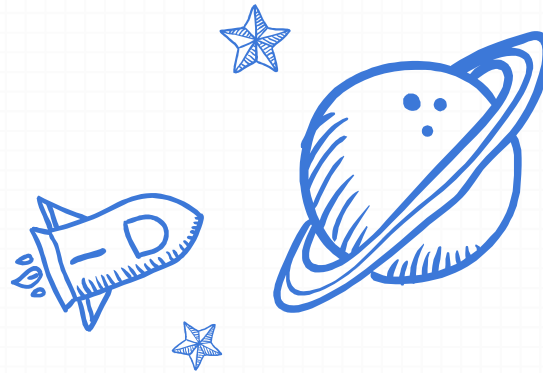




Congratulations, Winners!

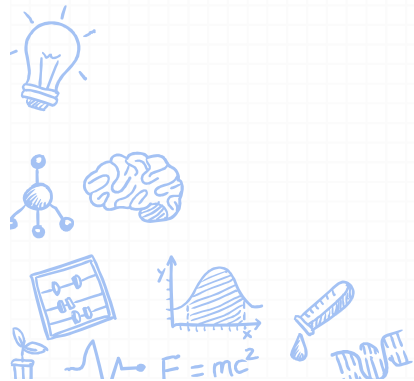
February 24, 2018





Honorable Mention

Elementary Division



Chemistry

Robert Connell

Tre Lessig

Walker Meade

5th Grade

Fulton Elementary School

Teacher: Paul Servis

The Wonderful World of Ice Cream



Chemistry

Maya Simmons
6th Grade
Santan Elementary School
Teacher: Monica Kennedy
Fizz, Bang, Boom



Engineering

Alex Warkentin
Aayush Pandey
Jordan Cortez
5th Grade
Tarwater Elementary School
Teacher: Kayla Jacobs
Pandas For Prez



Engineering

Tanner Cardon
Kael Slade
Jason Taing
6th Grade
CTA - Freedom Campus
Teacher: Krista Yubeta
Bottle Care



Environmental Sciences

Mialani Ocampo
Kaelynne Braden
Nathan Judd
5th Grade
CTA - Freedom Campus
Teacher: Mary Jo White
Solar Fountain



Environmental Sciences

Kate Burson
Lindsey Tainisky
Ella Deisinger
6th Grade
Fulton Elementary School
Teacher: Tonja Pichardo
Purifying Salt Water



Medicine & Health Sciences

Ryan Whyte

Reese Miller

5th Grade

Jacobson Elementary School

Teacher: Jaron Foy

Soda, Sugar and Science



Physics & Astronomy

Barrett Becker
Nick Huff
Lauren Jack
5th Grade
Carlson Elementary School
Teacher: Tristan Ruddle
Speed of Catapults



Physics & Astronomy

Arun Chebrolu

Glen Ruhl

Justin Yen

6th Grade

Jacobson Elementary School

Teacher: Ashleigh Butler

Magnetic Mayhem



Plant Sciences

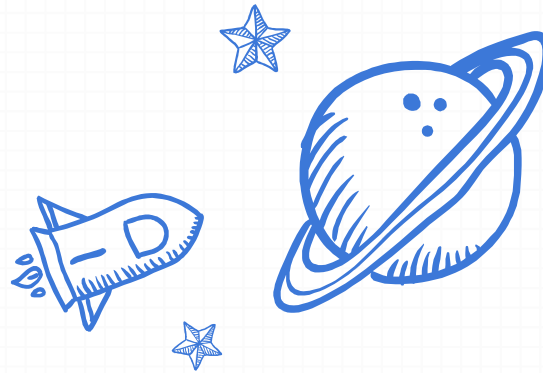
Zoe Barclay
Jacob Beasley
Elizabeth Franklin
5th Grade
Haley Elementary School
Teacher: Heather Kringen
Grow Plant Grow



Plant Sciences

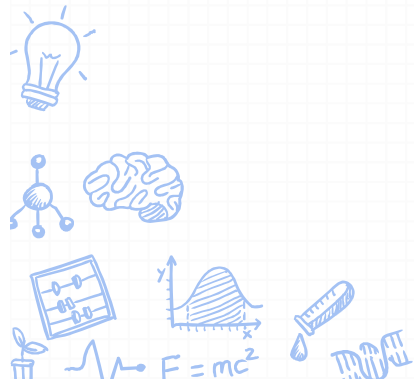
Rae Allison
Raylene Espinoza
6th Grade
Navarrete Elementary School
Teacher: Joanne Terrell
Venus Flytrap VS. Heat





Honorable Mention

Junior Division



Cellular & Molecular Biology

Alyssa Fabio

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

How Local Water React with Yeast Cells



Chemistry

Paige Leff
7th Grade
Santan Junior High School
Teacher: Kristina Plona
Meltdown



Chemistry

Junwei Mao
Spencer Russell
Tyler Zakowicz
8th Grade
Basha High School
Teacher: Meghan Dunigan
Solutions to Marker Stains



Earth & Planetary Science

Taylor Mears
7th Grade
Payne Junior High School
Teacher: Rosemary Schlechty
Monster of a Wave



Engineering

Victoria Jezierski

7th Grade

Payne Junior High School

Teacher: James Collier

Mechanical Properties of 3D Printed Materials



Environmental Sciences

Marisa Jimenez

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Clair Gustafson

The Effect of TDS Level on the Price of Spring Water



Environmental Sciences

Loretta Tran
Hayley Williams
8th Grade
Basha High School
Teacher: Meghan Dunigan
Rain Rain Go Away



Mathematical Sciences

Adam Lee

8th Grade

Bogle Junior High School

Teacher: Christina Morrison

*DNA vs. Genealogy Records in Determining Ancestral
Homelands*



Medicine & Health Sciences

Ella Butler

8th Grade

Bogle Junior High School

Teacher: Tammy Goodman

Which Lotion Works Best



Physics & Astronomy

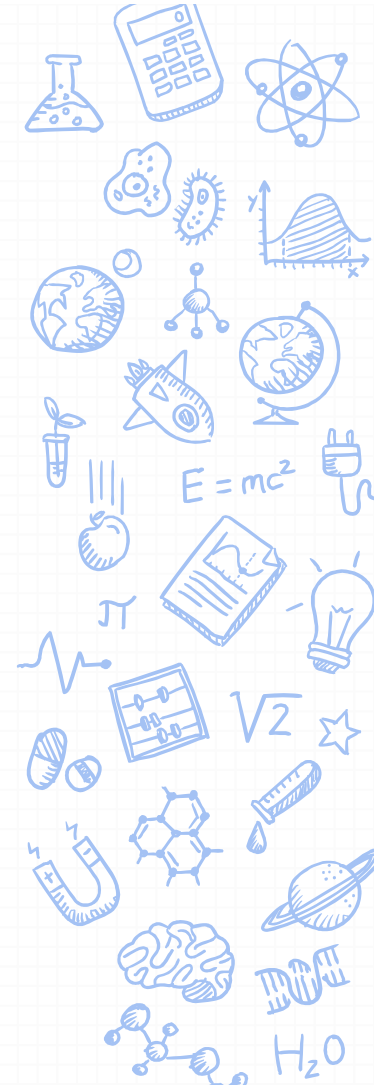
Brenna Buckley

7th Grade

Bogle Junior High School

Teacher: Dan Fortney

The Effect of Color on Heat Absorption



Physics & Astronomy

Rylee Johansen
8th Grade
Santan Junior High School
Teacher: Kristina Plona
Spunky Spatters



