

GREATER SAN DIEGO

S&E
EF

SCIENCE &
ENGINEERING
FAIR

gsdsef.org

INFORMATION & EXHIBITOR DIRECTORY

The 66th Annual

Greater San Diego

SCIENCE & ENGINEERING FAIR

March 9-March 15, 2020

BALBOA PARK ACTIVITY CENTER

Sponsored By



Also supported by industry, education, friends of science in San Diego and Imperial counties and nationwide

Welcome to the 66th Annual Greater San Diego Science and Engineering Fair!



2020 GSDSEF Schedule of Events

<p>Tuesday, March 10, 2020</p> <p>Sign In and Project Set Up Day</p>	<p>Project Sign in and Setup Day Balboa Park Activity Center (BPAC)</p> <ul style="list-style-type: none"> • Sign in and set up projects - 1 pm to 7 pm • Bring a foldable chair labeled with their name to use when not speaking to judges, backboard, notebook, and any models. Check website for items that are not allowed. • Sign-up for tours! • Pick up pre-ordered T-shirts. Purchase GSDSEF souvenirs.
<p>Wednesday, March 11, 2020</p> <p>Judging Day</p>	<p>Judging Day – BPAC - 8 am to approx. 2:45- 3 pm, Students/Judges only allowed during judging!</p> <ul style="list-style-type: none"> • <u>ALL</u> Student Exhibitors must be present throughout judging, UNTIL DISMISSED. • Dress in appropriate business-like attire and wear your NAME BADGE. • Do not forget to bring your lunch! Food is NOT available for purchase and you will NOT be permitted to leave to buy any. No food allowed in the BPAC.
<p>Thursday, March 12, 2019</p> <p>Open to Public Awards Ceremony</p>	<p>Open to Public - 10 am - 3 pm • Admission and Parking are FREE.</p> <ul style="list-style-type: none"> • Student Exhibitors receive free admission to many of the Balboa Park museums and the San Diego Zoo with their exhibitor badge. <p>Awards Ceremony – San Diego Air and Space Museum- 6pm - 8:30pm</p> <ul style="list-style-type: none"> • Students with exhibitor badges and accompanying family members have free admission to museum exhibits area starting at 3pm. • Ceremony doors open at 5:30 pm - Ceremony begins at 6 pm. • No awards will be announced until the ceremony. ALL students receive an award on stage.
<p>Friday, March 13, 2019</p> <p>Open to Public</p>	<p>Open to Public – 10 am - 3 pm • Admission and Parking are FREE.</p> <ul style="list-style-type: none"> • Student Exhibitors receive free admission to many of the Balboa Park museums and the San Diego Zoo with exhibitor badge. <p>Student Tours – students signed up and paid in advance.</p>
<p>Saturday, March 14, 2019</p> <p>Open to Public</p>	<p>Open to Public – 10 am - 3 pm • Admission and Parking are FREE.</p> <ul style="list-style-type: none"> • Student Exhibitors receive free admission to many of the Balboa Park museums and the San Diego Zoo with exhibitor badge.
<p>Sunday, March 15, 2019</p> <p>Open to Public</p> <p>Family Day</p> <p>Closing and Project Take Down Day</p>	<p>Open to Public - 10 am - 3 pm • Admission and Parking are FREE.</p> <p>Family Day Activities – Presentations, Demonstrations and Hands-On Science.</p> <ul style="list-style-type: none"> • The entire family is welcome to participate in these activities! • Student Exhibitors receive free admission to many of the Balboa Park museums and the San Diego Zoo with exhibitor badge. <p>Project Take-Down – <u>ALL PROJECTS MUST</u> remain on display until 3 pm, no exceptions!</p> <ul style="list-style-type: none"> • Project Removal – 3 pm to 4 pm; remaining projects will be stored until 6pm. Available again for pickup on Monday, March 16 between 10am-11am. • Please bring your exhibitor badge as identification to remove your project. • Note to Exhibitors: When you applied to enter the GSDSEF, you and your parent(s)/guardian(s) agreed to leave your project on display until 3 pm, Sunday, March 15. There are no exceptions to this agreement! You (or your representative) are responsible for removing your project.

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About the Greater San Diego Science & Engineering Fair



Our Mission
To provide a forum encouraging young minds in their independent research in science, technology, engineering, and mathematics - and inspiring the next generation of scientific thought, discovery, and innovation.



This year, the GSDSEF is celebrating its 66th Annual Science & Engineering Fair. The GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR (GSDSEF) started planning for its first Science Fair in 1954, and since then has provided an inspiring experience in science and engineering for thousands of San Diego and Imperial County students, motivating them to pursue careers in science, technology, engineering, and mathematics. We provide a regional competition that challenges students to go beyond classroom studies to do independent research – to ask compelling questions, design and implement innovative solutions, and present and defend results to judges who are professionals in their fields.

The GSDSEF students' STEM achievements showcase how young minds can make an impact in the present and future. *...Inspirational...motivational...transformative...* For over 66 years, the GSDSEF has been encouraging young minds in their pursuits that will define the next generation of scientific thought, discovery, and innovation.

Who May Participate in the GSDSEF

Any student in grades 6 - 12 who attends public, private, parochial or home schools in San Diego County or Imperial County may enter a project for screening and possible participation in the GSDSEF. This year the GSDSEF has an Elementary Showcase in which elementary students who have won the top awards in their school's STEM Fair may showcase and share their projects with judges.

Awards and Benefits of Participating in the GSDSEF

- The most important benefit for all student exhibitors is the opportunity to display their projects, meet with other exhibitors, and share projects and results with professional scientists and/or engineers.
- A Certificate of Merit is given to each student exhibitor in recognition of his/her efforts.
- Exhibitors are given opportunities to attend special scientific tours and several Balboa Park museums during Science Fair week.
- First, second, third and fourth place ribbon awards are given for projects in each category in both Senior and Junior Divisions.
- Four Senior and Four Junior Division Grand Prize Runners-up projects receive cash awards.
- Four Junior Division Grand Prize (Sweepstakes) winners receive cash awards.
- Four Senior Division Grand Prize (Sweepstakes) projects are awarded. These students receive college scholarship awards and the opportunity to compete in the Regeneron International Science and Engineering Fair (ISEF) in May 2020 in Anaheim, California. One Senior Division Grand Award (Sweepstakes) winner receives an award and scholarship from AFCEA.
- Engraved plaques are given to all Grand Prize (Sweepstakes) winners, alternates and runners-up.
- Other Special Awards, presented on stage to student exhibitors individually, include: Fred H. Rohr Memorial Award, Reuben H. Fleet Memorial Award, Mickey Award, Ronald Domb Memorial Award, Professional Engineers in California Government Scholarships, BD Awards, San Diego Zoo Global Awards, and the Student Leadership Board Awards.
- 60 Professional Societies provide over 150 special awards and/or scholarships, along with other National Society Awards.
- Top projects in Senior and Junior Divisions are nominated and selected to participate in state and nationally affiliated Fairs.
- Junior and Senior Division Teacher of the Year Awards are selected among nominations made by science fair participants and are given a cash award provided by the Barbara Friedman Foundation.

There are four main divisions in the GSDSEF:

Junior Division Life Sciences (Grades 6— 8); Junior Division Physical Sciences (Grades 6—8)
Senior Division Life Sciences (Grades 9—12); Senior Division Physical Sciences (Grades 9—12)

Our 16 Project Categories

- | | | |
|----------------------------------|--|---|
| • Animal Sciences | • Engineering – Electrical and Mechanical | • Medicine and Health |
| • Behavioral and Social Sciences | • Engineering – Energy and Transport | • Microbiology |
| • Biochemistry | • Engineering – Materials and Bioengineering | • Physics and Astronomy |
| • Chemistry | • Environmental Sciences and Management | • Plant Sciences |
| • Computer Science | • Mathematical Sciences | • Product Testing/Consumer Science (Junior Division Only) |
| • Earth and Planetary Science | | |

Special Recognition and Thanks

The Board of Directors and the Management Committee would like to thank the following individuals, groups and organizations for contributing time, talent, financial support, in-kind support and volunteers to our Science Fair.

Sponsors and Donations

BD
PECG (Professional Engineers in California Government)
San Diego County Office of Education
Reuben H. Fleet Science Center
Hologic Zable Foundation
General Atomics Sciences Education Foundation
Barbara Friedman Family Foundation
AFCEA
San Diego Taiwanese Cultural Center
DRS Daylight Solutions
Qualcomm
UTC Collins Aerospace Systems
ONR (Office of Naval Research)
San Diego Zoo Global Wildlife Conservancy Friends of Science
Viasat
Friends of San Diego

GSDSEF is an Affiliate of the following:

Regeneron International Science and Engineering Fair
Broadcom MASTERS
California Science and Engineering Fair



Area Merchants, Businesses, Community Organizations

Balboa Park Activity Center
BD Volunteers
Copy-It Printing
CoolBox Portable Storage
Raphael's Party Rentals
San Diego Air & Space Museum
San Diego Zoo Global-Education Department
Tu's Printing & Graphics
T-Shirt Mart National City
Voice and Video, Doug Edwards

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California Science & Engineering Fair

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Jelen Rodecker

Facilities/Venues

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Sam Ferguson

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Coordinator: Larry Nordell, *Marine Tech Soc.*
Dr. Annalese Kapteina, *MD*
Dr. Earl Williams
Dr. Donna Kritz-Silverstein, *UCSD*

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Kevin Guentner

Outreach

Erika Pollner, *BD*

Parking & Traffic

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Professional Societies

Adina Sobo, *Morse High School*
Sejal Pabari
Diane Vermuelen

Project Size & Safety

Hal Slater
Alexandra Vredenburg

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Imperial County Office of Ed: Janet Estrada
San Diego Diocese: Julia Cantillion

Scientific Tours

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Screening

Rose Armour

Scientific Review Committee

Phil Gay, Wendy Gay
Steve Rodecker, *SDSEA*
Rose Armour
Dr. Annalese Kapteina

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Emily Tianshi, *VP Media/Comm*
Ken Lew, *VP Outreach*
Harris Beg, *Secretary*
Raj Pabari, *Treasurer*

SLB Advisors/Supervisors

Jelen Rodecker
Steve Rodecker

Volunteers

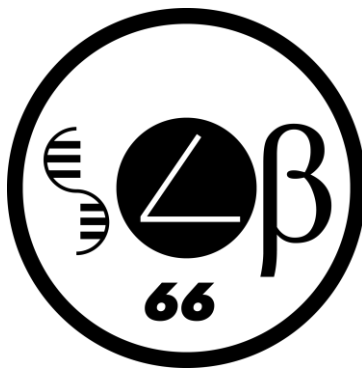
True Xiong, *Sony Playstation*
Erika Pollner, *BD*
Ken Lew, *Qualcomm*

Website Design & Maintenance

Designer: Dale Clarke, *Intuit*
Douglas Smith, *Leidos*
William Proffer, *Leidos*
Jelen Rodecker

The Board of Directors and Management Committee members are volunteers who give their time and expertise to produce the Greater San Diego Science & Engineering Fair.

66th Annual SDSEF



2019 - 2020

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Atulya Mandyam
Lou Fowler
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Cecilia Ymaz

The Student Leadership Board (SLB) is the Fair’s Student Honor Society. These students:

- actively participate in the planning of the Fair at monthly meetings during the year
- plan and present Science Fair “How To” workshops for student exhibitors throughout the year
- design the current year’s T-shirt logo
- assist with many aspects of the Fair itself, including setup/teardown, check-in, project size and safety check, and assist at the Awards Ceremony
- present the Student Leadership Awards to excellent projects
- plan, conduct, and oversee Family Science Day activities

The SLB is a great place for students of all backgrounds to come together and enjoy science, technology, engineering and mathematics while polishing their leadership skills.

More about SLB? Find us at the Fair (we wear cool T-Shirts) or email us at gdssefslb@gmail.com

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AWARDS CEREMONY

Thursday, March 12th, 2020 – San Diego Air & Space Museum

Presenting Sponsor: BD

PROGRAM

- 3:00 pm—Your badge gets you and family into the SDASM for free!
- 5:30 pm – The San Diego Air and Space Museum will open for the Awards Ceremony, *Food Concessions will be available*
- 5:30 pm – Professional Societies Awards listed on Big Screen
- 6:00 pm – National Anthem, Pledge of Allegiance, Opening and Announcements
- 6:15 pm – Keynote Speaker: Daniel Schumann, BD
- 6:20 pm – Presentation of Special Awards
Presentation of Categorical Place Awards
Presentation of Sweepstakes Awards

Special Acknowledgements and Appreciation

City of San Diego Parks & Recreation

Vicki Hara, Area Manager
Herman Parker, Dir. of Parks & Recreation
Berenecé Mora, Recreation Ctr Director
Brett Stanley, Asst Center Director, BPAC

**Balboa Park Activity Center
(BPAC)**

John Gascon
Latece Foster

San Diego Air & Space Museum

Melissa Paris

The Balboa Park Rangers

John Anderson
Balboa Park Rangers



SPECIAL RECOGNITION

Morse High School Hungry Tiger Restaurant for their catering services during Fair week

***Our gratitude
to the volunteers who help in
countless ways to produce the
66th Annual GSDSEF!***



**If you would like to
volunteer, sponsor the Fair,
or donate money, please go
to www.gsdsef.org**

Special Appreciation to

***A. Dale Clarke, of Intuit, for volunteering many, many hours to create and develop the
online screening and application.***

*

Rose Armour—For pre-approving 1600 projects and screening hundreds more.

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How Projects are Invited to Participate in the GSDSEF

After participating in their school or district-level science fairs, top projects are then recommended to go through the GSDSEF screening process. Students create a 10-slide digital presentation which is screened by professionals from the science, engineering, technology, and education fields. Projects that are “recommended” are invited to participate in the GSDSEF. In 2020, over 1000 students submitted their project for screening and screeners spent a hundred hours or more each reviewing presentations for uniqueness and adequate scientific method/engineering design principles.

