

# *Congratulations*

## TO OUR 2017 SACRAMENTO REGIONAL STEM FAIR WINNERS!



### **CATEGORY AWARDS**

#### BEHAVIORAL AND SOCIAL SCIENCES

##### **MIDDLE SCHOOL**

###### **Honorable Mention**

Cole Shepard

*Digital V. Print: Reading Comprehension*  
E.V. Cain STEM Charter Middle School

Jett Duncan

*Does Sight and Smell Affect the Taste Perception of Food?*  
E.V. Cain STEM Charter Middle School

###### **Fifth Place**

Samuel Herlehy

*Does Crossing the Midline Enhance Cognitive Skills?*  
E.V. Cain STEM Charter Middle School

###### **Fourth Place**

Carter Groth

*Can the Brightness of Light in a Room Affect a Persons Perception of Color*  
E.V. Cain STEM Charter Middle School

**Third Place**

Tianci Liu

*Is Auditory Learning Better than Visual Learning?*  
E.V. Cain STEM Charter Middle School

**Second Place**

Laura Holliday

*Can Young Children Mistake Medicine for Candy?*  
Our Lady of the Assumption School

**First Place**

Jacobe Brown

*Does Music Affect Test Scores?*  
E.V. Cain STEM Charter Middle School

**HIGH SCHOOL**

**Third Place**

Khushi Patel, Anokhi Patel, & Rea Sheemar

*Packed in Pretty*

River City High School

**Second Place**

Chinmayi Balusu

*Gender Differences in Emotional Recognition*  
Vista Del Lago High School

**First Place**

Tanushree Jain

*Analyzing Human Perspectives Across Age Groups Through Cognitive Psychology*  
Mira Loma High School

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**BIOLOGICAL SCIENCES**  
**MIDDLE SCHOOL**

**Honorable Mention**

Elizondo Parker & James Gray

*In Which Liquids Do Seeds Grow Best*

Clarksburg Middle School

Ava Deaner

*How much bacteria you food collect if you follow the "five second" rule?*  
Our Lady of the Assumption School

### **Fifth Place**

Khushki Shrivastava  
*Physarum Polycephalum's response to glucose*  
Elizabeth Pinkerton Middle School

### **Fourth Place**

Isaak Geil  
*Doorknobs vs. Toilets: which is cleaner?*  
E.V. Cain STEM Charter Middle School

### **Third Place**

Jackson Trickett  
*What spice kills the most Bacteria in Mouth*  
E.V. Cain STEM Charter Middle School

### **Second Place**

Khadeeja Baqui  
*Converting Dirt into Fuel Using Bacteria*  
Al Arqam Islamic School

### **First Place**

Kirsten Jilot  
*EDTA and Lysozyme: Weakening the Outer Membrane's Antibiotic Resistance in Gram-Positive Bacteria*  
E.V. Cain STEM Charter Middle School

## **HIGH SCHOOL**

### **Honorable Mention**

Annie La  
*Drought Tolerant Plant Analysis: The Effect of the Number of Trichomes on Water use Efficiency*  
Cordova High School

### **Third Place**

Riya Rampalli  
*Save our Coast: an ecological forecasting model to manage European Green Crab Invasion*  
Sacramento Country Day High School

### **Second Place**

Pavithra Sundaravaradan  
*Cheaper Cancer Detection: An Instant Immunoassay Kit*  
Mira Loma High School

### **First Place**

Teevyah Yuva Raju  
*The Reversal of Harms Done by the Drought: how carbon and nitrogen levels affect Fusarium oxysporum f. sp. lycopersici race 3 in soils effect Solanum Lycopersicum (tomato) plant growth.*  
Mira Loma High School

# CHEMISTRY AND HEALTH SCIENCES

## MIDDLE SCHOOL

### Honorable Mention

Grant Eklund

*Which Earthworm Diet effects the Phosphorus Level the Most?*

E.V. Cain STEM Charter Middle School

Mitchell Trnka

*Is GMO Food or Foe?*

E.V. Cain STEM Charter Middle School

### Fifth Place

Henry Tsai

*Measuring the Effect of Different Oxidizer-Fuel Ratios in Solid-Propellant Rocket Motors*

