



73rd Annual Los Angeles County
Science & Engineering Fair
March 12-13, 2023



Program & Student Exhibitors

Shrine Expo Hall * 665 W. Jefferson Blvd.

TOGETHER, WE HAVE THE POWER TO KEEP THE FUTURE BRIGHT

We are proud to sponsor the Los Angeles County
73rd Annual Science & Engineering Fair



WELCOME

The Science Fair Executive Board and Advisory Committee welcome you to the 73rd Annual Los Angeles County Science and Engineering Fair!

This year, over 650 students from public, parochial, and private schools in Los Angeles County are participating in the oldest and largest regional science fair in the western United States.

We celebrate science, technology, engineering, and mathematics in 36 Junior and Senior Division project categories from Animal Biology to Product Science.

MISSION and GOALS

- ❖ *To provide an opportunity for young people to apply creativity and critical thought to the solution of science, engineering, and mathematics problems beyond the confines of the classroom.*
- ❖ *To publicly recognize the achievements of talented science, mathematics, and engineering students.*
- ❖ *To provide opportunities for scientists, engineers, and business leaders to network with the educational community, both at the teacher and student level, to exchange ideas and discuss career opportunities.*
- ❖ *To promote school-community cooperation in developing the scientific potential and communication skills of tomorrow's leaders.*

Science Fair Executive Board

Nishat Alikhan	President
Benjamin Dickow	Vice President
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Maureen Allen	Honorary Board Member
Richard Boolootian	Honorary Board Member



President's Message:

Happy 2023! Happy 73rd Anniversary! Welcome back to our in-person LA County Science & Engineering Fair! What an absolute labor of love from all constituents! The Los Angeles County Science & Engineering Fair is proud to continue promoting STEM education in Los Angeles for over seven decades. During our long tenure, we have seen a lot. Established in 1950, to celebrate student success in STEM fields, the goal of the Los Angeles County Science & Engineering Fair has always been to promote an environment that encourages middle and high school students to ask those important questions - the why's, the how's, and the what-if's. And this year, after living through multiple Covid-19 impacted school years, Los Angeles County students' research shone through all the adversity that living through these unprecedented times brought.



As in the past few years, we had another incredible and unprecedented Fair season. With the challenges of living through a global pandemic and the continued disruptions to our daily lives and the trials and tribulations of off again/on again virtual and in-person teaching and learning. Keeping this in mind, I'm so proud of the 500+ students who despite of all of the obstacles this year brought, successfully completed creative & thought provoking scientific research and engineering projects thinking about the world around them and how they can positively impact their communities!

These young scientists and engineers would not be here without the leadership and guidance of their teachers, family members, and all those who supported them in their endeavors as well as the amazing support of our partners. I thank all of you who helped each and every student whose name appears in this program, every institution that supported their students, and each organization that made a donation to help support us in our mission of supporting STEM education in Los Angeles County!

Thank you all for being a part of our 73rd Anniversary as we celebrate the 73 years of Science and Engineering Fairs in Southern California! I wish all our students the best in their adventures yet to come.

A handwritten signature in black ink, appearing to read 'Nishat Alikhan'.

Nishat Alikhan, President

Los Angeles County Science & Engineering Fair



About the Theme

For the 2023 Fair we asked students from the 2022 Fair to suggest possible themes for the 2023 fair. Once we chose a theme, we, then asked participating schools to send in art to be used for the different aspects of the fair.

The Theme was created by Chaitra Sure from Gaspar de Portola Middle School

Chaitra explained the rationale behind his idea for this theme - I believe this theme pinpoints the projects and experiments taking place in the Science Fair this year. They are created to develop our future and to build a safe environment for all people coming and are already here in our world. New scientists are participating in the Science Fair to develop a new idea that will benefit all beings in the future.

Artwork was created by Karen Ji from Mirman School

Karen Ji is currently a 6th grade student at the Mirman School. Karen grew up in New Jersey and moved to California with her family last year. Science and arts are among her favorite subjects at school. Karen is also a professional rhythmic gymnast who competes at national level. In her spare time, she enjoys reading, drawing, socializing with friends, and traveling with family.



The design was based on my vision of based on what a better future looks like and how scientific and technological advancements that could potentially shape the world in years to come. The artwork is also be inspired by the efforts of individuals and communities working together to create positive change. I hope the artwork inspires and encourages people to take action towards building a better future for all of us.



ACKNOWLEDGEMENTS

Los Angeles County Science and Engineering Fair Advisory Committee

Nishat Alikhan, Shahida Alikhan, Alamelu Arunachalam, Paula Borstel, Linda Chilton, Meena Chokkalingam, Andrea Corrales, Fiona Darsot, Patrick Denny, Benjamin Dickow, Oscar Espinoza, Aidyl Gonzalez-Serricchio, Eric Hartung, Kevin Kha, Selena Khan Abdullah, Anne Maben, Jerilyn Neshek, Jeffrey Scott Nuttall, Andrea Peoples-Marwah, Anthony Quan, Susan Singh, Tonia Symensma-Cohen, John Vassiliades, Mark Wang

Science Fair Director Nishat Alikhan	Judge Recruitment Coordinator Alamelu Arrunachalam	Special Awards Chairs Mark Wang
Scientific Review Committee Chair Aidyl Gonzalez-Serricchio, PhD	Teacher Workshop Coordinator & Photography Coordinator Anne Maben	Technology Support Patrick Denny (On-site) Kevin Kha (Registration)
Social Media Coordinator Paula Borstel	Fundraising Committee Chair Eric Hartung	Volunteer Coordinator Meena Chokkalingham
Fair Registrar Oscar Espinoza	Interactive Exhibits Coordinator Jeffrey Scott Nuttall	Facilities Chair Susan Singh

We Need Your Help! We Need Your Help!

The Los Angeles County Science & Engineering Fair is a 501 (c) (3) non-profit organization and we must annually raise almost \$150,000 in funds to cover LACSEF expenses. *The Science Fair, its website and workshops are run completely by unpaid staff who find great satisfaction in donating their time on a volunteer basis.* We invite you to join our Advisory Committee to help continue producing the longest running regional science fair in the western United States!



The 73rd Annual
Los Angeles County Science & Engineering Fair

Thanks our Generous Contributors

\$10,000 - \$19,999

Broadcom
Edison International
Professional Engineers in California Government
Saban Family Foundation

\$5,000 - \$9,999

Supervisor Kathryn Barger (5th District)
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California Community Foundation
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General Atomics Sciences Education Foundation
Supervisor Hilda Solis (1st District)
Metropolitan Water District

\$500 - \$999

Aerospace
Phil Bangayan
Mark Wang

**The 73rd Annual
Los Angeles County Science & Engineering Fair
Thanks to the following supporters:**

Network for Good Contributors

Thanks to Science enthusiasts from around the country and the world
that contributed in support of the LA County Science & Engineering
Fair!

2022–2023 Contributions of Under \$500

Al Arun	Lisa & Stan Grod	S Luke	Sumathy Nellaiyappan	Ted Simpson
Amazon Smiles	Ingileif Hallgrimsdottir	G McGinty	Jeffrey Scott Nuttall	Smart & Final Charitable Foundation
American Vacuum Society	Becky & Eric Hartung	Gilberto Martinez	Panda Express	South Bay Business Environmental Coalition
Easun Arunachalam	Janet & David	Ann Matise	Lisa Park	Douglas Spencer
Raji Athappan	Jerilyn Joel	Nancy Melucci	Maria Perez	Ryan Stone
C & E Merdinian Armenian Evangelical School	Judy Joel	Stephen Miller	Padma Pillai	Tonia Symensma- Cohen & Brian Tannerbaum
Meena Chokkalingam	Krispy Kreme Donuts	Kaylani Mohan	Ralphs Grocery Stores	Andy Torosyan
Nick Cohen	J Lanier-Vos	Audrey Munro	Southern California Paleontological Society	Julia Waterman
Cindy Gainsforth	Cheryl Lin	Deborah Musher	Sree Mahalakshmi Rednam	Casey Wu
Steve Golden	Ravit Lonstein	Hedy Nazarian	Debbie Simon	Bob Yinger

**The 73rd Annual
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Thanks to the following supporters:**

Aquarium of the Pacific
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Columbia Memorial Space Center
Generation Earth
Global Effects, Inc.
Great Minds STEM Society
International Bird Rescue
Los Angeles Maritime Institute
Southwestern Herpetologists Society

In-Kind Donors

Thanks to Science enthusiasts from around the country and the world
that contributed in-kind support of the LA County Science &
Engineering Fair

American Academy of Motion Pictures Museum	Huntington Library, Art Museum, & Botanical Gardens	Ralphs Groceries
American Eagler	Kendra Scott Jewelry	Shrine Auditorium & Expo Hall
The Broad Museum	Let's Roam Scavenger Hunts	Skirball Cultural Center
Costco	Maricel Rocha Health Coaching	Starbucks
Curves	Pacific Park at the Santa Monica Pier	Western Bagel
Hollywood Wax Museum & Guinness Book of World Records Museum		Vons

Special Award Contributors

Thanks to the following Corporate and Professional Organizations for their generous support of excellence in student research:

American Meteorological Society
American Psychological Association
Association for Women Geoscientists
Broadcom
California Association of Professional Scientists (CAPS)
The David Park Innovation Foundation
Department of Defense
ICP DAS USA, Inc.
The Lemelson Foundation
Mu Alpha Theta
National Aeronautics and Space Administration (NASA)
National Geographic Society
National Oceanic and Atmospheric Administration (NOAA)
The Nuclear Society
Office of Naval Research (U.S. Navy / U.S. Marine Corps)
Professional Engineers in California Government Regeneration
Ricoh USA, Incorporated
Saban Family Foundation
Society for In Vitro Biology
Society for Science and the Public
Society of Petroleum Engineers - Los Angeles
Southern California Paleontological Society
Stockholm Junior Water Prize
Thermo Fisher Scientific
US Agency for International Development (USAID)
United States Air Force
US Metric Association
UCLA Brain Research Institute
Yale Science & Engineering Association



Messages from Families and Schools

Good Luck to all of you! Smile and Shine. Enjoy your time here at the Fair.

♥ The LA County Science Fair Committee

Congratulations **Sophia Perez** on making it to the Science Fair! We are so proud of you and all that you have accomplished! We love you so much! Mom and Dad

Jonah! We are so proud of you and your amazing FlexCharge discoveries! Squeezing you with Mom, Dad, Sienna & Allegra

Zach M, we are so proud of all your hard work & love of science! Love Mom, Dad & AJ

Congratulations **Steinunn!** Stay curious and have lots of fun at the Science Fair! Mamma, Aba, Ruth and Talia

Congratulations **C & E Merdianian** students! We are so proud of you!

Congratulations to our son **Ben** and to all of the St. Martin of Tours students participating in the Science Fair. You make us proud! The Waterman Family

Congrats **Haley** & the entire No Glow Team! So proud of all your hard work & accomplishments. Love Mom

Congrats **M!!** You go, science girl!! Change the world!! Love Bubu and Imo

Congratulations **Madeleine!** We are so proud of you! We love you! Dad, Mom and Halmoni

Amazing job, Orion! We are so proud of your hard work and creativity!
Love, Mom and Dad

Congratulations **Chloe C.!** We are so very proud of you! Well done! - Love, Mom, Dad, Audrey & Bailey

Get your unique 73rd Annual LA County Science & Engineering Fair today! Don't miss the opportunity to get a keepsake to commemorate our first in-person fair since 2019! Buy your t-shirts [here](#), now!

<https://www.bonfire.com/lacsef2023/>



SCHEDULE OF EVENTS

THURSDAY, MARCH 2	
Virtual Component Submission <ul style="list-style-type: none"> Report Logbook Pictures 3-4 Minute Video 	Via Google Form

SUNDAY, MARCH 12		
Student Registration & Project Screening Must have Photo Release Sheet	Exhibit Hall – Floor 2	2:00pm – 9:00pm
Student Workshop, Tips for Interview Success	Westside Expo Hall – Flr 2	3:00pm – 8:30pm
Interactive Exhibits Hands-on activities for students, parents, teachers, and visitors during unscheduled interview times	Eastside Expo Hall – Floor 2	10:00am – 3:00pm
Registration Closes (Students must arrive by 8:45 pm)	Exhibit Hall – Floor 2	9:00pm

MONDAY, MARCH 13		
Students Arrive Professional attire recommended Stickers required on items bought for judging Doors open at 8:45 AM	Exhibit Hall – Floor 1	by 8:30am
Judging & Interviews EVERY STUDENT MUST BE PRESENT	Exhibit Hall – Floor 1	9:10am – Lunch
<u>Lunch Times (on your own; Food Trucks/Concession Stand)</u> 11:00 → J16, S04, S06, S09, S10, S11, S13, S14, S15 11:20 → J05, J07, J08, J10, J12, J13, J14, J15, J17, J18, J19, J20, J22, S05, S08, S12 11:40 → J01, J02, J03, J04, J06, J09, J11, S07 12:00 → S01, S02, S03	<u>Dismissal Times (Tentative)</u> 1:20 → J14, S11 1:40 → J16, S04, S06, S09, S10, S13, S14, S15 2:00 → J05, J07, J08, J10, J12, J13, J15, J17, J18, J19, J20, J22, S05, S08, S12 2:20 → J06, J11, S03, S11 2:40 → J01, J02, J03, J04, J09, S01, S02	
Judging & Interviews EVERY STUDENT MUST BE PRESENT for entire duration	Exhibit Hall – Floor 2	End of Lunch – 4:30pm or earlier
Students Dismissed Determined by judging panel	Exhibit Hall – Floor 2	4:30pm or earlier
Final Judging NO STUDENTS	Exhibit Hall – Floor 2	4:30pm – 5:30pm

AWARDS FOR STUDENTS

This year, the Awards Ceremony will be held virtually and will be live streamed on Facebook and YouTube on Sunday, March 19, 2023 at noon.

Each student exhibitor, individual or part of a team, who participates in the Los Angeles County Science & Engineering Fair, receives a Certificate of Participation and a medal.

First Place, Second Place, Third Place, and Honorable Mention in each Project Category and Division, both individual and teams, will receive a Medal of Merit. Students who do not place 1st, 2nd, 3rd or Honorable Mention will receive a Recognition Medal.

Special Award winners will be selected by corporate, scientific and professional organizations. Prizes range from cash awards, gift certificates and internships.

