

Congratulations
TO OUR

**SACRAMENTO REGIONAL
STEM FAIR 2019**



SCIENCE



TECHNOLOGY



ENGINEERING



MATH

WINNERS

SPECIAL AWARDS

AMERICAN METEOROLOGICAL SOCIETY

Samyak Surti

Cellular Automata-Based Mathematical Model for the Spread of Forest Fires

Vista Del Lago High School

AMERICAN PSYCHOLOGICAL ASSOCIATION

Rhitishah Yuva Raju

The Reduction of Stress: A Novel Digital Intervention Method Utilizing Neural Oscillation Analysis and Scanning Techniques

Mira Loma High School

ASM MATERIALS EDUCATION FOUNDATION

Jacqueline Prawira

Ocean.Bioplas: The Plasticity of Marine Exoskeleton-Inspired Materials and the Degradability in the Environment

Mountain House High School

ASSOCIATION FOR WOMEN GEOSCIENTISTS

Easha Narayan, Diya Iyer, Avanti Ramraj

Organic Filter Bags

Granite Bay and Folsom High Schools

SPECIAL AWARDS

AIR RESOURCES BOARD

High School

Ruocheng Ma, Kevin Barnes

Lighting Design for CDR's Rebirth Hall

The City of Dharma Realm

Ashlyn Roice, Alicia Roice

Trash to Treasure: Production of Biofuel from Agricultural waste by Enzymatic saccharification and Fermentation by Saccharomyces cerevisiae using an Arduino based ethanol sensor

Mountain House High School

Middle School

Sachit Murthy, Adarsh Krishnamurthy, Hrishikesh Deshpande

Fires Near You - California

Sutter Middle School (Folsom)

Kaila Sheriff

Does the length of exercise affect the amount of carbon dioxide output

E.V. Cain STEM Charter Middle School

Amelia Totten

Does air pollution affect ocean life?

Our Lady of the Assumption Middle School

SPECIAL AWARDS

AIR RESOURCES BOARD

Middle School

Abhiram Mogali

Development of Wildfire Detection and Alerting System

Sutter Middle School (Folsom)

Aryah Hubbard

From Trash to Gas

Our Lady of the Assumption Middle School

CALIFORNIA ASSOCIATION OF PROFESSIONAL SCIENTISTS

Jacqueline Prawira

*Ocean.Bioplas: The Plasticity of Marine Exoskeleton-Inspired
Materials and the Degradability in the Environment*

Mountain House High School

DEPARTMENT OF WATER RESOURCES

High School

Nathan Smith

*Aqua Drone: A Novel Approach to Water Testing: An Autonomous
Drone for Measuring Water Quality in Hazardous Remote Locations*

Christian Brothers High School

Middle School

Anthony Wong, Katelyn Wong

How Moist Is Your Soil?

California Middle School

SPECIAL AWARDS

EXPLORER AWARD

Joanna Ojeda

Does the Color of a Drink Influence the Perception of it's Sweetness?

E.V. Cain STEM Charter Middle School

GENIUS OLYMPIAD

Nathan Smith

Aqua Drone: A Novel Approach to Water Testing: An Autonomous Drone for Measuring Water Quality in Hazardous Remote Locations

Christian Brothers High School

INTEL COMPUTER SCIENCE AWARD

Lucile Zhu

A Novel Artificial Intelligence Method to Detect Allergens in Daily Necessities

Mission San Jose High School

MU ALPHA THETA NATIONAL MATHEMATICS HONORS SOCIETY

Snehaa Ganesh

Investigation of TESS ID 425997655: A possible Habitable Planet System

Vista Del Lago High School

SPECIAL AWARDS

NASA

Shreya Ramachandran

Water Recycling: The Effect of Soap Nut Grey Water on the Environment (Soil Microbiome - Year 4)

American High School

NOAA

Shreya Ramachandran

Water Recycling: The Effect of Soap Nut Grey Water on the Environment (Soil Microbiome - Year 4)

American High School

NORTHERN CA SOCIETY OF TOXICOLOGY

High School

Chinmayi Balusu

Can the Longevity Compound Rapamycin Rescue Brain Tissue in Age-Related Diseases in Old Mice?

Vista Del Lago High School

Honorable Mention

Albert Qin

A Novel Convolutional Neural Network Based Approach to Bacteria Identification

Mira Loma High School

SPECIAL AWARDS

NORTHERN CA SOCIETY OF TOXICOLOGY

High School

Honorable Mention

Maria Fletes, Hemani Patel

What preservatives are most effective in slowing down food spoilage?

