# **LRSEF- General Award Script - Middle School**

### **Animal Sciences**

# 3rd Place

Jack English - Saint Francis of Assisi, Louisville Deer Collisions: Caused By High Parasite Loads?

### 2nd Place

Georgia Armstrong - Saint Francis of Assisi, Louisville Microfibers Impact Mussel Filtration Rates

### 1st Place

Ella Diehl - Saint Francis of Assisi, Louisville Exploring Noise Pollution Stress in Pollinators

### **Behavioral and Social Sciences**

### 3rd Place

Ben Davis, Nicholas Fiorini - North Oldham Middle School The Perfect Dunk: How Milk Factors Interact With a Popular Cookie

# **2nd Place**

Shayla Reynolds - Brown School Science Fair Effect of Time on Reading Comprehension

# 1st Place

Ella Spriggs-Dial - Saint Francis of Assisi, Louisville How Does Trauma Impact Emotional Recognition

# **Biochemistry**

# 2nd Place

Henry Peters - Saint Francis of Assisi, Louisville Exploring The Effect Of Pesticides On Ascorbic Acid

# 1st Place

Margaret Beatty - Saint Francis of Assisi, Louisville Does Commercial Pesticide Use Impact Trypsin Activity

# **Biomedical and Health Sciences**

# **3rd Place**

Angel Mason - Newburg Middle School Dissolve the Pain: Drug Solubility

# 2nd Place

Chloe Nunn - Saint Francis of Assisi, Louisville Exploring the Effects of Circadian Rhythms and Wound Healing

# 1st Place

Marianna Grabova - North Oldham Middle School Electric vs. Manual Toothbrush Efficiency

# **Biomedical Engineering**

# **3rd Place**

Noor ismail, Maryam alsaadi - Nur islamic school The Effect Of The Dark and Light On the Brain While Sleeping At Night

### 2nd Place

John Baldwin - Saint Francis of Assisi, Louisville Weight Shifting Bed For Bed Sore Prevention

#### 1st Place

Maci McCallon - Noe Middle The Fidgy Chair

# **Cellular and Molecular Biology**

# **3rd Place**

simon petruska - Saint Francis of Assisi, Louisville exploring the use of a planarian model with anesthetics

# **2nd Place**

Avery Ramsey - Saint Francis of Assisi, Louisville Impact of Car Emissions and Electromagnetic Radiation on Stem Cell Behavior

# 1st Place

Katie Quinn - Saint Francis of Assisi, Louisville Exploring the Impact of Atrazine on Childhood Learning

# Chemistry

### **3rd Place**

Liam Amick - Saint Francis of Assisi, Louisville Wastewater Dye Remediation with Natural Coagulants

# 2nd Place

Maxwell Holtgrave - Saint Francis of Assisi, Louisville Exploring the Effect of Heat on Omega-3 Fish Oils

### 1st Place

Jack Mulvihill - Saint Francis of Assisi, Louisville Using Kentucky Native Plants to Create Bioplastics

# Computational Biology and Bioinformatics

# 3rd Place

Erika Graham - Saint Francis of Assisi, Louisville Is there a between fly ash and thyroid cancer incidents

### 2nd Place

Michael Schoenbachler - Saint Francis of Assisi, Louisville Differential RNA expression in injured murine neurons

# 1st Place

Vedha Balamurugan - North Oldham High School A new trend of type 2 diabetes in children: Genetic factors and improved treatment options

### **Earth and Environmental Science**

# 3rd Place

Daniel Jaso - Saint Francis of Assisi, Louisville Exploring the Impact of Bridge Constriction on Stream Dynamics

# 2nd Place

Molly Baldwin - Saint Francis of Assisi, Louisville Hanging by a Thread, Microfibers Impact on Sand

### 1st Place

Nick Harshaw - Louisville Montessori Atmospheric Carbon Dioxide and Its Effect on the pH of Natural Water Systems

# **Embedded Systems**

# **3rd Place**

Liam Kirby - Saint Francis of Assisi, Louisville Wearable Air Quality Sensor

# 2nd Place

SWETHA SENTHIL NATHAN - Noe Middle Smart Street Light

# 1st Place

Henry Murr - Saint Francis of Assisi, Louisville Noninvasive Drug Testing via Raspberry Pi

# Energy: Chemical 3rd Place

Patrick Snider - Carrithers Middle School Solar Energy vs. Fossil Fuels Which is Better?