The 73rd Annual
Los Angeles County Science & Engineering Fair

PRESENTATION OF AWARDS

Sunday, March 19, 2023
*Viewable at the Fair's
Facebook Live & YouTube*

OPENING CEREMONY

- | | |
|-----------------|--|
| 12:00 pm | Welcome: Nishat Alikhan, <i>President, LACSEF</i> |
| 12:10 pm | CORPORATE AND PROFESSIONAL SPECIAL AWARDS |
| 12:40 pm | PROJECT CATEGORY AWARDS |
| 1:10 pm | SPECIAL AWARDS
Darrell Smedley Award
Sweepstakes Awards
Intel International Science & Engineering Fair Designees |

**** Please note: Times of each section are approximations and may be different when the show begins. ****

Special Awards

The following Special Awards will be presented at the Awards Ceremony if their criteria are met.

Organization	Name of Award	Criteria	Prize
American Meteorological Society	Certificate of Outstanding Achievement for Ability and Creativity in an Atmospheric Science Exhibit	Grades 6-12. Project showing excellence in atmospheric & related oceanic & hydrologic sciences	Certificate & invitation to LA-AMS Annual Banquet
American Psychological Association	Certificate of Award for Achievement in Research in Psychological Association	Grades 6-12. Best psychology-related project. Behavioral & Social Sciences / Animal Sciences / Biochemistry / Computer Sciences / Environmental Sciences / Math / Medicine & Health Sciences	Certificate
Association for Women Geoscientists	Student Awards for Geoscience Excellence	Female students only; Grades 6-12. Projects that increase public awareness of geosciences, illustrate the interdisciplinary nature of the geosciences, or promote the sensitivity to the Earth as a global system.	Certificate
ASM Materials Education Foundation	Most Outstanding Exhibit in Materials Science Award	Grades 6-12. Best materials engineering project.	Certificate & Ribbon
Broadcom	Broadcom Coding with Commitment	Grades 6-12. Project highlighting good use of coding in service of community service.	Raspberry Pi & \$250 Gift card
California Association of Professional Scientists (CAPS)	CAPS Science Achievement Award	Grades 7-11. For the project best illustrating good scientific methodology in a discipline represented by members of CAPS, including physics, chemistry, biological & environmental science, toxics & energy resources	Certificate, \$100
The David Park Innovation Foundation	The David Park Innovation Foundation Scholar Award	Grades 9-12. Most outstanding projects related to innovation & technology	Cash Award
Department of Defense	DoD STEM Leadership Prize	Grades 6-8. Excellence in STEM, as well as the problem-solving skills and determination to overcome challenges throughout the research project.	Certificate & \$100
ICP DAS USA, Inc.	Southern California Social Impact Award	Grades 6-12. Best new innovations carefully crafted, researched, built, and experimented to help better the environment and quality of life on the planet.	Cash Award
The Lemelson Foundation	The Lemelson Early Inventory Prize	Grades 6-8. Problem-solving, empathy, entrepreneurial, and environmentally-responsible invention.	Certificate & \$100
MU Alpha Theta	Mu Alpha Theta Award for the most challenging, original, thorough, & creative investigation of a problem involving mathematics	9th - 12th Grade Student Only. Most outstanding project exhibiting in the area of mathematics.	Certificate
National Aeronautics & Space Administration (NASA)	NASA Earth System Science Award	Grades 6-12. Project that offers greatest insight into Earth's Interconnected Systems and demonstrates excellence in inquiry.	Certificate
National Geographic Society	That's Geography! - Cultivating Empathy for the Earth Award	Grades 9-12. Project seeking solutions to the Earth's most pressing challenges	\$100 Award and Certificate
National Oceanic and Atmospheric Administration (NOAA)	NOAA's Taking the Pulse of the Planet Award - for presenting research that demonstrates the Principles & Technical Innovations that offer the greatest potential for an improved understanding of Earth's dynamic processes	Grades 6-12. Best project related to understanding and predicting changes in climate, weather, oceans, and coasts. Conserving and managing coastal and marine ecosystems.	Letter & Certificate

Organization	Name of Award	Criteria	Prize
Office of Naval Research (U.S. Navy / U.S. Marine Corps)	The Office of Naval Research Naval Science Award	Grades 6-12. Any project which shows excellence in science or engineering. No Team Projects!	Jr. Certificate & Medal Sr. Certificate, Medal, & \$50
Professional Engineers in California Government	Honorable Mentions Marylin Jorgenson-Reese Award for Excellence James E. Roberts Award for Excellence	Grades 6-12. Best engineering related projects	Gift Card & Honorable Mention Medal Cash Awards
Regeneron	Biomedical Science Award	Grades 9-12. Excellence in Science	Cash Award
Ricoh USA, Inc.	Ricoh Sustainable Development Award	Grades 6-12. For presenting research that demonstrates the Principles & Technical Innovations that offer the greatest potential for Sustainable Development	Certificate
Saban Family Foundation	Saban Family Foundation Prize	Grades 6-12. Top projects by female scholar with a focus on providing a positive impact to her community.	Cash Award
Society of Petroleum Engineers – LA Section	Award for any project that demonstrates a principle of energy, fluid and gas production & handling, or other technologies or science related to the Petroleum industry	Grades 6-12. Energy, fluid and gas production and handling, or other technologies or science related to the Petroleum industry.	Certificate & \$100
Society for In Vitro Biology	Society for In Vitro Biology Award	11th Grade Student Only. Most outstanding project exhibiting in the areas of plant or animal in vitro (artificial environment) biology or tissue culture.	Certificate
Southern California Paleontological Society	Southern California Paleontological Society Award for Academic Excellence	Grades 6-12. Best project related to paleontology or geology, earth science, paleobiology, or similar categories	Certificate, \$50 cash prize, membership in the society for one year, opportunity to present project at an SCPS meeting in June
Stockholm Junior Water Prize	Regional Water Prize Award - Award of Excellence for a Water-Related Science Research Project	Grades 9-12 only. Outstanding water-related research at the high school level which focuses on relevance in terms of science, the environment, & society, creativity of the project, methodology, subject knowledge, practical skills, & report & presentation.	Certificate + Nomination to State SJWP Competition
Thermo Fisher Scientific	Thermo Fisher Scientific Junior Innovators Challenge	Grades 6-8. Top 10% of all Junior Projects	Certificate + Eligibility to enter Thermo Fisher Scientific Junior Innovators Challenge competition
UCLA Brain Research Institute	Award - for outstanding projects related to Neuroscience	Grades 6-12. For outstanding projects related to Neuroscience	Gift Card & Certificate
U.S. Agency for International Development (USAID)	Science Champion Award	Grades 6-12. Scientific excellence and using science innovatively to create a potential solution to international development challenges.	Certificate
U.S. Air Force	The U.S. Air Force Science Award	Grades 9-12. Projects exemplifying STEM-related research	Certificate
U.S. Metric Association	U.S. Metric Association Award for the best use of SI Units in a Science Fair Project	Grades 9-12 only. Any project which involves measures and expresses those measures consistently and correctly in SI metric units; A project in which the measures were integrally important to the research.	Certificate
Yale Science and Engineering Association	Most Outstanding Exhibit	Grade 11 only. Outstanding Exhibit in Computer Science, Engineering, Physics, or Chemistry	Certificate & Medallion

Science & Engineering Fair Project Rubric 2023

Student: the judges will be using the following rubric to evaluate your project.

Topic	4	3	2	1
Introduction (I)/ Experimental Question (EQ) & Hypothesis (H) <i>(H may not be present in all projects)</i>	<input type="checkbox"/> It has an original, detailed EQ that clearly outlines the experiment. <input type="checkbox"/> H (where appropriate) is clearly stated and based on research. <input type="checkbox"/> The purpose of the investigation, answers a specific question.	<input type="checkbox"/> It has an EQ that outlines the experiment. <input type="checkbox"/> H (where appropriate) is clearly stated.	<input type="checkbox"/> The EQ is the same as published by another source; lacks originality. <input type="checkbox"/> H is based on assumptions, lacks a review of research.	<input type="checkbox"/> The EQ does not overview the experiment. <input type="checkbox"/> H is not related to the EQ; student lacks understanding of experiment and expected results.
Background Research/ Exploration	<input type="checkbox"/> Research has been done on the scientific process that is being manipulated in the experiment. <input type="checkbox"/> Correct number of cited references are present, written in proper format.	<input type="checkbox"/> Research has been done on the topic of the experiment. <input type="checkbox"/> References are present but may not be cited.	<input type="checkbox"/> Minimal research has been done. <input type="checkbox"/> Student lacks understanding of the experimental topics. <input type="checkbox"/> References may be present.	<input type="checkbox"/> Lacks evidence of research related to the topic of the experiment. <input type="checkbox"/> No references or citations are present.
Procedure/ Materials & Methods	<input type="checkbox"/> Detailed ORIGINAL procedure written to allow an outsider to understand all steps that were taken in the experiment. (This includes explanation of the variables, data collected, number of trials, disposal methods, if necessary, and all tools that were used.)	<input type="checkbox"/> The procedure is written to allow an outsider to understand steps that were taken in the experiment. (This includes explanation of the variables, data collected, and all tools that were used.)	<input type="checkbox"/> The procedure is the same as published by another source; lacks originality.	<input type="checkbox"/> The procedure is very brief and doesn't allow a reader to fully understand what was done during the experiment. <input type="checkbox"/> The procedure is not repeatable.
Data/ Results <i>*Some projects do not use graphs with data.</i>	<input type="checkbox"/> Appropriate qualitative and/or quantitative data was collected. <input type="checkbox"/> Data is clear and understandable. <input type="checkbox"/> Sample size and number of trials are appropriate for the subject. <input type="checkbox"/> Graphs/data/and tables are appropriately used. <input type="checkbox"/> Data is appropriately labeled. <input type="checkbox"/> Grade appropriate data presentation.	<input type="checkbox"/> Both qualitative and quantitative data has been collected. <input type="checkbox"/> Multiple trials have been conducted. Graphs are present of trials and averages. These graphs include key parts of a graph and a caption.	<input type="checkbox"/> Only one kind of data has been collected. <input type="checkbox"/> Limited trials have been conducted. <input type="checkbox"/> Student has a graph of their data.	<input type="checkbox"/> Minimal data has been collected. <input type="checkbox"/> Only one trial has been completed. <input type="checkbox"/> Graphs are misleading; they do not have equal spans; lacking key information.
Conclusions/ Student Understanding	<input type="checkbox"/> Analysis is thorough and grade appropriate. <input type="checkbox"/> Student has drawn conclusions based on their experiments and research. <input type="checkbox"/> Student is able to discuss the results and cite the data that has been collected. <input type="checkbox"/> The student is able to discuss if/when the research and data match or not. <input type="checkbox"/> Student has further questions and research ideas. <input type="checkbox"/> Great Depth of Understanding	<input type="checkbox"/> Student has drawn conclusions based on the experiments. <input type="checkbox"/> They are able to discuss the results and cite the data that has been collected. <input type="checkbox"/> Student has further questions and research ideas.	<input type="checkbox"/> Student has drawn conclusions based on the experiments. <input type="checkbox"/> Student is able to discuss the results and cite the data that has been collected.	<input type="checkbox"/> Student has difficulty discussing the experiment and results. <input type="checkbox"/> Student does not make connections between results and research.

Interview Tips & Tools

<p>1. Think of yourself as belonging to the science community. You are sharing your ideas among colleagues</p>	<p>4. Communicate in a natural manner, not rushed, perhaps just a bit slower than usual. Give each idea its moment in the sun.</p>	<p>7. Allow questions and comments to guide the direction of your presentation. Pause from time to time to allow for dialogue!</p>
<p>2. Find a way to get physically comfortable with yourself just before you begin. Breathe easily!</p>	<p>5. Let your opening start with a BIG IDEA, then connect it to your research topic. Place your project into context!</p>	<p>8. If you don't know, use the moment to think out loud with your colleagues. Show the quality of your thinking process!</p>
<p>3. Draw from what you know by heart— so that it doesn't sound overly "memorized." Speak from your place of confidence!</p>	<p>6. Provide a brief overview of highlights, like an abstract or a movie trailer. Excite your audience about your project!</p>	<p>9. Used sparingly, humor, charm, and eye contact may help you connect with your colleagues. Stay focused on the science story!</p>

Remember that this is an interview. Look professional!

When interviewed be sure to allow yourself time to get there and to relax! Your interview itself is only about **8 minutes**. You will be asked to be at your project early and to stay a few minutes after!

✓✓ *To find your interview time(s) look on the back of the name card at your project location!*



Who will interview you?

- ☞☞ They are scientists in the field, teachers, retired scientists, etc.
 - They have seen (and maybe read) your Abstract!
 - They have reviewed your board!
 - They are prepared with questions!

What questions might be asked?

Remember that every group/person will have their own favorite questions... here are the most logical ones, *and some of my favorites!*

- Why did you choose this experiment?
- What is the significance of this project to your life?
- ☞☞ What were your variables?
- ☞☞ What were your controls?
- ☞☞ How did you make sure to run a fair (controlled experiment)?
- ☞☞ What were your significant findings? (Results)
- ☞☞ What formulas did you use?
- ☞☞ Did your results match your research?
- ☞☞ How did you use your research? (Did you research?)
- ☞☞ Did you have any discrepant events? (Weird results that didn't fit the trend?)
- ☞☞ What further results/experiments might you now be interested in doing?

Partners... you BOTH/ALL have to talk!!

NON--DISCRIMINATION POLICY



The Los Angeles County Science and Engineering Fair is an equal opportunity for all event, regardless of age, ancestry, color, disability (mental and physical), gender, gender identity, sexual orientation, medical condition, national origin, race and religious creed. Judges and volunteers bear the responsibility to act as guardians and custodians of the students during their volunteering. Their familiarity with the students' special sensitivities is imperative to the overall Science Fair effort to achieve an equal opportunity for all environments, free of discrimination.

Los Angeles County Science & Engineering Fair Pledge for Parents, Volunteers and the Public

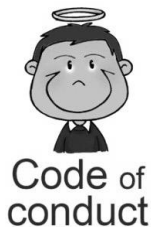
On behalf of teachers, parents and visitors I pledge to be an example for our children by:

- γ *Respecting the rules of the Los Angeles County Science & Engineering Fair;*
- γ *Encouraging excellence in experimentation and investigation;*
- γ *Supporting independence, originality, and creativity in the design and completion of all competitive projects; and*
- γ *Respecting the authority and decisions of the staff and judges of the Los Angeles County Science & Engineering Fair.*



My actions will promote the spirit of cooperation within and among all participating schools!

