

Honorable Mention

Elementary Division

Chemistry

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



Environmental Sciences

Mialani Ocampo

Kaelynne Braden

Nathan Judd

5th Grade

CTA - Freedom Campus

Teacher: Mary Jo White

Solar Fountain



Environmental Sciences

Kate Burson
Lindsey Tainsky
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

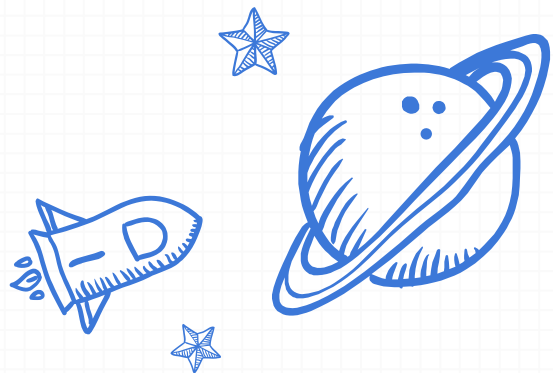
Zoe Barclay
Jacob Beasley
Elizabeth Franklin
5th Grade
Haley Elementary School
Teacher: Heather Kringen
Grow Plant Grow



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



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



Plant Sciences

Robby Glanville

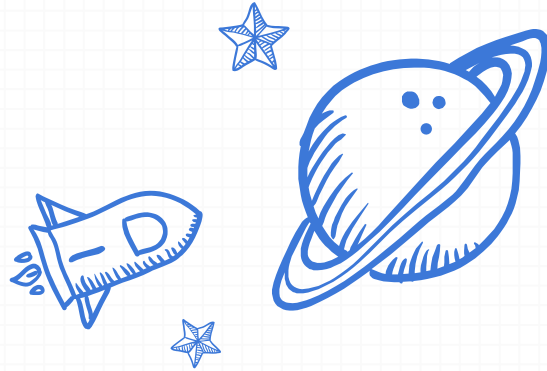
8th Grade

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?*



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



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*



Energy: Physical

Savannah Christopherson

9th Grade

Perry High School

Teacher: Jerry Bell

Temperature's Effect on a Solar Panel



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

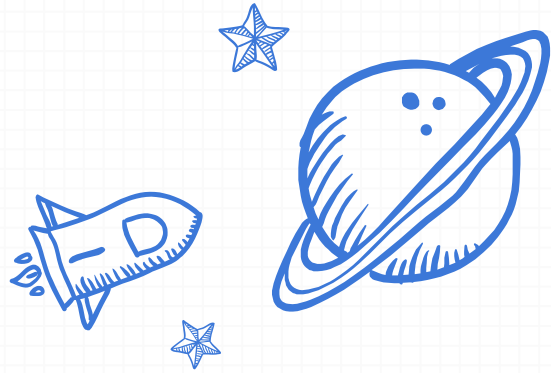
9th Grade

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

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



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



Plant Sciences

Breydon Frizzell

Karson Leavitt

Damon Uribe

5th Grade

Tarwater Elementary School

Teacher: Tonya McMillan

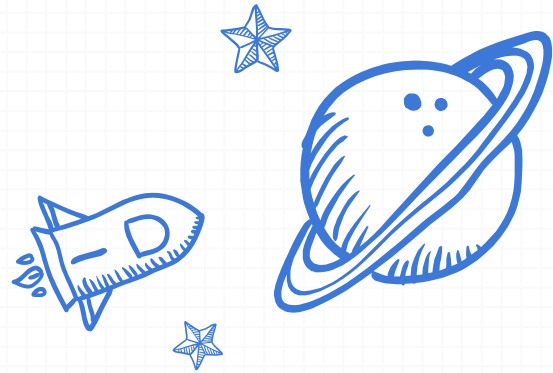
How Different Liquids Affect the Growth of Plants