Sutter Middle School (Folsom)

### Fourth Place

Hannah Somers

*Fast and Furious: What will make my Algae Grow?*

E.V. Cain STEM Charter Middle School

### Third Place

Nidhi Dontha & Mariela Shah-Morales

*Around the petri-dish: testing the efficacy of anti-bacterial agents*

Sutter Middle School (Folsom)

### Second Place

Allicia Roice & Ashlyn Roice

*The Hidden Sugar Strikes Back: Dangers of Hidden Sugar in Food*

Altamont Elementary

### First Place

Jacqueline Prawira

*Rice Plasticity*

Altamont Elementary

## HIGH SCHOOL

### Honorable Mention

Vishalakshi Arun

*Comparative Analysis of Current Sunscreen to develop a more efficient moss based sunscreen*

Mira Loma High School

### Third Place

Nitya Kotha

*Flame Retardant Paint*

Folsom High School

**Second Place**

Ritika Parvatikar & Isha Saldhi  
*Which food waste makes the best bioplastic?*  
Vista Del Lago High School

**First Place**

Sabrina Yarzada & Raihana Yarzada  
*Inseparable*  
School of Engineering and Sciences

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ENERGY AND TRANSPORTATION  
**MIDDLE SCHOOL**

**Honorable Mention**

Jake Graham  
*Taking Flight*  
E.V. Cain STEM Charter Middle School

Andrew Loehr  
*Feel the Burn*  
Our Lady of the Assumption School

**Fifth Place**

David Richards & Ben Powell  
*Does it pay to track: Stationary vs. Tracking Solar Panels*  
Leonardo Da Vinci Middle School

**Fourth Place**

Reyna Chitrapu  
*Direct Solar Desalination*  
Folsom Middle School

**Third Place**

Cody Gray  
*Weight Distribution: How Fast Can I Go?*  
E.V. Cain STEM Charter Middle School

**Second Place**

Yahvin Gali  
*Watts from Waves - Low Impact, Vertical Column, Nature Inspired Hydrokinetic Energy Converter*  
California Connections Academy @ Ripon

**First Place**

Nathan Smith  
*What is the best wind turbine for consumer and urban environment?*  
Sutter Middle School (Downtown)

# HIGH SCHOOL

## Honorable Mention

Suditi Bhatt & Akshara Legala

*Natural Detoxification: An Efficient Method of Greywater Filtration*

Vista Del Lago High School

## Third Place

Nishita Bagaria & Priyanka Venkatesh

*By experimenting with Different kinds of oils, Can effective biofuel be created that is tantamount to the oil industry in the future?*

Vista Del Lago High School

## Second Place

Sabeeha Baqui

*Efficient Water Electrolysis To Fuel Our World*

Al Arqam Islamic School

## First Place

Rhitishah Yuva Raju

*Saving the Delta by Managing the Natural Ecosystem of Marshland;*

*Sustaining the Population of Eurytemora Affinis*

Mira Loma High School

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# ENGINEERING MIDDLE SCHOOL

## Honorable Mention

Parker Spellacy

*Hit Me With Your Best Shot: Will a Trebuchet Without Wheels Shoot Farther Than One With Wheels?*

Our Lady of Assumption School

Jon Osborn

*Cold Feet: Which Material Insulates Best?*

E.V. Cain STEM Charter Middle School

## Fifth Place

Archit Jahagirdar, Virochan Pandit & Ameya Dhumal

*Smart Medicine Cabinet*

Sutter Middle School (Folsom)

## Fourth Place

William Myatt

*The Power of the Sun: Creating a Solar Case*

W.E. Mitchell Middle School

**Third Place**

Neha Sethi

*Alert System*

Winston Churchill Middle School

**Second Place**

Aidan Oddo

*How Slow can You Go?*

E.V. Cain STEM Charter Middle School

**First Place**

Zuriel Erikson Joven

*Improving the EyeWriter for Locked-in Syndrome Patients*

Sutter Middle School (Downtown)