Student Code of Conduct



As a participant in the Los Angeles County Science Fair:

- γ *I will compete honestly and with good sportsmanship.*
- γ *I will act with integrity and treat others with courtesy.*
- γ *I will respect Fair volunteers, staff, and judges and their decisions*



Regulations for Projects

The following regulations will help keep the projects uniform and within the laws of the State of California. Fair sponsors want all students to have the best opportunity to compete for the annual awards. During the time that the Fair is open to the general public, the perception of the projects must be positive and precautions must be taken for the security of each project. All projects at the Los Angeles County Science & Engineering Fair must abide by the following:

0. Present an experimentally based research design exemplifying the science processes or engineering design/inventions.
1. Be carefully prescreened and approved online by the School Site Coordinator. The Los Angeles County Science & Engineering Fair Judges' Rubric lists the criteria used to evaluate the projects. **Online Pre-approval** of project proposals is necessary for projects involving *tissue/cell lines, human subjects, live vertebrate animals, hazardous materials and/or microbes*
2. Clearly distinguished between the work of the student entrant and the work of others. Students who have prepared a project in conjunction with research participation opportunity in industry, a university, hospital or institution other than their school must show only the student's research in their project display. Students may mention the relationship to the research of others in notebooks only if they clearly specify the assistance received and the role and contributions of others in research related to the project. Most projects being performed at outside institutions will need online preapproval for the 5 categories listed above, including electronic verification by supervising professionals.
3. Be original and distinct. Identical project/data may not be submitted by a school under separate judging divisions. Likewise, the same unmodified project cannot be submitted multiple years.
4. Be within the total quota for each school. Quotas will be announced in advance of the Fair. If additional applications are submitted, schools will be contacted and each school will determine which projects are the official entries. If excess entries are initially overlooked, only a number corresponding to the quota will be judged. Those to be judged will then be selected at the discretion of the Science Fair Committee.
5. Schools need to be electronically enrolled for the fair through the www.lascifair.org website. Schools should avoid enrollment until it is certain that their students' projects will be completed in time, ready to be registered online and arrive at the Fair.
6. Student and project information will be submitted online by students only in grades 6-12 or with an age equivalent to those in grades 6-12. Team members **MUST** attend the same school, for oversight by the Site Coordinator.
7. Be registered and setup at the Fair and picked up only within the designated hours. Early entries will not be accepted. Entries will be accepted and project pick up will be permitted only when a member of the Los Angeles County Science Fair Committee is present.
8. Use illustrations or photographs **ONLY** of microbes, animals and plants for displays. The display of bacterial cultures and live or preserved animals and plants will not be permitted.
9. Remain at the Fair during the day scheduled for judging interviews. The only exception to this rule is for students who must take projects to the International Fair, if their departure day/time overlaps the time that the Los Angeles County Science & Engineering Fair is open. To ensure security during project removal, the authorized time for pick up will be strictly followed. The Fair is not responsible for projects left after the designated time.
10. Use a title that provides the viewer with a clear concept of the subject and procedure of the research. Present the steps of the scientific methodology used, organized from left to right and top to bottom. Use metric units for all measurements. Have all values on charts and graphs correctly labeled. Present all narrative writing in a legible manner with correct grammar, punctuation and spelling. Carefully review the category descriptions and select the proper one for the project.
11. Fit within the prescribed space limitations – no larger than 76 cm (2.5 ft. deep (front to back), 122 cm (4 ft.) wide (side to side) and 284 cm (6.5 ft.) high (if placed on table) or 274 cm. (9 ft.) high (if placed on floor) Oversized projects will be screened at the door and refused entry.
12. Be able to support their weight and not collapse due to inadequate construction. Any project that does not meet the minimum standards for construction will be removed from the display area and not judged.
13. Display photographs that do not show procedures harmful to the health and wellbeing of animals. (For instance, the performance or results of surgical procedures will not be shown.) Those projects not in compliance will be removed from the display areas and will not be judged.
14. Do not display items you cannot afford to lose. There is a system for bringing in items to show the judges. Have notebooks and other paperwork tethered to the display board. The Fair will not be responsible if these items are missing from projects.
15. A computer may be brought to the display for the judging interview if the student assumes full responsibility for the computer. Computers should not be left at a project if the student is not there to ensure its safekeeping.
16. Give attention to all considerations of safety. Projects that use 120-volt electrical current must have all wires and connections well shielded. Those projects not in compliance will be screened at the door and refused entry.
17. Adhere to all of the rules and regulations of the Fair and all relevant federal, state and local laws. Projects not in compliance will be screened at the door and refused entry.
18. Be submitted with the understanding that decisions of the Los Angeles County Science & Engineering Fair Committee are final.

Participating Schools Junior Division

Al-Huda Islamic School	Islamic Center of Claremont Community School	Ross Academy of Creative and Media Arts Middle School
Archer School for Girls - Junior Division	La Canada Preparatory	Rudecinda Sepulveda Dodson Gifted Magnet Middle School
Arroyo Seco Museum Science Magnet School	Los Angeles Academy Middle School	Rudecinda Sepulveda Dodson Middle School
Bell Gardens Intermediate School	Magnolia Science Academy 6	Saint Martin of Tours Elementary School
Beverly Vista Middle School	Mark Twain Middle School	Saint Monica Academy
Brentwood School - Junior Division	Miraleste Intermediate School	Sierra Madre Middle School
C. & E. Merdinian Armenian Evangelical School	Mirman School	Sierra Vista Junior High School
Cathedral Chapel School	Montebello Intermediate School	St. Cyril of Jerusalem School
Chaminade Middle School	New Horizon School	St. Gregory A. & M. Hovsepian School
Chamlan Armenian School	New Roads School	St. Timothy School
Delphi Academy of Los Angeles	Oak Hills Elementary	Stratford School
Dunsmore Elementary School	Palos Verdes Intermediate School	Temple Beth Am Pressman Academy
Hale Charter Academy STEAM Magnet	Pomona Unified School District Junior Division	The Science Academy STEM Magnet
Harvard-Westlake Middle School	Portola Highly Gifted Magnet	Turning Point School
Holy Angels School	Ridgecrest Intermediate School	Walter Reed Middle School
Incarnation Parish School	Rio Norte Junior High School	
Institute of Knowledge Middle School	Rosemont Middle School	

Participating Schools Senior Division

Anderson Clark Magnet High School	John Muir High School Early College Magnet
Applied Technology Center High School	La Canada High School
Archer School for Girls - Senior Division	La Salle College Preparatory
Bell Gardens High School	Magnolia Science Academy 4 Venice
Beverly Hills High School	Mira Costa High School
Brentwood School - Senior Division	National Youth Community Center
Cabrillo Marine Aquarium	New West Charter High School
California Academy of Mathematics and Science School	North Hollywood Senior High School
Chadwick School	Palisades Charter High School
Crescenta Valley High School	Palos Verdes High School
Da Vinci Science High School	Palos Verdes Peninsula High School
Delphi Academy of Los Angeles (Senior Division)	Pioneer High School
Diamond Bar High School	Pomona Unified School District Senior Division
Discovery Charter Preparatory High School	Rose and Alex Pilibos Armenian High School
Don Bosco Technical Institute	Schurr High School
Flintridge Preparatory School	Sherman Oaks Center for Enriched Studies
Geffen Academy at UCLA	The Buckley School
Granada Hills Charter High School	The Webb Schools
Hart High School	Walnut High School
Harvard-Westlake High School	West Ranch High School
Institute for Educational Advancement	Westridge School for Girls
Institute of Knowledge High School	Whitney High School

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The Los Angeles County Science & Engineering Fair Advisory Committee & Executive Board wants to applaud the Los Angeles County Board of Supervisors & our partners for supporting STEM Education in LA County!

Thank You!



Don't forget- You can still place an order for Science Fair shirts

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73rd Annual Los Angeles County Science & Engineering Fair *Statistical Summary*

Table 1. Number of Project Entries

Cat. No.	Category	2023	2023	2022	2021	2020	2019	2018	2017	2016
		JR	SR	Total	Total	Total	Total	Total	Total	Total
J01, S01	Animal Biology	6	8	17	4	23	27	18	20	30
J02, S02	Animal Physiology	6	14	8	10	19	16	18	20	15
S03	Behavioral / Social Sciences	-	13	10	10	21	25	12	9	12
J03	Behavioral Sciences - Non Human	5	-	4	1	11	11	10	13	12
J04	Behavioral / Social Sciences - Human	23	-	10	11	13	18	25	37	29
J05, S04	Biochemistry & Molecular Biology	8	16	21	18	35	25	32	41	29
S05	Chemistry	-	16	12	6	14	26	25	27	38
J06	Chemistry - Applied	18	-	11	13	14	35	27	32	30
J07	Chemistry - General	5	-	8	13	32	35	35	58	52
J08, S06	Earth / Space Sciences	6	3	14	8	18	22	34	39	19
J09, S07	Ecology	11	7	28	19	38	33	39	33	23
J10, S08	Engineering Applications	52	22	51	41	62	82	70	75	88
J11, S09	Engineering Research	15	15	20	12	33	42	26	44	42
J12, S10	Environmental Management	38	21	41	20	64	55	60	64	54
J13	Materials Science	19	-	17	12	18	28	29	36	18
J14, S11	Mathematics / Computer Sciences	10	16	18	13	37	32	25	19	22
J15, S12	Microbiology	10	9	15	12	23	15	19	30	14
J16, S13	Pharmacology	11	13	11	5	11	17	22	17	16
S14	Physics	-	5	5	11	19	11	14	16	32
J17	Physics - Aerodynamics / Hydrodynamics	16	-	5	7	16	26	14	34	21
J18	Physics - Electricity & Magnetism	12	-	17	8	29	30	24	41	33
J19	Physics - General	12	-	13	8	19	34	39	51	52
J20, S15	Plant Biology & Physiology	35	15	32	31	53	55	69	82	69
J22	Product Science	25	-	18	16	36	46	36	40	34
	TOTAL	343	193	406	309	658	746	722	878	763

DISTRICT	2023	2022	2021	2020	2019	2018	2017	2016
Archdiocese	4	1	4	9	10	13	15	19
Private	22	10	15	23	24	29	38	33
Public	68	61	44	69	97	75	94	95
TOTAL	94	72	63	92	121	117	147	147
BOYS	317	220	166	234	424	413	460	421
GIRLS	343	282	187	331	470	465	581	474
TOTAL	660	502	353	565	894	878	1041	895

Table 2: Number of Participating Students by School, Gender



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J01 • Animal Biology - Jr

J0101 Abouliau, Dro Gr: 8

An Alternate Source of Protein, The Black Soldier Fly

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J0102 Kaplan, Raphael Gr: 7

How Do Raptors Survive in L.A.?

S: La Canada Preparatory
D: La Canada
C: Miller, Steve

J0103 Hamdan, Ayah Gr: 7

Are Fingerprints Inherited?

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanaheh, Rula

J0104 Abdul-Malik, Idris Gr: 6

*The Heat is On: Examining the Impact of Temperature on Painted Lady Butterfly (*V. cardui*) Development*

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J0105 Elrabat, Yousef Gr: 7

Using Mealworms to Effectively Biodegrade Styrofoam

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J0106 Tariq, Adina Gr: 8

Stuck with You! A study on the Long Term Side Effects of Covid-19.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanaheh, Rula



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J02 • Animal Physiology - Jr

J0201 Hafid, Faris Gr: 7

Is There a Correlation between the Epstein-Barr Virus (EBV) and Developing Postural Orthostatic Tachycardia Syndrome (POTS)?

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J0202 Inocente, Azmavet Gr: 8

The Build Of The Artificial Pancreas

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J0203 Anousheh, Autrin Gr: 7

The Role of Wearable Electrocardiogram Technology to Detect Electrical Abnormalities Associated with Sudden Cardiac Arrest in Young Athletes

S: Mirman School
D: Independent
C: Peoples Marwah, Andrea

J0204 Jaju, Yash Gr: 7

Planaria, Regeneration, and Future of Medicine

S: La Canada Preparatory
D: La Canada
C: Miller, Steve

J0205 Bristow-Ingkom, Ani Gr: 8

Facial Features: Featuring Faces

S: Arroyo Seco Museum Science Magnet School
D: Los Angeles Unified School District
C: Griffith, Laura

J0206 Aliuddin, Khadijah Gr: 8

*Far From Home and Back Again: Tracking the Journey of the Eastern Kingbird (*T. tyrannus*) and Its Seasonal Lifestyle*

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J03 • Behavioral Science - Non-Human - Jr

J0301 Velasquez, Jennifer Gr: 7

Sugar Addiction: A Study of the Effect of different nutrient Sources When Exposed to Different Environmental Temperatures

S: Sierra Vista Junior High School
D: William S. Hart Union High School District
C: Davis, Shauna

J0302 Aftergood, Jonah Gr: 7

Which Beverages Stain Teeth The Most?

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0303 Ungersma, Penelope Gr: 7

Anthophilia Preferences for Colored Flowers

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J0304 Markarian, Ella Gr: 6

Did the Dog Do it Or Not

S: St. Gregory A. & M. Hovsepian School
D: St. Gregory A. & M. Hovsepian School
C: Haroutiounian, Shakeh

J0305 Wortman, Mazzy Gr: 8

Comparing Learning Capabilities Between White's Tree Frogs and Feeder Mice

S: Arroyo Seco Museum Science Magnet School
D: Los Angeles Unified School District
C: Griffith, Laura



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division

J04 • Behavioral/Social Sciences - Human - Jr

J0401 Abrishami, Cathryn Gr: 8

The Art of Deception

S: Arroyo Seco Museum Science Magnet School
D: Los Angeles Unified School District
C: Griffith, Laura

J0402 Vega, Kealani Gr: 8

Age Analyzation Towards Learned and Conditioned Responses

S: Miraleste Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J0403 Chan, Ashley Gr: 8

The Bystander Effect on Humans

S: Archer School for Girls - Junior Division
D: Private
C: Neshek, Jerilyn

J0404 Spencer, Sophia Gr: 6

Eye color and Photophobia: the effect of vision in light and dark.

S: Mirman School
D: Independent
C: Peoples Marwah, Andrea

**J0405 Orefice, Jenna Gr: 8
Kpachavi, Ashley Gr: 8**

How does your nightly routine and environment before sleep affect the quality of sleep and your overall health?

S: Sierra Vista Junior High School
D: William S. Hart Union High School District
C: Davis, Shauna

J0406 Kim, Ryan Gr: 6

Does differently colored food change our food preferences?

S: Stratford School
D: Private
C: del Mundo, Jett

**J0407 Chin, Audrey Gr: 8
Lee, Rachel Gr: 8
Han, Kevin Gr: 8**

Stroop Effect: Congruent VS. Incongruent Stimuli

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J0408 Peralta, Janelle Gr: 8

The Effect of School Gardens on Students' Well-being

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J0409 Ponnezhan, Liliana Gr: 6

Does Guided Deep Breathing Exercises Improve Test Outcomes in Elementary Students?

