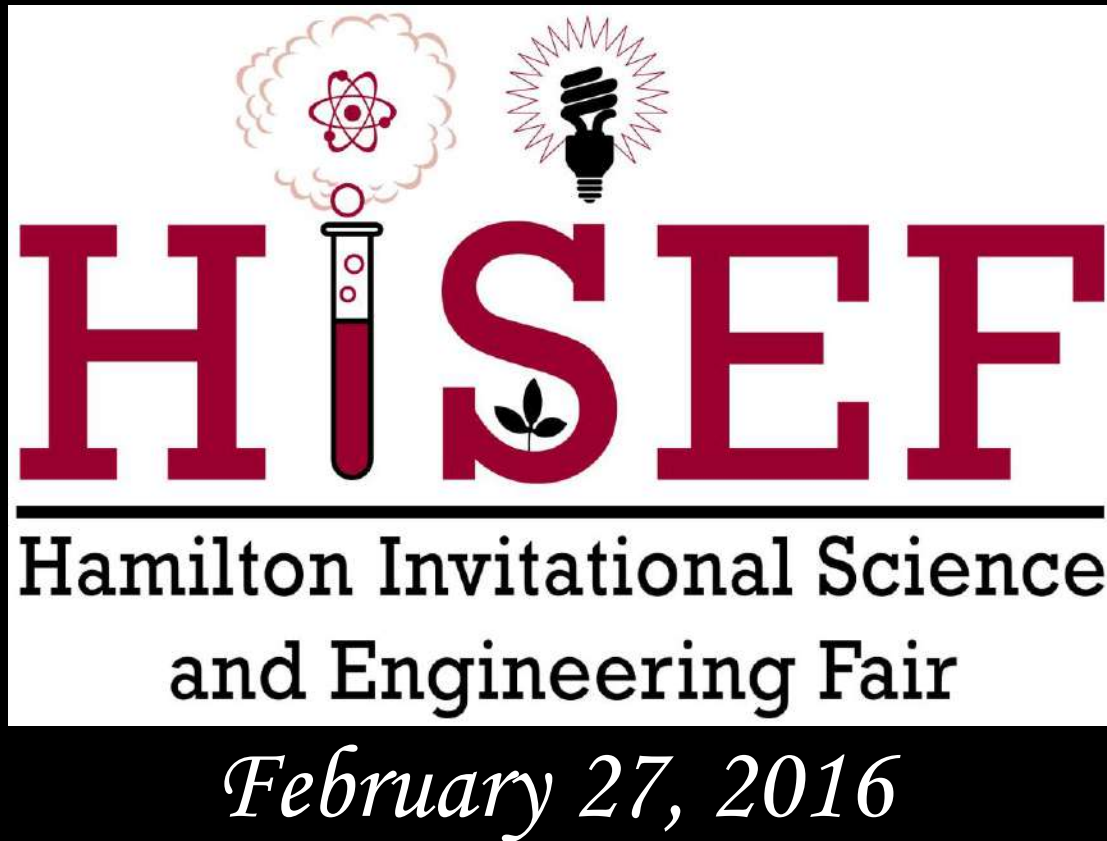


Congratulations HISEF Winners



*HONORABLE
MENTION*

**Elementary School
Entries**

*HONORABLE
MENTION*

**Elementary School
Entries**

PLANT SCIENCES

6th Grade

- ACP
- Will Napolitano
- The Effect of
Different Fertilizer
Types on Plant
Growth

ENVIRONMENTAL SCIENCE

5th Grade

- CTA Freedom
- Sean Chance
- Trinity Wood
- Faster Than The Speed of Light

6th Grade

- Ryan Elementary
- Lilli Seebold
- Liberty Wall
- Salty Solutions

CELLULAR AND MOLECULAR BIOLOGY

5th Grade

- Haley Elementary
- Adison Derbas
- Sanaa Dennis-Burch
- Olivia Chapa
- Egg-Celent Floating

CHEMISTRY

5th Grade

- Bologna Elementary
- Natasha Hill
- Erika Soto
- Annisa Salinas
- Which Fruits Mess Up Gelatin

6th Grade

- Haley Elementary
- Bailey Reynolds
- Jaymie Wollert
- Egg-Cellent Chemistry

EARTH AND PLANETARY SCIENCE

5th Grade

- CTA Independence Campus
- Evan Gratton
- Jackson Bowling
- Now You're Cooking

6th Grade

- Ryan Elementary
- Tien Jin Schnolo
- Elijah Burland
- Wacky Weather vs. Lovely Landscape

PHYSICS AND ASTRONOMY

5th Grade

- Santan Elementary
- Anna Yao
- Abigail Keyes
- Time to Bounce

6th Grade

- Jacobson Elementary
- Josh Lozza
- Transfer of Energy

6th Grade

- Jacobson
- Nolan Burke
- Kabir Nagpal
- Transfer of Energy

ENGINEERING

5th Grade

- Ryan Elementary
- Cameron Bautista
- Jack Li
- Olivia Drogosz
- Model Mayhem

6th Grade

- Riggs Elementary
- Lance Parise
- Davis Church
- Homemade Electric Car

*HONORABLE
MENTION*

Jr. High Entries

PLANT SCIENCES

7th Grade

- Catie Davidson
- Paige Shelite
- Payne Junior High
- Wacky Water

7th Grade

- Colleen Robinson
- Rebecca Hilbun
- Payne Junior High
- Plants vs Pollution

8th Grade

- Ben Falkner
- Payne Junior High
- Plants vs Crickets

MEDICINE AND HEALTH

7th Grade

- Melissa Lin
- Bogle Junior High
- The Effect of Sugar
Content in Candy
on Time to
Dissolve