### 2nd Place

Mary Jane Tevis-Orona - Carrithers Middle School Rust removal with electrolysis

# 1st Place

Fiona Gallagher - Saint Francis of Assisi, Louisville Use of Leaf Litter for the Production of Ethanol

# Energy: Physical 3rd Place

Jacob Mattingly - Brown School Science Fair The Effect of Windmill Blade Shape on Power Generation

# 2nd Place

anas ali, nour elamir , yousef ismail - Nur Islamic School of Louisville Getting Energy From Mud

# 1st Place

Samuel Flynn - Saint Francis of Assisi, Louisville Thermoelectric Potential of Asphalt

# **Engineering Mechanics**

# 3rd Place

Leo Osborne - Saint Francis of Assisi, Louisville A New Filter Design for Reducing Lawn Mower Emissions

# 2nd Place

Matthew Burns - Walden School Rocket Aerodynamics

# 1st Place

Olivia Long, Ella Pankonin - Saint Albert the Great School The Science of Egg Dropping

# **Environmental Engineering**

### 3rd Place

Xishan Ritchie - Carrithers Middle School Fabric Softener and Flammability

# 2nd Place

David Renz - Saint Francis of Assisi, Louisville engineering building shape to reduce urban pollution entrapment

# 1st Place

Lilia Biagi - Saint Francis of Assisi, Louisville Electric Field Remediation of Microfiber Pollution

# **Materials Science**

#### 3rd Place

Sophie Fabing - Saint Francis of Assisi, Louisville Strengthening Paper Bags with Polymer Coating

### 2nd Place

Oliver Carmack - Saint Francis of Assisi, Louisville Biodegradable Plastics

### 1st Place

Isaac Stroud - Saint Francis of Assisi, Louisville Creating Novel Fire Retardants

### **Mathematics**

# **3rd Place**

Jillian Wallshield - Carrithers Middle School Impact of Social Media on an Election

# 2nd Place

William Martin - Saint Francis of Assisi, Louisville Our Solar System and Its Connection to the Fibonacci Sequence

# 1st Place

Maia Kuehne-Seeber - Saint Francis of Assisi, Louisville Fractal Faults And Seismic Loading

# Microbiology

### **3rd Place**

Sarah Kwasny - Saint Francis of Assisi, Louisville The Effects of PET Plastics on the Gut Microbiome

### 2nd Place

Charlotte Doninger - Saint Francis of Assisi, Louisville Could Plastics be Waterway Reservoirs for Human Pathogens

# 1st Place

Mary Ballantine - Saint Francis of Assisi, Louisville Automotive Exhaust: A Selective Environment for Bacteria

# **Physics and Astronomy**

# **3rd Place**

Frank Leezer - Saint Francis of Assisi, Louisville Rocket Nose Cone Engineering

# 2nd Place

cooper osborne - Saint Francis of Assisi, Louisville Electromagnetic Fields: A shield against cosmic radiation?

#### 1st Place

Teklu Hemme - Saint Francis of Assisi, Louisville Acoustic Levitation

### **Plant Sciences**

# **3rd Place**

Shelby Geraghty - Brown School Science Fair Water works

# **2nd Place**

Jadyn Balsamo - Saint Francis of Assisi, Louisville Exploring the Cognitive Capabilities of Plants

### 1st Place

Mattie Diehl - Saint Francis of Assisi, Louisville Preventing Honeysuckle Invasion Using Kentucky Native Allelopathic Plants

# **Robotics and Intelligent Machines**

### 3rd Place

Makhtar Ndiaye - Newburg Middle School Drawbot: The Art of a Perfect Circle.

### 2nd Place

Mahasen Alsaadi - Nur Islamic School of Louisville Using Muscles to Allow Robots to Detect Objects at a Distance

### 1st Place

Micah Steineker, Peter Kurto - North Oldham Middle School Military Workload Robot

# **Systems Software**

# 3rd Place

Jason Millard - Saint Francis of Assisi, Louisville Helping Hand: An App Connecting Households to the Homeless

# 2nd Place

Kevin Brothers - Saint Francis of Assisi, Louisville Programming Autonomous Vehicles to Make Ethical Decisions

# 1st Place

Brent Merrigan - Saint Francis of Assisi, Louisville MedNotify

# **Translational Medical Science**

# 3rd Place

Emerson Wyatt - Saint Francis of Assisi, Louisville Sanguinaria Canadensis: a Novel Cancer Treatment?

# 2nd Place

Nico Sanchez - Saint Francis of Assisi, Louisville Exploring Effects of HDPE Leachate on Health

# 1st Place

Savannah Townsley - Carrithers Middle School What a Pain!