S: Stratford School
D: Private
C: del Mundo, Jett

J0410 Delson, Noa Gr: 7

Gossip Girlz

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0411 Hernandez, Jenny Gr: 8

Which is Candy?

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J0412 O'Dell, Remi Gr: 7

The Influence of the Pygmalion and Golem Effects on the Confidence, Mental Health and Math Test Scores of a Student in Middle School

S: Mirman School
D: Independent
C: Peoples Marwah, Andrea

J0413 Mustafa, Rasmi Gr: 8

Brave New World: Exploring the Potential of Virtual Reality Therapy in Overcoming Fears

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J0414 Goldscheider, Arielle Gr: 8

The Power Of Color

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0415 Goldberg, Simon Gr: 7

The Proof are in the Prints

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0416 Gomez, Allysson Gr: 8

Differing Styles, Varying Views

S: Arroyo Seco Museum Science Magnet School
D: Los Angeles Unified School District
C: Griffith, Laura

J0417 Htwe, Sandy Gr: 8

Exploring Short-Term Memory Retention with Visual versus Auditory Methods.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanaheh, Rula

J0418 Alkwadri, Aleena Gr: 6

Examining the Stress Relieving Powers of Aroma Therapy.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanaheh, Rula

J0419 Woo, Lucas Gr: 7

Examining the Influence of Bedtime Bright Light on Cognitive Function in Middle Schoolers

S: Mirman School
D: Independent
C: Peoples Marwah, Andrea

J0420 Lehrer, Rose Gr: 6

Mind the Sign

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J0421 Balaji, Ameya Gr: 7

Reiki: Unwind Your Mind

S: Cathedral Chapel School
D: Archdiocese of Los Angeles
C: Mitchell, Donielle

J0422 Ramos, Natasha Gr: 7

Does video game music productivity.

S: Mark Twain Middle School
D: LAUSD
C: Burman, Jenny

J0423 Qazwini, Zayneb Gr: 7

Black, White, or Something in Between? Exploring the Impact of Text Color on Readability

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J05 • Biochemistry & Molecular Biology - Jr

J0501 CORDARA, GUGLIELMO Gr: 7

SALT AND SUGAR: TWO SILENT ENEMIES!

S: La Canada Preparatory
D: La Canada
C: Miller, Steve

J0502 Murali, Varsha Gr: 8

GlutoPen : A Novel Solution to Allergen Detection

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J0503 Davidian, Natalie Gr: 7

Electrolyte Challenge

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J0504 Raja, Shravanthi Gr: 8

How Does Narrowing the Diameter of an Artery Affect Blood Flow Rate?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J0505 Nunez, Ximena Gr: 8

Are fingerprints inherited?

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J0506 Asatourian, Leana Gr: 7

Sugars in Your Smoothies!

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J0507 Akopyan, Sofia Gr: 8

How much fat is in your food?

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J0508 Gao, Derek Gr: 6

The secrets behind large and sweet strawberries

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J06 • Chemistry - Applied - Jr

J0601 Qureshi, Ayesha Gr: 6

How Acids Affect the Rate of Corrosion

S: Islamic Center of Claremont School (ICCS)
D: Claremont
C: Smadi, Samraa

J0602 Enfiadjian, David Gr: 8

Benzene Breach!

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J0603 Palma, Amelie Gr: 6

Ice Cream and Salt

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J0604 Wong, Allison Gr: 8

Can CaCO₃ Solve the Effects of Acid Rain?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J0605 Benneian, Andrew Gr: 7

What Cools a Soda the Fastest?

S: C. & E. Merdianian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J0606 Cortese, Frankie Gr: 7

Which Cleaning Liquid Creates the Most Rust on Spoons?

S: St. Cyril of Jerusalem School
D: Archdioceses of Los Angeles
C: Schori, Taylor

J0607 Erdenesuren, Maral Gr: 6

Can candles harm you and your health?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J0608 Rosner, Shiloh Gr: 6

Nejat, Jasmine Gr: 6

Whipped Cream Awesomeness

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0609 Efendy, Adelrio Gr: 7

Comparing different brands of Vitamin C for their solubility in Soda, Room Temperature Water, and Body Temperature Water

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J0610 Fawaz, Zein Gr: 7

Transforming Drinks Into Semi-Solid Juice Balls That Pop In Your Mouth

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J0611 Brady, Benjamin Gr: 7

The Efficiency of Aluminum Potassium Sulfate in Fireproofing Cloth

S: Mirman School
D: Independent
C: Peoples Marwah, Andrea

J0612 Rowe, Jordan Gr: 7

The effects of the enzyme Proteinase K on the biodegradation of plastic

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J0613 Gonzalez, Madison Gr: 6

Gummy Expansion

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J0614 Zubairi, Zainab Gr: 7

Fiery Fabrics: Unraveling the Impact of Fabric Softener on the Flammability of Textiles

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J0615 Hsiung, Jasmine Gr: 8

Between Granulated Activated Carbon Filters, Powdered Activated Carbon Filters, and No Carbon Filters, Which One Works Best?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J0616 Chung, Aspen Gr: 8

Producing Hydrogen Gas Through Electrolysis: How Different Amounts of Magnesium Sulfate Affect the Rate of Electrolysis and pH Change

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J0617 Hawa, Yousef Gr: 8

How pH-resh is your Water?

S: Islamic Center of Claremont School (ICCS)
D: Claremont
C: Smadi, Samraa

J0618 Ruiz, Gisabella Gr: 6

Walking Water

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J07 • Chemistry - General - Jr

J0701 Malloy, Cormac Gr: 6

The best water filters: Homemade vs. store bought

S: St. Timothy School

D: 5

C: Novak, Christy

J0702 Trinh, Douglas Gr: 6
McMullen, Dylan Gr: 6

Crushing Cans With Air Pressure

S: Pomona Unified School District

Junior Division

D: Pomona Unified

C: gardea, bridget

J0703 Chang, Ellie Gr: 6

Pods compared to non-concentrated dish soap

S: Stratford School

D: Private

C: del Mundo, Jett

J0704 Shepela, Elle Gr: 7

Glucose in Apples

S: Saint Martin of Tours Elementary School

D: Archdiocese of Los Angeles

C: Ashas, Mohammad

J0705 Alshurbaji, Adalina Gr: 6
Parwani, Madina Gr: 6

Which Salt Allows for the Best Crystal Formation to Occur?

S: Islamic Center of Claremont School (ICCS)

D: Claremont

C: Smadi, Samraa



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J08 • Earth / Space Sciences - Jr

J0801 Boyamyan, Mila Gr: 6

Stellar Engines

S: St. Gregory A. & M. Hovsepian School
D: St. Gregory A. & M. Hovsepian School
C: Haroutiounian, Shakeh

J0802 Sarkisian, Amelia Gr: 8
Sarkisian, Ramsey Gr: 8
Simon, Haley Gr: 8

No Glo Radiation-Protective Garments: Carbon-Fiber Filament Meshed in Fabric - the Way to Reduce Natural Radiation Exposure

S: Brentwood School - Junior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

J0803 Elbert, Hayes Gr: 7

Are Horizontal Windmills more efficient than Vertical Windmills?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J0804 Colato, Jeremy Gr: 6

Biogas Production: Which Balloon Will Grow The Tallest?

S: St. Timothy School
D: 5
C: Novak, Christy

J0805 Ziyad, Sara Gr: 6

Tumbling Through Space: How Does Speed Affect Orbiting Altitude?

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J0806 Meneses, Melissa Gr: 8

Heat Up! Water Temperature in Solar Oven

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J09 • Ecology - Jr

J0901 Herbert, Sophie Gr: 7
Mayne, Jacqueline Gr: 7

Deadly algae: How fertilizers create algae blooms and decrease dissolved oxygen levels

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J0902 Hopenstand, Ariel Gr: 6

Sea Change

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J0903 Whittemore, Mason Gr: 6

Unclear Contamination

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J0904 Hairabdian, Leon Gr: 7

How Does Your Location Affect Air Quality?

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J0905 Sathish, Ranjana Gr: 8

How does Supplemental Carbon Dioxide Affect Algae Growth?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J0906 Lawton, Francis Gr: 8

Water is Water is Water

S: St. Timothy School
D: 5
C: Novak, Christy

J0907 Cartwright, Beau Gr: 8

Effects of glyphosate-based roundup on gonad mass and cellular structure in freshwater mussels

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J0908 Hashmi, Shaheer Gr: 8

Chilling Out Sustainably: The Quest for an Affordable and Eco-Friendly Cooling Solution

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J0909 Luke, Guthrie Gr: 8
Luke, Daisy Gr: 8

The True Cost of Disposable Diapers

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J0910 Fuad, Norah Gr: 8

Disinfecting Undrinkable Water with Sunlight.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J0911 Benneian, Hovannes Gr: 8

Rethink Your Drink!

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division J10 • Engineering Applications - Jr

J1001A Badalyan, Naira Gr: 8

3D > 2D: Nonplanar Solar Panels to Increase Surface Area and Efficiency

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1002A Hokhikyan, Arpi Gr: 6

Build a heart rate monitor

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1003A Schofield, Anna Gr: 6

Trussworthy?

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J1004A Estrada, Darett Gr: 8

Need A Leg?

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1005A Sarmiento, Elise Gr: 6

Park, Joshua Gr: 6
Wang, Kayla Gr: 6

The Auto-Crate

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1006A Shawky, Ibrahim Gr: 6

Designing a Comfortable Bike Seat

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J1007A Thomas, Katia Gr: 8

Selig, Pasha Gr: 8

Building an Aerodynamic, Sustainable Steam Engine

S: Archer School for Girls - Junior Division
D: Private
C: Neshek, Jerilyn

J1008A Schneider, Sara Gr: 6

Robot Arm

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1009A Akoshali, Yanar Gr: 7

Constructing a Solar Water Heater and Testing its Efficiency in Heating Water From a Hose.

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J1010A Avila, Christopher Gr: 7

Santos, Giovany Gr: 7
Sanchez, Eduardo Gr: 7

ZA Bullet

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1011A Sakuma, Coco Gr: 8

Stop Building Damages Using Earthquake-resistant Supporters

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1012A Abgaryan, Davit Gr: 6

Rc blimp

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1013A Peralta, Chloe Gr: 7

Cake Cutter

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1014A Smith, Cody Gr: 7

Changing Concrete: A Resourceful Approach to Construction by Using Different Materials

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1015A Nunez, Jonathan Gr: 8

Space cleaners

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1016A Honda, Nick Gr: 8

Fog Collection for Agricultural Irrigation

S: Palos Verdes Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1017A Sasu, Ilinca Gr: 8

How Does the Size of the Filament Affect the Brightness of the Bulb and the Time it Takes to Burn Out?

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J1018A Dardashti, Shahrzad Gr: 7

Kruger, Evelyn Gr: 7

Decentralize Desalination

S: Beverly Vista Middle School
D: Beverly Hills Unified School District
C: Sherman, Michael

J1019A Kwon, Irene Gr: 7

Ahmed, Noreen Gr: 7

Choi, Heather Gr: 7

Oil Filtering from Water

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1020A Erikson, John Gr: 8

Device for Efficient Measuring of Solar Power

S: Miraleste Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1021A Petrosyan, Valeri Gr: 8

The Fuel of the Future: Harvesting Biofuel from Algae

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1022A Carmona-Gonzalez, Harley Gr: 7

Escobar, Moises Gr: 6

Magnetos GLove

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina



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Junior Division J10 • Engineering Applications - Jr

J1023A Carlin, Vienna Gr: 7

The Handy Hand

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1024A Garcia, Michelle Gr: 8

Bicycle Ice Cream

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1025A Wittnebel, Charles Gr: 6

Better Living Through DIY Air Filtration

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J1026A Mala, Bilal Gr: 6

If More Light is Concentrated on a Solar Light Will it Produce More Electricity and Allow Items to Charge Faster?

S: Islamic Center of Claremont School (ICCS)
D: Claremont
C: Smadi, Samraa

J1027B Sweeney, Colin Gr: 8

What mask best blocks a sneeze?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J1028B Tsao, Danielle Gr: 8

How much more power can a solar panel capture from the sun by using an active tracking system?

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1029B Bader, Travis Gr: 8

Lugo, Doviell Gr: 8

Using Modularity to Make Everyday Items More Efficient

S: Miraleste Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1030B Melkonyan, David Gr: 6

Point of a Parabola

S: C. & E. Merdianian Armenian Evangelical School
D: LAUSD/Private School
C: Sayadian, Fredrick

J1031B Arvizu, Kayla Gr: 7

Vahdat, Paria Gr: 7

Water On The Go: Creating an Emergency Water Filter

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1032B Boles, Leila Gr: 8

Amazing Origami: Fold into Function

S: Incarnation Parish School
D: Los Angeles
C: Anderson, Anna

J1033B Barrera, Nathan Gr: 6

The Obstacle Dodger

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1034B Fuentes, Donovan Gr: 8

Solar panel car

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1035B Melgoza, Emma Gr: 8

Fiddler Prevention Team

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1036B Bellabouah, Meryem Gr: 6

The Pi Plant

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1037B Whitaker, Ma'Kyla Gr: 8

Solar-powered Kart

S: Los Angeles Academy Middle School
D: Los Angeles Unified School District
C: Moss, Cynthia

J1038B Loza, Nathan Gr: 7

Hydro-Power!