8th Grade

- Aubree Flores
- Santan Junior High
- Get Your Head in
The Game

BEHAVIORAL AND SOCIAL SCIENCE

8th Grade

- Nivea Krishnan
- Grace Connolly
- Bogle Junior High
- The Effect of Music on a Cognitive Task

ENVIRONMENTAL SCIENCE

7th Grade

- Saachi Poddar
- Willis Junior High
- Global Warming's Impact on Coral

8th Grade

- Tess Ward
- Sydney Eliason
- Payne Junior High
- Biodegradation Generation

CELLULAR AND MOLECULAR BIOLOGY

8th Grade

- Hannah Hudson
- Casteel
- The Effect of Water Snails on the Ability of Elodea to Photosynthesize

CHEMISTRY

7th Grade

- Ika Lin
- Santan Junior High
- Temperatures Below Freezing

8th Grade

- Tiffany Ticlo
- ACP
- The Effect of Household Chemicals on Graffiti Removal

EARTH AND PLANETARY SCIENCE

7th Grade

- Alina Jelinski
- Macayla Frost
- Andersen Junior High
- THE POWER OF SOLAR

8th Grade

- Debbie Thai
- Santan Junior High
- Waves on the Shore

PHYSICS AND ASTRONOMY

7th Grade

- MacKenzie Bradbeer
- Willis Junior High
- The Effect of Electrolysis on Water

8th Grade

- Zoe Felbein
- ACP
- How the Types of Metal Affects the Kinetic Friction on Ice

COMPUTER SCIENCE

7th Grade

- McKay Porter
- Bogle Junior High
- The Effect of
Parabolic Reflector
Material on Wi-Fi
Signal Strength

8th Grade

- Max Camp
- Santan Junior High
- Kill-a-watt
Challenge

ENGINEERING

7th Grade

- Mason Salonic
- Casteel
- The Effect of Heat on Popular Insulations

7th Grade

- Caden McDaniel
- Trevor Kaiser-Borning
- Thomas Driggs
- Payne Junior High
- Twenty-feet Underground

8th Grade

- Ben Abercrombie
- Casteel
- The Effect of Foundation Type on Weight Required to Settle It

MATHEMATICAL SCIENCE

8th Grade

- Ryan Mehio
- Max Lipman
- Bogle Junior High
- The Effect of Different Forwards in Fifa 16 on the Amount of Goals they Score

*HONORABLE
MENTION*

High School
Entries

PLANT SCIENCES

- Ariel Law
- (ACP-Erie High School/Hugo Garcia)
- Aquaponics

BIOMEDICAL AND HEALTH SCIENCE

- Samihan Dani
- (Hamilton High/Raxha Bhadgev)
- The Fatty Acid Mystery

ANIMAL SCIENCES

- Tai Combs
- (Perry High/Karen Hutchinson)
- The Effects of Acidity on Brine Shrimp

BEHAVIORAL AND SOCIAL SCIENCE

- Payton Frei
- Allison Lozza
- (Hamilton High/Sara Loutzenheiser)
- How Different Facial Features Affect Facial Recognition

EARTH AND ENVIRONMENTAL SCIENCE

- Ankita Puri
- (Hamilton High/Jyoti Nair)
- The Effect of Types of Sun
Protectants on the Mass of
Coral

BIOCHEMISTRY

- Izaak Hernandez
- (Casteel High/Patricia Jones)
- The Effect of Minerals on Plant Growth

CELLULAR AND MOLECULAR BIOLOGY

- Ishaan Bakhle
- (Hamilton High/Raxha Bhadgev)
- The Effect of Type of Glycation-Combatant on Seperation of Glucose from a Solution Over Time

COMPUTATIONAL BIOLOGY

- Jahnavi Pejavar
- Sathe, Raywa
- (Hamilton High/Debbie Nipar)
- The Effect of Mutations on the Specificity of Argonaute-2

ENERGY: CHEMICAL

- (Michael) Jialin Li
- (Hamilton High/Brian Sears)
- Surface Vs. Luminol

ENERGY: PHYSICAL

- Halle Wilson
- (Hamilton High/Raxha Bhadgev)
- The Effect of Walking on Electricity

PHYSICS & ASTRONOMY

- Zhengdong Wang
- (Hamilton High/Debbie Nipar)
- Holistic Flare Prediction Using
Aggregated Solar Cycle 23-24
Magnetograms and
Intensitygrams

PHYSICS & ASTRONOMY

- Thomas Kulaga
- (Hamilton High/Raxha Bhadgev)
- Wi-Fi Wonders

ENVIRONMENTAL ENGINEERING

- Blawn, Kamryn
- (Hamilton High/Stephanie Syverson)
- Optimizing Mineral Carbonation to Sequester Carbon Dioxide

MATERIALS SCIENCE

- Natalie Brittner
- Maya Mortensen
- (Perry High/Karen Hutchinson)
- The Effect of Sanitary Pad
Material on Absorptive Capacity
and Cost