Plant Sciences

Robby Glanville

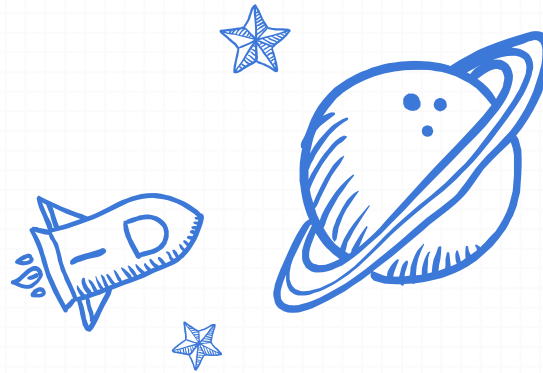
8th Grade

Arizona College Prep - Erie Campus

Teacher: Charles Kidder

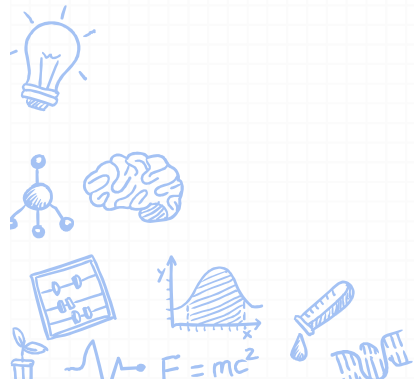
*The Effect of Use of Pesticides during Fruit Production
on its Resulting Vitamin C Content*





Honorable Mention

Senior Division



Behavioral & Social Sciences

Micaela Merryman

12th Grade

Basha High School

Teacher: Michael McKelvy

*Do Societal Factors Impact Homicide Convictions
Differently Than Exonerations?*



Biochemistry

Ethan Merritt

9th Grade

Hamilton High School

Teacher: Jyoti Nair

*The Effect of the Method of Preparation of Broccoli on
Ascorbic Acid Content*



Biomedical & Health

Roshan Sanyal

11th Grade

Hamilton High School

Teacher: Raxha Bhagdev

*Investigating the Ability to Combine Gold
Nanoparticle Technology with Current Alzheimer's
Treatment Options Amplify their Therapeutic Abilities*



Cellular & Molecular Biology

Matthew Torel
9th Grade
Casteel High School
Teacher: Cauley Clark
Bacterial Growth



Chemistry

Laurel Hamblin
9th Grade
Hamilton High School
Teacher: Brian Sears
Prismatic Pyrotechnics



Computational Biology & Bioinformatics

Dravid Navale

9th Grade

Hamilton High School

Teacher: Raxha Bhagdev

*Identifying Single Nucleotide Polymorphisms(SNP)
Variations in Cystic Fibrosis Causing CFTR Genes
Caused by Environmental Conditions Using
Bioinformatics*



Earth & Environmental Sciences

Viveka Chinnasamy
Charlene Bernabe
Kylee Thomas
9th Grade
Hamilton High School
Teacher: Aaron Ullman
Turning Trash Into Energy



Energy: Physical

Savannah Christopherson

9th Grade

Perry High School

Teacher: Jerry Bell

Temperature's Effect on a Solar Panel



Engineering Mechanics

Saachi Poddar

9th Grade

Chandler High School

Teacher: Deanna Martin

The Effect of Nose Cone Design on Model Rockets



Mathematics

Shivam Mohite
11th Grade
Hamilton High School
Teacher: Debbie Nipar
Variations on Infinite Summability



Microbiology

Anusha Natarajan

11th Grade

Hamilton High School

Teacher: Deborah Nipar

*The Effect of Vitamin D Intervention on Inhibiting
GOS2*



Physics & Astronomy

Rebecca Holdren

9th Grade

Hamilton High School

Teacher: Jyoti Nair

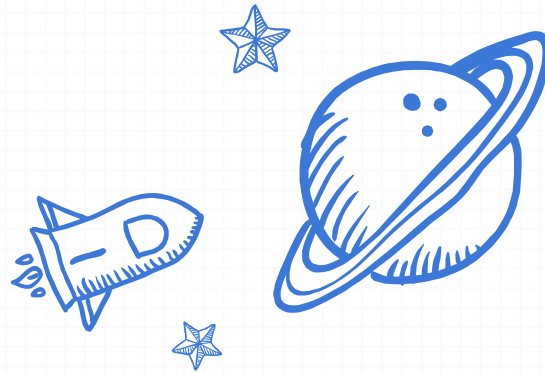
Stealth Planes, Radar and Angles of Incidence



Plant Sciences

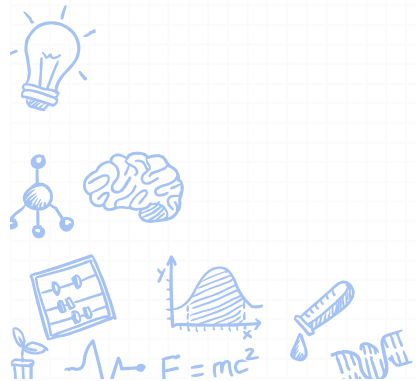
Jessica Montecalvo
9th Grade
Hamilton High School
Teacher: Ashleigh Straube
Radiation is Lit





3rd Place

Elementary Division



Cellular & Molecular Biology

Katy Volstad

Riley Beall

Chase Carter

6th Grade

Patterson Elementary School

Teacher: Daphne Medina

EGGcellent Teeth



Chemistry

Kailyn Figley

Anna Gryzlo

Chloe Wood

5th Grade

CTA - Freedom Campus

Teacher: Mary Jo White

Crystallization



Chemistry

Isaac Cuddihy

Arnav Mishra

Caleb Sirilan

6th Grade

Jacobson Elementary School

Teacher: Alex Kiracofe

The Shocking Truth About Batteries



Engineering

Alex Huang
Andrew Nelson
5th Grade
Jacobson Elementary School
Teacher: Susana Clapham
Think Thermal



Engineering

Eleanor Andersen

Ashton Palmer

6th Grade

Auxier Elementary School

Teacher: Joan Suhre

*Does the Angle of the Ping Pong Catapult Affect the
Distance of Where it Lands?*



Environmental Sciences

Caroline Ritchie

Reese Whyte

5th Grade

Jacobson Elementary School

Teacher: Jaron Foy

Sandbag Solution



Environmental Sciences

Savanna Creal
6th Grade
Knox Gifted Academy
Teacher: Michael Buist
Contamination Control



Medicine & Health Sciences

Grant Smith
Ava Nomura
Riley Wiggins
5th Grade
Navarrete Elementary School
Teacher: Bianca Doller
Iron for Breakfast



Physics & Astronomy

Kaelyn Berthiaume

J Lilly Ritze

5th Grade

CTA - Goodman Campus

Teacher: Carolyn Fox

Boat Bash



Physics & Astronomy

Vincent Blacconiere

Jameson Bauer

Keston Welker

6th Grade

Hull Elementary School

Teacher: Lisa Boyer

Different Pitches in Bottles



Plant Sciences

Breydon Frizzell

Karson Leavitt

Damon Uribe

5th Grade

Tarwater Elementary School

Teacher: Tonya McMillan

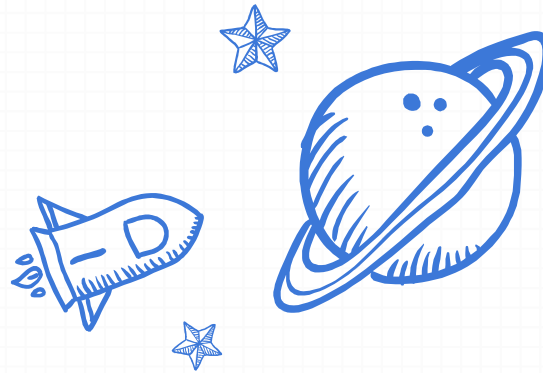
How Different Liquids Affect the Growth of Plants



Plant Sciences

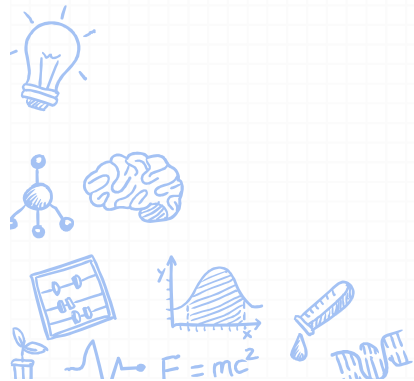
Jacob Druhe
Luke Vermeulen
6th Grade
Ryan Elementary School
Teacher: Tracy Silva
Algae Growth





