

## HSSEF 2020 SPECIAL AWARD WINNERS

### American Chemical Society, Hawaii Section

JR 1st Best Chemistry Project, \$100  
Project #433 – Maile Hunter, Hilo Intermediate  
Title: Staph in Hawaii's Beach Water

JR 2nd Best Chemistry Project, \$50  
Project #443 – Mia Garvin and Olivia Lau, Kaimuki Middle  
Title: Edible Eco-Straw

JR 3rd Best Chemistry Project, \$25  
Project #427 – Merydhol Joy James and Kailtyn Requillo, Kalakaua Middle  
Title: Unbreakable

SR 1st Best Chemistry Project. \$100  
Project #117 – Madison Kai, Iolani School  
Title: Adsorption and Desorption Dynamics of a Wastewater Contaminant —Ethinylestradiol— in Soils

SR 2nd Best Chemistry Project, \$50  
Project #121 – Kā'eo Kekumano  
Title: Sea Cucumber Extracts of *H. cinerascens* and Cuvierian Tubules Decrease HCT-116 Colorectal Cancer Cell Viability

SR 3rd Best Chemistry Project, \$25  
Project #138 – Kaia Broomell, Hilo High School  
Title: Quantification of Curcuminoids Curcumin and Bisdemethoxycurcumin in Red and Yellow Turmeric Using LC-MS

Exemplary Chemistry Project, \$25  
Project #118 - Clark, Zakary / Schiff, Henry  
Title: Debunking Synthetic Urine

Exemplary Chemistry Project, \$25  
Project #122 – Johnathan Le, McKinley High School  
Title: PCR of Hypoxia-Regulated Isoforms

Exemplary Chemistry Project, \$25  
Project #141 - Jacqueline Kirkpatrick / Cade Nakao, Mililani High School  
Title: The Strength of Banana Peel Bioplastics based on the Molarity of Hydrochloric Acid and Sodium Hydroxide

Exemplary Chemistry Project, \$25  
Project #116 – Meilin Bucher, Mililani High School  
Title: A Sustainable Natural Sunscreen

Best teacher award in Chemistry, \$100  
Yvonne Chan, Iolani School

### **Associated Chinese University Women**

Project #466 – Grace Fujii, Our Savior Lutheran School  
Title: How Does your Garden Grow?

Project #435 – Abigail Bumgardner, Stevenson Middle  
Title: AI Detecting Skin Cancer

Project #239 – Katrina Kuo, Kalani High School  
Title: The Effect of Thiamine on Hedera helix to Inhibit Rhizopus stolonifer Fungus

Project #211 – Katherine Liu, McKinley High School  
Title: From Waste to Roads

### **American Water Works Association – Hawaii Section**

1st Place, \$250 (2 projects)  
Project #149 – Summer Aniya, Mililani High School  
Title: The Durability of Invasive Algae as an Alternative to Paper Production

Project #205 Aaron Moises Paned, Waipahu High School  
Title: Applying Salt Water Purification to Seawalls

2nd Place, \$200 (2 projects)  
Project #165 – Mariko Quinn, Castle High School  
Title: To Tree or Not To Tree: Tracking Survival and Growth of Pocillopora acuta Spat on Coral Restoration Trees vs. Direct Reef Placement

Project #168 – Kyle Walker and Matthew Schaefer  
Title: Degradation of Aluminum in Saltwater and its Effect on Brine Shrimp Survival

### **Department of Health, Safe Drinking Water Branch**

1st Place SR Division, \$200  
Project #117 – Madison Kai, Iolani School  
Title: Adsorption and Desorption Dynamics of a Wastewater Contaminant —Ethinylestradiol— in Soils

2nd Place SR Division, \$150  
Project #103 – Jaron Kawamura/Tyler Matsuzaki, Iolani School  
Title: Estrogen Pollution and the Altered Sexual Development of Sarotherodon melanotheron and Oreochromis sp. Tilapia

1st Place JR Division, \$100  
Project #544 – Quinci Sasaki, Konawaena Middle  
Title: Bacteria in Public Bathrooms

2nd Place JR Division, \$75  
Project #470 – Shane Kaneshiro, Stevenson Middle  
Title: Essential Nutrients Present in Gray Water

Honorable Mention, JR Division, \$50  
Project #545 – Miya Suzuki, Iao Intermediate  
Title: Do You Really Know What You're Drinking?