MATHEMATICS

- Justin Zhu
- (HHS/Nipar)
- Climate Change and Economic Development: Optimizing the Economic, Technological, and Societal Growth of Countries Using Timetable Operations

SYSTEMS SOFTWARE

- Rohit Nandakumar
- (BHS/ Kathryn Driving Hawk)
- Health Connect: Wirelessly Connecting Patients and Doctors

3rd PLACE

Elementary School
Entries

PLANT SCIENCES

6th Grade

- Knox Gifted Academy
- Risha Bhoite
- Algae in Action

PHYSICS AND ASTRONOMY

5th Grade

- Riggs Elementary
- Drake Cluff
- Jack Kaplan
- Michael Schaeffer
- Supreme Beam

6th Grade

- Fulton Elementary
- Natalie Baldwin
- Taylor O'Brien
- To Infinity and Beyond

BEHAVIORAL AND SOCIAL SCIENCE

6th Grade

- Santan Elementary
- Kaytlyn Jackson
- Liliana Wagner
- The Science Behind Psychology

ENVIRONMENTAL SCIENCE

5th Grade

- Conley Elementary
- Syed Sarim Hussaini
- Samuel Franco
- Michael Bastian
- Snow Liquification

6th Grade

- Sanborn Elementary
- Frederick Ryan Subia
- Vivian Nguyen
- Andrew Huynh
- Around and Around

CELLULAR AND MOLECULAR BIOLOGY

5th Grade

- Andersen Elementary
- Owen Kelly
- Maya Lewis
- Jacob Amezcua
- Metal Zapper

CHEMISTRY

5th Grade

- Knox Gifted Academy
- Jaelle Valentine
- Connor Williams
- pH Predictors

6th Grade

- Weinberg Elementary
- Lamyia Zebian
- Kendal Gooch
- Abraham Duran
- Experi"mint"ing with Temperatures

EARTH AND PLANETARY SCIENCE

5th Grade

- Humphrey
- Natasha Hester
- Lilly Wehner
- Making Craters

6th Grade

- Navarrete
- Emma Nihill
- Hanna Nihill
- Flood Barriers

ENGINEERING

5th Grade

- Carlson Elementary
- Ella Davis
- Chance Lake
- Callen Peterson
- Floating Phenomenon

6th Grade

- CTA Freedom
- Miles Fawson
- Fabricating Friction

3rd PLACE

Jr. High Entries

PLANT SCIENCES

7th Grade

- Preston Thompson
- Casteel
- The Effect of Microwaves on the Growth of Seeds

8th Grade

- Mireya Borgen
- Casteel
- The Effect of Hydrogen Peroxide on the Growth of Begonia Roots

MEDICINE AND HEALTH

7th Grade

- Ethan Kennedy
- BAMS
- BPA Levels in Bottled Water

8th Grade

- Rekha Wijesuriya
- ACP
- The Effect of the Type of Basketball Shoe on Knee Strain

ANIMAL SCIENCES

7th Grade

- Andrew Li
- Raunak Mukherjee
- Conner Ashby
- Bogle Junior High
- The Effect of Diatomaceous Earth as a Pesticide

BEHAVIORAL AND SOCIAL SCIENCE

7th Grade

- Payton Dyet
- Casteel Which Memorization Technique Works Best When Trying to Memorize a Song?

8th Grade

- Patrick Kigin
- Ben Sagredo
- Bogle Junior High
- Cell Phone Distractions

ENVIRONMENTAL SCIENCE

7th Grade

- Erin Anglin
- Payne Junior High
- Plants vs Pollution

8th Grade

- Andrew Prouty
- Payne Junior High
- Got Depth

CELLULAR AND MOLECULAR BIOLOGY

7th Grade

- Anna Jiang
- ACP
- Potato Cells: The Effect of Potato (Cell) Size on the Amount of Diffusion

8th Grade

- Priyanshi Chudasama
- ACP
- The Effect of the Temperature of Isopropyl Alcohol (Precipitation Agent) on a DNA Extraction Process

CHEMISTRY

7th Grade

- Christian Alvarado
- Willis Junior High
- Rust or Bust

8th Grade

- McKenna
Messenger
- Payne Junior High
- Sweeteners &
Sugar

EARTH AND PLANETARY SCIENCE

7th Grade

- David Haneysmith
- Bogle Junior High
- The Effect of Base Width and Tower Height on Stability

8th Grade

- Jacob Guardado
- Casteel
- The effect of permeability on soils?

PHYSICS AND ASTRONOMY

7th Grade

- Abbie Jin
- ACP
- The Effect of the Platform Angle on Soil Impact

8th Grade

- Kaelah Kerr
- Payne Junior High
- Making Waves

COMPUTER SCIENCE

7th Grade

- Raegan Williams
- Bogle Junior High
- The Effect of Material Type on the Distance Wi-Fi Travels

8th Grade

- William Becker
- Bogle Junior High
- The Effect of Overclocking on a Raspberry Pi's CPU

ENGINEERING

7th Grade

- Samantha Story
- ACP
- Trust in the Rust:
The Effect of the
Liquid on the
Amount of Rust

8th Grade

- Bryn Creek
- Willis Junior High
- Building in
Earthquake Prone
Zones

MATHEMATICS

7th Grade

- Gunner Rodarte
- ACP
- Crushed vs. Cubed Ice, That's Nice (A Surface Area Comparison)