Who Judges the GSDSEF

At the GSDSEF, 300+ judges from the science and education communities evaluate projects and interview students to determine place awards. These judges are scientists, engineers, technology experts, university professors, specialists and retired educators – the majority of whom have doctorates, masters, or bachelor degrees in their respective fields. Additionally, sixty professional societies and organizations provide more than 150 special awards and scholarships. The Judges for Sweepstakes Awards have 5 or more years of science fair judging experience.



How Projects are Judged for Category Awards:

The GSDSEF projects are judged by Standards aligned with the Regeneron International Science and Engineering Fair and Broadcom MASTERS.

1. Creativity –

Originality of problem, uniqueness of approach. The handling and interpretation of data should be commensurate with the grade level of the student. Ingenious use of equipment and materials is considered without regard to the cost involved.

2. Scientific Thought/Engineering Goals –

Scientific Thought: The project shows evidence of depth of study and effort in employing scientific procedures in the solution of a clearly defined problem including study of background, organized procedures, appropriate sampling, orderly recording and analysis of data and the formulation of logical conclusions. Engineering Goals: The project has a clear objective relevant to the needs of the potential user. The product or process has been tested and is workable and economically and ecologically feasible.

3. Thoroughness –

The study is complete within scope of the problem. Scientific literature has been searched and experiments have been repeated and careful records have been kept.

4. Skill –

Credit is given for special skills needed for the construction or use of equipment and for mathematical, computational, and observational and design skills.

5. Clarity –

The purpose, procedures, and conclusions are clearly explained orally and through a display. The project notebook is well organized, neat and accurate. Sources of ideas, data and assistance are clearly identified.

6. Teams –

The tasks and contributions of each team member are clearly outlined and both team members are familiar with all aspects of the project. The final work reflects the coordinated efforts of both team members.

The GSDSEF Board of Directors and Management Committee would like to give a special recognition and thank you to the screeners who spend many hours reading hundreds of digital projects and taking the extra time to write comments to the students... to the judges who take the time out of their busy schedules to listen and talk to students, share their own passion for science and engineering, and encourage these talented young minds in their pursuits to be the next generation of scientific and technological discovery and innovation! ...AND to the teachers, students, and parents! Without all of your efforts, participation, and dedication there would be no fair !



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ORGANIZATIONS PROVIDING JUDGES TO THE 66th ANNUAL GSDSEF

The GSDSEF thanks the following companies, organizations, and schools for providing judges:

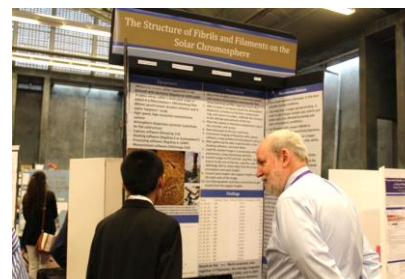
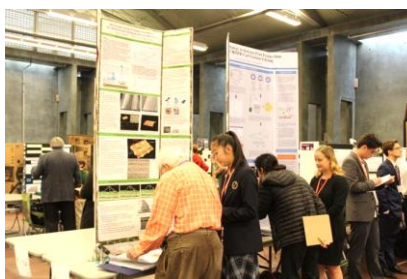
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 William P Mann MD
 Wunderman Thompson
 Zim Biosciences
 Zova Systems, LLC

Thank you to those who continue to support students and science and engineering education by judging at the Fair:

- Retired engineers, professors, scientists, medical doctors, researchers, and programmers from Janssen Research, Kaiser, Hewlett Packard, SAIC, SDSU, US Navy, UCSD, and other companies and organizations.
- Retired educators from El Cajon Valley School District, Escondido Union School District, Sweetwater Union High School District, Grossmont Union School District, and the San Diego Jewish Academy.





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Professional Society and Recognition Awards

Each Professional Society or Organization determines their own judging standards based on their organization's criteria and award projects accordingly. They provide more than 150 special recognition awards and scholarships to students totaling over \$25,000. Professional Societies and Organizations may choose for GSDSEF to distribute awards and scholarships or they may choose to award students at their society's board meetings or banquets.

- 3D Systems
 - American Chemical Society, San Diego Section
 - American Institute of Aeronautics and Astronautics - San Diego Section
 - American Society for Non Destructive Testing (San Diego Section)
 - American Society of Civil Engineers
 - American Society of Materials International, San Diego Chap
 - American Society of Mechanical Engineers
 - American Statistical Association, San Diego Chapter
 - Armed Forces Communications and Electronics Association
 - Association for Women in Science San Diego Chapter
 - BD
 - Biophysical Society
 - Boyce Research Initiatives and Education Foundation
 - Building Industry Association Cares
 - California Academy of Nutrition and Dietetics, San Diego Dist.
 - California Association of Professional Scientists
 - California Environmental Health Association - Southwest Chapter/County of San Diego, Dept of Environmental Health
 - California School Nurse Organization: San Diego/Imperial Section
 - DRS Daylight Solutions Award for Optics and Photonics
 - Experimental Aircraft Association, Chapter 14, San Diego
 - Fred H. Rohr Award from Collins Aerospace
 - Friends of Famosa Slough
 - General Atomics Sciences Education Foundation Advanced Materials Award
 - Health Physics Society (San Diego Chapter)
 - Hillcrest-Mission Valley Lions Club
 - Institute of Electrical and Electronics Engineers
 - Journal of Youths in Science (JOURNYS), Scripps High School Branch
 - Kaiser Permanente
 - Marine Technology Society
 - Price-Pottenger Nutrition Foundation
 - Professional Engineers in California Government
 - San Diego Astronomy Association
 - San Diego Audubon Society
 - San Diego Chapter of the Human Factors and Ergonomics Soc
 - San Diego County Dental Society
 - San Diego County Optometric Society
 - San Diego County Pharmacists Association
 - San Diego County Veterinary Medical Association
 - San Diego County Water Authority
 - San Diego for Science
 - San Diego Horticultural Society
 - San Diego Mensa
 - San Diego Post of the Society of American Military Engineers
 - San Diego Psychological Association
 - San Diego Science Educators Association
 - San Diego Section of the International Dark Sky Association
 - San Diego Shell Club
 - San Diego Skeptic Society
 - San Diego Society of Health-System Pharmacists
 - San Diego Zoo Global
 - Scripps Research
 - Sea World
 - Sigma Xi: The Scientific Research Honor Society (San Diego Chapter)
 - Society for the Advancement of Material and Process Engineering
 - Society of Fire Protection Engineers, San Diego and Inland Empire Chapter
 - Society of Toxicology: Southern California Regional Chapter
 - Society of Women Engineers - San Diego County Section
 - SPAWAR - NAVWAR
 - The City of San Diego's Environmental Services Department
 - The Ron Orta Excellence in Biomedical Research Award
 - Torrey Pines Docent Society
 - WaterReuse Association - San Diego Regional Chapter
- ISEF AFFILIATED AWARDS:
- Association for Women Geoscientists
 - Environmental Protection Agency (EPA)
 - Mu Alpha Theta
 - NASA Earth System Science Award
 - National Oceanic and Atmospheric Administration
 - Office of Naval Research-U.S. Navy/U.S. Marine Corps
 - Ricoh USA, Inc.
 - Society for In Vitro Biology
 - U.S. Air Force
 - U.S. Agency for International Development (USAID)
 - U.S. Metric Association
 - U.S. Stockholm Junior Water Prize
 - Yale Science and Engineering Association
- OTHER NATIONAL/INTERNATIONAL AWARDS:
- Lemelson Early Inventor Prize
 - Broadcom MASTERS



*The following **Special Awards and Recognition** are presented on stage during the Awards Ceremony:*

- ◆ BD Awards for "Advancing the World of Health"
- ◆ Fred H. Rohr Award
- ◆ Office of Naval Research
- ◆ San Diego Zoo Awards
- ◆ Professional Engineers in California Government (PECG) Scholarships
- ◆ Reuben H. Fleet Memorial Award
- ◆ RED Award - Ronald Domb Memorial Award
- ◆ Mickey Award
- ◆ Student Leadership Board (SLB) Awards
- ◆ Arthur Friedman Memorial Science Fair Teachers of the Year – Junior Division and Senior Division

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HIGHLIGHTS from the 2019 GSDSEF



- ❖ Over 930 students submitted their 10-slide digital presentation of their projects to be screened into the fair.
- ❖ Over 620 students were recommended to participate in the fair.
- ❖ 18 sixth graders participated in the Sixth Grade Showcase
- ❖ Over 60 Professional Societies gave Special Awards and/or scholarships

Category Awards:

- ❖ **Junior Division:** 96 First Place, 130 Second Place, 148 Third Place, 49 Fourth Place
- ❖ **Senior Division:** 41 First Place, 35 Second Place, 20 Third Place Awards. 4 Fourth Place

Special Awards:

- ❖ 89 qualified for the California State Science Fair (CSSF)
- ❖ 4 Senior Division projects won Sweepstakes to attend the INTEL International Science & Engineering Fair (ISEF) in Phoenix, AZ.
- ❖ 60 Junior Division Students were eligible for the Broadcom Masters competition
- ❖ 150+ Special Awards totaling over \$10,000 from Professional Societies and Organizations

HIGHLIGHT RESULTS FROM AFFILIATE FAIRS

GSDSEF Results at the California Science and Engineering Fair (CSEF) 2019

947 students from 404 schools statewide participated at the CSEF in April, 2019. GSDSEF had 89 participants with 32 Category Place Award winners. The CSEF awards the top four projects within each subject category and each age division as First, Second, Third, and Fourth Place awards. Only one project, receives each award — there are no ties. Category Award winning projects receive the following cash awards. Team project cash awards are divided equally among each team member.

Category	Jr. Div	Sr. Div
First Place	\$250	\$500
Second Place	\$125	\$250
Third Place	\$75	\$125
Fourth Place	\$50	\$75

CSEF Category Place Awards won by GSDSEF Students:

- Junior Division: 1 First, 4 Second, 1 Third, 4 Fourth, 6 Honorable Mention
- Senior Division: 5 First, 4 Second, 3 Third, 2 Fourth, 2 Honorable Mention

CSEF Special Awards/Recognition Awards:

- LA BioMed Awards for Excellence in Biochemistry and Molecular Biology - Senior Div. \$ 1,250, Jessie Gan, San Diego Jewish Academy
- Past Chairpersons' Humanitarian Awards , two \$1,250 Junior Div. awards: Ainsley E. Savant, Encinitas, St. John School – Encinitas; Eden E. Stambaugh, Santa Fe Christian School
- AACC Clinical Chemistry Awards: \$200 awards: Junior Div.: Haya M. Belbes, Bright Horizon Academy; Senior Div: Anushree Chaudhuri, Westview HS
- Center for Plant Cell Biology - Senior Div place awards of \$500 First Place: David L. He, Canyon Crest Academy
- SPIE Optics and Photonics Recognition Awards - Senior Div. First Place \$800: Isaac A. Broudy, Bonita Vista High
- Association for Women Geoscientists Award (ISEF Affiliate Award), Melia P. Crimaldi, Santa Fe Christian School
- Four students who qualified for the Intel International Science & Engineering Fair in Phoenix, AZ.

Broadcom MASTERS Results:

Broadcom MASTERS® (Math, Applied Science, Technology and Engineering as Rising Stars), is the premier middle school science and engineering fair competition. In 2019, over 2300 middle school applicants from 48 states, 2 US Territories, 1 Department of Defense School competed at the national level. GSDSEF nominated 60 students for Broadcom MASTERS.



Top 30 Finalist/Rising Star Award winner:

- ❖ Kyle Tianshi, Gr. 7, The Cambridge School

The Rising Star Awardees win a trip to Anaheim as the United States delegate to Broadcom MASTERS International and Official Observer at ISEF.

Top 300 Finalists from the GSDSEF:

- ❖ Reuben Broudy, Gr. 8, Soille SD Hebrew Day School
- ❖ Marcus Catanzaro, Gr. 7, Pacific Beach MS
- ❖ Kian Chakamian, Gr. 8, The Rhoades School
- ❖ Agastya Sridharan, Gr. 7, Thurgood Marshall MS
- ❖ Kyle Tianshi, Gr. 7, The Cambridge School

66th Annual Greater San Diego Science & Engineering Fair - 2020

INTEL International Science and Engineering Fair (ISEF):

During the week of May 11-17, 2019, 1842 students from 80 countries, regions, territories, and from across the US, were in Phoenix, Arizona to be judged for their STEM projects at the INTEL International Science and Engineering Fair. Approximately 300 students receive 1st through 4th place awards in the 21 categories, and approximately 300 special awards, scholarships, scientific trips, and internships are given out by international companies, universities, and professional societies.

Eight San Diego students qualified through the GSDSEF or through the CSEF.

ISEF Finalists through GSDSEF

- ◆ Sauhaarda Chowduri, Gr. 11, Westview High
- ◆ Mason Holst, Gr. 10, Canyon Crest Academy
- ◆ Emily Kang, Gr. 10, Canyon Crest Academy
- ◆ Kaitlyn Wang, Gr. 11, Canyon Crest Academy

ISEF Finalists through CSEF

- ◆ Ruchi Agashe, Gr. 11, Canyon Crest Academy
- ◆ Anushree Chaudhuri, Gr. 11, Westview High
- ◆ Emily Tianshi, Gr. 10, The Cambridge School
- ◆ Vivek Vijayakumar, Gr. 10, San Marcos High



ISEF PLACE AWARDS:

- **CHEMISTRY** - Second Award of \$1,500: Anushree Chaudhuri, Westview High
- **EARTH AND ENVIRONMENTAL SCIENCES** - Second Award of \$1,500: Emily Tianshi, The Cambridge School
- **MICROBIOLOGY** - Second Award of \$1,500: Emily Kang, Canyon Crest Academy
- **PHYSICS AND ASTRONOMY** - Second Award of \$1,500: Vivek Vijayakumar, San Marcos High
- **ROBOTICS AND INTELLIGENT MACHINES** - Third Award of \$1,000: Sauhaarda Chowdhuri, Westview High School

ISEF SPECIAL AWARDS:

- **Acoustical Society of America** - Third Award of \$600.00, (student's Mentor awarded \$150): Sauhaarda Chowdhuri, Westview High
- **GoDaddy** - Making the Best Use of Data Award \$1,500: Sauhaarda Chowdhuri, Westview High

REGENERON TALENT SEARCH

The Regeneron Science Talent Search is the nation's oldest and most prestigious science and math competition for high school seniors.