3rd Place

Junior Division



Animal Sciences

Diya Nath

7th Grade

Arizona College Prep - Erie Campus

Teacher: Larisa Thompson

*The Effect of Household Chemicals on Brine Shrimp
Stages and Death*



Animal Sciences

Kiana Morris

8th Grade

Bogle Junior High School

Teacher: Christina Morrison

The Effect of Substrate on Crickets



Behavioral & Social Sciences

Isabel Marley

7th Grade

Payne Junior High School

Teacher: Rosemary Schlechty

Matters of Memory



Behavioral & Social Sciences

Megan Misener

8th Grade

Bogle Junior High School

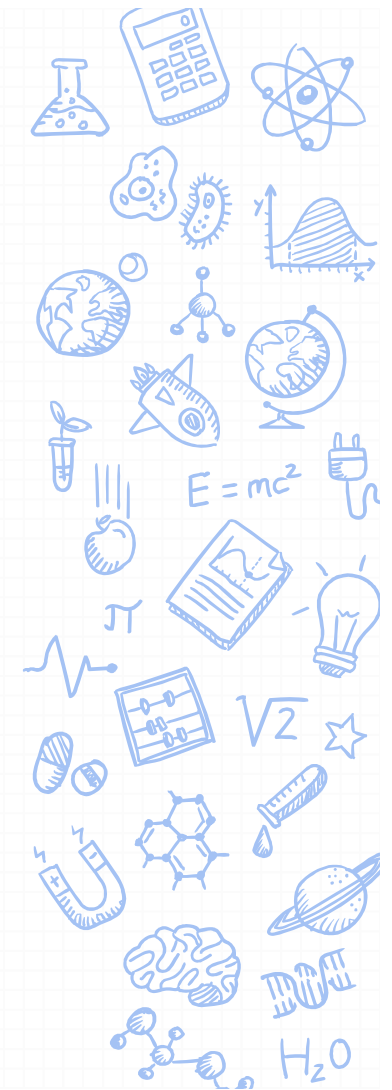
Teacher: Jena Phillips

How Social Media Affects Personality



Cellular & Molecular Biology

Trinity Woods
Ava Johnson
Sydney Johnson
7th Grade
Basha High School
Teacher: Miranda Thornton
Forensics



Cellular & Molecular Biology

Makenzie Williams

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

The Effect of Water Pollutants on Daphnia Magna



Chemistry

Kellyn Nault
7th Grade
Payne Junior High School
Teacher: Lara Grimes
pH in Sports Drinks



Chemistry

Nolan Burke

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

Effect of Milk Fat to Serum Ratios on pH Decline



Computer Science

Chloe Maden

8th Grade

Bogle Junior High School

Teacher: Tammy Goodman

*Fastest Programming Language and Method to
Calculate Pi*



Earth & Planetary Science

Sage Patzer

7th Grade

Santan Junior High School

Teacher: Kristina Plona

Angle of Power



Earth & Planetary Science

Michelle Goerge

8th Grade

Andersen Junior High School

Teacher: Vidya Balasubramaniam

Science Behind Gigantic waves



Engineering

Joshua Shunk
7th Grade
Santan Junior High School
Teacher: Kristina Plona
Clean Energy Project



Engineering

Pradhyum Sathishkumar

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

*The Effect of Different External Catalytic Converters on
the Amount of Carbon Dioxide Coming Out*



Environmental Sciences

Sophia Carson

8th Grade

Bogle Junior High School

Teacher: Christina Morrison

*The Effect of Ocean Acidification on Marine
Organisms*



Mathematical Sciences

Yaniv Briker

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

Password Attack



Medicine & Health Sciences

Price Valladolid

8th Grade

Andersen Junior High School

Teacher: Vidya Balasubramaniam

Which Drink Replenishes the Most Electrolytes



Physics & Astronomy

Laura Richter
7th Grade
Payne Junior High School
Teacher: James Collier
Pulley Power



Physics & Astronomy

Danielle Bernabe

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

The Effect of Heat Plastics' Flexural Strength



Plant Sciences

Nour Hassan
Ria Kulhari
7th Grade
Bogle Junior High School
Teacher: Jena Phillips
Hypothesizing Hydroponics



Plant Sciences

Morgan Nelson

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

Nanosilver to the Rescue





3rd Place
Senior Division



Behavioral & Social Sciences

Abhigyan Shukla

Andrew Hyatt

10th Grade

Hamilton High School

Teacher: Bhagdev Raxha

The Brain, Language, and Stroop



Biochemistry

Neha Shakir

9th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna Nath

*Cooler Cows??? The Effect of Temperature on
Methane Production*



Biomedical & Health

Shalini Vijayaraghavan

12th Grade

Hamilton High School

Teacher: Raxha Bhagdev

A Novel Way to Cure Atherosclerosis



Cellular & Molecular Biology

Vedik Navale

12th Grade

Hamilton High School

Teacher: Debbie Nipar

*Liposome-Mediated Histamine Delivery for
Accelerated Wound Healing and Skin Regeneration*



Chemistry

Tyler Goodrich
10th Grade
Perry High School
Teacher: Billie Fortune
Breaking the Tension



Computational Biology & Bioinformatics

Samantha Kamath

12th Grade

Hamilton High School

Teacher: Raxha Bhagdev

*Modeling a Drug Delivery System Within Nerve Guide
Conduits*



Earth & Environmental Sciences

Devon L Baggot
9th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna Nath

*What Are You missing? The Effect of Intensities of City
Lights on Light Pollution.*



Energy: Chemical

Sajan Patel

9th Grade

Hamilton High School

Teacher: Brian Sears

*Ethanol's Efficiency in Terms of its Energy Content
Compared to Gasoline and Biodiesel*



Energy: Physical

Hunter Paynich

10th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna nath

*The Effect of Different Temperatures of Water on the
Solar Panel and on the Output of the Solar Panel in
Volts*



Engineering Mechanics

Gavin McDaniel

Robert Pike

12th Grade

Perry High School

Teacher: Karen Hutchinson

On the Aerodynamics of Rocket Payload Fairings



Environmental Engineering

Brendan Manning

10th Grade

Hamilton High School

Teacher: Raxha Bhagdev

The Effect of Cheap Water Filters on the Amount of Water Analysis Tests That the Resulting Water Passes



Mathematics

Michael Chung

11th Grade

Hamilton High School

Teacher: Raxha Bhagdev

Quantum Zeno Effect Using Schrodinger's Equation



Microbiology

Tej Patel
9th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna Nath

*"No SPF for You!!!" The Effect of Different Durations
of UV-C Light on E. Coli Bacterial Colonies*



Physics & Astronomy

Jerry Sun
Jonathan Dwiyono

11th Grade

Hamilton High School

Teacher: Debbie Nipar

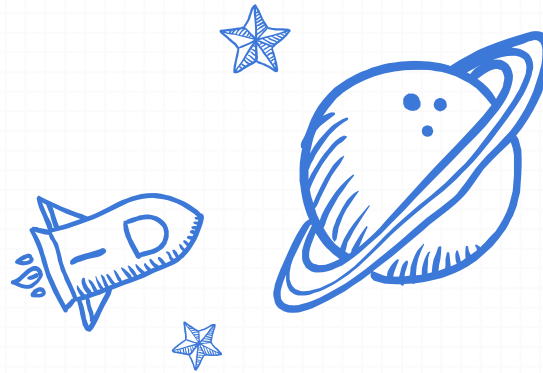
*Using Convolutional Neural Networks to Predict
Stellar Parameters from Direct Imaging*



Plant Sciences

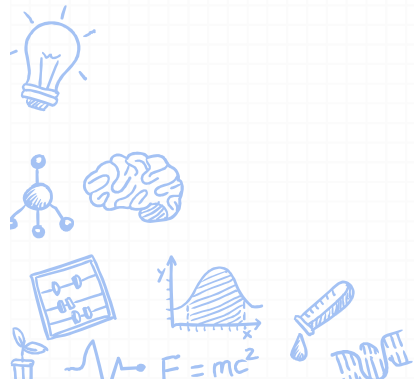
Janet Thampy
9th Grade
Perry High School
Teacher: Christy Watabe
Alluring Alleopathy