8th Grade

- Logan Ferrera
- Santan Junior High
- Games Will Save

3rd PLACE

High School Entries

PLANT SCIENCES

- Jin Ni
- Zoe Kross
- (Basha High/Charina DeCaro)
- Effect of Acid Rain on
Nitrogen Fixing Bacteria in
Plants

BIOMEDICAL AND HEALTH SCIENCE

- Kiera Blawn
- Komal Agrawal
- (Hamilton High/Debbie Nipar)
- The Reduction of Alzheimer's Disease by Activating Sirtuin1 through Resveratrol

MICROBIOLOGY

- Rashmi Athavale
- (Hamilton High/Stephanie Syverson)
- The Effect of an Amphotericin Resistant Plasmid on the Transformation of *E.coli*

ANIMAL SCIENCES

- Ameera Patel
- Erika Brady
- (Hamilton High/Stephanie Syverson)
- Light It Up

BEHAVIORAL AND SOCIAL SCIENCE

- Alisha Goyal
- (Hamilton High/Raxha Bhadgev)
- Schedule it, and grades will come

EARTH AND ENVIRONMENTAL SCIENCE

- Maggie Mulligan
- (Hamilton High/Raxha Bhadgev)
- Hold Your Breath

BIOCHEMISTRY

- Shaun Victor
- (Hamilton High/Raxha Bhadgev)
- The effect of Ascorbic Acid concentration on caffeine levels in water

CELLULAR AND MOLECULAR BIOLOGY

- Benjamin Crimando
- (Hamilton High/Stephanie Syverson)
- The Effect of Hand Drying Methods on The Spread of Microorganism

COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

- Justin Yu
- (Hamilton High/Debbie Nipar)
 - Exploration of the Feasibility of Biomimetic Hydrogels and Their Potential Implications and Drug Delivery

CHEMISTRY

- Zachary Chaddock
- Alan Barnes
- (Hamilton High/Sara Loutzenheiser)
- The Effect of Distillation or Solar Desalination on Salt Water
- Jesus Galvan
- (Hamilton High/Christopher Mattix)
- Dissolved Oxygen in Water

ENERGY: CHEMICAL

- Cassandra Smith
- (Chandler High/Deana Martin)
- The Concentration of Solute on Hydrogen Production in a Hydrogen Fuel Cell

ENERGY: PHYSICAL

- Roshan Sanyal
- (Hamilton High/Brian Sears)
- The Effect of Bridge Designs on Damage due to Earthquakes

ENGINEERING MECHANICS

- Manuel Morales
- Neil Naik
- (Perry High/Karen Hutchinson)
- Effects of Water Waves on Structures

ENVIRONMENTAL ENGINEERING

- Emma Merritt
- (Hamilton High/Raxha Bhadgev)
- Magic Mushrooms

MATERIALS SCIENCE

- Lena Han
- (Hamilton High/Sara Loutzenheiser)
- The Effect of Size and Material on Reverberation Produced in a Concert Venue

ROBOTICS & INTELLIGENT MACHINES

- Isaac Chappell
- (Basha High/Michael McKelvy)
- Incorporating Ethics into Robotic Systems

MATHEMATICS

- Shivam Mohite
- (HHS/Sears)
- Fractals

SYSTEMS SOFTWARE

- Shardul Kothapalli
- (Hamilton High/Debbie Nipar)
- A Novel Way to Enable the Blind to Recognize Motion

2nd PLACE

Elementary School
Entries

PLANT SCIENCES

6th Grade

- CTA Freedom
- Elsie Abercrombie
- Fantastic Fertilizers

MEDICINE AND HEALTH

6th Grade

- Knox Gifted Academy
- Jalen Lee
- Johnathan Nash
- Ricardo Tapia
- Got Spice?

BEHAVIORAL AND SOCIAL SCIENCE

6th Grade

- Santan Elementary
- Gillian Goldsmith
- Emily Mihalovich
- Battle of the Ages

ENVIRONMENTAL SCIENCE

5th Grade

- Riggs Elementary
- Randall Martin
- Cade Sanders
- Adrian Valdez
- The Oil Session

6th Grade

- ACP
- Nevan Hanford
- Thirst for Water: The Effect of the Temperature of Salt Water on the Amount of Fresh Water Collected in a Desalination Device

CELLULAR AND MOLECULAR BIOLOGY

5th Grade

- Haley Elementary
- Alejandra Gonzalez
- Manhattan Tibbott
- The Secret Cells

6th Grade

- CTA Freedom
- Isabel Freeland
- The Effect of
Antibacterial Agents

CHEMISTRY

5th Grade

- Navarrete Elementary
- Reese Carpenter
- Hayley Hewitt
- Eliza Dysart
- On Your Marker Go?