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J1039B Diaz, Kenneth Gr: 8

The Rotor Rivalry

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1040B Chikati, Sai Tej Gr: 6

The Robotic Helping Hand

S: Oak Hills Elementary
D: Newhall
C: Henry, Jarrod

J1041B Petrosian, George Gr: 8

Killer swimsuit

S: St. Gregory A. & M. Hovsepian School
D: St. Gregory A. & M. Hovsepian School
C: Haroutiounian, Shakeh

J1042B OBrient, Liam Gr: 6

A shocking solution to the drought: a foolproof timer circuit for greywater systems

S: Turning Point School
D: independent
C: KLine, Matthew

J1043B Eisner, Noah Gr: 8

Revzen, Noah Gr: 7

Portable Self-Powered Induction Stove

S: New Roads School
D: Independent
C: Figueroa, Daniel

J1044B Tiruvellore, Vinayan Gr: 8

Korrapati, Gautham Gr: 8

Garcia, Daniel Gr: 8

Self Sufficient Garden: A Green Dream Come True

S: Rio Norte Junior High School
D: William S Hart Union High School District
C: Madrid, Stephanie

J1045B Narez, Itzel Gr: 7

Apolinar, Sophia Gr: 7

Determining the Viability of Using Recycled Bottles to Make Trash Cans

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1046B Conde Osorio, Natalie Gr: 6

Cue the Signal

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah



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Junior Division
J10 • Engineering Applications - Jr

J1047B Lavi, Ruben Gr: 6
Manvelyan, Lilith Gr: 6

Railroad Trash Vacuum

S: St. Gregory A. & M. Hovsepian
School
D: St. Gregory A. & M. Hovsepian
School
C: Haroutiounian, Shakeh

J1048B Menashe, Samuel Gr: 7

Discover The Hover

S: Temple Beth Am Pressman
Academy
D: Private
C: Hall, Monica

J1049B Welsh, Severine Gr: 7

When the Nose Doesn't Know

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J1050B Bass, Maliyah Gr: 8

*Dealing with Diabetes: The Process Of
Developing an Artificial Pancreas*

S: Ross Academy of Creative and
Media Arts Middle School
D: ABC Unified School District
C: Espinoza, Oscar

J1051B Carnow, Nathaniel Gr: 8

Hand Washing Timer

S: Ross Academy of Creative and
Media Arts Middle School
D: ABC Unified School District
C: Espinoza, Oscar

J1052B Carroll, Teagan Gr: 8

Can You Hear Me Now

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli



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Junior Division
J11 • Engineering Research - Jr

J1101 Tierney, Anita Gr: 8
Tominna, Bernadette Gr: 8

Hydraulics: Air vs. Water

S: Saint Monica Academy

D: Glendale

C: Ghandhi, Sorab

J1102 Vuong, Nolan Gr: 8
Gianchandani, Vikraant Gr: 8

Building Better Bridges.

S: Palos Verdes Intermediate School

D: Palos Verdes Peninsula Unified School District

C: Munoz, Julie

J1103 Ramirez, Benjamin Gr: 6

Fantastic Cars

S: Pomona Unified School District

Junior Division

D: Pomona Unified

C: gardea, bridget

J1104 Shang, Vivien Gr: 7

A device to eliminate D. citri

S: Mirman School

D: Independent

C: Peoples Marwah, Andrea

J1105 Eitel, Andreas Gr: 6

Retrofitting Existing Bridges to Enhance their Earthquake Resistance

S: Oak Hills Elementary

D: Newhall

C: Henry, Jarrod

J1106 Diaz, David Gr: 7

What Effects Do Different Liquids Have On A Hydraulic Press?

S: Mark Twain Middle School

D: LAUSD

C: Burman, Jenny

J1107 Hutt, Julietta Gr: 8

What Effect Does Speaker Enclosure Size Have on Bass Frequency Response?

S: Sierra Madre Middle School

D: Pasadena Unified School District

C: Dev Anandhan, Ravi

J1108 Janjua, Eshal Gr: 6

The Girl Who Harnessed the Wind: Which Blade Design in a Windmill Effectively Produces the Most Electricity?

S: Institute of Knowledge Middle School

D: Walnut

C: Khan, Selena

J1109 Chou, Braden Gr: 6

What Materials Block Wi-Fi?

S: Pomona Unified School District

Junior Division

D: Pomona Unified

C: gardea, bridget

J1110 Gonzalez, Liv Gr: 7
Magluyan, Jasmine Gr: 7

Box Oven: Tin Foil or Mirrors?

S: Holy Angels School

D: Archdiocese of Los Angeles

C: Galvez, Araceli

J1111 Gil, Ashton Gr: 8

Rizzi, Frank Gr: 8

RC Plane

S: Holy Angels School

D: Archdiocese of Los Angeles

C: Galvez, Araceli

J1112 Galvan-Lora, Valentina Gr: 6

Anti-Stabber

S: Rudecinda Sepulveda Dodson

Middle School

D: LAUSD South

C: Sarmiento, Wilmer

J1113 ABDULMATIN, ISMAEL Gr: 6

Calculating the amount and worth of precious metals in electronic waste (e-waste)

S: New Horizon School

D: PUSD

C: Satya, Kavitha

J1114 Baek, Justin Gr: 8

Using Volcanoes to Generate Energy

S: Palos Verdes Intermediate School

D: Palos Verdes Peninsula Unified School District

C: Munoz, Julie

J1115 ruiz, elijah Gr: 7

Chinn, Isabella Gr: 7

Acosta, Damian Gr: 7

DIY water bottle light bulb

S: Montebello Intermediate School

D: Montebello Unified School District

C: Aragon, Karina



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Junior Division J12 • Environmental Management - Jr

J1201A Kostikyan, Arthur Gr: 8

Do different types of water pollution affect algae growth?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J1202A Choi, Dean Gr: 8

Aquifire

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1203A Mohindra, Shivani Gr: 6

How Does the pH Level of Water Affect the Growth of French Marigolds?

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1204A Gregor, Thomas Gr: 6

More Efficient Solar Panels

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1205A Parry, Asha Gr: 7

Arsenic in Drinking Water: Comparing Arsenic Levels in Different Socioeconomic Neighborhoods of Los Angeles

S: Archer School for Girls - Junior Division
D: Private
C: Neshek, Jerilyn

J1206A Smurda, Blaise Gr: 6

What is the best method of water purification?

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J1207A Panicker, Neelima Gr: 7

What is the best natural way to remove microplastics from water?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1208A Kotthru, Raga Hansika Gr: 8

What is the best way to use a Solar Powered water Desalination device?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1209A Tesoriero, Stella Gr: 8

Drip Irrigation Systems: Which One Works Best?

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J1210A Kazi, Yumna Gr: 6

Cover It Up! Exploring Which Ground Cover Best Stops Soil Erosion.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshamleh, Rula

J1211A McCabe, Liam Gr: 8

Eutrophication

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J1212A Glasgow, Samantha Gr: 7

Washing Machines And Their Impact On Oceans.

S: Sierra Vista Junior High School
D: William S. Hart Union High School District
C: Davis, Shauna

J1213A Armenian, Ari Gr: 7

Methods of Desalination

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J1214A Hashimi, Kaihann Gr: 7

Using Orange Peel Polymer for Moisture Conservation and Growth of Snap Peas (Pisum sativum)

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J1215A Ajami, Melina Gr: 8

Prevention of Carbon Dioxide in Our Atmosphere

S: Palos Verdes Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1216A Engle, Colton Gr: 6

Magnet Power

S: St. Timothy School
D: 5
C: Novak, Christy

J1217A Ibatuan, Jhiliene Gr: 7

The Prevention of Air Pollution: What Effect Does Soil Have on Air Pollution?

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1218A Alam, Zohra Gr: 7

Protecting Plants from Acid Rain

S: Sierra Vista Junior High School
D: William S. Hart Union High School District
C: Davis, Shauna

J1219A Torosyan, Leonna Gr: 7

Reduce, Reuse, Recycle

S: La Canada Preparatory
D: La Canada
C: Miller, Steve

J1220B Aiba, Leona Gr: 8

Otsubo, Rei Gr: 8

Terashima, Micah Gr: 8

Natural Resource Filtration

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1221B Boynerian, Vem Gr: 7

Testing Radiation Emitted from Electronics in Certain Conditions

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J1222B Rahman, Adiva Gr: 6

Increasing Sustainable Energy

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1223B Lee, Elijah Gr: 7

SOS- Save Our Soil!

S: St. Timothy School
D: 5
C: Novak, Christy



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Junior Division
J12 • Environmental Management - Jr

J1224B Delgado, Jerry Gr: 8

How Solar Powered Chromebook Chargers can Lower Carbon Emissions
S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1225B Figueroa, Noah Gr: 7
Luciano, Jordin Gr: 7
Rosalado, Mariella Gr: 7

Cleaning Schools and Pools
S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1226B Roy, Shayon Gr: 8

Let's save water
S: Rosemont Middle School
D: Glendale Unified School District
C: Risse, Suzanne

J1227B Mazariegos, Camila Gr: 6
What Type of Fruit-Based Compost Affects the Growth of a Sweet Alyssum

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1228B Kniffin, Summer Gr: 8

Sand Temperature and Turtle Gender
S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1229B Vignesh, Yuvanah Gr: 7
Reddy, Sathvi Gr: 8

Increasing the life span of solar panels
S: Rosemont Middle School
D: Glendale Unified School District
C: Risse, Suzanne

J1230B Sharif, Arman Gr: 8

Caution: Worms at Work! An Investigation in the Use of Vermiculture (G. mellonella and T. molitor) in the Biodegradation of Polystyrene
S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J1231B Jackson, Amy Gr: 7

Worms, Worms are Everywhere : A study of Solutions To our Planets Plastic Problems.
S: Sierra Vista Junior High School
D: William S. Hart Union High School District
C: Davis, Shauna

J1232B Vergel de Dios, Angeleslie Gr: 8

SFS Water Filter
S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1233B Kinsella, James Gr: 6

Desalinating water
S: New Roads School
D: Independent
C: Figueroa, Daniel

J1234B Svilik, Jonathan Gr: 8
Kang, Ethan Gr: 8

Water Works: A Solar Desalination Chamber
S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1235B Dorepally, Prateek Gr: 7

Is Water Powered Energy the Future of Fuel?
S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1236B Abraham, Samuel Gr: 8

Simple Water Desalination
S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1237B Crane, Claire Gr: 6

Greywater: YAYwater or NAYwater?
S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J1238B Kim, Daniel Gr: 8

Making your own water filter
S: Incarnation Parish School
D: Los Angeles
C: Anderson, Anna



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Junior Division J13 • Materials Science - Jr

J1301 Martinez, Evan Gr: 7
Palmer, Emmett Gr: 7

The Best Drinking Cup

S: Mark Twain Middle School

D: LAUSD

C: Burman, Jenny

J1302 Silberstein, Zoe Gr: 6

Which Brand of Bottled Water is "Purest"

S: Temple Beth Am Pressman Academy

D: Private

C: Hall, Monica

J1303 Dehlinger, Corey Gr: 8

How Does the Type of Material Affect the Distance of an Object?

S: Ross Academy of Creative and Media Arts Middle School

D: ABC Unified School District

C: Espinoza, Oscar

J1304 Bhakta, Nishita Gr: 8

How Does The Sun Affect Paint?

S: Ross Academy of Creative and Media Arts Middle School

D: ABC Unified School District

C: Espinoza, Oscar

J1305 Gainsforth, Orion Gr: 8

How do I fold thee? Let me count the ways!

S: Delphi Academy of Los Angeles

D: N/A

C: Gainsforth, Cindy

J1306 Premjith, Tvisha Gr: 6

How does color affect heating by light absorption

S: Oak Hills Elementary

D: Newhall

C: Henry, Jarrod

J1307 Song, Troy Gr: 7

Atmospheric Energy

S: Walter Reed Middle School

D: Los Angeles Unified School District

C: Sofio, Joyann

J1308 Goei, Crystal Gr: 7

Water Filled Balloon vs. Air Filled Balloon, Which is stronger?

S: Holy Angels School

D: Archdiocese of Los Angeles

C: Galvez, Araceli

J1309 Adeva, Natalie Gr: 8

Real Gold?

S: Ross Academy of Creative and Media Arts Middle School

D: ABC Unified School District

C: Espinoza, Oscar

J1310 Lee, Lucinda Gr: 6

Insulate It!

S: Walter Reed Middle School

D: Los Angeles Unified School District

C: Sofio, Joyann

J1311 Girardi, Luke Gr: 7

What Liquid Reflects the Most Light

S: Portola Highly Gifted Magnet

D: LAUSD (Northwest)

C: Gramajo, Ruth

J1312 Mounivong, Emmalynn Gr: 8

Glowstick Mania

S: Ross Academy of Creative and Media Arts Middle School

D: ABC Unified School District

C: Espinoza, Oscar

J1313 Jarjoura, Luca Gr: 7

Science of Water Filtration

S: New Roads School

D: Independent

C: Figueroa, Daniel

J1314 Navarro, Antonio Gr: 7

Radiation Shield

S: St. Timothy School

D: 5

C: Novak, Christy

J1315 Ting, James Gr: 8

Saving Spoiled Shorelines

S: St. Timothy School

D: 5

C: Novak, Christy

J1316 Niere, Amielle Jubilee Gr: 8

Measuring The Quality Of Different Fabrics

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School

D: Los Angeles Unified School District

C: Aki, Teresa

J1317 Clauson, Micah Gr: 8

Which type of insulation works best in homes

S: Sierra Madre Middle School

D: Pasadena Unified School District

C: Dev Anandhan, Ravi

J1318 Ghatei, Iliia Gr: 8

Improving urban life by 24.67%. Stronger/safer roads and buildings by just adding a simple material to concrete mixture.

S: Hale Charter Academy STEAM Magnet

D: LAUSD

C: Ramirez, Joanne

J1319 Gonzalez, Isabella Gr: 7

Determining which Metals or Alloys are Most Corrosion Resistant to Saltwater

S: Rudecinda Sepulveda Dodson Middle School

D: LAUSD South

C: Sarmiento, Wilmer



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Junior Division

J14 • Mathematics & Computer Sciences - Jr

J1401 Gelman, Evelyn Gr: 8

How Accurate Is Artificial Intelligence?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1409 Hong, Daniel Gr: 8

Vex Robotics Autonomous Code

S: Palos Verdes Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1402 Huang, Henry Gr: 8

Training AI To Play Tennis

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1410 Gomez, Anderson Gr: 6

Speeding Surface Area!

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1403 Arunachalam, Pranav Gr: 7

Pneumonia and Covid Detection on CXR Images using Deep Learning

S: Rosemont Middle School
D: Glendale Unified School District
C: Risse, Suzanne

J1404 Hafid, Youcef Gr: 8

Identifying Dog Breeds

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J1405 Velusamy, Aditya Gr: 8

What is the most efficient YOLOv5 AI model when detecting vehicles?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J1406 Magunna, Viggo Gr: 8

The limits of AI's human voice recognition

S: New Roads School
D: Independent
C: Figueroa, Daniel

J1407 Wu, Tianqi Gr: 8

Testing Neural Networks

S: Palos Verdes Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1408 Guo, Minghao Gr: 7

Development of a Smart Traffic Light Algorithm for Traffic Control

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J15 • Microbiology - Jr

J1501 Charette, Alex Gr: 8

Does a toothbrush cap really limit bacteria growth on a toothbrush head?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1502 Durcan, Conor Gr: 7

Testing Bacteria Levels in Different Water Environments

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J1503 Sandoval, farah Gr: 7

You cannot B. Cereus: Bacteria growth at school

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J1504 Agzamov , Mirsolih Gr: 7

The Effect of Different Temperatures on Yeast Fermentation

S: New Horizon School
D: PUSD
C: Satya, Kavitha

**J1505 Hamdan, Suhaa Gr: 8
Sidky, Noor Gr: 8**

Bee Gone! A Study on the Antibacterial Properties of Bee Propolis.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

**J1506 Hokugo, Sena Gr: 7
McLain, lone Gr: 7**

Which Hand-Cleaning Products Are Most Effective When Trying to Remove Germs From the Hands?