2nd Place

Elementary Division



Behavioral & Social Sciences

Gabriela Alvarado

Lucinda Cook

6th Grade

Santan Elementary School

Teacher: Monica Kennedy

Ready, Set, Read



Cellular & Molecular Biology

Natalie Gurgui

Olivia Lund

6th Grade

Navarrete Elementary School

Teacher: Joanne Terrell

Vitamin C Aid



Chemistry

Matthew Hansen
Alexander Drakatos
5th Grade
Riggs Elementary School
Teacher: Heidi Weiland
Blinding Biochemicals



Chemistry

Varsha Khatri
Fatima Ahmed
6th Grade
CTA - Goodman Campus
Teacher: Karen Lee
The Universal Solvent



Earth & Planetary Science

Roman Corella
Lomakuyva Polacca
Julian Trujillo
5th Grade
CTA - Goodman Campus
Teacher: Jadriene Ellery
Creating Craters



Earth & Planetary Science

Arveen Aziz

6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

*The Effect of Flood Preventing Techniques on the
Amount of Wet Area of Home*



Engineering

Rowen Noreus
Ben Baldueza
5th Grade
Santan Elementary School
Teacher: Hannah Ross
Let It Slow



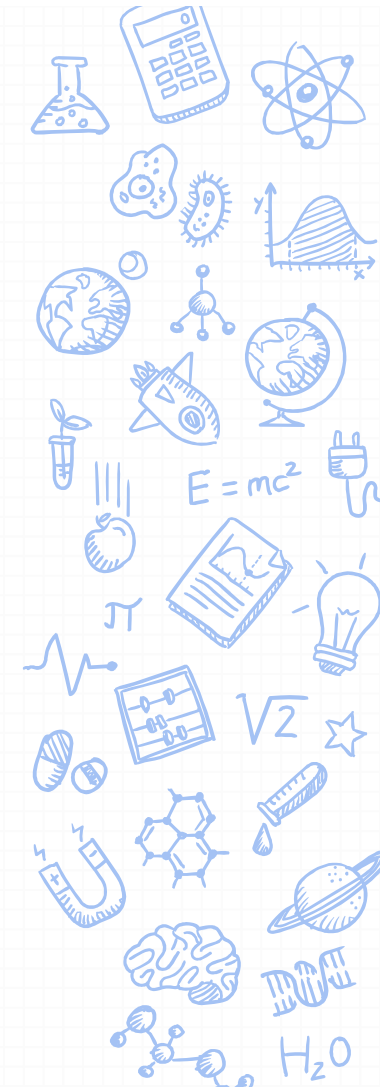
Engineering

Katelyn Reinert
Megan Burke
6th Grade
Jacobson Elementary School
Teacher: Alex Kiracofe
Driving into the Future



Environmental Sciences

Annie Andersen
Madison Gonsalves
5th Grade
Hull Elementary School
Teacher: Michael Doutrich
The Best Bulb



Environmental Sciences

Dominic Cangemi

Noah Weister

6th Grade

Navarre Elementary School

Teacher: Joanne Terrell

pH in Drinking Fountains



Mathematical Sciences

Dawn Shim

6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

*The Effect of the Weight of Coin Face on Amount of
Coin Face Probability*



Medicine & Health Sciences

Jack McDougal

Brady Ishu

Abbey Redish

5th Grade

Hull Elementary School

Teacher: Kaitrin Cardew

*Does Water Temperature Affect the Reaction Time of
an Alka-Seltzer Explosion?*



Medicine & Health Sciences

Claudia Avalos
Audrey Muller
Caitlin Flannery

6th Grade

Hull Elementary School

Teacher: Lisa Boyer

What Not to Drink for a Brighter Smile



Physics & Astronomy

Merrick Kubacki
Lindsy Ramsey
Addison Stevens
5th Grade
Riggs Elementary School
Teacher: Becky From
Fruitastic Batteries



Physics & Astronomy

Conner Golightly
Camden Skousen

6th Grade

CTA - Freedom Campus

Teacher: Krista Yubeta

Soccer Ball Sizes



Plant Sciences

Nathan Nguyen

Benjamin Wang

5th Grade

Jacobson Elementary School

Teacher: Susana Clapham

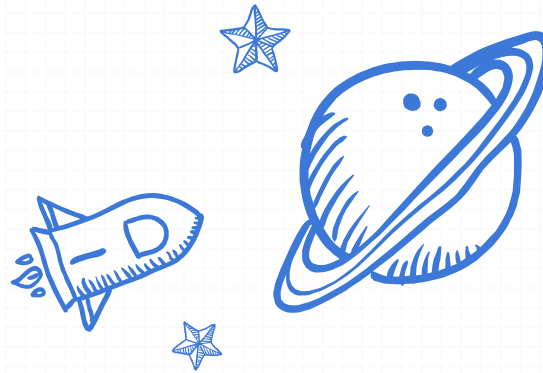
Ready Set Grow



Plant Sciences

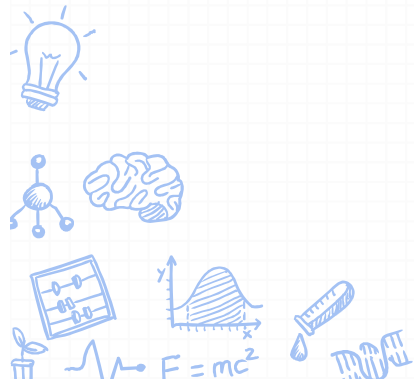
Kaitlyn Hutchins
Brooklyn Douglas
6th Grade
Weinberg Elementary School
Teacher: Kati Barrera
The Race Is On





2nd Place

Junior Division



Animal Sciences

Victoria Yang

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

The Effect of Temperature on Egg Production



Animal Sciences

Izaan DeBruyn

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

The Effect of Light Color on the Respiratory Rate of Guppies



Behavioral & Social Sciences

Ashlynn Tucker

Sofia Llanos

Davina Chen

7th Grade

Basha High School

Teacher: Miranda Thornton

Fidget Spinner Madness



Behavioral & Social Sciences

Clare Hale

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

Gender Stereotypes



Cellular & Molecular Biology

Andrew Yang

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

The Effect of Sugar Type on Yeast Metabolism



Cellular & Molecular Biology

Shruti Ramkumar

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

Detection of the 1p and 19q Chromosome Using Deep Learning



Chemistry

Jordan Hill

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

*The Effect of Material Type on Rate of Temperature
Conduction*



Chemistry

Jennyfer Park

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

*The Effect of Different Oil Ingredients Added into Soap
on its pH Level*



Computer Science

Bode Light

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

The Effect of Big Data on Digital Assistants



Earth & Planetary Science

Carrie Chen

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

The Effect of Soil Moisture on the Building Stability



Engineering

Noah Kellso
Shayan Mukherjee
7th Grade
Bogle Junior High School
Teacher: Jena Phillips
Power of Pressure



Engineering

Jack Cristofano

Ben Jones

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

How Sandbags Used in Hurricanes/Flooding Can Be Improved



Environmental Sciences

Charles Zhang

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

The Effect of Humidity on Solar Cell Performance



Mathematical Sciences

Anish Puri

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

The Effect of Possible Password Combinations Across Length and Number of Characters Allowed on the Time Taken to Crack a Password



Medicine & Health Sciences

Defne Aydin

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

*The Effect of Different Water Purification Methods on
the Number of Surviving Protists Left in the Water*



Medicine & Health Sciences

Mikayla Gardias

8th Grade

Bogle Junior High School
Teacher: Tammy Goodman
How Activity Affects Sleep Quality