6th Grade

- Bologna Elementary
- Brandy Sanchez-Pena
- Paige Park
- Lizbeth Banuelos
- Rise of the Muffins

EARTH AND PLANETARY SCIENCE

5th Grade

- Haley Elementary
- Eliana Watson
- Brooke Speaker
- Emily Boyd
- Colors in the Sun

6th Grade

- Haley Elementary
- Hayley Williams
- Lori Tram
- William Policastro
- Rain Rain Go Away

PHYSICS AND ASTRONOMY

5th Grade

- Santan Elementary
- Jiyu Wang
- Madison Meyers
- Magnificent Magnets

6th Grade

- Jacobson Elementary
- Benjamin Jones
- Anthony Dominguez
- Jack Cristofano
- Transfer of Energy

COMPUTER SCIENCE

6th Grade

- ACP
- Cheng, Richard
- Designing a Password Hacker

ENGINEERING

5th Grade

- CTA Freedom
- Joshua Palmer
- Sam Hoffman
- Tyler Linford
- Temperature and Magnetic Forces

6th Grade

- Navarrete Elementary
- Ryan Mokdad
- Dillon Garrison
- Ben Murray
- Maglev Mania

2nd PLACE

Jr. High Entries

PLANT SCIENCES

7th Grade

- Josh Grattopp
- Matthew Torel
- BAMS
- Symbiotic Relationships
Between Mycorrhizae
Fungi and Mini Carrots

8th Grade

- Kimberly
Markegard
- Andersen Junior
High
- Moss vs. Soil

MEDICINE AND HEALTH

7th Grade

- Juhi Khandelwal
- ACP
- What Bacteria is Hiding in Your Lunch Box?: The Effect of Different Lunch Box Materials on the Number of Bacterial Colonies Grown

8th Grade

- Natalie Daines
- Andersen Junior High
- How Much Sun Could Sunblock Block if Sunblock Could Block Sun

ANIMAL SCIENCES

7th Grade

- Abbey Alevizon
- Kate Pletka
- Bogle Junior High
- The Effect of Different Environments on an Earthworm's Health

8th Grade

- Hayden Cristofano
- ACP
- Music's Effect on Equine Cardiorespiratory Performance During Exercise

BEHAVIORAL AND SOCIAL SCIENCE

7th Grade

- Kabir Mahir
- ACP
- Fingerprint Fever:
The Effect of Surface
Temperature on the
Clarity of
Fingerprints

8th Grade

- Eli Joseph
- Santan Junior High
- Warped Words

ENVIRONMENTAL SCIENCE

7th Grade

- Ethan Merritt
- Willis Junior High
- The Effect of pH
on the Hardness of
Water

8th Grade

- Isabel Aksamit
- Jaide Montefour
- Bogle Junior High
- The Effect of Acid
Rain on Plants

CELLULAR AND MOLECULAR BIOLOGY

7th Grade

- Mariam Ayesh
- ACP
- The Effect of Temperature on Glucose Levels After Sucrase is Added

8th Grade

- Lily Deliman
- Willis Junior High
- The Effect of pH on Lactase Activity

CHEMISTRY

7th Grade

- James Fink
- Willis Junior High
- The Effect of Surface Area on a Chemical Reaction

8th Grade

- Chloe Leff
- Willis Junior High
- The Effect of the Adsorptive Strength of the Paper-Like Material Used for the Paper Chromatography on the R_f Values of the Pigments in Leaves

EARTH AND PLANETARY SCIENCE

7th Grade

- Arthur Yang
- Santan Junior
High
- Fresh Seawater

8th Grade

- Wyatt Spivey
- ACP
- The Effect of Acid
Rain on Growth of
Pansies

PHYSICS AND ASTRONOMY

7th Grade

- Ethan Earl
- Casteel
- The
Electromagnetic
Spectrum

8th Grade

- Abbey Foster
- Willis Junior
High
- Wine Glass
Wonders

COMPUTER SCIENCE

7th Grade

- Angela Wang
- Santan Junior High
- Digital Space

8th Grade

- Ryan Pallas
- ACP
- The Effect of Different Materials on the Strength of a Wi-Fi Signal

ENGINEERING

7th Grade

- Chris Hyman
- Casteel
- Alternative Energy

8th Grade

- Cameron Braddock
- Willis Junior High
- Types of Flaps

MATHEMATICAL SCIENCE

7th Grade

- Zara Jahan
- Santan Junior High
- Radioactive

8th Grade

- Nicole Valego
- Kaitlyn Murphy
- Bogle Junior High
- The Effect of Surface Area in Different Positions En Pointe on Applied Force

2nd PLACE

High School Entries

PLANT SCIENCES

- Jinnie Xie
- (Hamilton High/Debbie Nipar)
- Knocking out the Expression of the Pollen-specific *Oryza Sativa Indica* Pollen Allergen Gene in Genetically Engineered Golden Rice Through Genetic Mutation

BIOMEDICAL AND HEALTH SCIENCE

- Akshata Rudrapatna
- (Hamilton High/Debbie Nipar)
- Applying Viral Nanoparticles in Treatment Vectors for Alzheimer's Disease Using Molecular Dynamics Simulations

MICROBIOLOGY

- Bethany Kalscheur
- (Perry High/Karen Hutchinson)
- The Development and Analysis of a Naturopathic Solution Formulated From Essential Oils and Elemental Nitrates as Microbial Inhibitors on Plastic

ANIMAL SCIENCES

- Lakshmi Vallabhaneni
- (Hamilton High/Stephanie Syverson)
- Diffuse TBI on Pre-Pubescent vs Peri-Pubescent Rats

BEHAVIORAL AND SOCIAL SCIENCE

- Saahil Poonawalla
- (Hamilton High/Debbie Nipar)
- The Effects of Digital Creativity
Support Tools on Individual
Creativity

EARTH AND ENVIRONMENTAL SCIENCE

- Madeleine Howell
- (Basha High/Michael McKelvy)
- Exploring Probiotics for use in Mitigating Amphibian Fungal Disease

BIOCHEMISTRY

- Vivian Nguyen
- (Hamilton High/Brian Sears)
- Got Vitamin C?