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



Medicine & Health Sciences

Price Valladolid

8th Grade

Andersen Junior High School

Teacher: Vidya Balasubramaniam

Which Drink Replenishes the Most Electrolytes



Plant Sciences

Nour Hassan

Ria Kulhari

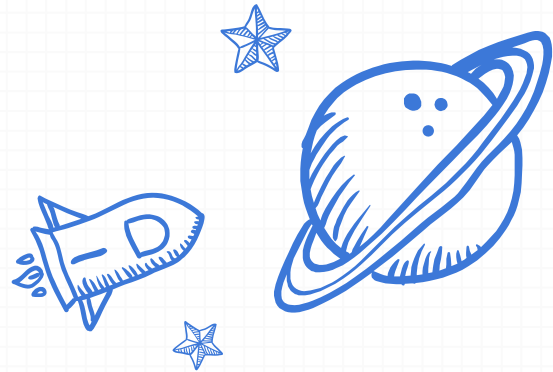
7th Grade

Bogle Junior High School

Teacher: Jena Phillips

Hypothesizing Hydroponics





3rd Place

Senior Division

Biochemistry

Neha Shakir

9th Grade

Arizona College Prep - Erie Campus

Teacher: Rachna Nath

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



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*



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*



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

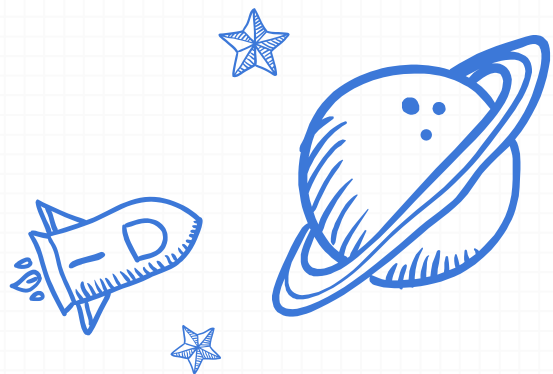
11th Grade

Hamilton High School

Teacher: Debbie Nipar

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





2nd Place

Elementary Division

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



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
Lindsi 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



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



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*



Earth & Planetary Science

Carrie Chen

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Kim Meyer

The Effect of Soil Moisture on the Building Stability



Environmental Sciences

Charles Zhang

8th Grade

Arizona College Prep - Oakland Campus

Teacher: Tamela Harris

The Effect of Humidity on Solar Cell Performance



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*



Plant Sciences

Michelle Hu

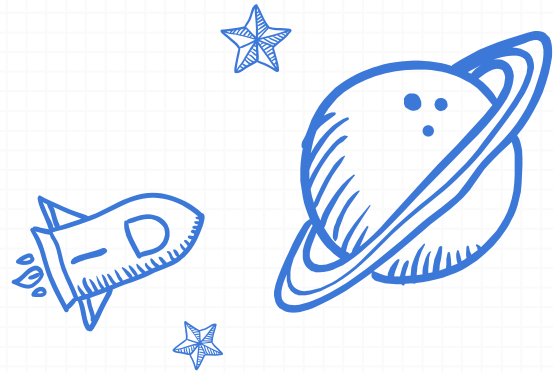
7th Grade

Santan Junior High School

Teacher: Kristina Plona

*The Effect of Sunscreen on Dissolved Oxygen
Produced Nannochloropsis*





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*



Biomedical & Health

Laasya Vallabhaneni

12th Grade

Hamilton High School

Teacher: Debbie Nipar

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



Computational Biology & Bioinformatics

Elaina Ashton

10th Grade

Arizona College Prep - Erie Campus

Teacher: Kevin Jagiello

The Effect of Different Size Bloated 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: 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*



Materials Science

Nidhi Arthreya
9th Grade
Hamilton High School
Teacher: Debbie Crane
Phylogenetic 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*