Physics & Astronomy

Rahil Shah

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

*The Effect of Wing Angle on Quad-Copter (Drone)
Speed*



Physics & Astronomy

Andrew Kang

8th Grade

Arizona College Prep - Erie Campus

Teacher: Charles Kidder

*The Effect of Angle of Attack on Voltage Generated By
Wind Turbines*



Plant Sciences

Michelle Hu

7th Grade

Santan Junior High School

Teacher: Kristina Plona

*The Effect of Sunscreen on Dissolved Oxygen
Produced Nannochloropsis*



Plant Sciences

Mason Lemke

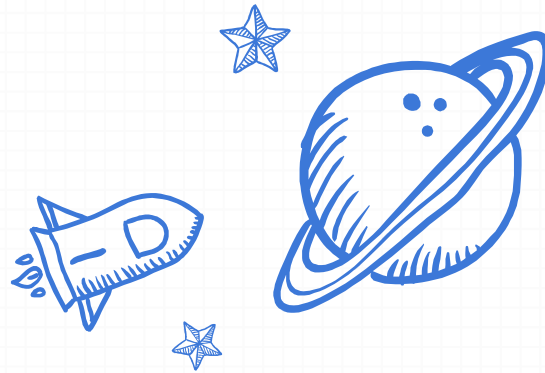
8th Grade

Bogle Junior High School

Teacher: Tammy Goodman

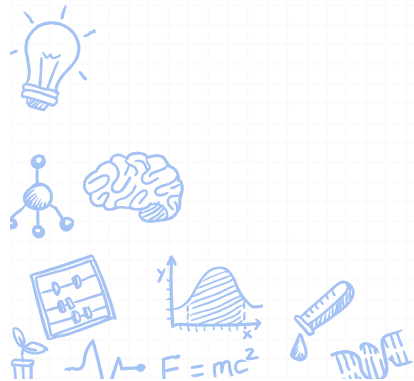
*The Effect of Super Absorbent Polymers on the Growth
of a Plant*





2nd Place

Senior Division



Animal Sciences

Emma Loop

9th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna Nath

*SWARMING: The Effect of Household Ingredients on
Bee Behavior and How it Can Control Swarming*



Behavioral & Social Sciences

Devrath Iyer

10th Grade

Hamilton High School

Teacher: Debbie Nipar

*Automatically Analyzing Open-Ended Survey
Responses Using Statistical and Machine Learning
Methods*



Biochemistry

Nicole Smith

9th Grade

Hamilton High School

Teacher: Brian Sears

The Effect of CO₂ on the Decomposition of Oysters



Biomedical & Health

Laasya Vallabhaneni

12th Grade

Hamilton High School

Teacher: Debbie Nipar

*Effects of Age on Neuropathology Induced by
Experimental Pediatric Concussion*



Cellular & Molecular Biology

Lasya Anantuni

Rachel Yu

12th Grade

Hamilton High School

Teacher: Raxha Bhagdev

The Astroglial Scar After Exercise Treatment Post-Spinal Cord Injury



Chemistry

Omkar Arasaiah

9th Grade

Hamilton High School

Teacher: Raxha Bhagdev

Grapes Can Produce Plasma. But How?



Computational Biology & Bioinformatics

Elaina Ashton

10th Grade

Arizona College Prep - Erie Campus

Teacher: Kevin Jagiello

The Effect of Different Size Bloating Stomachs on the Electrical Resistance of a Stretch Sensor When Measured Using an Intel Galileo Arduino Board or a Digital Multimeter



Earth & Environmental Sciences

Peyton Idleman

9th Grade

Perry High School

Teacher: Jerry Bell

Drastic Reduction of Plastic



Energy: Chemical

Nikita Bharati

9th Grade

Basha High School

Teacher: Michael McKelvy

*Investigation of the Algal Bioflocculating Activity of
Naturally-Occurring Extracellular Polymeric
Substances (EPS): A Novel Approach for Optimizing
Biofuel Production*



Energy: Physical

Travis Zhang
Dev Singhania

10th Grade

Hamilton High School

Teacher: Raxha Bhagdev

*A Spatial and Temporal Model for Probabilistic
Forecasting of Solar Photo-Voltaic Power*



Engineering Mechanics

Sonakshi Sharma

Ayesha Raman

11th Grade

Hamilton High School

Teacher: Raxha Bhagdev

Mechanical Fatigue of PCM-Based Infrastructure



Environmental Engineering

Arthur Yang

9th Grade

Hamilton High School

Teacher: Taylor Hale

*Effect of Changes in Operating Temperature on the
Voltage Output of a Reversible Fuel Cell*



Materials Science

Nidhi Arthreya
9th Grade
Hamilton High School
Teacher: Debbie Crane
Phytogenic Prosthetics



Mathematics

Evan Crabtree

10th Grade

Perry High School

Teacher: Karen Hutchinson

*The Effect of Shuffling Technique on Number of
Consecutive Cards*



Microbiology

Hannah Skocypec

12th Grade

Basha High School

Teacher: Michael McKelvy

Exploring the Use of Bacteria in Mitigating Fungal Disease



Physics & Astronomy

Jacob Wise

10th Grade

Perry High School

Teacher: Karen Hutchinson

Observing Particle Decay with Clouds



Plant Sciences

Candice DeCuna

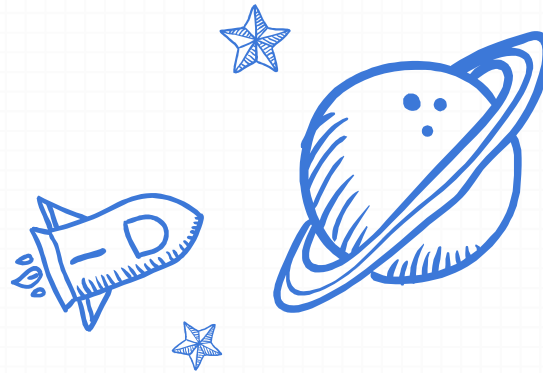
9th Grade

Hamilton High School

Teacher: Brian Sears

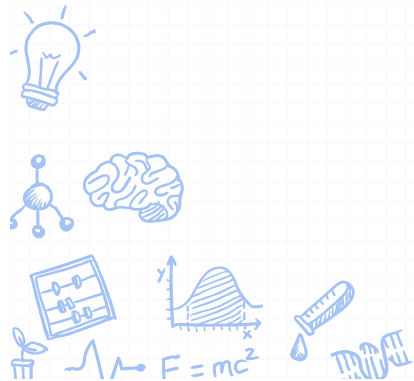
*The Efficacy of Plant Type on Number of Crickets
Repelled*





1st Place

Elementary Division



Animal Sciences

Aubrey Colvin

6th Grade

Navarrete Elementary School

Teacher: Joanne Terrell

Getting Schooled on Climate Change



Behavioral & Social Sciences

Roman Sanders

5th Grade

CTA - Freedom Campus

Teacher: MaryJo White

Backwards Video Gaming - Testing Neuroplasticity



Behavioral & Social Sciences

Ella Gibbs
Sydni Parker

6th Grade

Navarrete Elementary School

Teacher: Joanne Terrell

Pump the Beats



Cellular & Molecular Biology

Corey Allen
Lailani Hall

5th Grade

Sanborn Elementary School

Teacher: Geneal Fendrick

The Fun of Melting Ice



Cellular & Molecular Biology

Ekta Puri

6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

*The Effect of Caffeine's Allelopathic Potential as a
Growth and Germination inhibitor*



Chemistry

Prisha Khemka
Disha Sankhla
Emma Weiss
5th Grade
Knox Gifted Academy
Teacher: Jamie Stack
A Sweet Solution



Chemistry

Shanthi Lebonheur

6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

The Effect of the Type of Emulsifier or Stabilizer on the Amount of Water, Oil, and Dispersed Phase in an Emulsion



Computer Science

Shane Smith

6th Grade

Ryan Elementary School

Teacher: Caroline Hall

RFID Reader Blocking: What Works and What Doesn't



Earth & Planetary Science

Mia Smith
Anya Morman
Marissa Chavez
5th Grade
CTA - Freedom Campus
Teacher: Mary Jo White
Light Powered Solar



