth Gallagher - duPont Manual Regional Fair - High School

Exploring the Conversion of Plastics to Porous Carbon

Isaac Stroud - LRSEF - Middle School

Creating Fire Retardant Hydrogels

Mathematics

3rd Place

Diamond Edwards - LRSEF - High School

Mathmusical

Jack Mulvihill - LRSEF - Middle School

Fractal Dimension and Flooding in US Rivers

2nd Place

Jason Wang - Central Kentucky Regional Science & Engineering Fair - High School

Using binary quadratic forms to test which versions of the Modified Pell Equation are solvable

Bridget Yun - Central Kentucky Regional Science & Engineering Fair - Middle School

Is the Golden Ratio Really Golden?

1st Place

Shubh Gupta - duPont Manual Regional Fair - High School

A Reconceptualization of the Multiple Traveling Salesman Problem: Engineering an Approximate Algorithm for Cost

Justin Huang - Meyzeek Regional Science Fair - Middle School

How do parameters affect the dynamic stability of a mathematical population model?

Microbiology

3rd Place

Emma Jinright - Central Kentucky Regional Science & Engineering Fair - High School

Effects of the Hendra Virus Matrix Protein on Viral Membrane Fusion

Nithin Senthilvel - Meyzeek Regional Science Fair - Middle School

The Short-Term Effects of Disparate Concentrations of Calcium Ammonium Nitrates on the Heart Rate of Daphnia Magna.

2nd Place

Mary Ballantine - LRSEF - Middle School

Hemp Extract: Miracle Cure or Microbiome Disruptor?

Anne Liang - duPont Manual Regional Fair - High School

Effect of Grape Components on Periodontitis

1st Place

Elaina Render - duPont Manual Regional Fair - High School

Exploring Probiotic Food Products as a Reservoir for Antimicrobial Resistance

Lucy Teng - Meyzeek Regional Science Fair - Middle School

The Effect of Food on the Antibiotics Susceptibility of Bacteria via Biofilm

Physics and Astronomy

3rd Place

Jonathan Ghazala - Science & Engineering Fair of Northern Kentucky - Middle School

The perfect swing

Molly Kleier - Science & Engineering Fair of Northern Kentucky - High School

The Magnus Force: The Effects of Turbulence Caused by Stitch Depth and Pattern

2nd Place

Cooper Osborne - LRSEF - Middle School

Optimizing Inductive Charging in Wearable Items

Hugh Skinker, Rohan Rauch - Central Kentucky Regional Science & Engineering Fair - High School

Construction of a Static High Voltage Amplifier

1st Place

James Gonzalez - duPont Manual Regional Fair - High School

Growth and Analysis of Nano Clusters: Self-Organized Pattern Formation

Owen Hartmann, Daniel Lukyanchuk - Meyzeek Regional Science Fair - Middle School

The Magnetic Linear Accelerator

Plant Sciences

3rd Place

Iris Apple - LRSEF - Middle School

Exploring Electrical Signaling in Plants

Kendal Jones, Taylor Bellomy - Science & Engineering Fair of Northern Kentucky - High School

Sweaty Plants

2nd Place

Jash Pola - duPont Manual Regional Fair - High School

The Effect of Electromagnetic Radiation on Vigna Radiata
Taylor Webb - Central Kentucky Regional Science & Engineering Fair - Middle School
Ready, Set...Grow!

1st Place

Mattie Diehl - LRSEF - Middle School
Ailanthus Altissima: Exploring Noise Pollution's Impact on Allelopathic Toxicity
Jamari Taylor - Central Kentucky Regional Science & Engineering Fair - High School
Role of Cell-wall degrading Enzymes in Pathogenicity of the Fungus Colletotrichum graminicola to Maize

Robotics and Intelligent Machines

3rd Place

Carissa Stahl - Science & Engineering Fair of Northern Kentucky - Middle School
Hit the Road Jack
Gracie Terry, Matthew Diamond - Science & Engineering Fair of Northern Kentucky - High School
Robot Ruckus

2nd Place

Zahra Chasmawala - Meyzeek Regional Science Fair - Middle School
Joystick Controlled Roomba
Nicole Wong - Central Kentucky Regional Science & Engineering Fair - High School
Discriminating adversarial examples in satellite imagery

1st Place

Shreyas Ghare - Meyzeek Regional Science Fair - Middle School
The Efficiency of Ev3 Programs On the Pick-A-Ball Robot
Rohan Ghiya - duPont Manual Regional Fair - High School
predicting different types of diabetes using machine learning

Systems Software

3rd Place

Arjun Parmar - Meyzeek Regional Science Fair - Middle School
How does the percentage flexion of your robotic articulated finger influence its ability to lift a paper cup?
Shridha Rajeswar - duPont Manual Regional Fair - High School
Analysis of Water Quality With the Help of Machine Learning

2nd Place

Tanner Aslan - LRSEF - Middle School
Creating an Artificial Intelligence That Pursues a Moving Target
Grace Goff - Central Kentucky Regional Science & Engineering Fair - High School
A Computer Vision Based Approach to Structural Health Monitoring

1st Place

Yash Pathak - Meyzeek Regional Science Fair - Middle School
Automated Digital Data Conversion
David Vulakh - Central Kentucky Regional Science & Engineering Fair - High School
Parallel Max-Min Ant Colony System for solving combinatorial constraint-satisfaction problems

Translational Medical Science

3rd Place

Harrison Jeffreys - LRSEF - Middle School
Exploring the Effects of AGE Toxicity in Cells
Khalid Rashad - Central Kentucky Regional Science & Engineering Fair - High School
A Machine Learning Approach to Facilitate Autism Spectrum Disorder Diagnosis

2nd Place

Liv Ashley - LRSEF - Middle School

Exploring Toxicity of Vitamin E Acetate in E-Cigarettes
Aysha Khan - duPont Manual Regional Fair - High School
The Effect of Quercetin, a Plant Polyphenol, on Bladder Cancer

1st Place

Vedha Balamurugan - LRSEF - Middle School

Anti-diabetic effect of bitter tasty plant products on type 2 diabetic children: Importance of human neglected bitter taste

Robi Bolli - duPont Manual Regional Fair - High School

Therapeutic potency of physioxia cultured cardiac mesenchymal cells for myocardial repair in mice with a 30-day-old myocardial infarction