S: The Science Academy STEM Magnet
D: Los Angeles Unified School District
C: DiMonaco, Flavia

J1507 O'Boyle, Allison Gr: 7

Is it Safe to Swim?

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J1508 Martinez Park, Madeleine Gr: 7

Can Noctiluca Scintillans Be Used To Make An Affordable, Eco-Friendly, Non-Electric Lamp?

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J1509 Patel, Jiya Gr: 8

Comparing the Antimicrobial Effects of Amoxicillin, Penicillin and Vancomycin to Forms of Natural Medicine on E-coli Bacteria.

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J1510 Ahmad, Noor Gr: 6

Identifying the Limits to the Growth of Bacteria under Various Temperatures.

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J16 • Pharmacology - Jr

J1601 Vega, Makana Gr: 8

The Affect of Solubility on Painkillers

S: Miraleste Intermediate School
D: Palos Verdes Peninsula Unified
School District
C: Munoz, Julie

J1602 Labesh, Yasmine Gr: 8

*Which Cramp Medication Dissolves the
Fastest in White Vinegar?*

S: Islamic Center of Claremont School
(ICCS)
D: Claremont
C: Smadi, Samraa

J1603 Buckmaster, Sophia Gr: 8

Does Name Brand Matter?

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J1604 Cho, Hana Gr: 8

*Effect of common antibiotics (Penicillin,
ampicillin, and neomycin) on gram-
positive (Bacillus subtilis) and gram-
negative (E. coli) bacteria*

S: Archer School for Girls - Junior
Division
D: Private
C: Neshek , Jerilyn

J1605 Boghossian, Talia Gr: 7

*Can Resveratrol and Drosophila
Melanogaster Help Us Live Healthier
and Longer?*

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J1606 Mirza, Arhum Gr: 8

*Defeat the Unseen: Developing a
Pathway to Help the Blind Navigate*

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J1607 Syed, Yaser Gr: 7

*Comparing the Dissolution Rate of
Tylenol*

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J1608 Kamdar, Charlotte Gr: 8

*Saffron VS Cancer: How Saffron affects
the Regeneration of Neoblasts in
Planaria*

S: Archer School for Girls - Junior
Division
D: Private
C: Neshek , Jerilyn

**J1609 Paik-Heintz, Samuel Gr: 8
Singhania, Prianna Gr: 8**

*The Viability of Bacteriophage
Treatment for E. Coli*

S: Mark Twain Middle School
D: LAUSD
C: Burman, Jenny

J1610 Moeller, Abigail Gr: 8

pH with Pills

S: Ross Academy of Creative and
Media Arts Middle School
D: ABC Unified School District
C: Espinoza, Oscar

J1611 Tulloch, Ella Gr: 8

*Battling with Broccoli: The effects of
sulforaphane on oxidative stress in C.
elegans*

S: Archer School for Girls - Junior
Division
D: Private
C: Neshek , Jerilyn



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division

J17 • Physics - Aerodynamics/Hydrodynamics - Jr

J1701 Navarro, Nikolas Gr: 8

Rocket Aerodynamics

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J1702 Bangayan, Anthony Gr: 8

Nerf Blasting Barrels: Do Nerf Barrels Actually Work?

S: Chaminade Middle School
D: Los Angeles
C: Jones, Robert

J1703 Elias, Janelle Gr: 6

Flight C

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1704 Mahajan, Aditi Gr: 8

How Does the Diameter of an Artery and Plaque Build-up Affect the Rate of Blood Flow in an Artery?

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

**J1705 Bonilla, Grecia Gr: 6
Gonzales, Emilia Gr: 6**

Parachute Drop Bomb

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J1706 Mehra, Namya Gr: 8

How Do Air Pressure and Speed Impact the Collision of Two Objects?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

**J1707 Marmer, Lev Gr: 6
Geer, Jadon Gr: 6**

The Grand Splash

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J1708 Pagaduan, Kc Gr: 8

Tornado in a Box

S: Ross Academy of Creative and Media Arts Middle School
D: ABC Unified School District
C: Espinoza, Oscar

J1709 Piersol, Maximus Gr: 7

What is the Effect of Weather On The Stall Point of a Wing?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1710 Lopez-Martinez, Natalie Gr: 7

Hydraulic Lifts

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1711 Powell, Leo Gr: 6

Music: Making Waves in Science

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J1712 Yeh, Owen Gr: 8

Comparing Paper Airplane Designs for the Best Aerodynamics

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J1713 Gallegos, Ethan Gr: 6

Air Resistance Fabrics

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J1714 Matisse, Zach Gr: 8

Set Sail: Which Weirdly Shaped Sail Will Be the Best?

S: St. Timothy School
D: 5
C: Novak, Christy

J1715 Naseer, Adam Gr: 7

Heaving the Limit: Designing Boats to Bear the Load - An Investigation into the Key Factors that Support Maximum Cargo Weight

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J1716 Parry, Iago Gr: 6

Parachutes to the Rescue: Investigating the relationship between area of parachute, payload mass and terminal velocity

S: New Roads School
D: Independent
C: Figueroa, Daniel



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division

J18 • Physics - Electricity & Magnetism - Jr

J1801 Hong, Elle Gr: 6

Attraction Action!

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J1802 Morales, Emmanuel Gr: 8

Protection Against an RFID Reader

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1803 Odorczyk, Elenka Gr: 6

Electric Energy from Household Items

S: Pomona Unified School District
Junior Division
D: Pomona Unified
C: gardea, bridget

J1804 Shanoian, Peter Gr: 7

Simple Electric Motor: Which is the best power source?

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1805 Karimova, Kamala Gr: 6

Which Fruit Conducts the Most Voltage?

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J1806 Hawa, Yasmeen Gr: 7

Magnetic Fruit

S: Islamic Center of Claremont School (ICCS)
D: Claremont
C: Smadi, Samraa

J1807 Bard, Ori Gr: 7

A New Angle on Solar Energy

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J1808 Sandoval, Jason Gr: 8

Lights Off!

S: Bell Gardens Intermediate School
D: Montebello Unified School District
C: Merilus, Catheline D.

J1809 Martin, Sophia Gr: 7

Comparison of Electromagnetic Fields Emitted from Various Objects

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J1810 Diaz, Eduardo Gr: 6

1,2,3...SCATTER!

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1811 Farkhondeh, Arsha Gr: 7

How to Generate More Electricity?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J1812 Cru, Joseph Gr: 7

Testing the conductivity of different liquids

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J19 • Physics - General - Jr

J1901 Ehrich, Walker Gr: 6

To bounce or not to Bounce

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J1902 Murphy, Megan Gr: 7

What color absorbs the most light and convert it to heat?

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J1903 Rivera, Lyric Gr: 6

LEGO Drop Experiment

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J1904 Dishoyan, Emma Gr: 7

What Ever Floats My Boat

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1905 Bholat, Ashalina Gr: 8

It's Free, Free Falling! Does the Mass of an Object Affect the Speed by Which it Falls?

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J1906 Ste-Croix Hamazaki, Aude Gr: 6

s-ICE-mulator

S: Oak Hills Elementary
D: Newhall
C: Henry, Jarrod

J1907 Grady, Evan Gr: 6

Temperatures impact on how far a ball travels

S: St. Timothy School
D: 5
C: Novak, Christy

J1908 Ter-Arsenyan, Karen Gr: 6

What makes ice melt faster

S: C. & E. Merdinian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J1909 Agustin, Joseph Gr: 6

Catapult Power

S: Magnolia Science Academy 6
D: LAUSD-Charter
C: Kim, Sarah

J1910 Huang, Charles Gr: 8

The Relativistic Kinematics of Muon Decay: A Measurement of Muon Lifetime and Speed

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J1911 Sabah, Raadiya Gr: 7

Automatic Street Light

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J1912 Viljoen, Anabelle Gr: 8

Yu, Avery Gr: 8

Analyzing the Refraction and Reflection of Light

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division J20 • Plant Biology & Physiology - Jr

**J2001A Ghazarian, Alex Gr: 7
Hagobian, Christopher Gr: 7**

Antimicrobials and Radish Growth

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J2002A Alejandro, Emily Gr: 7

Does Artificial Light Affect the Growth of Plants?

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J2003A Bhavsar, Gaia Gr: 8

Fueled by algae: Determining which type of algae produces the most oil that can be used for biodiesel to power modes of transportation

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J2004A Chavez, Emely Gr: 7

Water Control

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J2005A Hawa, Malak Gr: 7

Which Caffeine will Grow the Plant the Tallest and the Fastest?

S: Islamic Center of Claremont School (ICCS)
D: Claremont
C: Smadi, Samraa

J2006A Amerine, Paige Gr: 8

The Colorful Pothos

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J2007A Matheny , Oliva Gr: 8

How does your garden grow?

S: St. Timothy School
D: 5
C: Novak, Christy

J2008A Payasam, Satyajith Gr: 6

Do Different Genes of Music Affect Plant Growth?

S: Dunsmore Elementary School
D: GUSD
C: Garabedian, Osan

J2009A Dizon, Savanna Gr: 6

How does compost affect the growth of Glycine Max

S: Rudecinda Sepulveda Dodson Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J2010A Desrosiers, Claire Gr: 7

The effect of sunscreen on different types of freshwater plants

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J2011A Shahnazarian, Maral Gr: 7

The Effect Of Food Residuals On Grass

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

J2012A Khatchadourian, Natalie Gr: 8

DNA extraction from strawberries

S: C. & E. Merdianian Armenian Evangelical School
D: LAUSD/ Private School
C: Sayadian, Fredrick

J2013A Nguyen, Nathan Gr: 7

Soil Filtration Against Acidic Mixture

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J2014A Rosner, Ness Gr: 8

Fantastic Fertilizers

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J2015A Robin, Nikolai Gr: 6

From Gravel to Moss: What hydroponic growth stone grows tomato plants best?

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J2016A Tsan, Samantha Gr: 8

Algae Growth

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J2017A Sun, Samuel Gr: 8

Plant Health with Household Products

S: Palos Verdes Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J2018A Alameddine, Fatimah Gr: 6

Plants in Peril: Examining the Effects of Global Warming on California's Flora

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

J2019B Himsi, Josiah Gr: 8

Can I Reduce My Carbon Footprint by Growing Phytoplankton?

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

J2020B Kay, Kendelyn Gr: 6

Can It Grow?

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J2021B Stevens, Madison Gr: 8

What is the best Plant Food?

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J2022B Perez, Sophia Gr: 6

Do Lemon, Orange, and Apple Infused Water Affect the Growth of a Centuarea Cyanus?

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

J2023B Munshi, Sahel Gr: 8

Heavy Metals Alter Plant Development and Physiology

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

**J2024B Balaji, Ananya Gr: 8
Luong, Sofia Gr: 8**

Effects of Varied Lighting on Hydroponically Grown Wheatgrass

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J20 • Plant Biology & Physiology - Jr

J2025B Cho, Bella Gr: 6

Acid or Alkaline?

S: Walter Reed Middle School
D: Los Angeles Unified School District
C: Sofio, Joyann

J2026B Schaeffer, Eloise Gr: 7

Lights on Lima beans

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J2027B Tashman, Ayden Gr: 8

Musical Plants: Does Music Affect the way your Plants Grow?

S: Temple Beth Am Pressman Academy
D: Private
C: Hall, Monica

J2028B Brown, Nicholas Gr: 7

Which Plant Grows Best in Microgravity?

S: Hale Charter Academy STEAM Magnet
D: LAUSD
C: Ramirez, Joanne

J2029B Ouchi, Hiromi Gr: 8

Using RuBisCO to Enhance the Growth Rate of Wheatgrass

S: Ridgecrest Intermediate School
D: Palos Verdes Peninsula Unified School District
C: Munoz, Julie

J2030B Lee, Anson Gr: 6

Do Temperatures of Water Affect Plant Growth?

S: Pomona Unified School District Junior Division
D: Pomona Unified
C: gardea, bridget

J2031B Mulla, Ibraheem Gr: 7

*Testing the Effect of Earthworms and Peanut Shell Powder on String Bean (*Phaseolus vulgaris*) Growth and Soil Moisture Content*

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J2032B Audu, Sophie Gr: 7

Plants to the Rescue: Do plants have an effect on noise pollution?

S: Rudecinda Sepulveda Dodson Gifted Magnet Middle School
D: Los Angeles Unified School District
C: Aki, Teresa

**J2033B Yanez, Stephanie Gr: 7
Gutierrez, Liliana Gr: 7**

Follow the Light

S: Bell Gardens Intermediate School
D: Montebello Unified School District
C: Merilus, Catheline D.

J2034B Kaplan, Moses Gr: 7

Polluted vs Pure Microgreens

S: Portola Highly Gifted Magnet
D: LAUSD (Northwest)
C: Gramajo, Ruth

J2035B Ehrich, Penelope Gr: 8

BE WISE WHEN YOU FERTILIZE!

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division J22 • Product Science - Jr

J2201 Califano, Belicia Gr: 6

Most Absorbent Paper Towel Brand

S: Pomona Unified School District
Junior Division
D: Pomona Unified
C: gardea, bridget

J2202 Sasamoto, Celia Gr: 6

*Which Color Leaves the Most
Unpopped Kernels?*

S: St. Timothy School
D: 5
C: Novak, Christy

J2203 Ahmed, Maryam Gr: 7

*Color Coded: Examining the Interplay of
Age and Color in Shaping Our
Perception of Flavor*

S: Institute of Knowledge Middle School
D: Walnut
C: Khan, Selena

**J2204 Gloria, Chirsten Gr: 7
Ko, Juliana Gr: 7
Lee, Allison Gr: 7**

Soundproofing Door Hanger

S: Rudecinda Sepulveda Dodson
Middle School
D: LAUSD South
C: Sarmiento, Wilmer

J2205 Khan, Sana Gr: 7

*Dis Dis Away! Which Disinfectant
Works Best at Killing Bacteria?*

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J2206 Halari, Samia Gr: 6

*The Effectiveness of Plant-Based
Detergent and Chemical-Based
Detergent on Stained Pieces of Cloth.*

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J2207 Mata, Clarissa Gr: 8

Botany in Distress

S: Montebello Intermediate School
D: Montebello Unified School District
C: Aragon, Karina

J2208 Weissman, Noah Gr: 7

*Which is better? Powder or granular
carbon*

S: Temple Beth Am Pressman
Academy
D: Private
C: Hall, Monica

J2209 Matavosian, Angelique Gr: 8

*What Materials Are Good Sound
Insulators*

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida

**J2210 Ruiz, Halo Gr: 6
Martir, Chloe Gr: 6**

*Which of Shampoo is Healthiest for
your Hair and Which is the Best?*

S: Pomona Unified School District
Junior Division
D: Pomona Unified
C: gardea, bridget

J2211 Magnano, Matteo Gr: 8

The Race Against Pain

S: Saint Martin of Tours Elementary
School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

**J2212 Polk, Caleb Gr: 6
Meister, Shepard Gr: 6
Yoseph, Thomas Gr: 7**

Evaluating Solar Ovens

S: Turning Point School
D: independent
C: KLine, Matthew

**J2213 Hynes, Joseph Gr: 7
Dyrek, Jefferson Gr: 7**

What soda is the worst for your teeth.