Earth & Planetary Science

Leela Raj Sankar
6th Grade
Knox Gifted Academy
Teacher: Michael Buist
Purification Situation



Engineering

Prisha Schroff
Michael Rosendahl
5th Grade
Knox Gifted Academy
Teacher: Deepa Iyer
Solar Powered Drones



Engineering

Emma Hogarth
Sara Horrell
Dylan Lee
6th Grade
Knox Gifted Academy
Teacher: Michael Buist
Polyhedron Pros



Environmental Sciences

Cullen Shreiner
Alex Jian
Daniel Coles
5th Grade
Knox Gifted Academy
Teacher: Deepa Iyer
Solar Irradiance



Environmental Sciences

Sophia Mallette

Taylor Tainsky

Valerie Miller

6th Grade

Fulton Elementary School

Teacher: Nicole Renio

A Sip of the Ocean



Mathematical Sciences

Eldrick Chang
Daniel Lin
Nate Feely
6th Grade
Knox Gifted Academy
Teacher: Michael Buist
Marvelous Membranes



Medicine & Health Sciences

Whitney Connor

Megan Williams

Sidney Fagan

5th Grade

Knox Gifted Academy

Teacher: Jamie Stack

Testing SPFs in Sunscreen



Medicine & Health Sciences

Caelyn Bambianian
Chloe Boyd
Sophia Greifzu
6th Grade
Santan Elementary School
Teacher: Monica Kennedy
Heart Beat



Physics & Astronomy

Andres Encinas

Drew Boyd

Anders Platt

5th Grade

Hancock Elementary School

Teacher: Michelle Martin

Paper Planes with Different Nose Tip Weights



Physics & Astronomy

Natalie Cline

Julia Pitman

6th Grade

Santan Elementary School

Teacher: Kim Sanford

The Ripple in the Water



Plant Sciences

Eashani Ghosh
Michael Cozza
Colin Shunk
5th Grade
Knox Gifted Academy
Teacher: Deepa Iyer
Hydroponics



Plant Sciences

Alicia Bai

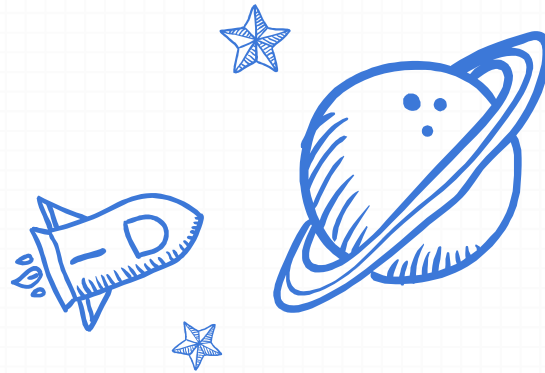
6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

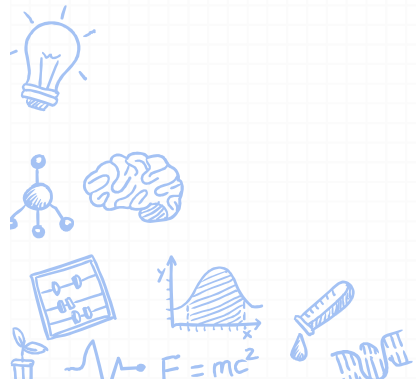
*The Effect of Salinity on the Germination Rate of
Tomato Seeds*





1st Place

Junior Division



Animal Sciences

Skylar Franz

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

*The Effect of the Amount of Protein in Seeds on Ant
Choosing*



Animal Sciences

Kaitlyn Lai

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

*The Effect of Different Types of Scents on the Number
of Crickets Near the Scent*



Behavioral & Social Sciences

Jubilee Lin

7th Grade

Santan Junior High School

Teacher: Kristina Plona

Minding the Memory



Behavioral & Social Sciences

Morgan Applegate

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

Product Placement



Cellular & Molecular Biology

Mihira Karnik

7th Grade

Arizona College Prep - Erie Campus

Teacher: Larisa Thompson

*What is the Ideal Time for Preparing Vegetables Such
that the Nutritional Value Will Be at its Highest?*



Cellular & Molecular Biology

Sarah Savage
8th Grade
Santan Junior High School
Teacher: Kristina Plona
A Matter of Antioxidants



Chemistry

Reese Carpenter

7th Grade

Payne Junior High School

Teacher: Rosemary Schlechty

Moving Color Molecules Using DNA Technology



Chemistry

Maria Lopez

8th Grade

Arizona College Prep - Erie Campus

Teacher: Charles Kidder

*The Effect of Different Types of Food Dye on Migration
During Electrophoresis*



Computer Science

Roman Goebel

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Melody Anderson

The Effect of Virtual Cubes on Run Speed of a Map



Computer Science

Richard Cheng

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

*The Effect of Image Format on Percentage Size
Reduction in Compression*



Earth & Planetary Science

Vinay Raman

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

*The Effect of Chemical Dispersant Amount on the
Difference of Interfacial Tension*



Engineering

Caitlin Patarakun

7th Grade

Arizona College Prep - Erie Campus

Teacher: Larisa Thompson

How Does Ambient Temperature Affect the Amount of Energy Produced by a Solar Cell?



Engineering

Thilina Balasooriya

Pranav Mantri

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

Smart Watering System Mach-2



Environmental Sciences

Amitesh Bharati

7th Grade

Basha High School

Teacher: Miranda Thornton

Spectacular Spirulina the Effect of Algae Blooms



Environmental Sciences

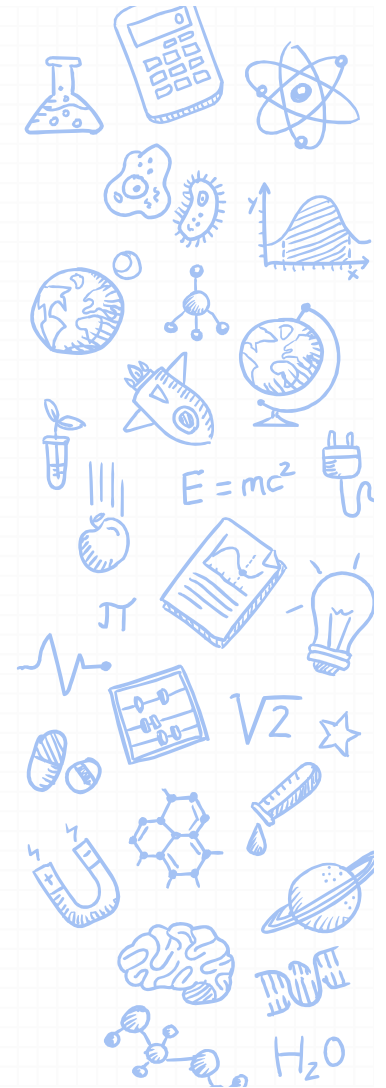
Risha Bhiote

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

*The Effect of Changing the Starch Used in Bioplastic
and Testing the Biodegradability and Durability*



Mathematical Sciences

Christopher Lavin

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Clair Gustafson

The Effect of Angles on Distances



Mathematical Sciences

Ashley Kalscheur

8th Grade

Casteel High School

Teacher: Robin Flyte

The Math and Marketing Behind Mother Nature



Medicine & Health Sciences

Sophia Dominguez

7th Grade

Payne Junior High School

Teacher: James Collier

The Effect of Various Sunscreen SPF's on UV Protection



Medicine & Health Sciences

Nathan Lam

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

*The Effect of Sucrose Water's Temperature on the
Amount of Sucrose Converted into Glucose Using
Invertase*



Physics & Astronomy

David Demarco

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Clair Gustafson

*What is the Effect of Different Methods of
Transportation on the Time it Takes to move a Moai
Statue?*