REGENERON TOP 40 from the GSDSEF

Alina Pollner, Gr. 12, Canyon Crest Academy

The Regeneron TOP 40 finalists will travel to Washington, D.C. from March 5-11, 2020 where they undergo a judging process and compete for more than \$1.8 million in awards. They also have the opportunity to interact with leading scientists, meet with members of Congress and display their projects at the National Geographic Society. Finalists are each awarded at least \$25,000, and the top 10 awards range from \$40,000 to \$250,000.

REGENERON TOP 300 from the GSDSEF

Ilan Cosman, La Jolla High School
Daniel Liu, Torrey Pines High School
Alina Pollner, Canyon Crest Academy
Arushi Dogra, Del Norte High School



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GSDSEF Student Exhibitors Tour Opportunities

San Diego Zoo "Inside Story Tour"

Friday, March 13, 2020 * 10:00 am – 12:30 pm * Cost: \$12.50 per student-exhibitor

Check in with the Student Tours Coordinator by 9 am. We will depart from the front of the Balboa Park Activity Center (the Science Fair building) at 9:15 am. Students will be escorted by certificated teachers/chaperones. We will walk to the Zoo entrance where we will meet our Zoo Professional Educator Guides. The tour will include a bus ride with behind-the-scenes stops not open to the general public. The tour concludes at the Zoo at 12:00 pm and we will then walk back to the BPAC by 12:30 for pickup.

Students must wear their badges!!!



Science Fair Students

Enjoy Our Beautiful BALBOA PARK AND MUSEUMS

SPECIAL NOTE

For all GSDSEF activities, a student Exhibitor must follow their school's field trips and/or attendance procedures in order to miss a school day.

Parents sign a general release with the GSDSEF during the application process for entrance to the GSDSEF provides the necessary permission for students to participate in GSDSEF tours and other activities in Balboa Park



Exhibitors Badges give all student-exhibitors free admission to most of the museums in Balboa Park between the conclusion of Judging on Wednesday, March 13, 2019 and the end of Science Fair on Sunday, March 17, 2019. Please check the Balboa Park website at www.balboapark.org for a list of museums and their hours.

FREE ADMISSION TO THE MUSEUMS AND SAN DIEGO ZOO IS ONLY FOR STUDENT-EXHIBITORS WEARING HIS/HER OFFICIAL 2020 EXHIBITOR NAME BADGE AND NOT FOR FAMILY MEMBERS OR FRIENDS.

- ❖ To enter the San Diego Zoo for free using your badge, report to the Zoo Guest Relations window.
- ❖ Special Exhibits at a museum may require a fee (at the student price). This includes admission to the IMAX Theater at the Reuben H. Fleet Science Center.

FACILITIES AND MUSEUMS TO ENJOY WHILE AT BALBOA PARK:



Botanical Gardens
Museum of Photographic Arts
Reuben H. Fleet Space Museum
San Diego Air & Space Museum
San Diego Art Institute
San Diego Automotive Museum

San Diego Hall of Champions
San Diego Museum of Art
San Diego Zoo Global
Timken Museum of Art
San Diego Automotive Museum
Veterans Museum & Memorial



* Note: Not all museums at Balboa Park are confirmed at time of printing for free for Student Exhibitors. Please refer to final list at the Tours Desk in the BPAC during Science fair Week.

We encourage students to enjoy Balboa Park with a friend or in a group

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SENIOR DIVISION

Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
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Senior Division – Animal Sciences

101	Garcia	Asael	11	What Genre of Music Affects a Mammal's Productivity the Best?	Central Union High School	Rueda
102	Huang	Aaron	11	Anxiety Hierarchy: Testing the Priority of Genes in C. Elegans	Canyon Crest Academy	Haas

Senior Division – Behavioral and Social Sciences

104	Ismail	Abdullahi	10	The Gym or the Field?	Bright Horizon Academy	Naserelddin
105	Kariye	Abdirahman	9	Repetition Makes Perfect	Bright Horizon Academy	Naserelddin
106	Kim	Sean	11	Gender Roles and Portrait Values in Relation to the Progression of Gender Equality	The Bishop's School	Keller
107	Krishnamurthy	Hari	9	AsylumIndicator.AI - Predictive Behavioral Modeling of United States Asylum Adjudication to Help Refugees	Canyon Crest Academy	Haas
108	Lee	Brian	11	How Age and Social Experience Dictate Beliefs on Ease of Social Mobility	Scripps Ranch High School	Fowler
109	Liu Li	Albert Grace	9 9	What Affects the Probability of School Shootings?	Scripps Ranch High School	Fowler
110	Mohamed	Mustafa	10	Will Brain Games Increase IQ	Bright Horizon Academy	Naserelddin
111	Munoz	Priscila	10	Correlation Between Recurring Dream Themes and Anxiety Disorders	Central Union High School	Rueda
112	Padilla Stallworth	Daniella Kayla	10 11	The Effect of Talking Versus Texting on Human Reaction Time	Central Union High School	Rueda
113	Perez	Anaid	11	The Environmental Factors That Triggers the Development of Persistent Asthma	Central Union High School	Rueda
114	Quijada	Miriam	10	Effect of Organization on Short-Term	Central Union High School	Rueda
115	Shriram	Anjana	10	Prepotent Response Inhibition in ASL vs. non-ASL Multilinguals- A Correlative Study	Canyon Crest Academy	Haas

Senior Division – Biochemistry

118	Gan	Jessie	11	Application of a Novel Cell-Adhesion Force Quantification Technique to Predict Metastasis	San Diego Jewish Academy	Eisen
119	Han	Juyoung	11	Genome Editing For All Students	Canyon Crest Academy	Haas

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division – Biochemistry (cont'd)						
120	Hegde	Aditya	10	The Effects of Carbon Nanomaterials on the Effectiveness of Phage Therapy	Canyon Crest Academy	Haas
121	Li	Vivian	10	The Impact of Diet Upon Metabolism in Fish	La Jolla Country Day School	Padgett
122	Loughney	Cameron	12	The Effect of Organic Compost on the Voltage Output of a Microbial Fuel Cell	Bonita Vista High School	Mardahl-Dumesnil
123	Wang	Daniel	10	Lock Them Up: Capture Proteins in Action Using Covalent Bonds	Torrey Pines High School	Belyea
124	Wang	Kate	11	Machine Learning and Pharmacophore- Based Drug Discovery for Treating Duchenne Muscular Dystrophy	Canyon Crest Academy	Haas
125	Wu	Kyra	11	Identification of Natural and Synthetic Inhibitors of E. Coli fabI through Virtual Screening	Canyon Crest Academy	Haas
Senior Division – Chemistry						
128	Magana	Jasmine	10	How a Decrease in Temperature Affects an Oscillating Reaction	Central Union High School	Rueda
129	Vargas	Audrey	11	Photocatalytic Treatment of Wastewater and Hydrogen Production	Sweetwater High School	Chase
130	Xu	Ian	11	The Detection and Discrimination of Volatile Organic Vapors in a Thermally Cycled Porous Silicon Photonic Crystal Nanosensor	Del Norte High School	Liao
131	Xu	Kane	11	Copper Catalyzed Hydroboration of Benzylidenecyclobutanes	Del Norte High School	Liao
Senior Division - Computer Science						
133	Arias	Jose	9	Password Security	Gompers Preparatory Academy	Ulyyott
134	Bowyer Grigsby	Nolan Prescott	11 11	An Application to Calculate Individual Percent Risk of Specific Cancers Using QRDA Category I File Assessment	Scripps Ranch High School	Fowler
135	Kim	Elliott	11	Amorphous: A Multipurpose Tactile 3-Dimensional Display System	Scripps Ranch High School	Fowler
136	Kuang	Andrew	10	Simplified Asthma Diagnosis Through Neural Networks	Canyon Crest Academy	Haas
137	Liu	Livia	9	No Texting While Driving App	Olympian High School	Claudio
138	Pabari	Raj	10	DNA Storage - Novel, Cloud-Based Solution to Archive Digital Data Using Synthetic Nucleotides	Classical Academy High School	Bower

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division - Computer Science (cont'd)						
139	Rizo	Petunia	9	Using Musical Notation to Encrypt Messages in Python	Mt. Everest Academy	Negus
140	Rosenbaum	Maya	10	Game-Based Gratitude Journal App for Android	Canyon Crest Academy	Haas
141	Telang Stevenson	Aditi Kayla	10 10	SocialCue: Breaking Down Communication Barriers	Olympian High School	Claudio
142	Um	Christopher	11	Improving Complexity of Grover's Algorithm Using Qutrits Manipulation and a Novel Two-Dimensional System of the Oracle	Torrey Pines High School	Belyea
143	Wu	Dustin	12	Deep Learning Jazz Ensemble	Pacific Ridge High School	Mudaliar
144	Xu	Ellen	9	Artificial Intelligence Based Kawasaki Disease Early Diagnosis	Del Norte High School	Callicott

Senior Division -- Engineering: Electrical and Mechanical

147	Alwazir	Solaiman	9	Alzheimer's Aid	Bright Horizon Academy	Naserelddin
148	Caligiuri	Christopher	11	Novel Stimulation of Stem-Cell Derived Brains to Model Neurodevelopmental and Neurodegenerative Diseases	Canyon Crest Academy	Haas
149	Garcia	Eva	10	Renewable Energy Produced by Solar Tracking	Central Union High School	Rueda
150	Isabelle	Adrian	12	A Low Cost Motion Detector Using Modern Engineering Technologies	Olympian High School	Claudio
151	Kuo	Marc	10	Read My Mind: Morse Code Communication By Measuring Electrical Activity From Eye Blinking	La Jolla High School	Coggan
152	Monroy	Diego	9	Winds of Change	Vincent Memorial Catholic High School	Lizarraga
153	Soliman	Ziyad	10	Stop That Car!	Classical Academy High School	Naserelddin
154	Zeng	Michael	10	For the Deaf to "Hear" - An Experimentation of Augmented Reality	The Bishop's School	Heldt

Senior Division -- Engineering: Energy and Transport

156	Schremmer	Bella Rose	9	Powered Piers and Beaches by the Rise and Fall of Waves -- A Novel Wave Energy Conversion Application	University City High School	Quessenberry
157	Vallejo	Jose	9	Aerodynamics & Bridge Design	Gompers Preparatory Academy	Ulloytt

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division – Engineering: Materials and Bioengineering						
159	Czajkowski	Aurora	12	Engineering an Affordable and Sustainable Water Filtration Device	Bonita Vista High School	Mardahl-Dumesnil
160	Khan	Mohammad	9	Finding an Effective, Self-Cleaning Water Treatment Solution	Bright Horizon Academy	Nasereldin
161	Konganda	Shaun	11	Comparing SSVEP & P300 in BCI Brain-Computer Interface	Canyon Crest Academy Haas	
162	Montoya	Issael	10	The Effect of Salt and Sugar on a Microbial Fuel Cell	Central Union High School	Rueda
163	Palayur	Ann	12	Saving Habitats and Water Via Controlled Plant Environments	St. Joseph Academy	Sjogren
164	Tianshi	Emily	11	Atmospheric Moisture Harvesting Device: Biomimicking Torrey Pine Needles	The Cambridge School High School	Mayne
165	Ymaz	Cecilia	9	Desalinate-It-Yourself: Desalinating Salt Water Using A DIY Filter	Chula Vista High School	Saclauso-Caro

Senior Division – Environmental Sciences and Management

168	Cao	Rina	11	Effect of Cities on Normalized Differences of Land	University City High School	Stevenson
169	Gupta Whall	Kavya Dagny	9 10	A Device to Detect GenX Contaminated Water Using Chemical Indication and Colorimetry	La Jolla High School	Eaton
170	Gurram	Sanjana	11	Optimizing Plant Cellulose for Cost-effective and Environmentally Benign Oil Spill Mitigation	Westview High School	Ingram
171	Holmes	Mason	10	Fluorescent Reporter Under MerR-like Receptors for Metallic Ion Contaminant Recognition	Canyon Crest Academy Haas	
172	Krutzik	Anika	9	Exploring the Biodiversity of the New River Using Molecular Six Techniques Techniques	Vincent Memorial Catholic High School	Lizarraga
173	Oualline	Grace	11	Determining the Efficacy of Mycelium Water Filtration Systems	La Jolla Country Day School	Padgett
174	Sanchez	Sabrina	12	One Man's Trash Is Another Worm's Treasure	Bonita Vista High School	Mardahl-Dumesnil

Senior Division – Mathematical Sciences

176	Faktor	Benjamin	11	Mathematical Analysis of A Fluid in a Polyhedral Domain	Canyon Crest Academy Haas	
177	Fowler	Lou	10	A User-Friendly Statistics Calculator Including Regression Analysis and 14 Statistical Tests	Academy of Our Lady of Peace	Paluso
178	Ranka	Siddhant	11	Measurement of Correlation and Randomness in Irrational Numbers	Del Norte High School	Callicott