### **Emergency Amateur Radio Club**

SR Division, \$250  
Project #178 – Roen Wainscoat, Kalaeo High  
Title: Using Mesh Networking Technology to Develop a Self-Contained System for Digital Communication During Natural Disasters

JR Division, \$175  
Project #595 - Henry Shiro, Volcano School  
Title: A Space Worthy of Raspberry Pi

JR Division, \$125  
Project #484 – Taylor De Sa, Moanalua Middle  
Title: Invisible Health Hazard

JR Division, \$50  
Project #564 – Shylah Quimoyog-Nguyen and Kayla Ujimori, Highlands Intermediate  
Title: Affectance of Electromagnetic Solenoid

### **Friends of Hanauma Bay**

SR Division, \$150  
Project #158 - Saige Holkup  
Title: Identifying Microplastics in Hawaii's Ecosystems

JR Division, \$100  
Project #599 - Benjamin Wyatt, Hilo High and Intermediate  
Title: The Effect of Reef-Safe and Regular Sunscreens on *Pterocladia capillacea*

Teacher Award: Grant Yamashita for Project #158  
Teacher Award: Carri Wissman for Project #599

### **Hawaii Optometric Association**

SR Division, \$100  
Project #139 - Rona Lei Duldulao/Vanessa Mae Tuppil, McKinley High School  
Title: Anti-Fog glasses

JR Division, \$100  
Project #598 – Janice Galicinao, Kalakaua Middle School  
Title: Identifying Retinal Scan Abnormalities Using Computer Programming

Teacher Award, \$100 Kari Yoo for Project #139  
Teacher Award, \$100 Ivy Hsu, for Project #598

### **Hawaiian Eye Foundation**

SR Division, \$100  
Project #143 – Tony Dang, Iolani School  
Title: Detecting Open-angle Glaucoma Using Deep Learning

JR Division, \$100  
Project #598 – Janice Galicinao, Kalakaua Middle School  
Title: Identifying Retinal Scan Abnormalities Using Computer Programming

### **IEEE**

SR Division 1<sup>st</sup> Place: #176 - Lana Lubecke, Kalani High School  
Title: "Life Reader: Remote Airborne Detection of Respiration"  
Teacher Award: Kenneth Okawa

SR Division 2<sup>nd</sup> Place: #178 - Roen Wainscoat, Kalahaehoe High School  
Title: "Using Mesh Networking Technology to Develop a Self-Contained System for Digital Communication During Natural Disasters"

SR Division 3<sup>rd</sup> Place: #174 - Alexander Bell, Evan Curry and Nicholas White, Kealahou High School  
Title: "Developing a Multi-Use UAV Capable of Long-Range Flight"

JR Division 1<sup>st</sup> Place: Project #595 - Henry Shiro, Volcano School  
Title: "A Space Worthy Raspberry Pi"  
Teacher Award: David Wells for Project #595

JR Division 2<sup>nd</sup> Place: Project #495 - Laurenn Fujikawa, Kailua Intermediate  
Title: "Smart Alert"

JR Division 3<sup>rd</sup> Place: Project #591 – Jeffery Ferrer, Chaemin Lee and Sky Voong, Kaimuki Middle School  
Title: "Fire Out"

### **Office of Hawaiian Affairs**

Project #419 – Makamae Punohu-Freeman / Kalia Cazimero / Kalani Hoapili, Puohala Elementary School  
Title: He Mana Kō Ka ‘Ōlelo

Project #490 - ‘Oli Walker / Kamaka Spalding, Hauula Elementary School  
Title: On or Gone: Sun vs. Wind / Pā Mai Ka Lanakila!