**HIGH SCHOOL**

**Honorable Mention**

Deeraj Gurram

*Smart Housing: An Innovative Idea*

Vista Del Lago High School

**Third Place**

Makar Loktyukhin & Joshua McClure

*Hybrid Rockets: Paraffin as a Hybrid Fuel*

Folsom High School

**Second Place**

Ryan Walsh

*How to program a light show*

Jesuit High School

**First Place**

Arya Goutam

*ResQ: A low-cost wearable device that alerts family members worldwide in the event of a fall*

The Nueva School

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MATH AND COMPUTER SCIENCES

**MIDDLE SCHOOL**

**Second Place**

Srinidhi Chandrasekaran & Sneha Bagaria

*Bully Detector*

Folsom Middle School

**First Place**

Advait Thaploo & Mario Ishac  
*Beat the Heat: Saving Lives through Intel Edison*  
Winston Churchill Middle School

**HIGH SCHOOL**

**Honorable Mention**

Dylan McLeod & Rithwik Ediga Lakhamsani  
*Using Machine Learning to Automate Geographic Object Recognition, Segmentation and Analysis*  
Folsom High School

**Third Place**

Gautam Pradeep  
*A Comparison of Computer Vision Techniques for Classifying and Localizing Fruits in Images: Handcrafted*  
Mira Loma High School

**Second Place**

Patrick Song  
*Predicting Malaria Using a Periodic Vector-Bias Model*  
Davis Senior High School

**First Place**

Guadalupe Bernal  
*Autonomous Off-Road Vehicle Using Computer Vision for Surveillance Applications*  
Folsom High School

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PHYSICAL SCIENCES

**MIDDLE SCHOOL**

**Honorable Mention**

Hunter Binns & Isaac Bueno  
*The Science Behind Tsunamis*  
Clarksburg Middle School

**Constance Grant**

*Row, Row, Row your Boat in the Safest Part of the Stream!*  
E.V. Cain STEM Charter Middle School

**Fifth Place**

Kench Vang & Khai Ngo  
*Electrical Motor*  
W.E. Mitchell Middle School



**Fourth Place**

Ryan Ross

*Which Gold Ball Goes the Farthest?*

E.V. Cain STEM Charter Middle School

**Third Place**

Camila Ceron-Garcia & Ashley Harvey

*Inflated Soccer*

W.E. Mitchell Middle School

**Second Place**

Bret Hayden

*Which plug is strongest*

E.V. Cain STEM Charter Middle School

**First Place**

Elijah Reeves

*How strong is gravity really?*

W.E. Mitchell Middle School

**HIGH SCHOOL**

**Honorable Mention**

Sydney Walthall

*The Effect of Color on Radiant Energy Absorption*

C.K. McClatchy High School

**Third Place**

Catherine Colella

*A Study of the Parabolic Reflector*

Western Sierra Collegiate Academy

**Second Place**

Richard Korshkov

*Quantum Levitation and Diminishing Electrical Resistance in Unconventional Superconductors*

Western Sierra Collegiate Academy

**First Place**

Deveshi Buch

*Atmospheric Rivers: From Drought to Deluge*

Vista Del Lago High School

# GRAND PRIZE AWARDS

## Third Place

Guadalupe Bernal

*Autonomous Off-Road Vehicle Using Computer Vision for Surveillance Applications*

Folsom High School

## Second Place

Arya Goutam

*ResQ: A low-cost wearable device that alerts family members worldwide in the event of a fall*

The Nueva School

## First Place

Teevyah Yuva Raju

*The Reversal of Harms Done by Drought: how carbon and nitrogen levels affect Fusarium oxysporum f. sp. lycopersici race 3 in soils effect Solanum Lycopersicum (tomato) plant growth.*

Mira Loma High School

*Congratulations again to all our Winners!*

ALL PARTICIPATING STUDENTS DEVELOPED AMAZING PROJECTS FOR OUR JUDGES TO VIEW.

YOU HAVE ALL ACCOMPLISHED SO MUCH.

WE HOPE TO SEE YOU ALL IN 2018!

Northern California



Education Foundation

Science • Technology • Engineering • Math