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division – Medicine and Health Sciences						
180	Bantval Chiniga	Pranav Rishi	9 10	The Efficacy of Topical Curcumin 5% Gel for Knee Osteoarthritis: A Pilot Study	Canyon Crest Acad/ Francis Parker School	Haas
181	Feldstein	Dylan	11	Do Induced Pluripotent Stem Cell-Derived Extracellular Vesicles Reduce Macrophage Activation and Induce Anti-Inflammatory Effects?	Canyon Crest Academy	Haas
182	Feldstein	Emily	11	Oxidized Metabolites of Dietary Fats Induce Liver Cell Death	Canyon Crest Academy	Haas
183	Feng	Morgan	10	A New Efficient Approach to Monitor Cell Response to Viral Infection	Westview High School	Christopher
184	Gao	Andrew	10	Scan, Sequence, Save: Early Lung Cancer Detection via Novel DNA Methylation Liquid Biopsy and Deep Learning Assisted Imaging Analysis	Canyon Crest Academy	Haas
185	Gonzales	Briana	11	The Effect of Age on the Ability to Hear High Frequencies	Central Union High School	Rueda
186	Huang	Irene	11	Assessing Tennis Players' Physiological Responses Using Wearable Devices Under Different Score Scenarios	Canyon Crest Academy	Haas
187	Huang	Ryan	10	Manipulation of Gut Microbiome by Prebiotic to Combat Alcoholic Liver Diseases	Canyon Crest Academy	Haas
188	Kamil	Kainath	10	Analyzing Protein Production and Gene Expression of Neurostimulant-addicted <i>Drosophila Melanogaster</i>	Mission Vista High School	German
189	Krishnan	Nanditha	10	Optimization of UV nm Spectroscopy for Protein Concentration for Therapeutic Applications	Torrey Pines High School	Belyea
190	Li Zhang	Oulan Charlotte	11 11	Accurate Prediction of Myopic Progression and High Myopia by Machine Learning	Torrey Pines High School	Belyea
191	Mandyam	Atulya	10	SCH 23390 Inhibits Cell-Death Produced by Methamphetamine in Human Neuronal Progenitor Cells	Westview High School	Ingram
192	Mendoza	Sebastian	12	Sleep Deprivation on Human Deep Tendon Reflexes	Bonita Vista High School	Mardahl- Dumesnil
193	Morales	Andres	9	Fast Food VS Homemade Food	Gompers Preparatory Academy	Ulliyott
194	Negrete	Alexis	12	ADHD in a Stratified Pediatric Sample: A Study of Prevalence, Comorbid Conditions, & Impairments	Central Union High School	Rueda
195	Ramirez	Jadyn	10	NSAIDs: The Fastest Pain Relief	Central Union High School	Rueda
196	Tang	Jason	11	Understanding the Function of Novel Tumor Suppression Gene UBE1L in Melanoma	Canyon Crest Academy	Haas

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division – Medicine and Health Sciences (cont'd)						
197	Wang	Jeffrey	11	Multiple Factor Analysis Methods Elucidate Genome Expression Changes Across Cell Types	The Bishop's School	Pelletier
198	Xu	Lynne	11	Develop a Human Brain Organoid Model to Investigate Neuroinflammation in Neurological Diseases	Torrey Pines High School	Belyea
199	Yao	Maxwell	11	Effect of a Combinatory RNAi Transfection on Kras-mutant Colorectal Cancer	Canyon Crest Academy	Haas
200	Zhu	Wanyi	11	Molecular Mechanisms of an HTLV Infection	Canyon Crest Academy	Haas

Senior Division – Microbiology

203	Abdinasir	Daud	10	The Effect of Vaping on Lung Cells	Bright Horizon Academy	Naserelddin
204	Belbese	Haya	9	The Road to the Cure of Alzheimer's	Bright Horizon Academy	Naserelddin
205	Clairmont	Ryan	10	Proteus Mirabilis Exhibits Increased Susceptibility to Erythromycin During Swarming	Canyon Crest Academy	Haas
206	Dimmock	Samuel	11	Does Capsaicin Decrease Quorum Sensing in Important Human Pathogen Pseudomonas aeruginosa?	Canyon Crest Academy	Haas
207	Fan	Kara	9	Antibacterial Polymer: Aloe Vera Synthesis of Nano-silver Polymer and its Application	Westview High School	Christopher
208	Jung	Eleanor	9	A Novel Approach to Killing Klebsiella Pneumoniae Using Endolysins and Polycationic Peptides	Mt. Carmel High School	Klingborg
209	Li	Raymond	10	Sensitivity of Bacteria to Metals During Lag Phase VS Growth Phase	Canyon Crest Academy	Haas
210	Liu	Edward	11	Pathogenic Bacteria Disrupts Skin Barrier in Atopic Dermatitis	Canyon Crest Academy	Haas
211	Narayana Murthy	Adhithi	10	Identification, Cloning, and Expression of Desaturase Enzyme in E.coli Bacteria	Del Norte High School	Callicott
212	Osman	Shukriya	9	Antioxidants: A Potential Key In Preventing Radiotherapy Cell Toxicity	Bright Horizon Academy	Naserelddin
213	Udata	Sidharth	10	Phage Phases: How Stress Affects Bacteriophage Transition from Lysogenic to Lytic Pathways	Canyon Crest Academy	Haas
214	Unpingco	Nicholas	11	How Does Stress Affect Bacterial Susceptibility to Bacteriophage Infection in E. Coli?	Canyon Crest Academy	Haas

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Senior Division – Microbiology (cont'd)						
215	Vangala	Yashasvi	11	Investigation Into the Rate of Development of Phage Resistance in E.coli	Canyon Crest Academy	Haas
216	Vaughn	Justin	10	Effect of Different Media on Synthesis of Silver Nanoparticles by Aspergillus niger	Canyon Crest Academy	Haas
217	Yardley	Grace	11	Phage Stability	Canyon Crest Academy	Haas
Senior Division – Physics and Astronomy						
219	Catanzaro	Francisco	11	Determining Plastics with a Grating Spectrometer	Cathedral Catholic High School	Rafie
220	Tanori	Efrain	11	Effect of Down Force of the Best Beyblades using a MainStays Fan	Central Union High School	Rueda
221	Vijayakumar	Vivek	11	Characterizing the Pulsations of Delta Scuti Stars Using the Mg I b Triplet	San Marcos High School	Terrill
Senior Division – Plant Sciences						
223	Lai	Malvyn	9	Effects of Mycorrhizal Networks on Carbon Flow Between Plants	Mt. Everest Academy	Pachon
224	Li	Shaun	10	Effects of the Combination of Endomycorrhizal and Cyanobacterial Symbioses on Nitrogen Uptake in Hornworts	Canyon Crest Academy	Haas
225	Nafarrete	Noah	12	The Effect of Ferrous Iron Gluconate on Chloroplast Biosynthesis and Anthocyanin Regulation in <i>Rotala rotundifolia</i>	Bonita Vista High School	Mardahl-Dumesnil
226	Palayur	Sarah	9	Why Do Seeds Germinate at Different Paces?	St. Joseph Academy	Sjogren
227	Williams	Skyler	11	The Role of Increased Flavonoid Accumulation in Protection of Pollen from Ultraviolet Radiation B	Canyon Crest Academy	Haas
JUNIOR DIVISION						
Junior Division – Animal Sciences						
501	Barton	Mele	8	Investigating Plastic Contaminants Present in the Alimentary Tracts of Fish	The Rhoades School	Hunker
502	Bove Burns	Preston Carlie	7 7	Dog Saliva vs. Human Saliva	St. John School - Encinitas	Heins

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Animal Sciences (cont'd)						
503	Carlson	Karissa	8	Worms Compost	St. Didacus Parish School	Blickenstaff
504	Cook	Aidan	8	Magnetic Regeneration for Planaria	St. Didacus Parish School	Blickenstaff
505	Cummins	Cassara	8	Oil Removed from Feathers	St. Didacus Parish School	Blickenstaff
506	Hernandez	Emmanuel	8	How Does Temperature Affect the Work of Ants?	Our Lady of Mount Carmel	Pereyra, SJS
507	Staines Hina	Angelina Emiko	8 8	Incubating Chicks: Will EO Water and UV Light Affect Hatchability?	St. Rita's Catholic School	Rice
508	Hudgins	Daneya	8	Dogs Vs. Humans: Who Can See Better in the Dark?	Farb Middle School	Huntington
509	Lawler- Ehr	Sophie	7	Horse Heart Beats	St. Peter the Apostle Catholic School	Fantano
510	Nunez Vazquez	Jessica	8	Marine Environmental Change	Farb Middle School	Huntington
511	Patterson	Robbie	7	Paw Dominance in Dogs	St. Didacus Parish School	Blickenstaff
512	Penalosa	Emmanuel	7	What Foods Do Dogs Prefer?	St. Michael Academy San Diego	Escalante
513	Prince	Kaia	8	Most Popular Bird Seed	St. Didacus Parish School	Blickenstaff
514	Quintero	Cianna	8	Worm Growth and Kitchen Wastes	Chula Vista Middle School	Saclauso-Caro
515	Rizo	Ria	8	Chicken Language Analysis over Time and Frequency	Mt. Everest Academy	Negus

Junior Division – Behavioral and Social Sciences

518	Alfaro	Gabriela	7	Do People Prefer/Use E-Books or Print Books for Leisure Reading?	Nazareth School	Reed
519	Baes	Piper	8	Personal Personality	St. Peter the Apostle Catholic School	Fantano
520	Ballew Mercado	Tea Isabella Joyce	7 7	What Causes Us to Take Longer When Making a Decision at a Concession Stand?	St. Michael's School - Poway	Poling
521	Bannister	Zara	8	Correlation of Psychological Flexibility Traits to Physical Displacement	The Rhoades School	Hunker
522	Bateman	Maya	8	The Effect of Your Age on How Scared You Are	The Children's School	Brown
523	Belanich Howard	Taylor Grace	7 7	Who Follows the Rules?	The Rhoades School	Hunker

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Behavioral and Social Sciences (cont'd)						
524	Bettinger	Jorielle Nyla	8	Which Affects Adolescents' Mental Health More? Social Media vs. School	St. Michael Academy San Diego	Escalante
525	Burrows Shaul	Noa Abigail	8 8	Effects of Emotion on Vocal Volume	The Rhoades School	Hunker
526	Calderon Myhra	Sabrina Shaelen	7 7	InCreativity	St. Michael's School - Poway	Poling
527	Cappiello	Griffin	8	Effects of Positive Vocalizations On Athletic Performance	The Rhoades School	Hunker
528	Carr	George	8	Does Where You Sit Affect Your Test Scores?	The Children's School	Brown
529	Chaffin	Jake	7	Suggestion Versus Perception	The Children's School	Quincannon
530	Chaffin	Sarah	7	The Effect of Doodling on Memory	The Children's School	Quincannon
531	Chapman	Cooper	7	How Will Gender Effect Financial Bias?	The Children's School	Quincannon
532	Childress	Payslie	8	Can You Outsmart a 6th Grader	Carlton Hills Middle School	Ducharme
533	Crowe	Mikayla	8	The Effect of Gender on Participation in Sports	The Children's School	Brown
534	De Las Alas	Jeremy	8	Does the Awareness of a Positive Consequence Affect the Way You Work?	St. Michael Academy San Diego	Escalante
535	Degodoy	Olivia	7	Gamers vs Non-gamers Reaction Times	Bonita Vista Middle School	Shimasaki
536	Dela Cruz	Gerrel	8	Autism's Bizarre Adventure	Farb Middle School	Huntington
537	Diamond	Teddy	8	VR Equilirium	San Diego Jewish Academy	Deveau
538	Doan	Vivian	8	Color and Preference	Farb Middle School	Huntington
539	Dolin	Rebecca	8	Perception: Positive or Negative Space	Carlton Hills Middle School	Ducharme
540	Elasaad	Leila	8	Testing the Effectiveness of the Flipped Classroom Model on Student Recall	The Rhoades School	Hunker
541	Eldegwy	Mariam	7	The Effect of Gender on Short-Term Memory	Bright Horizon Academy	Naserleddin
542	Frank	Sophia	7	Does Color Have an Effect on Our Memory?	St. John School - Encinitas	Heins

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Behavioral and Social Sciences (cont'd)						
543	Galicot	Andrea	8	Which Ages Have Better Teamwork	San Diego Jewish Academy	Deveau
544	Goldwasser	Michelle	8	Which Sex Trusts Themselves More Than Others?	San Diego Jewish Academy	Deveau
545	Gonzalez	James	8	Audiobooks & Literacy	St. John of the Cross Catholic School	Krumm
546	Goodwin	Karis	8	The Power of Suggestion	St. John School - Encinitas	Heins
547	Housden	Ian	8	The Effect of Sound on Heart Rate	The Children's School	Brown
548	Jinich	Marc	8	Decision Making Biases: Nature vs. Nurture	San Diego Jewish Academy	Deveau
549	Jones	Isabel	8	Random Numbers	St. Didacus Parish School	Blickenstaff
550	Jones	Jemma	7	Text Color and Readability	St. Didacus Parish School	Blickenstaff
551	Kelly	Alana	8	The Effect of Varying Reading Speeds on Reading Comprehension for Dyslexics	The Children's School	Brown
552	Khan	Safwa	8	Effect of Color On Memory	Bright Horizon Academy	Naserelddin
553	Levi	Lauren	8	Uncontrollable Laughter	Soille San Diego Hebrew Day School	Bessler
554	Lindgren	Christopher	7	Reaction Time	St. Didacus Parish School	Blickenstaff
555	Lopez	Mayela	8	Accuracy of Eyewitness Testimony	St. Didacus Parish School	Blickenstaff
556	Masi	Lily	7	Investigating Anxiety Levels In Preadolescent Vs. Adolescent Children	The Rhoades School	Hunker
557	Mattsson	Sara	8	Color for Memory	Carlton Hills Middle School	Ducharme
558	Maudal	Ava	8	Aptitude on Attitude	St. John School - Encinitas	Heins
559	Maya	Zelma	8	The Effect of Clutter on Productivity	Soille San Diego Hebrew Day School	Bessler
560	McNamara	Kelsie	7	Social Media	St. John School - Encinitas	Heins
561	Montal	Paul	8	Does The Type of Group You Work with Affect Math Test Scores?	The Children's School	Brown
562	Montal	Shane	7	The Effect of Teaching Nonverbal Communication on Nonverbal Communication Knowledge	The Children's School	Quincannon