Physics & Astronomy

Matthew Layne

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

The Energy of the Future: Space-Based Solar Power



Plant Sciences

Conner Redmond

7th Grade

Arizona College Prep - Oakland Campus

Teacher: Clair Gustafson

*The Effect of Genotype on Resistance to Heavy Metal
Soil Contamination*



Plant Sciences

Jaycee Murton

8th Grade

Payne Junior High School

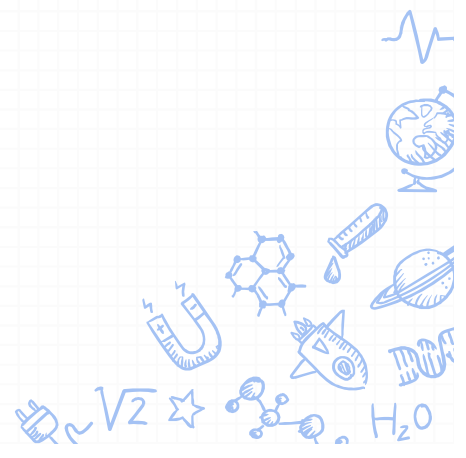
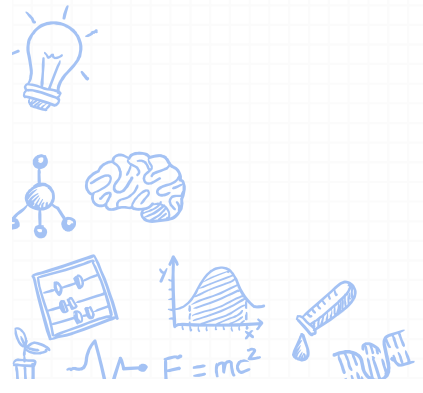
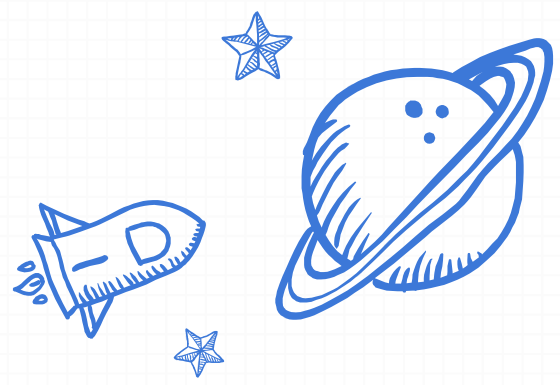
Teacher: Kristin Emerich

The Effect of Magnetism on Plant Growth



1st Place

Senior Division



Animal Sciences

Vaishalini Sitaraman

10th Grade

Hamilton High School

Teacher: Raxha Bhagdev

Hyoids and Force



Behavioral & Social Sciences

Alisha Goyal

12th Grade

Hamilton High School

Teacher: Debbie Nipar

*Adolescents' Motivations for Social Media and Effects
on Anxiety*



Biochemistry

Sanjana Ramakrishhan

9th Grade

Hamilton High School

Teacher: Brian Sears

*The Effect of Nitrates and Phosphates on Pixelated
Algae Growth in Pond Water*



Biomedical & Health

Somil Jain

12th Grade

Hamilton High School

Teacher: Raxha Bhagdev

Targeting of mtTERT Promoter for Treatment of GBM



Cellular & Molecular Biology

Ryan Tran

12th Grade

Basha High School

Teacher: Michael McKelvy

*Genetic Modification of *N. Oceanica* for Enhanced
Biofuel Production*



Chemistry

Cassidy Fredette-Roman

12th Grade

Basha High School

Teacher: Michael McKelvy

*Can Adding Healthy Proteins to Factor V Leiden Blood
Improve its Clotting Function?*



Computational Biology & Bioinformatics

Rohit Nandakumar

12th Grade

Basha High School

Teacher: Michael Mckelvy

Developing a Machine Learning Model to Identify Protein-Protein Interaction Hotspots to Facilitate Drug Discovery



Earth & Environmental Sciences

Shreya Tripathi

Elda Bengu

9th Grade

Hamilton High School

Teacher: Raxha Bhagdev

*The Effect of Fruit Peels on the Amount of Oil
Absorbed: A Biodegradable Way to Prevent Oil Spills*



Embedded Systems

Sachin Konan

12th Grade

Hamilton High School

Teacher: Debbie Nipar

*A Novel Framework for Optimizing Neural Network
Performance by Morphing Systolic Arrays*



Energy: Chemical

Grace Wei

11th Grade

Hamilton High School

Teacher: Debbie Nipar

*The Accelerating Effects of Ultrasonic Wave on
Water's Crystallization*



Energy: Physical

Sahil Sharma

10th Grade

Arizona College Prep - Erie Campus

Teacher: Cristi Sims

Do Thin Film Photovoltaic Cells Made into Novel Polygons, Namely Convex and Concave Forms, Produce More Voltage than a Rigid Silicon Photovoltaic Cell?



Environmental Engineering

Bridge Bach

9th Grade

Arizona College Prep - Erie Campus

Teacher: Cristi Sims

*Erosion Prevention: The Effect of Plant Species on
Amount of Soil Erosion*



Materials Science

Austin Heath

12th Grade

Perry High School

Teacher: Karen Hutchinson

Effect of 3D Printing Infill Percentage on Tensile Strength



Microbiology

Nidhi Singh

9th Grade

Hamilton High School

Teacher: Taylor Hale

*The Effect of Process Conditions on pH Variation
During Yogurt Fermentation Process Using Arduino*



Physics & Astronomy

Jayashree Adivarahan

9th Grade

Hamilton High School

Teacher: Brian sears

*The Effect of Electromagnetic Radiation on Water
Hardness*



Plant Sciences

Xenia Zhao

9th Grade

Hamilton High School

Teacher: Jyoti Nair

The Effect of Carbon Dioxide Concentration on Seed Viability



Systems Software

Karthik Rajkumar

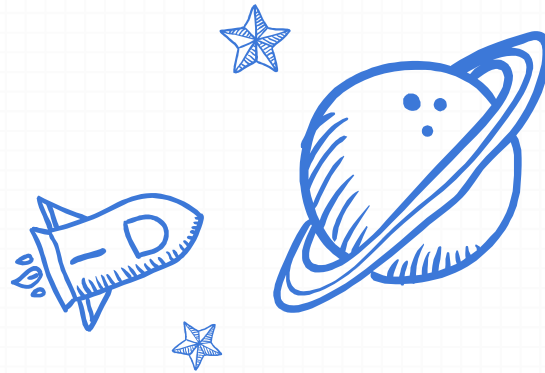
12th Grade

Hamilton High School

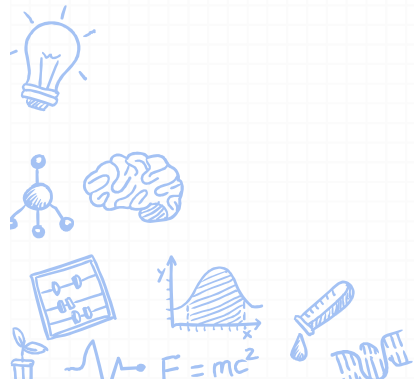
Teacher: Debbie Nipar

*A Novel Blockchain and Deep Machine Learning
Framework for Computer-Aided Analysis of Small
Medical Image Datasets using GPU-accelerated Cloud
Computing*





Water Wise Awards



Water Wise Award

Skyler Maes
Ashley Sanchez Arenas
5th Grade
Bologna Elementary School
Teacher: Sundra Nickerson
Solar-Powered Water Desalination