Animal Sciences

Aubrey Colvin

6th Grade

Navarrete Elementary School

Teacher: Joanne Terrell

Getting Schooled on Climate Change



Cellular & Molecular Biology

Corey Allen
Lailani Hall

5th Grade

Sanborn Elementary School

Teacher: Geneal Fendrick

The Fun of Melting Ice



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



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



Environmental Sciences

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



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

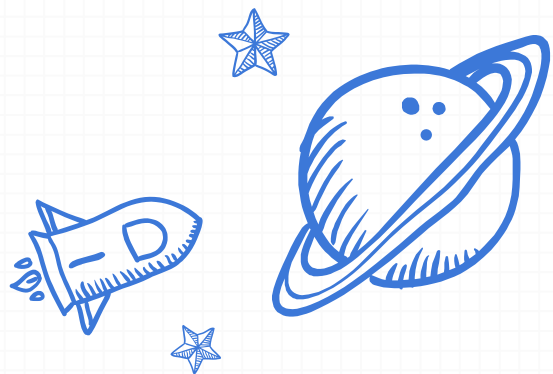
6th Grade

Arizona College Prep - Oakland Campus

Teacher: Carlie Moss

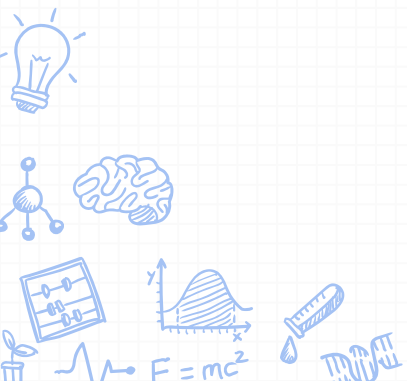
*The Effect of Salinity on the Germination Rate of
Tomato Seeds*





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

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?*



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



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*



Environmental Sciences

Amitesh Bharati

7th Grade

Basha High School

Teacher: Miranda Thornton

Spectacular Spirulina the Effect of Algae Blooms



Environmental Sciences

Risha Bhoite

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

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



Medicine & Health Sciences

Sophia Dominguez

7th Grade

Payne Junior High School

Teacher: James Collier

The Effect of Various Sunscreen SPFs 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

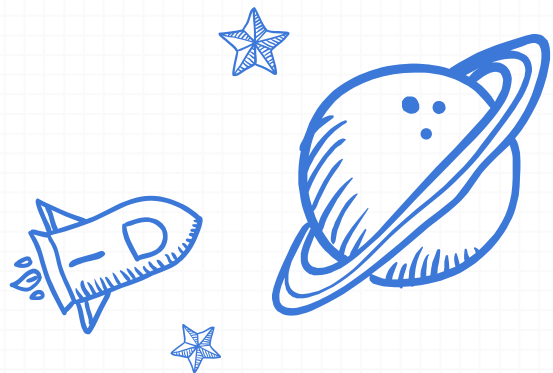
7th Grade

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?*





1st Place

Senior Division

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



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*



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?



Engineering Mechanics

Aidan Powers

11th Grade

Perry High School

Teacher: Karen Hutchinson

Designing the Fastest CO2 Car



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



Water Wise Award

Thilina Balasooriya

Pranav Mantri

8th Grade

Bogle Junior High School

Teacher: Jena Phillips

Smart Watering System Mach-2



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 Bhoite

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

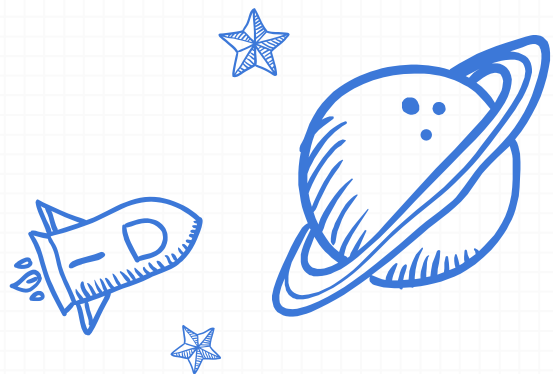
12th Grade

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*



