

The 69th Annual GSDSEF

GRAND AWARDS

2023

Junior Division

**Grand Awards
Runners-Up**

Junior Division

Grand Award Runner Up - Life Sciences

Samuel Sternson

The Rhoades School

Advisor: R. Hunker

*Production of Natural UV-absorbing Sunscreens in Plant
Leaves*

Junior Division

Grand Award Runner Up - Life Sciences

Dhruv Bantval

Pacific Trails Middle School

Advisor: E. Main

***Smart glove with ASL-to-Speech Conversion to Assist the
Hearing Impaired***

Junior Division

Grand Award Runner Up - Physical Sciences

Keanu Zeller

The Rhoades School

Advisor: R. Hunker

The Angle Effects on Eddy Current Impacts

Junior Division

Grand Award Runner Up - Physical Sciences

Jake Vignevic

St. Gregory the Great

Advisor: Sudipta Dasgupta

*Measuring Protein and Vitamin C Level in Foods after Different
types of Cooking*

Senior Division

Grand Awards

Runners-Up

Senior Division

Grand Award Runner Up - Life Sciences

Kara Fan

Westview High School

Advisor: S. Halander

A Self-Disinfecting Nanomaterial for Future Space Travel

Senior Division

Grand Award Runner Up - Life Sciences

Sanjana Kumar

Francis Parker School

Advisor: J.P. Pierce

*Utilizing 3D-Printed Engineering Living Materials to Break
Down Environmental Pollutants*

Senior Division

Grand Award Runner Up - Physical Sciences

Saanvi Dogra

Del Norte High School

Advisor: S. Dhandra

*Investigating the Underlying Molecular Patterns in Aggressive
Brain Tumor ETMR Title*

Senior Division

Grand Award Runner Up - Physical Sciences

Vishnu Aravind

Alex Kumar

Del Norte High School

Advisor: S. Kumar

*Using Machine Learning to Repurpose FDA Drugs for the
Treatment of Diabetic Cardiomyopathy*

The Taiwan Award

**A Grand Award presented by the
Taiwanese American Foundation of San Diego**

The Taiwan Award

Vishnu Aravind

Alex Kumar

Del Norte High School

Advisor: S. Kumar

*Using Machine Learning to Repurpose FDA Drugs for the
Treatment of Diabetic Cardiomyopathyt Title*



Junior Division
GRAND AWARDS

Junior Division

Grand Award – Life Sciences

Steven Chen

Pacific Trails Middle School

Advisor: A. Milholland

Magnetically-Powered Micro Train

Junior Division

Grand Award – Life Sciences

Lily Long

The Rhoades School

Advisor: R. Hunker

Exploring Academic Setting Applications of a Turing Test Derivative

Junior Division

Grand Award - Physical Sciences

Kayley Xu

The Bishop's School

Advisor: J. Jordan

Respiratory Sound Classification Using AI

Junior Division

Grand Award - Physical Sciences

Brooklyn Owen

Classical Conversations

Advisor: K. Owen

Putts to Perfection: Comparing Repeatability of Heavy and Light Putters

Senior Division

GRAND AWARDS

Senior Division

Grand Award - Life Sciences

Sarah Gao

Canyon Crest Academy

Advisor: E. Gerstin

*Identification and Experimental Characterization of Plant
Seeds as Effective Flocculants for Water Treatment*

Senior Division

Grand Award - Life Sciences

Kate Xu

Del Norte High School

Advisor: B. West

*Project: Reducing Lead Contamination Through Hydroponically-Grown
Mycorrhizal Plants*

Senior Division

Grand Award - Physical Sciences

Agastya Sridharan

Scripps Ranch High School

Advisor: P. Fowler

*Improved Inductive Performance on Small Datasets Using
Hyper-Connected Neural Architectures, C. Elegans-Inspired
Networks, and Evolutionary Modeling*

Senior Division

Grand Award - Physical Sciences

Nicholas Usher

Logan Brown

High Tech High School North County

Advisor: C. Sailor

*A Differentially-Geared, Omnidirectional Robotics Platform With
Autonomous Jerk-Limited Navigation*

The 69th Annual GSDSEF

ISEF Finalists
2023

ISEF Finalists:

Sarah Gao

Kate Xu

Agastya Sridharan

**Nicholas Usher and
Logan Brown**

ISEF Finalists:

Kara Fan

Saanvi Dogra

**Congratulations to our
2023**

**GRAND AWARD
Winners**