River City High School

Marissa Ramey, Katelynn Prater

Traditional Medicine vs. Herbal Medicine: Which is better at relieving headache symptoms?

River City High School

Middle School

Ethan Wu, Marco Huang

What do you get when you combine natural antibiotic agents together to fight off common germs?

Zehnder Ranch School and Elizabeth Pinkerton Middle School

Honorable Mention

MacIntosh Kistner

How Do Different Dilutions of Disinfectants Affect the Growth of Bacterial Resistants?

E.V. Cain STEM Charter Middle School

SPECIAL AWARDS

OFFICE OF NAVAL RESEARCH

High School

Nathan Smith

Aqua Drone: A Novel Approach to Water Testing: An Autonomous Drone for Measuring Water Quality in Hazardous Remote Locations

Christian Brothers High School

Yahvin Gali

Rethinking Braille with Pi Reader - Raspberry Pi based Optical Reader for the Blind and Visually Impaired

California Connections Academy at Ripon

Srinidhi Chandrasekaran

Understanding Early Diagnosis of Parkinson's Disease Through Support Vector Machine Modeling

Granite Bay High School

Middle School

Rishabh Ambavanekar

Laser Communication

Folsom Middle School

Sydney McCaughna

Lifting Spirits - Which Wing Shape Generates the Most Lift?

E.V. Cain STEM Charter Middle School

SPECIAL AWARDS

OFFICE OF NAVAL RESEARCH

Middle School

Roxy Olivia Luster

Fog, Fog, on the wall what color shines brightest through fog

E.V. Cain STEM Charter Middle School

PROFESSIONAL ENGINEERS IN CALIFORNIA GOVERNMENT

Guadalupe Bernal

Robotic Platform for Artificial Intelligence Development

Folsom High School

RICOH AWARD

Jacqueline Prawira

Ocean.Bioplas: The Plasticity of Marine Exoskeleton-Inspired

Materials and their Degradability in the Environment

Mountain House High School

SOCIETY FOR SCIENCE & THE PUBLIC - LEMELSON EARLY INVENTOR PRIZE

Jordan Prawira

Spira Mirabilis: Improving the Performance of Archimedes Wind

Turbine with Logarithmic Spiral Concept

Altamont Elementary School

SPECIAL AWARDS

SOCIETY FOR IN VITRO BIOLOGY

Chinmayi Balusu

• *Can the Longevity Compound Rapamycin Rescue Brain Tissue in Age-Related Diseases in Old Mice?*

Vista Del Lago High School

SMUD

High School

Selena Wong, Estella Wong, Parth Purankar

Autonomous Lawn Watering Robot

Vista Del Lago High School

Middle School

Aryah Hubbard

From Trash to Gas

Our Lady of the Assumption Middle School

STOCKHOLM JUNIOR WATER PRIZE

Shreya Ramachandran

• *Water Recycling: The Effect of Soap Nut Grey Water on the Environment (Soil Microbiome - Year 4)*

American High School

• Selena Wong, Estella Wong, Parth Purankar

Autonomous Lawn Watering Robot

Vista Del Lago High School

SPECIAL AWARDS

STOCKHOLM JUNIOR WATER PRIZE

Avanti Ramraj, Diya Iyer, Easha Narayan

Organic Filter Bags

Granite Bay and Folsom High Schools

US AIR FORCE

High School

Samyak Surti

Cellular Automata-Based Mathematical Model for the Spread of Forest Fires

Vista Del Lago High School

Tirth Surti

Galaxy Morphological Classification Through Machine Learning

Granite Bay High School

Snehaa Ganesh

Investigation of TESS ID 425997655: A possible Habitable Planet System

Vista Del Lago High School

Middle School

Rishabh Ambavanekar

Laser Communication

Folsom Middle School

SPECIAL AWARDS

US METRIC ASSOCIATION

Shreya Ramachandran

Water Recycling: The Effect of Soap Nut Grey Water on the Environment (Soil Microbiome - Year 4)

American High School

YALE SCIENCE & ENGINEERING ASSOCIATION

Samyak Surti

Cellular Automata-Based Mathematical Model for the Spread of Forest Fires

Vista Del Lago High School

Congratulations again to All our winners!

All participating students developed OUTSTANDING projects for our judges to view.

You have ALL accomplished so much. We hope to see you ALL in 2020!

Northern California



Education Foundation
Science • Technology • Engineering • Math