CELLULAR AND MOLECULAR BIOLOGY

- Emma Howell
- Benjamin Howell
- Jacob Fredette-Roman
- (Basha High/Michael McKelvy)
- Optimizing Microbial Cell Factory
Production of Insulin as a Function of
pH

COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

- Dhruv Iyer
- (Hamilton High/Debbie Nipar)
- A Novel Graph Theory Based Approach for Identifying Drug Discovery Targets in Computationally-Derived Gene Regulatory Networks (cGRNs)

CHEMISTRY

- Mai Nguyen
- Nguyen, Lisa
- (Chandler High/Denise Lewis)
- The Effect of Temperature on the Color Absorbency of Iron Thiocyanate

ENERGY: CHEMICAL

- Macyn Kvanvig
- (Chandler High/Denise Lewis)
- Effect of Amount of Carbon in a Fuel on Mean Amount of Energy Released During Combustion

ENERGY: PHYSICAL

- Cole McClure
- Graham, Ian
- (Perry High/Jarrett Pack)
- Heaters Gonna Heat

PHYSICS & ASTRONOMY

- Hannah Miao
- (Hamilton High/Debbie Nipar)
- Orbital Determination and
Impact Probability Visualization
of a Near Earth Asteroid

ENGINEERING MECHANICS

- Alisha Verma
- (Hamilton High/Stephanie Syverson)
- Determining Shelf Life of Produce
Based on Temperature and Humidity

ENVIRONMENTAL ENGINEERING

- Lisa Zou
- (Hamilton High/Debbie Nipar)
- Uptake and Translocation of AsIII and AsV by Corn: Metal Chelation

MATERIALS SCIENCE

- Hailey Van Genderen
- (Hamilton High/Raxha Bhadgev)
- Biodegradable Plastic: What is the Effect of Glycerin on a Plastic's Degradability?

ROBOTICS & INTELLIGENT MACHINES

- Sachin Konan
- (Hamilton High/Debbie Nipar)
- Microwave Doppler Radar for First Response

EMBEDDED SYSTEMS

- Elliot Smith
- (Hamilton High/Debbie Nipar)
- Self and Remote Monitoring,
Bluetooth-Enabled Electrocardiogram
Prototype and Mobile App

MATHEMATICS

- Jerry Zhu
- (Hamilton High/Debbie Nipar)
- Load Profile Forecasting Methodology

1st PLACE

Elementary School
Entries

PLANT SCIENCES

5th Grade

- Navarrete Elementary
- Orion Rodriguez
- Daniel O'Neill
- Tajj Brewington
- Survival of the Flowers

6th Grade

- Haley Elementary
- Ayana Field
- Bennet Silsby
- Cryogenic Roses

MEDICINE AND HEALTH

6th Grade

- Navarrete Elementary
- Maddox Doolin
- Jordan Gerdes
- Concussion
Catastrophe

ANIMAL SCIENCES

5th Grade

- Haley Elementary
- Emma Aeilts
- Morgan Esch
- Jamisen Harris
- Huddle and Cuddle

BEHAVIORAL AND SOCIAL SCIENCE

6th Grade

- Navarrete Elementary
- Emersynn Neill
- Charlize Beniquez
- Musical Math

ENVIRONMENTAL SCIENCE

5th Grade

- Knox Gifted Academy
- Elizabeth Weiss
- Kenneth Su
- Jayden Chao
- Gone With The Wind

6th Grade

- Haley Elementary
- Michele Medina
- Chloe Thompson
- Daisy Motes
- Bring on the Heat

CELLULAR AND MOLECULAR BIOLOGY

5th Grade

- Ryan Elementary
- Brody Solomonson
- Trevor Tague
- Gavin Willis
- Different Liquids
Affects on Super
Absorbane Polymers

6th Grade

- ACP
- Nathan Lam
- The Effect of Different
Liquids on The Color
of Apple Slices

CHEMISTRY

5th Grade

- CTA Freedom
- Caitlin Patarakun
- Mia Le
- Is Black Ink Really Black?

6th Grade

- ACP
- Anish Puri
- The Effect of the Strength of the Acid to Base Ratio on the Heat Generated by the Reaction (Enthalpy of Neutralization)

EARTH AND PLANETARY SCIENCE

5th Grade

- Knox Gifted Academy
- Joshua Shunk
- Madeline Salonic
- Mason Asher
- Wind Works

6th Grade

- Santan Elementary
- Angel Perez-Martinez
- Solar Powered

PHYSICS AND ASTRONOMY

5th Grade

- Knox Gifted Academy
- Taran Mayer
- Astronomical Asteroids

6th Grade

- Jacobson Elementary
- Savar Sinha
- Omri Redbird
- Aerodynamics
Awesomeness

COMPUTER SCIENCE

6th Grade

- Knox Gifted Academy
- Andrew Oh
- Daniel Choi
- Sensing Sensors

ENGINEERING

5th Grade

- Haley Elementary
- Audrey Boardman
- Isabel Marley
- The Storm Shack

6th Grade

- Knox Gifted Academy
- Ben Badhorn
- School Supply Scooter

MATHEMATICS

5th Grade

- Knox Gifted Academy
- Mihira Karnik
- Arhan Sankhla
- Laurel Anderson
- Cryoconite Caretakers