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Behavioral and Social Sciences (cont'd)						
563	Montiel	Ashley	8	What Do You See?	St. Michael Academy San Diego	Escalante
564	Mulvey	Grace	7	Real or Fake Smile	St. Didacus Parish School	Blickenstaff
565	Muzaini Usmani	Jenan Arisa	7 8	How Likely are People to Conform into Groups?	Bright Horizon Academy	Naserleddin
566	Nesbitt	Wesley	8	The Effects of Roris Marini on Recall in Adolescent Test Subjects	The Rhoades School	Hunker
567	Nguyen Sanchez	Annabella Isabel	8 8	How Different Scenarios Affect Us	Farb Middle School	Huntington
568	Ocampo	Jaden	8	What is the Effect of Net or No Net on Free Throw Percentage?	Wangenheim Middle School	Mendibles
569	Occhialini	Frank Ray	7	Effectiveness of Lie Detector Tests	St. Didacus Parish School	Blickenstaff
570	O'Hollaren	Elias	7	The Effect of Video Games on Heart Rate	St. Didacus Parish School	Blickenstaff
571	Palmer Telfer	Luke Trey	8 8	Running at the Speed of Music	The Rhoades School	Hunker
572	Pascual	John	8	Music as a Tool	St. Michael Academy San Diego	Escalante
573	Pastuszko	Maya	8	The Effect of Colors on People with in Different Ages	The Children's School	Quincannon
574	Pathria	Sonali	8	The Affect of the Similarity of Appearance on How Attractive and Persuasive You Find That Person	The Children's School	Brown
575	Persichilli	Emma	8	How Colored Packaging Affects Children's Food Choices	St. Didacus Parish School	Blickenstaff
576	Podolsky	Denisse	8	Who Has Better Memory-- Introverts or Extroverts?	Soille San Diego Hebrew Day School	Bessler
577	Postins	Asha	8	Do We Base Who We Trust on Clothing	The Children's School	Quincannon
578	Qarar	Qudsia	7	Comparing Paper and Computer	Bright Horizon Academy	Naserleddin
579	Quezada	Adriana	8	It's All In Your Head: Inside a Stutterer's Brain	St. John School - Encinitas	Heins
580	Rooney	Patrick	8	The Effect of Country of Origin on Employment Opportunities	The Children's School	Brown
581	Ross	Sammy	8	When Time Flies	San Diego Jewish Academy	Deveau
582	Ryan	Leia	8	The Empathy Mechanism: Using a Quotient To Evaluate the Effects of Gender and Age	The Rhoades School	Hunker

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Behavioral and Social Sciences (cont'd)						
583	Savage Savage	Matthew Sean	8 8	The Stroop Effect	St. Didacus Parish School	Blickenstaff
584	Sipper	Ellie	7	How Does the Color of the Logo Affect Kids' Emotions?	Nazareth School	Reed
585	Sridharan	Agastya	8	Quantifying the Impact of Search-Order Bias on Voting Preferences Using a Simulated Web Environment	Thurgood Marshall Middle School	Schumacher
586	Sugapong	Evelyn	7	News: Believably False, or Unbelievably True?	Bonita Vista Middle School	Cardenas
587	Tadesse	Wegahta	8	Reaction Time and Ages	St. Didacus Parish School	Blickenstaff
588	Thaper Weston	Mehar Jamie Jane	8 8	Exploring Effects of Transient Emotions on Short Term vs Long Term Recall	The Rhoades School	Hunker
589	To	Monica	8	Project Stage	Wangenheim Middle School	Silva
590	Usmani	Aairah	7	Do Different Colored Walls Make You Focus More?	Bright Horizon Academy	Naserelddin
591	Vosburgh	Nicole	8	The Stroop Effect in Action	St. John School - Encinitas	Heins
592	Wilson	Henry	8	The Most Eye Catching Color	St. Didacus Parish School	Blickenstaff
593	Yaruss	Calvin	8	Which Facial Expression Can Be Most Easily Be Detected and Why?	The Children's School	Brown

Junior Division – Biochemistry

597	Cannon	Elenore	8	Organic vs Non-Organic Bananas Investigation	Chula Vista Middle School	Saclauso-Caro
598	Childs	Thomas	7	Germs Germs, Go Away!	Good Shepherd Catholic School	McNeil
599	Coles	Naija	8	Looking Deeper Into the Results of Gel Electrophoresis	Wangenheim Middle School	Mendibles
600	Do	Kai	8	How Does L-ascorbic Acid Affect the Ph Levels of Tilapia Skin	Wangenheim Middle School	Silva
601	Echoku	Lisa	8	How Would the Fat in Milk Affect It Spoiling?	Chula Vista Middle School	Tom
602	Kazi	Hafsah	7	Turmeric: The Effect on Metals in Healthy Cells	Bright Horizon Academy	Naserelddin
603	Kishimoto	Jaren	7	Electricity in Fruits and Vegetables	St. Michael's School - Poway	Poling
604	Matias	Isabella	7	Which Apple Will Win?	Bonita Vista Middle School	Shimasaki

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Biochemistry (cont'd)						
605	Tawatao	Samantha Gail	8	Does the Amount of Detergent Affect the Amount of DNA Extracted from a Banana?	Wangenheim Middle School	Mendibles
606	Venverloh	Vincent	8	Does Amount of Water Within a Substance Effect Energy Obtainable	The Children's School	Brown
607	Vogel	Kevin	8	Effect of Plastic Source on the Rate of Biodegradability	Chula Vista Middle School	Saclauso Caro
608	Wegner	Lillian	7	Can People Accurately Rank Sodium Levels Among 3 Popular Snack Foods?	The Children's School	Quincannon
Junior Division – Chemistry						
612	Azhand	Harris	8	How Does the Type of Carbon Affect the Clarity of Filtered Colored Water?	Wangenheim Middle School	Mendibles
613	Bella	Jenevie	8	What Fabric is Most Absorbent of Water	Chula Vista Middle School	Tom
614	Cornejo	Christina	8	Separating Hydrogen and Oxygen from Water	St. Rita's Catholic School	Rice
615	De Guzman	Lukky	8	Preventing Condensation on Eyeglasses	Chula Vista Middle School	Tom
616	Do	Nathan	8	Acid Attack	Farb Middle School	Huntington
617	Dyakova	Victoria	8	Glycerin and Soap Bubbles	Wangenheim Middle School	Mendibles
618	Flietstra	Jonathan	8	The Effect of Length of Cloth with Naphtha Lighter Fluid on Flame Duration	City Tree Christian School	Lee
619	Figueroa	Samuel	7	Instant Drinks	Corfman School	Leon
620	Fries	Sam	8	Water and Nitrates	St. Didacus Parish School	Blickenstaff
621	Green	Alexis	7	Types of Paint and Temperature vs Drying Time	St. Michael Academy San Diego	Escalante
622	Gruber	Mila	6	Which Natural Ingredient Can Make Homemade Litmus Paper Work As Well As Store-bought Litmus Paper?	St. Mary Star of the Sea School	Alonso
623	Haim	Annalee	8	Holy Crap!	Soille San Diego Hebrew Day School	Bessler
624	Jackson	Lorelei	8	Vitamin C Levels at Different Ripening Stages of a Bell Pepper	St. Mary Star of the Sea School	Alonso
625	Killion	Jasmine	8	Does Soda Ash Make Tie Dye Brighter?	Mt. Helix Academy	Hudson
626	Lapp	Eliyahu	8	Get Your Oils Ready	Soille San Diego Hebrew Day School	Bessler

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Chemistry (cont'd)						
627	Ligeralde	Racel	8	More Than Just A Drink: Fuel Power At Peak	Good Shepherd Catholic School	McNeil
628	Maman	Eitan	8	Is Your H ₂ O the Way to Go	San Diego Jewish Academy	Deveau
629	Mayne	Evangeline	8	Slime Stretchiness	The Cambridge School	Mayne
630	Putrus	John	7	Determining Iodine Content in Salt	Mt. Helix Academy	Hudson
631	Singer	Catherine	8	What Wrapping Material Preserves Apples the Best: Ziploc Bags, Reynolds Wrap, or Glad Cling Wrap?	Mt. Helix Academy	Hudson
632	Sun	Yi	8	Do Different Salt Types, Kosher, Sea Salt, and Pink Salt Have the Same Effect on the Time It Takes Ice to Melt?	Wangenheim Middle School	Mendibles
633	Sweeney	Jocelyn	7	Does Copper Ionization Work Better than Chemicals in Killing Algae?	Nazareth School	Reed
634	Szajkowski	Daniela	8	Marshmallow Density	St. Mary Star of the Sea School	Alonso
635	Zagursky	Maya	8	What Recipe for Bath Bombs Makes the Fizziest Bath Bomb?	San Diego Jewish Academy	Deveau
Junior Division – Computer Science						
639	Anderson	Ashton	8	Using Machine Learning to Detect and Identify Food Products for the Sight Impaired.	Correia Middle School	Flosky
640	Benintend Goodsell	Logan Koe	7 7	Generating Color Through Coding an Infinity Mirror	The Rhoades School	Hunker
641	Berg	Liora	8	Look Away: Vision App	Soille San Diego Hebrew Day School	Bessler
642	Chatha Samy	Arjun David	8 8	Fall Detection: Using Artificial Intelligence to Help the Elderly	The Rhoades School	Hunker
643	Cisneros	Emilio	7	What Materials Block WiFi Signal	Bonita Vista Middle School	Cardenas
644	Cruz	Diego	8	At What Angle Does Light Show Up the Clearest in a Spectrometer?	Wangenheim Middle School	Silva
645	Gamboa Gracias	Mateo Jacob	8 8	Programming a Tic-Tac-Toe Game	St. John of the Cross Catholic School	Krumm
646	Gandara	Emilio	8	Coding a Game	St. John of the Cross Catholic School	Krumm
647	Goodsell	Kai	8	Forecasting Stock Market Values Using Machine Learning	The Rhoades School	Hunker

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Junior Division – Computer Science (cont'd)

648	Martinez	Andrew	6	What Materials Can Reduce A WiFi Signal	St. Mary Star of the Sea School	Alonso
649	Plasencia	Oscar	7	N-Gram Fitness!	Nazareth School	Reed
650	Rao Rao	Rahul Rikhil	8 8	AI-Based Obstacle Detection and Notification for the Visually Impaired	Pacific Trails Middle School	Thacker
651	Steadman	Aleister	8	Using a Neural Network to Determine Emotion in Music	Wangenheim Middle School	Silva

Junior Division – Earth and Planetary Science

654	Adolpho	Kalani	7	Is the Size of the Tornado Affected by Water Temperature ?	Nativity School	Lunn
655	Brady	Morgan	8	Why is there Extra Light in our Skies?	Stella Maris Academy	Jones
656	Castro Perez	Valentina Isabella	8 8	Which Biodegradable Method Works the Best	Our Lady of Mount Carmel	Pererya, SJS
657	Catanzaro	Marcus	8	Percolation: Quantifying the Movement of Water Through Soil	Pacific Beach Middle School	Greenberg
658	Inocentes	Alecsandra	8	The Effect of Salt Level on Plant Growth	St. Michael Academy San Diego	Escalante
659	Kaplan	Julia	8	Which Oil Makes the Best Rainbow?	San Diego Jewish Academy	Deveau
660	Lam Tran	Kaia Emily	8 8	How Does Temperature Affect the Mineral Amount In Different Types of Water?	Wangenheim Middle School	Silva
661	Rascon	Joe	7	Plants & Colors	St. Didacus Parish School	Blickenstaff
662	Santana-Oikawa Valencia	Danae Estefania	8 8	Preventing Forest Fires	Our Lady of Mount Carmel	Pereyra, SJS
663	Serena	Gabriela	7	Wave Runup and Ocean Floor Composition	St. Michael's School - Poway	Poling
664	Tamashiro	Sophia	8	The Effect of Different Types of Sunscreens on Brine Shrimp	City Tree Christian School	Lee
665	Alvarado	Kandice	7	The Impact of Light Pollution	Corfman	Leon

Junior Division – Engineering: Electrical and Mechanical

667	Apalatea Cordaro	Michael Brendan	8 8	The Memory Metal	St. John School - Encinitas	Heins
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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Engineering: Electrical and Mechanical (cont'd)						
668	Bamford Taylor	Tom Ashur	8 8	Constructing an Affordable Robotic Device that Automates Multiple Agricultural Tasks	The Rhoades School	Hunker
669	Bassyouni	Kareem	7	Shakeless Structures	Bright Horizon Academy	Naserelddin
670	Bayot Sanchez	Abigail Ashley	8 8	What They Can't See May Hurt Them	St. Rita's Catholic School	Rice
671	Britt	Gavin	8	Which Angle of a Solar Panel Creates the Most Electricity?	De Portola Middle School	Yepiz
672	Celestino	Katherine	8	Which Turbine Propeller Design Produces the Most Amount of Voltage?	St. John of the Cross Catholic School	Krumm
673	Choi	Chris	7	Solectricity	Corfman School	Leon
674	Escudero	Anderson	6	Does the Amount of Salt in Water Affect Electrical Conductivity?	St. Mary Star of the Sea School	Alonso
675	Garcia	Isabella	7	How do Photovoltaic Modules React to Temperature?	Bonita Vista Middle School	Shimasaki
676	Knoll Morales	Andres Miguel	8 8	Is It More Beneficial to Build Your Own Drone Versus Buying One?	St. John of the Cross Catholic School	Krumm
677	Manalo	Jennine	8	Generating Energy from Sewage Water Flow	St. Rita's Catholic School	Rice
678	McKinney	Nathan	8	Mapping the Field of an Electromagnet	Good Shepherd Catholic School	McNeil
679	Meyer	Christopher	6	Hammering Force for Different Types of Wood	St. Mary Star of the Sea School	Alonso
680	Moxley	Cecilia	8	Motor's Role in Robot Mobility	De Portola Middle School	Bridges
681	Murray	Leanne	8	Which Dome Should Be Your Home?	Wangenheim Middle School	Silva
682	Newton	Wesley	8	The Comparative Noise-Eliminating Effects of Several Materials	St. Didacus Parish School	Blickenstaff
683	Norin	Luke	6	The Effect of Angles on Catapult Launch	City Tree Christian School	Lee
684	Pritsker	Noah	8	The Real Way to Open a Coconut	Soille San Diego Hebrew Day School	Bessler
685	Recalde	Thomas	7	Can a Stirling Engine Run with a "Cold Source"?	St. Mary Star of the Sea School	Alonso
686	Santos	Jaime	8	Electromagnetism and Speakers	Corfman School	Butler
687	Stern	Sadie	8	The Effect of Glue on Elastic	The Children's School	Quincannon
688	Tamayo	Orion	8	Hand Motion Controlled Light	Farb Middle School	Huntington