Water Wise Award

Kera Medhi

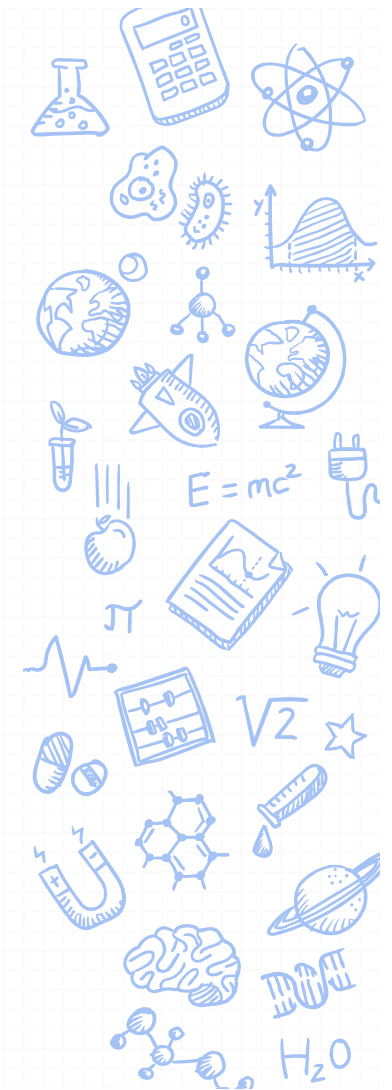
Andrew Lee

6th Grade

CTA - Independence Campus

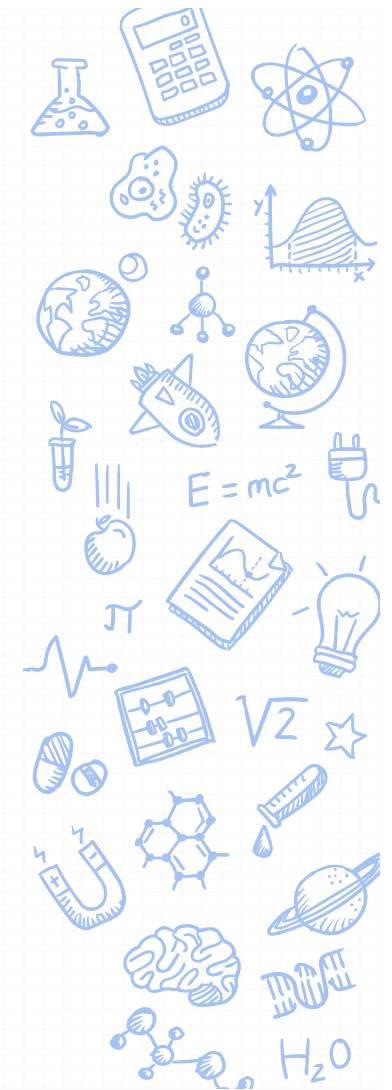
Teacher: Rebecca Babcock

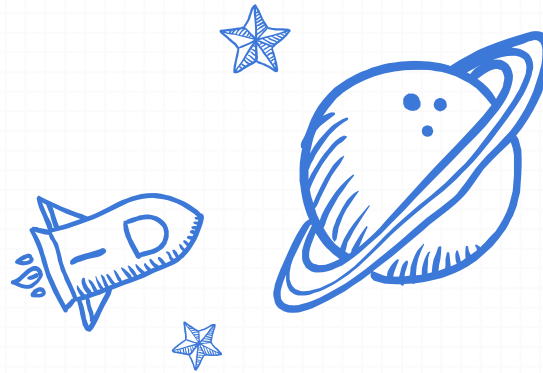
Sheds of Water



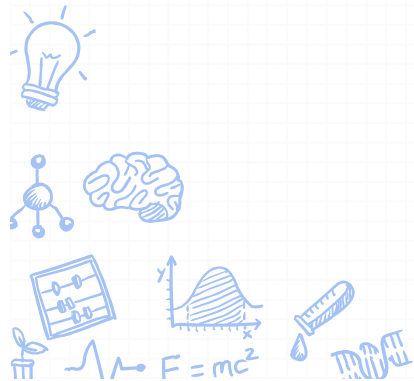
Water Wise Award

Thilina Balasooriya
Pranav Mantri
8th Grade
Bogle Junior High School
Teacher: Jena Phillips
Smart Watering System Mach-2



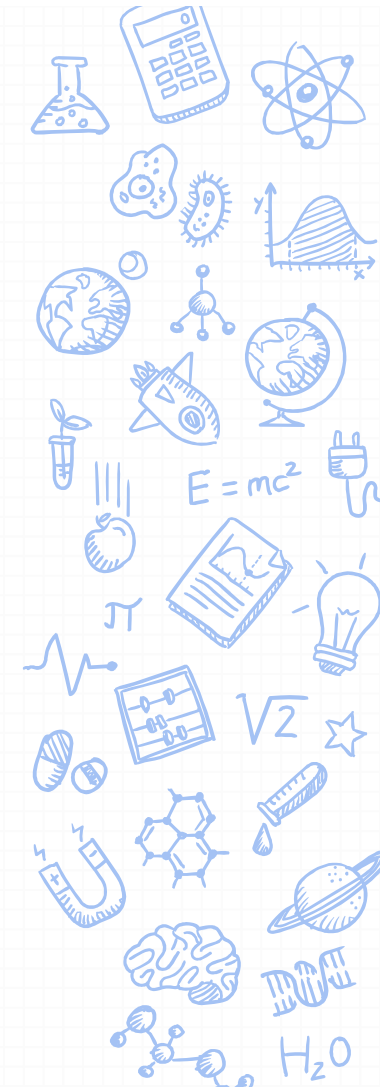


Intel Innovator Awards



Intel Innovator Award

Prisha Khemka
Disha Sankhla
Emma Weiss
5th Grade
Knox Gifted Academy
Teacher: Jamie Stack
A Sweet Solution



Intel Innovator Award

Emma Hogarth
Sara Horrell
Dylan Lee
6th Grade
Knox Gifted Academy
Teacher: Michael Buist
Polyhedron Pros



Intel Innovator Award

Mihira Karnik

7th Grade

Arizona College Prep - Erie Campus

Teacher: Larisa Thompson

*What is the Ideal Time for Preparing Vegetables Such
That the Nutritional Value Will be at its Highest?*



Intel Innovator Award

Risha Bhiote

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

*The Effect of Changing the Starch Used in Bioplastic
and Testing the Biodegradability and Durability*



Intel Innovator Award

Rohit Nandakumar

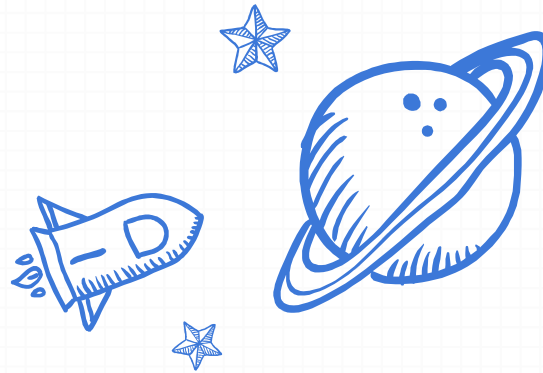
12th Grade

Basha High School

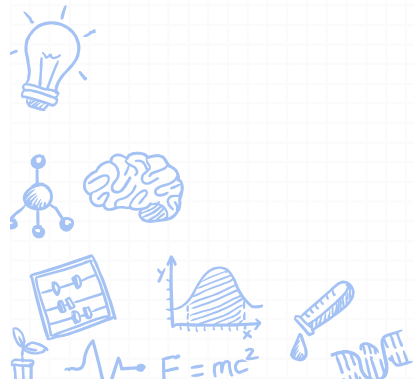
Teacher: Michael Mckelvy

*Developing a Machine Learning Model to Identify
Protein-Protein Interaction Hotspots to Facilitate Drug
Discovery*





Best of Fair Awards



Best of Fair: Physical

Karthik Rajkumar

12th Grade

Hamilton High School

Teacher: Debbie Nipar

*A Novel Blockchain and Deep Machine Learning
Framework for Computer-Aided Analysis of Small
Medical Image Datasets using GPU-accelerated Cloud
Computing*



Best of Fair: Biological

Rohit Nandakumar

12th Grade

Basha High School

Teacher: Michael Mckelvy

*Developing a Machine Learning Model to Identify
Protein-Protein Interaction Hotspots to Facilitate Drug
Discovery*



Credits

Huge thanks to all of our HISEF volunteers and vendors for making this event successful!

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