S: Holy Angels School
D: Archdiocese of Los Angeles
C: Galvez, Araceli

J2214 Quan, Kai Gr: 6

*The Science of Trendy Insulated Water
Bottles: Do They Deliver?*

S: Mark Twain Middle School
D: LAUSD
C: Burman, Jenny

**J2215 Dymtrow, Luke Gr: 7
Jung, Justin Gr: 7**

*Candle Scandal: Are You Getting The
Best Bang For Your Buck?*

S: St. Timothy School
D: 5
C: Novak, Christy

J2216 Luna, Meisen Gr: 6

Silky Smooth

S: Bell Gardens Intermediate School
D: Montebello Unified School District
C: Merilus, Catheline D.

J2217 Rao, Vinay Gr: 6

Sun Smart

S: Sierra Madre Middle School
D: Pasadena Unified School District
C: Dev Anandhan, Ravi

**J2218 Qasem, Yahia Gr: 8
Qasem, Yomna Gr: 8**

*How Safe are Child Proof Medicine
Bottles?*

S: Al-Huda Islamic School
D: Private Islamic
C: Alshanableh, Rula

J2219 Husaini, Aliyah Gr: 7

*Testing the Amount of Glucose
Produced by Different Lactase
Supplements*

S: New Horizon School
D: PUSD
C: Satya, Kavitha

J2220 Sinanian, Max Gr: 8

Paper Towel vs Sweidsh Dishcloth

S: Saint Martin of Tours Elementary
School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J2221 Wickstrom, William Gr: 8

What Tape is the Strongest

S: Saint Martin of Tours Elementary
School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad

J2222 Gabrielyan, Emilie Gr: 7

Synthetic Vs. Natural Antacids

S: Chamlian Armenian School
D: GUSD
C: Gevorkian, lida



2023 LOS ANGELES COUNTY SCIENCE FAIR

Junior Division
J22 • Product Science - Jr

J2223 Lem, Sydney Gr: 7

Chemical vs. Natural: Which key ingredient works best at preventing ants?

S: Archer School for Girls - Junior Division
D: Private
C: Neshek , Jerilyn

J2224 Sacino, Liam Gr: 6
Gibson, Jace Gr: 6

Is What UV What You Get?

S: Incarnation Parish School
D: Los Angeles
C: Anderson, Anna

J2225 Waterman, Ben Gr: 7

Does Your Straw Suck?

S: Saint Martin of Tours Elementary School
D: Archdiocese of Los Angeles
C: Ashas, Mohammad



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S01 • Animal Biology - Sr

S0101 Mustafa, Layan Gr: 10

It's About Bloody Time! Examining the Health Impacts of Conventional Pad Components on Women's Menstruation

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S0102 Lari, Jordan Gr: 11

The effect of caffeine on high school students' cardiovascular health and their genetic makeup

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0103 Zirn, Katharina Gr: 11

Siebel, Silas Gr: 11

Sohn, Ellie Gr: 10

The Percent Uptake of Polyethylene After Three Trophic Levels, From Rotifera to Artemia to Medusa

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S0104 Boyd, William Gr: 11

Chemical Sensing in Aurelia Aurita Studied by AI-Enhanced Image Analysis: Jellyfish Can Smell

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S0105 Jeong, Justin Gr: 11

DETERMINING THE PHYLOGENETIC POSITION OF THE SAUNDERS'S GULL

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0106 Lee, Rachel Gr: 10

Soh, Sabrina Gr: 11

Decreasing the Excretion of Microplastics in Polystyrene-Consuming Mealworms

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0107 Salman, Usman Gr: 9

Toxic Trespass: Assessing the Impact of Copper Sulfate Pentahydrate on Marine Ecosystems

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S0108 DeMerit, Hannah Gr: 10

Lavichant, Matthew Gr: 11

In Vivo Study of Uptake and Accumulation of Polyethylene Microplastics in Artemia and A. Aurita

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S02 • Animal Physiology - Sr

S0201 Lin, Angelina Gr: 10

Are all controls interchangeable? (in Caenorhabditis elegans)

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

**S0202 Viveros, Ashley Gr: 10
Price, Timothy Gr: 10
Reyes, Ruby Gr: 10**

Lifespan Abbreviation Induced by Caffeine in Worms

S: Discovery Charter Preparatory High School
D: LAUSD
C: Bagoyan, Ashkhen

S0203 Madrid, Nathaniel Gr: 11

Creating a Functioning Model of two Human Kidneys

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S0204 Chen, Zimo Gr: 10

Meta-Analysis on the Effects of Diet on Diabetes

S: Walnut High School
D: Walnut Valley Unified
C: Lim, Garrett

**S0205 Kashif, Hania Gr: 10
Amir, Zimal Gr: 10**

The Clairvoyants: Examining the Influence of Age on Brain Waves and Mental Prediction

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

**S0206 Woodward, Benjamin Gr: 12
Peng, Yang Gr: 12**

Nematodes Dopamine Rush - The Effect of Different Concentrations of Glucose on Caenorhabditis elegans

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0207 Chen, Jonathan Gr: 9

The Effects of Plant-Based Diet on Prostate Cancer

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S0208 Gruetemann, Annika Gr: 10

Examining Mytilus edulis' Filtration Capabilities Against Microplastics

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0209 Iwata, Manon Gr: 9

Effect of Paeonia Lactiflora Pall (White Peony) Roots on the Alleviation in Primary Dysmenorrhea

S: Westridge School for Girls
D: Independent
C: Perahya, Daniel

S0210 Ong, Petrina Gr: 11

Effect of Neurotransmitters on Planarian Flatworm Regeneration

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S0211 Cheng, Lauren Gr: 9

A Path to Scientific Discovery: The Interconnections Between a Plant-Based Diet and Stroke

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S0212 Kashif, Javeria Gr: 9

Robo Roach to the Rescue! Evaluating the Efficiency and Viability of Integrating Blaberus discoidalis and Technology in Rescue Operations

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

**S0213 Sorenson, Ty Gr: 11
Lachowicz, Christopher Gr: 11**

Vranich, Cole Gr: 11

Emitting Sound Frequencies to Repel Euwallacea nr. forficatus

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0214 Kung, Justin Gr: 11

"Planting the Seeds of Prevention: The Impact of Plant-Based Diets on Diabetes Incidence"

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S03 • Behavioral/Social Sciences - Sr

S0301 Hajhamid , Zeena Gr: 9
Ali, Samiya Gr: 9
Azzaz, Salma Gr: 9

Just Beat It: Examining the Gender Gap in Math-Induced Stress and Heart Rate Responses

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S0302 Morales, Gabriel Gr: 11

Big City Rats

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S0303 Deng, Ashley Gr: 12

Modeling Depression and Antidepressant Treatment Accurately in Drosophila Melanogaster

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S0304 Kao, Naomi Gr: 12

The Effect of a Simulation Game on Students' Handwashing Knowledge and Skills

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0305 Liang, Kimberly Gr: 10

Quantifying Happiness

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S0306 Kapadia, Rana Gr: 11

Public Health Awareness Survey

S: Da Vinci Science High School
D: Wiseburn School District
C: Creencia, Alex

S0307 Cha, Grace Gr: 11

Effects of Magnesium on Fruit Fly Memory

S: National Youth Community Center
D: 2
C: Kim, Wonjong

S0308 Chen, Chloe Gr: 9

The Power of Music: Do frequencies impact nematodes with dementia?

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0309 Zhang, Yaduo Gr: 10
Zhang, Selina Gr: 10
Cao, Chenming Gr: 9

The Relative Importance of Nature and Nurture

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S0310 Mahidhara, Meera Gr: 12

Less Stress for the Homeless

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn

S0311 Cho, Hannah Gr: 12

Cortical Thicknesses of the Insula and Prefrontal Regions Are Significantly Correlated with Social-Emotional Processing

S: North Hollywood Senior High School
D: Los Angeles Unified
C: Maine, Altair

S0312 Sullivan-Pascual, Kaitlyn Gr: 11

How the Placebo Effect Alters Cognitive Performance

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S0313 Moshfeghi, Sara Gr: 11

Combating the Spread of Deepfake Videos with Labels

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division

S04 • Biochemistry & Molecular Biology - Sr

S0401 Ahmed, Mariyah Gr: 9

That's a Wrap! Investigating Plastic Wrap Brands to Determine their Effectiveness in Preventing Oxidation

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

**S0402 Peti-Peterdi, Anna Gr: 11
Peresztegi, Lena Gr: 9
Peresztegi, Daniel Gr: 11**

The Development of the C2F Seawater to Freshwater Converting Bioplat

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0403 Wang, Danny Gr: 10

Pinpointing Drug Targets on Influenza by Analyzing RNA Sequencing Data

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S0404 White, Josette Gr: 9

Plastic Eating PETase (Year 2 with Procedure Modifications)

S: Archer School for Girls - Senior division
D: Private
C: Neshek, Jerilyn

**S0405 Chiang, Kate Gr: 12
Mani, Anjali Gr: 12**

Protective effects of omega-3 fatty acids against oxidative stress-induced collagen degradation of Tilapia fish scales

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S0406 Rivera, Brianna Gr: 10

Milk into plastic

S: Pomona Unified School District Senior Division
D: Pomona Unified
C: gardea, bridget

S0407 Chung, Ray Gr: 9

A new design for photovoltaic proteins in biohybrids with an aim to improve thermal stability and electric output

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

S0408 Jones, Zachary Gr: 11

Recombinant Synthesis of Ovomuroid Protein, an Allergen in Eggs

S: Hart High School
D: William S. Hart Union High School District
C: Jones, Jenni

S0409 Simpson, Ava Gr: 11

Determining the Collagen Content and Concentration of Nanofat and Microfat Using SDS-PAGE and Sirius Red Dye Assay Analysis

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0410 Dokko, Claire Gr: 11

Comparing the Cancer-Inhibiting Abilities of Photosynthetic Pigments in Algae on Breast and Testicular Cancer Cell Lines

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S0411 Ghadimi, Derick Gr: 10

Path To Understand and Cure the Mechanics of Phantom Limb Pain

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0412 Hwang, Elyse Gr: 12

Investigating the Open-Closed Transition of cpSRP43 Using NMR Spectroscopy and a DE3NQ Mutant

S: La Canada High School
D: La Canada High School
C: Cartnal, James

S0413 Ho, Long Hei (Ryan) Gr: 10

Identifying the Pollen Composition of Local Honeys by DNA Barcoding

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S0414 Ornelas, Matteo Gr: 11

Investigating the Hybridization of Phage Tail Proteins for use in the Treatment of Multi-Antibiotic-Resistant Bacteria

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

S0415 Takleh, Rama Gr: 10

Sweetening the Deal: Examining the Effects of Sucrose, Fructose, and Glucose on Hypoglycemic Recovery

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S0416 Junaid, Muhammad Gr: 9

Slow Your Flow: Examining the Effects of Sodium Citrate on Coagulation in the Human Body

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S05 • Chemistry - Sr

**S0501 Contreras, Marcel Gr: 9
Ruiz, Ariana Gr: 9**

Kevlar's against water

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S0502 Rivera, Paul Gr: 11

Colors and their relationship with heat and light

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

S0503 Im, Daekyu Gr: 11

Kimchi Chemistry

S: National Youth Community Center
D: 2
C: Kim, Wonjong

S0504 Nazarian, Jonah Gr: 10

Flex Charge

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0505 Marin, Karen Gr: 10

How do different variations of additives to coffee affect its acidity?

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

**S0506 Terjimanian, Lori Gr: 11
Karapetyan, Angela Gr: 11**

Tooth Decay Eggs-periment

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

S0507 Adams, Victoria Gr: 12

The Effects of Various Chemicals such as Capsaicin and Caffeine on the Energy Production of Microbial Fuel Cells

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

**S0508 Zhang, Sarah Gr: 10
Kruger, Karina Gr: 10**

Fading Famines: Reducing world hunger by innovating upon ancient meat preservation techniques

S: Beverly Hills High School
D: Beverly Hills Unified School District
C: Sherman, Michael

**S0509 Picos, Anthony Gr: 12
Lara, Diana Gr: 11**

Tenderized Meats

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

**S0510 Contreras, Isabella Gr: 12
Acevedo, Aimee Gr: 11
Torres, Leonel Gr: 11**

Look no further for a grease stain remover

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

**S0511 Kang, Sehoon Gr: 11
Zhang, Zhehao Gr: 11**

Conversion of Carbon Dioxide into a Versatile Green Solvent with Isoreticular Metal-Organic Frameworks

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S0512 Kim, Christine Gr: 11

Understanding the Relative Efficiency of Antibodies Generated in Response to Infection by Covid Variants

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0513 Yu, Jeffery Gr: 12

How To Eliminate The "Swimming Pool Smell"

S: Granada Hills Charter High School
D: Granada Hills Charter High School.
C: Shah, Tripti

S0514 Mak, Katelyn Gr: 11

Comparing the Influences of Stevia Rebaudiana Extract and Butylated Hydroxytoluene on the Degradation of Biodiesel Derived from Brassica napus L. Oil

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S0515 Ortega, shaun Gr: 12

Sweet Tooth

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

S0516 Rajesh, Sana Gr: 11

Improving the Ductility and Overall Usability of Milk Based Plastic Through the Implementation of a Plasticizer

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S06 • Earth / Space Sciences - Sr

S0601 Zhou, Oscar Gr: 11

*Correlation between Climate Change
and Natural Disasters*

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S0602 Budano, Julia Gr: 12

*Water Consumption in Los Angeles and
Tucson*

S: Schurr High School
D: Montebello Unified School District
C: Islas, Myriam

S0603 Agekyan, David Gr: 12
Mardirousi, Emily Gr: 12
Canlas, Sean Gr: 12

*Investigating Methane Emissions in
Local Communities*

S: Anderson Clark Magnet High School
D: Glendale Unified
C: Evans-Bye, Dominique



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S07 • Ecology - Sr

S0701 Tapia, Alexander Gr: 10
A. De La Torre , Julian Gr: 10

Water Desalination

S: John Muir High School Early College
Magnet
D: Pasadena Unified School District
C: Oliu , Susana