6th Grade

- Knox Gifted Academy
- Morgan Applegate
- Super Bowl
Advertising

1st PLACE

Jr. High Entries

PLANT SCIENCES

7th Grade

- Rykr Templeton
- Casteel
- Phaseolus Vulgaris
growth
Experiment

8th Grade

- Macy Weber
- ACP
- The Effect of
Different Types of
Water on Plant
Growth

MEDICINE AND HEALTH

7th Grade

- Vinayak Athavale
- Santan Junior High
- Antioxidants in Strawberries

8th Grade

- Sarah Quintana
- ACP
- The Effect of Temperature on Peak Expiratory Flow Rates

ANIMAL SCIENCES

7th Grade

- Ethan Moulesong
- ACP
- The Effect of Cat Litter Type on the Absorption Rate Over Time

8th Grade

- Dawson Moulesong
- ACP
- The Effect of Different Environments on Betta Behavior

BEHAVIORAL AND SOCIAL SCIENCE

7th Grade

- Lily Steenhard
- Casteel
- The Effect of Age on Hand Eye Coordination

8th Grade

- Hannah Guan
- ACP
- Typography of Authority: The Effect of Font on Memory

ENVIRONMENTAL SCIENCE

7th Grade

- Nikita Bharati
- BAMS
- Bio-Hydrogen

8th Grade

- Stormy Light
- ACP
- The Effect of
Root Growth on
Soil Erosion

CELLULAR AND MOLECULAR BIOLOGY

7th Grade

- Genevieve Kelsey
- Willis Junior High
- Sugar High or Low?

8th Grade

- Sachit Swaminathan
- Willis Junior High
- The Magic of Chemical Reactions-How Substrate Concentration Interacts With Catalase Enzymes

CHEMISTRY

7th Grade

- Aris Zhu
- Santan Junior High
- Enzyme Reaction

8th Grade

- Maggie Han
- ACP
- The Effect of Sodium Chloride on Instant Cold Packs

EARTH AND PLANETARY SCIENCE

7th Grade

- Hannah Renfrow
- Casteel
- A Plant's Response to Gravitational Change

8th Grade

- Sajni Patel
- ACP
- The Effect of Tsunami Wall Types on Wave Travel Distance

PHYSICS AND ASTRONOMY

7th Grade

- Will Kaplan
- Casteel
- Halogram

8th Grade

- Vivian Zhao
- Julianah Head
- Bogle Junior High
- The Effect of Bow Material on the Frequency of Sound

COMPUTER SCIENCE

7th Grade

- Joshua Grumski
- Bogle Junior High
- The Effect of the Type of Computer and Power Usage

8th Grade

- Jake Marr
- Santan Junior High
- Clocks v speed

ENGINEERING

7th Grade

- Rebecca Holdren
- Willis Junior High
- Paper Quality

8th Grade

- Alex Wilhelm
- Willis Junior High
- It's Still Pure: A Solar Distillation Experiment

MATHEMATICAL SCIENCE

7th Grade

- Rylee Yarger
- Casteel
- Can You Walk on Water?

8th Grade

- Elaina Ashton
- Vanessa Ghosn
- ACP
- The Effect of the Reflectivity of Different Reflectors and Angles on the Efficiency and Power Output of the Solar Panel

1st PLACE

High School Entries

PLANT SCIENCES

- Michael Koury
- Ben LeRoy
- (Basha High/Michael McKelvy)
- Does Phloem Sap Composition Impact the Rate of Psyllid Infestation and HLB Infection in Citrus Trees?

BIOMEDICAL AND HEALTH SCIENCE

- Anuj Shah
- (Hamilton High/Debbie Nipar)
- Neuroblastoma: Exploring Novel Methods to Model Tumors and Improve Treatment Efficiency

MICROBIOLOGY

- Ruchi Banerjee
- Reeti Banerjee
- Yoona Kim
- (Basha High/Michael McKelvy)
- Can Nanoparticles Synergistically Enhance Oral Health

ANIMAL SCIENCES

- Enya Spanings
- (Chandler High/Heather Walterson)
- The Effect of Gender and Age on the Gregarious Behavior of the Australian Plague Locust

BEHAVIORAL AND SOCIAL SCIENCE

- Sarah Alwin
- (Hamilton High/Sara Loutzenheiser)
- The Effect of Learning a Tonal Foreign Language On Ability to Recognize Tones in a Sequence

EARTH AND ENVIRONMENTAL SCIENCE

- Carl Whitesel
- (ACP-Erie High School/Kristi Glassmeyer)
- Phenotypic Plasticity in *D. magna* During Exposure to Minute Concentrations of Hydrogen Peroxide

BIOCHEMISTRY

- Katherine Roshak
- (Hamilton High/Brian Sears)
- Hazardous Phosphorus

CELLULAR AND MOLECULAR BIOLOGY

- Vedik Navale
- (Hamilton High/Debbie Nipar)
- Comparison of Aminoglycoside Polymers and Lipopolymers for Transgene Delivery of TRAIL protein into UMUC-3 bladder cancer cells

COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

- Ritika Bharati
- (Hamilton High/Debbie Nipar)
- Observing Drug Synergy
Mechanisms to Target Viruses

CHEMISTRY

- Sophia Chan
- Keene Patarakun
- (ACP-Erie High School/Kevin Jagiello)
- A Study on the Effect of Sodium Citrate Concentration on the Absorption Wavelength Peak of Gold Nanoparticles Using Spectroscopy

ENERGY: CHEMICAL

- McKenna Loop
- (ACP-Erie High School/Kristi Glassmeyer)
- The Effect of the Extraction Method on the Amount of Algal Crude Lipids Recovered for Economically Feasible Biofuel Production

ENERGY: PHYSICAL

- Kyle Davidson
- Victor Nieto
- (Perry High/Karen Hutchinson)
- Magnets in Motion

PHYSICS & ASTRONOMY

- Brian Nguyen
- (Chandler High/Denise Lewis)
- The Effect of Skyscraper Shape on the Development of Wind Vortices

ENGINEERING MECHANICS

- Harsha Lakamsani
- Anish Agarwal
- (Hamilton High/Jyoti Nair)
- Effect of Various Tidal Velocities on Hydroelectric Generators

ENVIRONMENTAL ENGINEERING

- Sara Jones
- (Perry High/Karen Hutchinson)
- The Effect of Different Species of Bog Plant on the Uptake of Nitrogen in Dairy Wastewater

MATERIALS SCIENCE

- Michael Chen
- (Hamilton High/Debbie Nipar)
- Non-Recyclable Plastics as 3D-Printer Filament

ROBOTICS & INTELLIGENT MACHINES

- Anay Gupta
- (Hamilton High/Debbie Nipar)
- A 3D Vision and Machine Learning Integrated Robotic Solution to Medication Non-Adherence for the Elderly

EMBEDDED SYSTEMS

- Jacob Gonsalves
- Jonathon Gonsalves
- (Basha High/Michael McKelvy)
- Real-Time Energy Efficiency
Analysis for the Smart Home of
the Future

MATHEMATICS

- CG Schultz
- (Hamilton High/William Angelidis)
- Surprising Numerical Patterns: A Study of Logarithmic Patterns in Large Data Sets using Benford's Law

SYSTEMS SOFTWARE

- Rahul Ramesh
- (Hamilton High/Debbie Nipar)
- A Novel Algorithm for Detection of *Plasmodium falciparum* Parasites in Digitized Blood Samples

SCIENTIFIC WRITING ELEMENTARY AWARDS

■ 5th Grade: Knox Gifted Academy Elementary

- Elizabeth Weiss
- Kenneth Su
- Jayden Chao
- Gone With The Wind

■ 6th Grade: Haley Elementary

- Reynolds, Bailey
- Wollert, Jaymie
- Egg-Cellent Chemistry

SCIENTIFIC WRITING JUNIOR HIGH AWARDS

- 7th GRADE: Hannah Renfrow
 - Casteel
 - A Plant's Response to Gravitational Change

- 8th Grade: Sajni Patel
 - ACP
 - The Effect of Tsunami Wall Types on Wave Travel Distance

WATER WISE ELEMENTARY AWARDS

- 5th Grade: Ella Johnston, Lily Avalos & Ella Gressley
 - Auxier Elementary
 - Does Covering Effect Evaporation?
- 6th Grade: Frederick Ryan Sabia, Vivian Nguyen & Andrew Huynk
 - Sanborn Elementary
 - Around and Around

WATER WISE JUNIOR HIGH AWARDS

- 7th Grade: Arthur Yang
 - Santan Junior High
 - Fresh Seawater
- 8th Grade: Andrew Prouty
 - Payne Junior High
 - Got Depth

WATER WISE HIGH SCHOOL AWARD

- Chris Gibby
- Natalie Gibby
- The Effect of Surface Water Treatment Plants on Water Quality

INTEL INNOVATOR ELEMENTARY AWARDS

■ 5th Grade: Knox Gifted Academy

- Mihira Karnik
- Arhan Sankhla
- Laurel Anderson
- Cryoconite Caretakers

■ 6th Grade: CTA Goodman

- Camille Aguirre
- Mya Perkett
- Savage Cabbage

INTEL INNOVATOR JUNIOR HIGH AWARDS

- 7th Grade: Will Kaplan
 - Casteel High
 - Halogram
- 8th Grade: Cameron Braddock
 - Willis Junior High
 - Types of Flaps

INTEL INNOVATOR HIGH SCHOOL AWARD

- Rahul Ramesh
- (HHS/Nipar)
- A Novel Algorithm for Detection of *Plasmodium falciparum* Parasites in Digitized Blood Samples

BEST OF FAIR

BIOLOGICAL

- Carl Whitesel
- (ACP Erie High/Glassmayer)
- Phenotypic Plasticity in *D. magna* During Exposure to Minute Concentrations of Hydrogen Peroxide

PHYSICAL

- McKenna Loop
- (ACP Erie High/Glassmayer)
- The Effect of the Extraction Method on the Amount of Algal Crude Lipids Recovered for Economically Feasible Biofuel Production

Congratulations HISEF Winners