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Junior Division – Engineering: Electrical and Mechanical (cont'd)						
689	Tianshi	Kyle	8	Raspberry Pi Powered Microscopic Particle Detector Using Image Processing	The Cambridge School High School	Mayne
690	Toth	Aidan	7	The Best Paper Airplane	St. Michael's School - Poway	McHale
691	Valenzuela	Lorenzo	7	Engineering a Hand	Corfman School	Leon

Junior Division – Engineering: Energy and Transport

694	Brooks	Cameron	7	Why Does a Wind Turbine Need to Have a Good Aerodynamic Design	Bonita Vista Middle School	Shimasaki
695	Cervantes Navarro	Brenda Mya	8 8	Parachutes: Does Size Matter?	National City Middle School	Langel
696	Colucci Humphrey	Max Evan	8 8	Rocket Cars	St. John School - Encinitas	Heins
697	Duben	Asher	8	Energy Shoe	Soille San Diego Hebrew Day School	Bessler
698	Estep	Kyle	8	Soaring Through the Science of Rockets	Farb Middle School	Huntington
699	Garcia	Shane	8	Aero - Potato	St. John School - Encinitas	Heins
700	Jeon Kim	Jaeyoung Ryan	8 8	Experimental System Designs to Improve Energy Efficiency of Vehicle in Real World Road Conditions	Mesa Verde Middle School	Bird
701	King	Evan	8	The Test Track	Wangenheim Middle School	Mendibles
702	Kosol	Janina	8	How Does the Shape of a Skateboard Affect Speed	Wangenheim Middle School	Mendibles
703	Lopez	Jose	8	Energy in the Sky	Our Lady of Guadalupe Academy	Patton
704	Lugo	Isabella	8	Water=Electricity?	Good Shepherd Catholic School	McNeil
705	Munshi	Ronit	7	Robotic Insect	Carmel Valley Middle School	Kelly
706	O'Leary	Luke	7	Effects of Temperature on Hydroelectric Energy	St. Gregory the Great Catholic School	Dasgupta
707	Orozco	Darian	7	Cool Turbines	Bonita Vista Middle School	Cardenas
708	Perez	Leonardo	8	What Makes a Helicopter Fly?	Our Lady of Mount Carmel	Pereyra, SJS
709	Pham	Tony	8	How Does the Length of a Catapult Arm Affect the Distance a Ball is Launched?	Wangenheim Middle School	Mendibles

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Junior Division – Engineering: Energy and Transport (cont'd)						
710	Razo	Jorge	8	DIY Potato Charger vs DIY Dill Pickle Charger	Chula Vista Middle School	Saclauso-Caro
711	Riaza	Frederic	8	Gas Mileage Put to the Test	St. Peter the Apostle Catholic School	Fantano
712	Slinsky	Daniel	7	Rocket Models	Our Lady of Mount Carmel	Pereyra, SJS
713	Usher	Nicholas	8	Superconductors: The Future of Transportation?	Classical Academy Middle School	Morrow
714	Vellore	Kashifa	7	Harvesting Piezoelectricity from Commonly Used Devices	Bernardo Heights Middle School	Cao
715	Villa	Alondra	8	What's the Best Cooking Pot Material?	Chula Vista Middle School	Saclauso-Caro
716	Reyes	Isaac	8	Lights and Action	Southwest Middle School	Barron

Junior Division – Engineering: Materials and Bioengineering

718	Aly	Ziyad	7	Hydraulic Powered Robot Cardboard Arm	Bright Horizon Academy	Naserelddin
719	Armas	Adam	7	The Floatist Floaties	Bonita Vista Middle School	Cardenas
720	Ayesta-Hollstein	Sofia	8	The New Water Solution	Stella Maris Academy	Jones
721	Coates	Dayna	8	Raise The Roof-Top Gardens	Rancho del Rey Middle School	Castillo
722	Copon	Ethan	7	Can You Trust Your Truss?	Bonita Vista Middle School	Stell
723	Cruz	Vincent Michael	8	How Does the Amount of Fins Affect a Submarine's Speed?	Wangenheim Middle School	Mendibles
724	Dagdag	Samantha	8	The Comparison of Different Bridge Supports Before Breaking	Wangenheim Middle School	Mendibles
725	Englund	Lilian	8	Bioplastics: Cleaning Up Our Oceans	St. Mary Star of the Sea School	Alonso
726	Griger	Veronica	7	Is It Possible to Make a Biodegradable Straw Out of Casein Plastic?	Coastal Academy	Biernacki
727	Johnson	Brevan	8	How Can Adding Filling to a Cardstock Cylinder Affect Its Stability?	Wangenheim Middle School	Mendibles
728	Lynch	Cooper	8	Why It Breaks	San Diego Jewish Academy	Deveau
729	Maya	Nina	8	Ocean Pollution Solution	Soille San Diego Hebrew Day School	Bessler
730	McKone-Sweet Tretinjak	Marcos Colten	7 7	Paper Airplanes Air Dynamics	St. Michael's School - Poway	Poling

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Junior Division – Engineering: Materials and Bioengineering (cont'd)						
731	Patterson	Liam	7	Structures that Reduce Tsunami Damage	St. Didacus Parish School	Blickenstaff
732	Pham	Tiffany	8	How Temperature of Materials Affects Sound	Wangenheim Middle School	Silva
733	Teran	Daniela	8	Heat Resistance of Concrete	St. Didacus Parish School	Blickenstaff
734	Toth Wilson	Alexandra Christabella	7 7	Phone Holder	St. Michael's School - Poway	Poling
735	Vu	Vincent	8	Which Type of Inexpensive Soundproofing Produces Effective Soundproofing?	Wangenheim Middle School	Mendibles
736	Knapton	Philip	7	What Material of Baseball Bats Has Higher Exit Velocity	Nazareth School	Reed

Junior Division – Environmental Sciences and Management

740	Antonio Banco	Jacob Brando	8 8	How Does the Presence of Heavy Metals Affect Aquatic Environments?	Wangenheim Middle School	Silva
741	Apostol	Korina	8	Which Form of Insulation is Most Effective in Retaining the Temperature of Hot Green Tea at 0 Degrees Fahrenheit?	St. Michael Academy San Diego	Escalante
742	Banda Carrillo	Ana	6	How Does Diet Affect Red Earthworms Population and Soil?	Our Lady of Guadalupe Academy	Patton
743	Bernal Esguerra	Celeste Sofia	7 7	How to Clean Up an Oil Spill	Our Lady of Mount Carmel	Pereyra, SJS
744	Beuchs Burkart	Eoin Alex	8 8	Light Pollution	St. John School - Encinitas	Heins
745	Camarena	Hector	8	Can I Make It Rain For Cheap?	Farb Middle School	Huntington
746	Carbajal Robledo	Karol Osdanna	8 8	Recycling Greenhouse	Our Lady of Mount Carmel	Pereyra, SJS
747	Curry	Luzaira	8	People vs. Trash	Farb Middle School	Huntington
748	Dailey MacNab	Sebastian Jacob	7 7	Which Interior is Most Economical?	St. Michael's School - Poway	McHale
749	De Guzman	Ryan	8	H2 Oh No! Which San Diego Public Parks Have the Cleanest Drinking Water?	Good Shepherd Catholic School	McNeil
750	Delgado	Raquel	7	How Much Air Pollution is There in Places Visited Every Day	All Hallows Academy	Meza
751	Dionne	Colin	7	Reach for the Stars	St. Peter the Apostle Catholic School	Fantano
752	Esch Millikin	Adam Grace	8 8	Quantifying the Effectiveness of P. ostreatus in Mycoremediation of Heavy Metals	The Rhoades School	Hunker
753	Grodeman	Savanna	8	Can San Diego's Freshwater pH Sustain Rainbow Trout Population?	Chula Vista Middle School	Tom

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Junior Division – Environmental Sciences and Management (cont'd)						
754	Guerrero	Alayda	8	Oceans Without Border	Chula Vista Middle School	Saclauso-Caro
755	Hernandez	Marcos	8	Temperature and Beach water pH	St. Didacus Parish School	Blickenstaff
756	Ismail	Fatuma	8	Can Bacteria Break Down Engine Oil?	Bright Horizon Academy	Naserelddin
757	Kamencik	Tanner	7	Would a Black Solar Tube Filled with Water Gain More Energy Than a White Solar Tube Filled with Water?	All Hallows Academy	Meza
758	Keswani Samady	Rohan Elias	7 7	Documenting the Prevalence of Invasive Species at the Batiquitos Lagoon	The Rhoades School	Hunker
759	Lambert	Joseph	7	The Stirling Engine	Nativity School	Lunn
760	Lay	Kyla	8	Flowers and Erosion	St. Didacus Parish School	Blickenstaff
761	Leung	Kayla	8	How Much Carbon Dioxide is Produced by Different Gas Sources?	St. Michael Academy San Diego	Escalante
762	Liang	Stephanie	7	Water Filters: The Future of Helping Nature?	Bonita Vista Middle School	Cardenas
763	Lindsey	Emilie	8	The Effect of Acidification on Beam Clam Shell Mass and Seagrass Length	City Tree Christian School	Lee
764	Norvell	Willa	8	Woolsey Fire Burnt Soil: Analyzing Factors for Native Plant Regrowth	The Rhoades School	Hunker
765	Ortega	Alyssa	8	Air Pollutants In Our Environment	Corfman School	Butler
766	Petersen	Tyler	8	Microbial Fuel Cell - A New Energy Source	De Portola Middle School	Bridges
767	Podlich Bordine	Kaitlyn Kelly	8 8	Exploring Water Quality at the Buena Vista Lagoon	The Rhoades School	Hunker
768	Rhee	Ethan	7	Cooking with the Sun	St. Didacus Parish School	Blickenstaff
769	Rotunda	Alex	7	Raise the Roof	St. Peter the Apostle Catholic School	Fantano
770	Sheldon	William	8	Humidity Hotspot	St. Joseph Academy	Hanson
771	Silva	Gretchen	8	Where is the Bacteria in Your Faucet?	Chula Vista Middle School	Saclauso-Caro
772	Slinkard	Peyton	7	Effectiveness of Homemade Desalinators	St. Didacus Parish School	Blickenstaff
773	Teran	Valeria	8	Soil Bearing Capacity	St. Didacus Parish School	Blickenstaff
774	Larios	Emely	8	Construction Bio-Plastics as a Replacement for the Traditional Petroleum-Based Plastic	Chula Vista Middle	Tom

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Junior Division – Mathematical Sciences						
776	Katriel	Levi	8	Analyzing NFL Statistics To Determine Impacts of Injuries on Team Performance	The Rhoades School	Hunker
777	Madhukara	Nandana	7	Mathematical Origami Models for Space Structures Based on the Axial Compressibility of Cones	Pacific Trails Middle School	Freeman
778	Nguyen	Simon	7	Polygon Area Calculator and Pi Estimator	Good Shepherd Catholic School	McNeil
Junior Division – Medicine and Health Sciences						
781	Azzeh Dodds	Ella Evan	7 7	Are Fingerprint Patterns Inherited	St. John School - Encinitas	Heins
782	Bertellotti Duong	Ethan Tyler	7 7	A Study of Padding	St. Michael's School - Poway	McHale
783	Dockery Serena	Patrick Gustavo	7 7	Hearing Loss When You Use Headphones, Earbuds, and AirPods	St. Michael's School - Poway	McHale
784	Dogra	Sania	8	Indirect Assessment of Solanine Levels in Potatoes Over Time	The Rhoades School	Hunker
785	Goswami	Sameer	8	Investigating Lead Contamination in Children's Consumer Products	The Rhoades School	Hunker
786	Hmoud	Reem	7	One Step Closer to Ending Diabetes by Choosing the Right Variety of Rice	Bright Horizon Academy	Naserelddin
787	Hussain	Daanya	8	Are Probiotics Beneficial for Brain Health?	Bright Horizon Academy	Naserelddin
788	Jayco	Robin	8	Studying and Performing Bioinformatics Using Influenza	St. Rita's Catholic School	Rice
789	Lacibal	Eljen	8	The Effect of Different Liquids on a Liver	Wangenheim Middle School	Silva
790	Lehmann	Isabel	8	Climber's Chalk: Quantifying Exposure to Magnesium Carbonate Coarse and Fine Particulates	The Rhoades School	Hunker
791	Link Sharma	Audrey Divya	7 7	Investigating Antimicrobial Properties of Eco-Friendly Herbal Disinfectants	The Rhoades School	Hunker
792	Luu	Alan	8	Absorbing Alveoli	Farb Middle School	Huntington
793	Marasigan	Marianna	7	Does Gender Affect How Often Arched Fingerprints Occur?	Wangenheim Middle School	Mendibles
794	McElfresh	Ruthie	8	Does Ballet Experience Affect Reaction Time?	Soille San Diego Hebrew Day School	Bessler
795	Meram	Samantha	8	Can Your Phone Really Kill You?	Corfman School	Butler
796	Meyers	Sofia	8	Does Being on Your Phone Make You Blink More?	St. John School - Encinitas	Heins