Project #533 – Moani Silva / Hali‘a Kāneakua-de la Cruz, Hauula Elementary School  
Title: Shades of the Past / Ke Kala Kahiko

### **Saul Price Aina Haina Award**

Project #172, Micah Wilweber, Kalaheo High School  
Title: Forecasting Short Term Rain Events Using Data from a Personal Weather Station (PWS)

### **Society of American Military Engineers**

SR Division, \$150  
Project #131 – Alicia Acosta / Rianne Tangonan, Waipahu High School  
Title: Designing a 3D Printed Prosthetic Hand

SR Division, \$150  
Project #119 – Kristen Anbe/ Trisha Valenzuela, Waipahu High School  
Title: Testing the Effects of Singing on Athletes’ Lung Capacities

JR Division, \$50  
Project #499 – Joseph Holtzmann, Our Lady of Good Counsel  
Title: Strength of Bridges

JR Division, \$50  
Project #595 – Henry Shiro, Volcano School  
Title: A Space Worthy Raspberry Pi

JR Division, \$50  
Project #489 – Dylan Spencer, Kainalu Elementary  
Title: Wireless Electricity

JR Division, \$50  
Project #439 – Cheydon Agos, Waipahu Intermediate  
Title: Suck It Up!: Observing the Effects of SiO<sub>2</sub> on Freeze Dried Products

### **The Queen’s Health Systems**

Best in Biochemistry, SR Division, \$500  
Project #117 - Madison Kai, Iolani School  
Title: Adsorption and Desorption Dynamics of a Wastewater Contaminant —Ethinylestradiol— in Soils

Best in Microbiology, SR Division, \$500  
Project #220 - Cade Kane, Kamehameha Schools, Kapalama  
Title: Isolation and Characterization of Endophytes from *Cordyline fruticosa*

Best in Cell and Molecular Biology, SR Division, \$500  
Project #134 - Mana Harada, Roosevelt High School  
Title: Targeting Genetic Mutations Using CRISPR Cas9

Best in Biochemistry, JR Division, \$500  
Project #427 – Merydhol Joy James and Kailtyn Requillo, Kalakaua Middle  
Title: Unbreakable

Best in Microbiology, JR Division, \$500  
Project #540 – Abigail Keith, Waiakea Intermediate  
Title: An Eco-Friendly Solution to a Recalcitrant Agricultural Problem: Using Essential Oils to Control Bacterial Leaf Spot of Thai Basil

Best in Translational Medicine, JR Division, \$500  
Project #598 - Janice Galicinao, Kalakaua Middle School  
Title: Identifying Retinal Scan Abnormalities Using Computer Programming

Teacher Awards, SR Division - \$500 each  
-Yvonne Chan, Iolani School  
-Grant Yamashita, Kamehameha Schools, Kapalama  
-Elizabeth Clemens, Roosevelt High School

Teacher Awards, JR Division - \$500 each  
-Clifford Lim, Kalakaua Middle  
-Kristen Mizumoto, Waiakea Intermediate  
-Ivy Hsu, Kalakaua Middle

### **University of Hawaii Cancer Foundation**

1st Place, Project #247, Mary Winnicki, Punahou School  
Title: Machine-Learning Driven Detection of Metastatic Cancer (Year Two)

2nd Place, Project #110, Annabelle Ink, Mililani High School  
Title: Smoke Screen: The Effect of Social Media on Teenage Vaping

3rd Place, Project #251, Taylor Moniz, Kamehameha Schools, Kapalama  
Title: Ivermectin Induces Apoptosis, Cell Cycle Arrest, and Senescence in C4-2 Prostate Cancer Cells