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Medicine and Health Sciences (cont'd)						
797	Mizan	Orin	8	Crybaby	Soille San Diego Hebrew Day School	Bessler
798	Nagarajan	Krishna	8	The Effect of Simple Sugars on Adolescent Heart Rate	The Rhoades School	Hunker
799	Namazy	Max	8	Does Age Affect Olfactory Fatigue?	Mt. Helix Academy	Hudson
800	Palma	Aaron Jonathan	8	Myocardial Infarction Representation Experiment	St. Rita's Catholic School	Rice
801	Rupesh	Bhadra	8	Evaluating Single Nucleotide Polymorphisms in the Correlation of Phenotypes to Type 2 Diabetes	The Rhoades School	Hunker
802	Shaked	Moshe	8	Protecting Screens	Soille San Diego Hebrew Day School	Bessler
803	Singer	Alek	8	Does BMX Improve Balance	Soille San Diego Hebrew Day School	Bessler
804	Soberanes	Melissa	6	How Pollution is Affecting Children in the Imperial/Mexicali Valley	Our Lady of Guadalupe Academy	Patton
805	Valadez	Ivan	7	Feel the Burn	Barbara Worth Junior High School	Calip
806	Youssef	Sarah	7	Will Organic Really Make a Difference?	Bright Horizon Academy	Naserelddin
807	Zhang	Sydney	7	Designing a Low-cost, High-sensitivity Method for Early Diagnosis of Dry Eye Diseases	Mesa Verde Middle School	Cochran

Junior Division – Microbiology

810	Al-Delaimy	Meryem	8	UV Rays Vs UV Light on Bacteria	Bright Horizon Academy	Nasereddin
811	Arnold	Abigail	8	The Antibacterial Properties of Manuka Honey in Relation to Its UMF Value	Mt. Helix Academy	Hudson
812	Aswad	Farah	8	Which Works Best?? Alcohol vs. Homemade Sanitizers	Bright Horizon Academy	Naserelddin
813	Barron	America	8	Bacteria in USD Currency	Chula Vista Middle School	Saclauso-Caro
814	Berman	Jonah	7	Comparing Bacteria Levels at Fast Food Restaurants	The Rhoades School	Hunker
815	Berona Polish	Dominic Sydney	8 8	Sweet Sensation: What Sugar Substitute Works Best Compared to Basic Sugar?	Wangenheim Middle School	Silva
816	Calatroni	Sofia	7	What Prevents Germ Growth the Most - Cold Temperatures, Copper, or Disinfecting Wipes	All Hallows Academy	Meza
817	Escobar	Ema	7	The Five Second Rule	St. Didacus Parish School	Blickenstaff

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Microbiology (cont'd)						
818	Fan	Leanne	6	Power of Light: The Antibacterial Effect of Red and Blue Lights	Mesa Verde Middle School	Fice
819	Howard	Sophie	8	How Much Bacteria is Really on Your Toothbrush?	St. John School - Encinitas	Heins
820	Kozak	Josh	7	Is a Washed or Unwashed Egg Better at Protecting Against Bacteria	All Hallows Academy	Meza
821	Olin	Magnolia	8	Bacteria in Public Pools	Chula Vista Middle School	Saclauso-Caro
822	Sandoval	Melanni	8	The Effect of Filtration Methods on River Water	The Children's School	Quincannon
823	Shlemon	Sarah	7	Time to Glow: The Effect of Agitation on Dinoflagellate Bioluminescence	Classical Conversations	Shlemon
824	Stroup	Shannon	7	Child and Adult Medical Clinic Waiting Rooms: Which Has More Bacteria?	Nazareth School	Reed
825	Tiong	Jaelynn	8	The Greatest Elimination	St. Michael Academy San Diego	Escalante
826	Tuscano	Erin Grace	8	Testing the Effectiveness of Commercially Available Water Filters for Total Dissolved Solids and Microbial Growth	St. Michael Academy San Diego	Escalante
827	Wilson	Michelle	7	How Much Bacteria Accumulates on the Sole of a Brand New Pair of Shoes	All Hallows Academy	Meza
828	Yerushalmi	Ella	8	SCOBY-doo. Where Are You? A Scientific Kombucha Experiment	Soille San Diego Hebrew Day School	Bessler
Junior Division – Physics and Astronomy						
831	Allende	Jacques	7	What Tennis String Produces the Most Spin and Power	Nazareth School	Reed
832	Abeles	Andrew	8	How Does Weather Affect Golf ?	San Diego Jewish Academy	Deveau
833	Bamba	Jayden	8	Wooden Secret Power Vs. Speed	Farb Middle School	Huntington
834	Benedict Streitman	Sawyer Jake	7 7	Evaluating the Effectiveness of Light Shields Against Skyglow	The Rhoades School	Hunker
835	Boggs	Ryan	7	Balloon Powered Car	St. Michael Academy San Diego	Escalante
836	Buratti	Margherita	8	How to Get Out of Quicksand	The Children's School	Quincannon
837	Cantore	Nico	8	Golf Balls and Price Ranges	St. Didacus Parish School	Blickenstaff
838	Chandra	Vikramaditya Sidharth	7	Why the Moon Appears Larger Occasionally	San Elijo Middle School	Bireddy

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Physics and Astronomy (cont'd)						
839	Diones	Ayann	7	Which Color Absorbs the Greatest Amount of Radiant Energy?	St. Michael Academy San Diego	Escalante
840	Faust	Jackson	7	Light Pollution	St. John School - Encinitas	Heins
841	Fouch	Lucas	7	Make A Hit Chart Like A Pro	Bonita Vista Middle School	Shimasaki
842	Gagiolo	Ty	8	Non-Newtonian Fluids vs. Projectile	St. Didacus Parish School	Blickenstaff
843	Hall	Micah	7	Model Rocket Aerodynamics	Mt. Helix Academy	Hudson
844	Hinds	Hayden	7	Fluid Thickness and its Effects on Coil Efficiency	Nativity School	Lunn
845	Krajewski	Ronald	7	Project Catapult	St. Michael's School - Poway	Poling
846	Kyne	Silas	8	Trailer Sway? No Way!	St. Joseph Academy	Hanson
847	Licha	Jack	8	Bumper to Bumper	Soille San Diego Hebrew Day School	Bessler
848	Lugasi	Eitan	8	Ready For Take-Off	Soille San Diego Hebrew Day School	Bessler
849	Machuca	Breanna	8	Does the Size of a Parachute Alter Its Landing Speed	Chula Vista Middle School	Tom
850	McGarry White	Haegan Elijah	6 6	Fooooooling Gravity	St. Peter the Apostle Catholic School	Fantano
851	Ortiz	Andreina	8	Rolling Friction	St. Didacus Parish School	Blickenstaff
852	Pullman	Matthew	8	The Parachute Predicament	St. Joseph Academy	Hanson
853	Ravi	Tejas	7	The Effects of Various Wavelengths on Rod Activity	The Rhoades School	Hunker
854	Reyes	Kylie	8	Determining if Helium Filled Latex Balloons Lose Buoyancy at a Linear or Non-Constant Rate	Chula Vista Middle School	Tom
855	Ryan	Samantha	8	How Does the Shape of a Paper Airplane Affect Its Ability to Fly?	St. Mary Star of the Sea School	Alonso
856	Sanchez Vidal	Diego Santiago	7 7	Does the Shape of a Parachute Affect Its Speed, Distance, and Landing?	Our Lady of Mount Carmel	Pereyra, SJS
857	Tabalon	Jacob	8	The Phenomenon of Naruto Running	St. Michael Academy San Diego	Escalante
858	Tirabassi	Aiden	6	Solar Powered Car	St. Mary Star of the Sea School	Alonso
859	Wilson	Leah	8	May the FORCE Be with You	Soille San Diego Hebrew Day School	Bessler

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Plant Sciences						
862	Bucholtz	Seth	8	Does Depth of Hole Effect Size of Plant?	The Children's School	Quincannon
863	Cagayao	Jodie Marie	7	Wifi the Death to Plants?	St. Michael Academy San Diego	Escalante
864	Castrejon Castro	Carlo Omar	7 7	Which Fertilizer is the Best for Plant Growth	Our Lady of Mount Carmel	Pereyra, SJS
865	Garcia	Stefania	7	What Type of Plants are More Flammable?	Bonita Vista Middle School	Cardenas
866	Hamel	Alexis	7	How Does Attention Affect a Plant's Growth?	Mt. Helix Academy	Hudson
867	Haynes	Hunter	7	Comparing the Number of Stomata on Leaves of Bushes and Succulents	Eastlake Middle School	Martinez
868	Hurd	Ashley	8	Does Highlighter Ink or Tonic Water Produce a More Luminescent Carnation?	Wangenheim Middle School	Mendibles
869	Kantala	Jedrick	8	The Effects of Powder Metal on Grass	Wangenheim Middle School	Mendibles
870	Kareem	Rozita	8	Effect of Elements on Plants	Bright Horizon Academy	Naserelddin
871	Leong	Gregory	7	Coffee Grounds in Action	St. Pius X School	Doyle
872	Marcy Walley	Ryanne Christina	8 8	Pesky Pesticides	Coastal Academy	Biernacki
873	Marquez	Hayden	7	Hydroponic Growing Methods VS Traditional Growing Methods	Bonita Vista Middle School	Shimasaki
874	Mendoza	Gizcel	8	Water Propagation vs Soil Propagation for Succulents	Wangenheim Middle School	Silva
875	Miranda	Joaqui	8	Fertilizer's Effect on Pea Plant Apperance	Wangenheim Middle School	Silva
876	Morin	Emma	6	The Effect of pH of Water on Cress Seed Growth	City Tree Christian School	Lee
877	Morineau	Emilio	8	What Factor is Most Important for a Plant's Growth?	Our Lady of Mount Carmel	Pereyra, SJS
878	Ndume	Dorcas	8	The Effect of Music (Classical and Pop) on Growth of Okra Seeds	City Tree Christian School	Lee
879	Ortiz	Sofia	7	Do Potted Plants Grow Taller Indoors or Outdoors?	St. Pius X School	Doyle
880	Rafii	Gabrielle	8	Extracting DNA from Strawberries	San Diego Jewish Academy	Deveau
881	Riel	Larianna	8	Growth of Bush Bean Plants Inside of Box with Different Passageways	Wangenheim Middle School	Mendibles

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division – Plant Sciences (cont'd)						
882	Serra-Fernandez	Maria	8	How is Plastic Pollution Affecting Our Plants?	Wangenheim Middle School	Silva
883	Shallan	Felicity	8	An EGG-celent Fertilizer	Mt. Helix Academy	Hudson
884	Stack Thomas	Morgyn Chloe	7 7	Plant vs. Fire	St. Peter the Apostle Catholic School	Fantano
885	Taylor	Sylvie	7	Do Plants Grow the Fastest in Sandy or Clay Soil?	Mt. Helix Academy	Mac Donald
886	Timtiman	Arielle	8	The Effect of Aloe Vera Gel on Tomatoes	Wangenheim Middle School	Mendibles
887	ValeCruz	Noor	8	The Effect of DIY Liquid Fertilizer on the Growth of Squash Plants	Chula Vista Middle School	Saclauso-Caro
888	Venger	Rebecca	8	The Effect of Extra Water on Closely Spaced Plants	Soille San Diego Hebrew Day School	Bessler
Junior Division ONLY – Product Testing/Consumer Sciences						
892	Alatorre	Camila	8	Removing Permanent Marker Stains	Chula Vista Middle School	Tom
893	Alford	Finley	7	Effects of Heat on Fishing Line	All Hallows Academy	Meza
894	Barsoumian	Andrew	8	Swimming Suit Speed	St. Joseph Academy	Hanson
895	Bateman	Siena	7	Gender Bias by Color in Kids Clothing Stores	The Children's School	Quincannon
896	Blue Patel	James Neelan	8 8	Beat the Heat: Comparing the Effectiveness of Blacktop Coatings	The Rhoades School	Hunker
897	Brandenburg Halenza	Maddox Carter	8 8	Documenting Ball Pressure Changes and Subsequent Effects on Performance	The Rhoades School	Hunker
898	Bray Mara	Andalyn Annie	7 7	The Effects of Ultra Violet Light on Printer Ink	St. Michael's School - Poway	Poling
899	Castro Castro	Alexa Valeria	6 6	Which Wood is More Sustainable for Heavy Objects?	Our Lady of Mount Carmel	Pereyra, SJS
900	Chamberlin	Nicole	8	The Best Type of Sunscreen	St. Didacus Parish School	Blickenstaff
901	Chatha	Anusha	8	Harvesting Water: Testing the Effectiveness of Various Sized Mesh in Fog Nets	The Rhoades School	Hunker
902	Coronel-Villarreal	Hector	8	Thermal Schock	Corfman School	Butler
903	DeSouza	Nicolas	7	Which Helmet is Safer - Hockey or Football Helmet?	All Hallows Academy	Meza

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division ONLY – Product Testing/Consumer Sciences (cont'd)						
904	Do	Cameron	8	Comparing the Effectiveness of Various Face Masks in Blocking Coarse and Fine Particulates	The Rhoades School	Hunker
905	Dullano	Dylan	7	Coke versus Pepsi Blind Taste Test	St. Michael Academy San Diego	Escalante
906	Duong	Joshua	8	Will Polish Prevent Wood From Absorbing Water	Chula Vista Middle School	Tom
907	Ertel	Elisheva	8	Straws for a Cause	Soille San Diego Hebrew Day School	Bessler
908	Figueroa-Valdez Perez-Maytorna	Daniel Vicente	6 6	Measuring pH levels in Different Water Products to Find Out Which is Healthier (In terms of pH Levels)	Our Lady of Mount Carmel	Pereyra, SJS
909	Gelle	Abdullahi	7	Plastic in Rice	Bright Horizon Academy	Naserelddin
910	Gonzalez Sierra	Sarai Romina	8 8	Toilet Paper Breaking Point	Our Lady of Mount Carmel	Pereyra, SJS
911	Gorou	Melania	7	What Is In Your Water	Nazareth School	Reed
912	Gray	Noelle	8	Which Baking Method Works Best for Cheesecakes?	Carlton Hills Middle School	Ducharme
913	Hayek	Katie	8	Soaking Up the Sun	St. Peter the Apostle Catholic School	Fantano
914	Hoang	Trinity	8	How Do Different Marker Brands Determine Whether Ink Fades Away Faster?	Wangenheim Middle School	Silva
915	Hotz	Daniel	8	Think Before You Drink: Testing the Effectiveness of Various Electrolyte Solutions	Mt. Helix Academy	Hudson
916	Hotz	Jacob	8	Skintastic Sunscreen	Mt. Helix Academy	Hudson
917	Hulse	Alexandria	7	Testing Pointe Shoe Pads	Nazareth School	Reed
918	Jaber	Marcelo	7	Testing Different Glues in Different Temperatures	St. Didacus Parish School	Blickenstaff
919	Jimenez Ritterbeck	Valentino Jackson	7 7	The Effect of Shoe Type on Jumping	City Tree Christian School	Lee
920	Lau	Brandon	8	Fast Fizz: What Liquid Dissolves Alka-Seltzer Fastest?	Mt. Helix Academy	Hudson
921	Lay	Avery	7	Biodegradable Straws	St. Didacus Parish School	Blickenstaff
922	Leos	James	7	Synthetic vs Conventional	St. Didacus Parish School	Blickenstaff
923	Lewis	Rachel	8	Eyeliner on Point?	Carlton Hills Middle School	Ducharme

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Proj #	Last Name	First Name	Gr	Project Title	School	Tchr/Advr
Junior Division ONLY – Product Testing/Consumer Sciences (cont'd)						
924	Maake	Alayna	7	Generic Versus Name Brand Cereals: Absorbability	St. Didacus Parish School	Blickenstaff
925	McGinnis	Killian	7	Football Helmet Safety	St. Didacus Parish School	Blickenstaff
926	Miranda	Nicholas	7	Got Apples?	St. Michael Academy San Diego	Escalante
927	Montejo Nasry	Rosy Margaret	8 8	Bottle of the Brands	St. Peter the Apostle Catholic School	Fantano
928	Nguyen	Cassie	7	The Pigmentation of Paint in Sunlight	St. Didacus Parish School	Blickenstaff
929	Oquendo	Alyna	8	The Effect of Isopropyl Alcohol vs Lysol Disinfectant	Chula Vista Middle School	Saclauso-Caro
930	Pawl	Jackson	7	Best Bottle Brand	All Hallows Academy	Meza
931	Serawit	Yacob	8	Pulp or No Pulp?	St. Didacus Parish School	Blickenstaff
932	Tortona	Jayce	7	How Does Temperature Affect Batteries	Bonita Vista Middle School	Stell
933	Tran	Christopher	8	How Does the Number of Bananas in a Bunch Affect the Time They Take to Ripen?	Wangenheim Middle School	Mendibles
934	Tran	Katie	8	Gloss and Glimmer: Which Will Be the Last Shimmer	Carlton Hills Middle School	Ducharme
935	Tran	Quynh	8	How Effective are Household Items on Removing Permanent Marker on Plastic?	Wangenheim Middle School	Mendibles
936	Villafana	Jonah	7	Steak Out: What Works Best to Tenderize Steak	St. Pius X School	Doyle

** ELEMENTARY SHOWCASE **

Environmental Science & Management

1	Robinson	Braylon	5	Life in a Jar	Johnson Magnet School for STEM	Hickenbottom/ Weinshanker
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Plant Science

2	Younger	Suria	4	Moody Plants	Johnson Magnet School for STEM	Smith/ Weinshanker
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Product Testing/Consumer Science

3	Bello	Giovanni	3	Melting Crayon	Johnson Magnet School for STEM	Teshara-Tartt/ Weinshanker
4	Banuelos	Alessandra	3	Permanent Marker vs Soap	Johnson Magnet School for STEM	Anderson/ Weinshanker

66th Annual Greater San Diego Science & Engineering Fair - 2020

The Board of Directors and Management Committee would like to thank the following schools and their teachers/advisors of San Diego and Imperial Counties for their commitment to and support of students and their research in science, technology, engineering and math in the Greater San Diego Science and Engineering Fair.

2020 School and Teacher/Advisor Directory

JUNIOR DIVISION:

All Hallows Academy... Meza, Jennifer
Barbara Worth Jr. High School (Imperial County)... Calip, Celena
Bernardo Heights Middle School... Cao, Linguie
Bonita Vista Middle School... Cardenas, Carla
Bonita Vista Middle School... Shimasaki, Cynthia
Bonita Vista Middle School... Stell, Jolene
Bright Horizon Academy 6-8... Nasereddin, Najwan
Carlton Hills Middle School... Ducharme, Kathryn
Carmel Valley Middle School... Kelly, Siobhan Cruz
Chula Vista Middle School... Saclauso-Caro, Gina
Chula Vista Middle School... Tom, Tina
City Tree Christian School... Lee, Michelle
Classical Academy Middle School... Morrow, Jennifer
Classical Conversations... Shlemon, Jennifer
Coastal Academy... Biernacki, Bridget
Corfman School (Imperial County)... Butler, Christina
Corfman School (Imperial County)... Leon, Isaac
Correia Middle School... Flosky, Jeff
De Portola Middle School... Bridges, Michael
De Portola Middle School... Yepiz, Lee
Eastlake Middle School... Martinez, Ricardo
Farb Middle School... Huntington, Patricia
Good Shepherd Catholic School... McNeil, Mary Anne
Mesa Verde Middle School... Bird, Russ
Mesa Verde Middle School... Cochran, Caroline
Mesa Verde Middle School... Fice, Danielle
Mt. Everest Academy... Negus, Norman
Mt. Helix Academy... Hudson, John
Mt. Helix Academy... Mac Donald, Kayla
National City Middle School... Langel, Katharine
Nativity School... Lunn, Tracy
Nazareth School... Reed, Marilyn
Our Lady of Guadalupe Academy (Imperial County)... Patton, Joshua
Our Lady of Mount Carmel... Pererya, SJS, Juanita
Pacific Beach Middle School... Greenberg, Greg
Pacific Trails Middle School... Freeman, Kathryn
Pacific Trails Middle School... Thacker, Samantha
Rancho del Rey Middle School... Castillo, Dawn
San Diego Jewish Academy 7-8... Deveau, Lily
San Elijo Middle School... Bireddy, Sreelatha
Soille San Diego Hebrew Day School... Bessler, Matt
Southwest Middle School... Erin Barron
St. Didacus Parish School... Blickenstaff, Rita
St. Gregory the Great Catholic School... Dasgupta, Sudipta
St. John of the Cross Catholic School... Krumm, Greg
St. John School - Encinitas, CA... Heins, Gina
St. Joseph Academy 6,7,8... Hanson, Ryan
St. Mary Star of the Sea School... Alonso, Janice
St. Michael Academy San Diego... Escalante, Marilin
St. Michael's School - Poway... McHale, Kaley
St. Michael's School - Poway... Poling, June

JUNIOR DIVISION cont'd:

St. Peter the Apostle Catholic School... Fantano, Theodore
St. Pius X School... Doyle, Rachel
The Rhoades School... Hunker, Roxanne
Thurgood Marshall Middle School... Schumacher, Erin
Wangenheim Middle School... Mendibles, Tommy
Wangenheim Middle School... Silva, Marin

SENIOR DIVISION:

Academy of Our Lady of Peace... Paluso, Tim
Bonita Vista High School... Mardahl-Dumesnil, Michelle
Bright Horizon Academy 9-12... Naserelddin, Najwan
Canyon Crest Academy... Haas, Ariel
Cathedral Catholic High School... Rafie, Marjan
Central Union High School (Imperial County)... Rueda, Lourdes
Chula Vista High School... Saclauso-Caro, Gina
Classical Academy High School... Bower, David
Classical Academy High School... Naserelddin, Najwan
Del Norte High School... Callicott, Andrea
Del Norte High School... Liao, Frank
Gompers Preparatory Academy... Ulloytt, Jessica
La Jolla Country Day School... Padgett, Dan
La Jolla High School... Coggan, Jay
La Jolla High School... Eaton, Holly
Mission Vista High School... German, Natalie
Mt. Carmel High School... Klingborg, Amy
Mt. Everest Academy... Negus, Norman
Mt. Everest Academy... Pachon, Rebeca
Olympian High School... Claudio, Michael Tony
Pacific Ridge High School... Mudaliar, Raj
San Diego Jewish Academy 9-12... Eisen, Cheryl
San Marcos High School... Terrill, Robert
Scripps Ranch High School... Fowler, Patty
St. Joseph Academy 9-12... Sjogren, Rebecca
Sweetwater High School... Chase, Johnathan
The Bishop's School... Heldt, Ben
The Bishop's School... Keller, Lani
The Bishop's School... Pelletier, Anthony
The Cambridge School High School... Mayne, Melissa
Torrey Pines High School... Belyea, Brinn
University City High School... Quessenberry, Maureen
University City High School... Stevenson, Sean
Vincent Memorial Catholic High School (Imperial County)...
Lizarraga, Raciel
Westview High School... Christopher, Matthew
Westview High School... Ingram, My-Nga

FAMILY DAY

Sunday, March 15, 2020
10:00AM - 3:00PM

Balboa Park Activity Center
2145 Park Blvd, San Diego, CA 92101



*Presented by the
Student Leadership Board*

SAN DIEGO ZOO

Interact with the Zoo Ambassadors - unique creatures like sloths and iguanas and hear about wildlife conservation efforts.

1:00-2:00

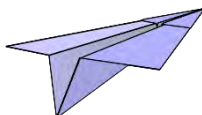


Find out about celestial bodies that might support life!

1:30-2:30

ALL DAY - JOIN THE FUN!

Participate in other fun, family friendly science hands-on activities like marshmallow tower competitions, and paper airplane contests. See science "magic" with butterfly pea tea demonstrations!



Operate remote-controlled robots and learn about power tools, machining, and CAD design.



Observe the Sun in great detail using a telescope and learn about its structure.



3D SYSTEMS

Observe cutting edge 3D printing technologies at work and see how you can print at home.

1:00-3:00

Use clues to find all of the mystery projects and win a prize in the ***Annual GSDSEF Project Scavenger Hunt***

The 2019-2020 Student Leadership Board is sponsored by:

DRS DAYLIGHT SOLUTIONS

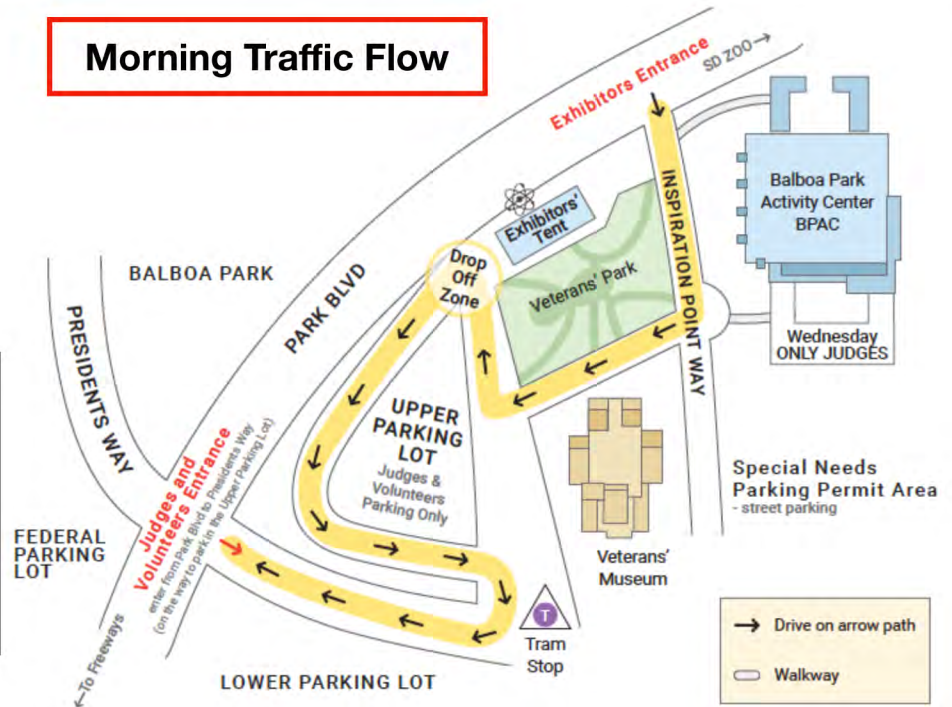
Traffic and Parking for Judging Day, March 11, 2020 Balboa Park Activity Center / 2145 Park Boulevard

- Arrive between 7:10 to 7:40 AM, **student orientation begins 7:45 AM**
- Enter at Inspiration Point Way, drop-off at the white tent in the Upper Lot, leave at Presidents Way

Judges and Volunteers Parking

- Enter Presidents Way
- Park in the Upper Lot
- **Permit required** (San Diego police officers will ask to see it; see contact below to request one)
- Proceed to the white tents by BPAC

Morning Traffic Flow



- **New traffic flow this year**
- Queuing begins at 2:00 PM, student dismissal begins about 2:45 PM
- Enter at Inspiration Point Way, follow signs, pickup at BPAC on Wieber Ave, leave at Wieber Ave (right turn only)

Special Needs Parking

- Park on Inspiration Point Way in the designated area
- **Permit required** (see contact below to request)

Parents and Students Parking

- Park in the Lower Lot only (the one with solar arrays)

Afternoon Traffic Flow