S0702 Huang, Ann Gr: 10

*The Effect of Different Fertilizers on
Levels of Dissolved Oxygen*

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S0703 Lundberg, Madeleine Gr: 11

*Farmers Say Thank You: Finding an
Alternative Farming Method Using
Electromagnetic Fields*

S: Archer School for Girls - Senior
division
D: Private
C: Neshek , Jerilyn

S0704 Rangel , Efren Gr: 10
Pereyra, Bryan Gr: 10

Exploring the Greenhouse Effect

S: John Muir High School Early College
Magnet
D: Pasadena Unified School District
C: Oliu , Susana

S0705 Isaiaants, Haik Gr: 11

*Lowering the Harmful Impact of
Invasive Species*

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0706 Moore-Walker, Mia Gr: 11

*Assessing the nutritional impact of
decomposers(isopods) on soil fertility*

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S0707 Leland, Stella Gr: 9

*Global Worm-ing: Climate Change and
Lumbriculus Variegatus*

S: Archer School for Girls - Senior
division
D: Private
C: Neshek , Jerilyn



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division S08 • Engineering Applications - Sr

S0801 Kulkarni, Shreyas Gr: 10

The Affordable Lockbox

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S0802 Benedicto, Vela Gr: 10

Designing A C.A.S.E. Air Quality Monitor (cost-efficient, accurate, self-sustaining, easy-to-use)

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S0803 Huang, William Gr: 12

SuperVision: A Novel Integrated Sensing and Computational Framework to Enable Superhuman Epiretinal Prostheses

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S0804 Lonstein, Elan Gr: 11

Alternate Center Airbag Gas Release System

S: Delphi Academy of Los Angeles (Senior Division)
D: N/A
C: Gainsforth, Cindy

**S0805 Gu, Eric Gr: 9
Friedman, Jolie Gr: 9**

The Circuit Shower

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0806 McDermott, Lachlan Gr: 11

Carbon Can: A Novel Hand-Held Carbon Capture Device

S: Geffen Academy at UCLA
D: N/A (Private/Independent School)
C: Finck, Benjamin

S0807 Fu, Chengyu Gr: 11

Two-Degree-of-Freedom Transformable Wheels

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S0808 Ju, Dohyun Gr: 12

The Development of an Automated, Modular Method for Medical Image Registration in the Creation of a Volumetric Prostate Atlas

S: Palisades Charter High School
D: LAUSD
C: Curren, Jane

**S0809 Muppana, Roshini Gr: 11
Donato, Sara Gr: 11**

The Discrepancy Between Pebbles and Lava Rock in the Growth of Mint Within an Aquaponic System

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

**S0810 Miller, Russell Gr: 11
Kim, Christopher Gr: 11
Fridman, Eric Gr: 11**

Injury Detection Early Warning System

S: Sherman Oaks Center For Enriched Studies
D: Los Angeles Unified School District
C: Gutierrez, Juan

S0811 Sakharkar, Shreyas Gr: 11

Alzheimer's Disease Patient Chatbot

S: West Ranch High School
D: William S. Hart UHSD
C: Hughes, William

S0812 Sampath, Rohan Gr: 11

Piezoresistive Graphene-Based Biosensor for Measuring Biomaterial Conductivity

S: Geffen Academy at UCLA
D: N/A (Private/Independent School)
C: Finck, Benjamin

**S0813 Shah, Sid Gr: 11
Jain, Arhum Gr: 11**

The Haptic Metroband

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S0814 Gonzalez, Mathew Gr: 9

Cable Management

S: Pomona Unified School District Senior Division
D: Pomona Unified
C: gardea, bridget

**S0815 sosa, maryjane Gr: 10
nunez, kayla Gr: 10**

electric motorboat

S: BELL GARDENS HIGH SCHOOL
D: Montebello Unified
C: Huerta, Jorge

**S0816 Gonzalez, Galilea Gr: 11
Gonzalez, Isabel Gr: 11
Gaona, Amybella Gr: 11**

Automatic Pet Feeder

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

**S0817 Resendez, Joaquin Gr: 10
Valerio, Omar Gr: 10**

Piezoelectric Pick-Up

S: Pomona Unified School District Senior Division
D: Pomona Unified
C: gardea, bridget

S0818 Rivas, Jiselle Gr: 11

Hydraulic Robotic Arm

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

**S0819 Sawaf, Philippe Gr: 10
Haronian, Elan Gr: 10**

Fire Resistant Medical Carrier Drone

S: The Buckley School
D: Independent/Private
C: Fernandes, Anat

S0820 Sriram, Athreya Gr: 10

Temperature Scanning Station

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

**S0821 Wong, Don Gr: 11
Song, Regan Gr: 11**

Autonomous UAV-Assisted Light Pollution Mapping

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

**S0822 Holschneider, Paul Gr: 11
Fisher, Addison Gr: 11**

Optimizing Wheel Fairings for Fixed Gear Aircraft

S: The Buckley School
D: Independent/Private
C: Fernandes, Anat



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S09 • Engineering Research - Sr

S0901 Tempereau, Andreas Gr: 12

Designing and Constructing an Automatic, Non-Electrical Cardiopulmonary Resuscitation Machine Gen 2.0

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0902 Xie, Christine Gr: 11

Hydrogel-assisted brain transplantation of HOXA3-expressing endothelial progenitor cells for brain repair after stroke

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0903 Cherumandanda, Sanjith Gr: 11

Lam, Warren Gr: 12

Kim, Chowon Gr: 11

Designing and Evaluating the Effectiveness of a Quartic Spline Interpolation within Engineering Simulations

S: La Canada High School
D: La Canada High School
C: Cartnal, James

S0904 Alestwani, Badruddin Gr: 10

The Cryptic Wifi System: Investigating the Impact of Height on Pollen Router Signals

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S0905 Arjomand, Lily Gr: 10

Ant's Capability to Sequester Carbon Dioxide to Increase CO2 Removal in the Environment

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

S0906 Jimenez, Olivia Gr: 10

How does the Beta Type Stirling Engine affect the rate at which its heat source cools?

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S0907 Rafique, Usman Gr: 11

Factors Determining the Difference in Rocket Apogee Measurement using GPS and Barometric Altimeter

S: Geffen Academy at UCLA
D: N/A (Private/Independent School)
C: Finck, Benjamin

S0908 Anand, Anish Gr: 9

A Novel Control System for Autonomous Quadcopter Navigation

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S0909 Lee, Alexander Gr: 9

Internet-of-Things Connected Foley Catheter Urine Collection System to Automatically and Continuously Measure Urine Output

S: Walnut High School
D: Walnut Valley Unified
C: Lim, Garrett

S0910 Rodriguez-Romero, Dylan Gr: 9

Solar Panel Boat vs. Battery Powered Boat

S: Pomona Unified School District
Senior Division
D: Pomona Unified
C: gardea, bridget

S0911 Sun, Sophie Gr: 11

3D Printing Houses: PLA vs. Algae Filament

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S0912 Collis, Caroline Gr: 9

Textiles Reaching Out Miles: How Washing your Clothes Pollutes the Environment with Microfibers

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn

S0913 Liorsdottir, Steinunn Gr: 10

A Science Project For Making Science Projects

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

**S0914 Valencia, Anthony Gr: 12
Wiemels, Jason Gr: 12**

MLPEG: Using Machine Learning for Data Compression

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S0915 Kelly, Nita Gr: 11

Breathe with Ease: Assessing the Efficiency of HEPA Air Filters

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn



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Senior Division S10 • Environmental Management - Sr

S1001 Rappoport, Gray Gr: 10

Creating a Inexpensive, Effective Super Saturated Polymer Out of Citrus Polysaccharides

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S1002 Luo, Joyce Gr: 9

Cooked By Soot

S: Pomona Unified School District
Senior Division
D: Pomona Unified
C: gardea, bridget

S1003 Lee, Ethan Gr: 11

Landfill Coverage Through the Utilization of Charcoal

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

**S1004 Hwang, Esther Gr: 11
Park, Kate Gr: 10
Yang, Kayleen Gr: 11**

Water Contamination in La Crescenta Schools

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1005 Tinajero, Scarlett Gr: 11

How detergent affects our environment

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S1006 Park, Aiden Gr: 10

The Effect of Temperature on the Shedding of Microplastics

S: North Hollywood Senior High School
D: Los Angeles Unified
C: Maine, Altair

**S1007 Carlson, Ruby Rose Gr: 12
Weene, Max Gr: 12**

Caenorhabditis elegans Soil Rejuvenation

S: Brentwood School - Senior Division
D: Private
C: Gonzalez-Serricchio, Aidyl

**S1008 Azzaz, Adam Gr: 10
Khan, Umar Gr: 10
Musallet, Ihsan Gr: 10**

Fighting Fire with Science: A Comparative Study of Flame Retardant Effectiveness

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S1009 Kasparian, Daron Gr: 10

"The Fuel of the Next Generation" Transesterification of Biodiesel Using Recycled Cooking Oils

S: Rose and Alex Pilibos Armenian High School
D: private
C: Mishler, Jacque

S1010 Shu, Yvette Gr: 12

Microplastic Fallout Density of Polyester Fabrics from Fast Fashion Companies under UV Light

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1011 Clayton, Charlie Gr: 10

The Health Implications of Recent Bacterial Waves Along the Coast of Southern California

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn

S1012 Roberts, Skylar Gr: 9

Using Homemade Magnetite Ferrofluid to Extract Microplastics From Water

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn

S1013 Song, Ashley Gr: 11

All It Takes is a Switch of Chemicals: A Safer Approach to Extracting Hydrophobic Plant Wax

S: Whitney High School
D: ABC Unified School District
C: Song, Nitta

S1014 Salman, Alishba Gr: 10

A Magnetically Attractive Solution: Comparing the Efficiency of Ferromagnetic Nanoparticles for the Purpose of Oil Remediation

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S1015 Boghossian, Raffi Gr: 10

Do Not Worry about Plastic, We Have Worms!

S: Rose and Alex Pilibos Armenian High School
D: private
C: Mishler, Jacque

S1016 Saha, Ruhini Gr: 11

Pyrolysis of plastic waste to fuel

S: Granada Hills Charter High School
D: Granada Hills Charter High School.
C: Shah, Tripti

S1017 Sun, Bill Gr: 11

Hybrid Photobioreactor System for Economical Biofuel Production with Upcycled Plastic Bottles

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1018 Scorza, Vana Gr: 10

Photovoltaic (PV) Solar Cells' Output (watts) vs. the Ambient Temperature (F)

S: Rose and Alex Pilibos Armenian High School
D: private
C: Mishler, Jacque

S1019 Roy, Debayon Gr: 11

Predicting Sewer Pipe Longevity Through Deep-Learning Methods: A Novel Way To Prevent Sanitary Sewer Overflow

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1020 Ro, Erica Gr: 12

Measuring the Effectiveness of Thermochromic Roofs for Urban Heat Island Mitigation

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S10 • Environmental Management - Sr

S1021 Henderson, Annalia Gr: 9

Ballona Wetlands Remove

Contaminants from Municipal Runoff:

An Ecological Sink for Enterococcus

S: Palos Verdes High School

D: Palos Verdes Unified School District

C: Munoz, Julie



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division

S11 • Mathematics & Computer Sciences - Sr

S1101 Chow, Jenna Gr: 12

BerthaBot: A Student Interface with Realistic Communication Through Artificial Intelligence Knowledge Bases

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S1102 Tsuboi, Angelina Gr: 11

ADS-B Plane Spoofing Detection using Neural Networks and RF Fingerprinting

S: Chadwick School
D: palos verdes unified school district
C: Figueroa, Dijanna

S1103 DeMerit, Rachel Gr: 12

Predictive Data Model for Diabetic Recommendations

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S1104 Song, Harris Gr: 11

Algorithmic Generation and Implementation of the Protein Universe

S: Walnut High School
D: Walnut Valley Unified
C: Lim, Garrett

S1105 Xu, John Gr: 10

Procedural Generation in 2D Metroidvania Game with Answer Set Programming

S: Harvard- Westlake High School
D: District 4
C: Reed, Tripp

**S1106 Dalva, Michael Gr: 11
Huh, Isabel Gr: 11**

Crush Guard

S: Granada Hills Charter High School
D: Granada Hills Charter High School.
C: Shah, Tripti

S1107 Yoon, Anthony Gr: 12

Machine Learning Ensemble for Operational Variables and Prediction of Truck Turntime at the Port of Los Angeles

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

S1108 Liu, Justin Gr: 12

A Novel Super-Resolution AI Engine and Multi-Stage Abnormality Detection Pipeline for Early Blindness Prevention

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S1109 Ren, Emily Gr: 11

Intersection of Longest Cycle and Largest Bond in 3-Connected Graphs

S: Diamond Bar High School
D: WVUSD
C: SORENSEN, ERIC

S1110 Wang, Kevin Gr: 11

Effects of Using Neural Networks to Generate Music

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

**S1111 Krishna, Tejaswi Gr: 10
Krishna, Hrishikesh Gr: 12**

Analysis of Rising Interest Rates on Student Loans from a Macro and Microeconomic Perspective

S: Mira Costa High School
D: MBUSD
C: Nodado, Ernesto

S1112 Bi, Zexin Gr: 10

Using Pretrained Natural Language Processing Model to Extract Drug-Drug-Interaction from Medical Paper

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1113 Sun, Xiangzhou Gr: 10

Communication Reduction via Compression-Aware Training for Efficient Edge-Cloud Computing on AR/VR Systems

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1114 Paz, Matteo Gr: 10

Long-Short Term Memory Recurrent Neural Networks as a Stock Market Prediction Tool

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

S1115 Fergesen, Gabriel Gr: 11

Watching the Death-Clock: Simulating Prion Infection of Human Cells

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

**S1116 Sarmiento, Gavin Gr: 9
Park, Erinne Gr: 9
Van, Alice Gr: 9**

IllumiBox: The Lock-Box that Combats the Rise of Porch Pirates by Autonomously Detecting and Securing Packages

S: California Academy of Mathematics and Science School
D: Long Beach Unified School District
C: Sarmiento, Jasmine



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S12 • Microbiology - Sr

S1201 Valenzuela , America Gr: 9
Soto Pacheco, Maryelva Gr: 9

Avoiding another Pandemic

S: Applied Technology Center High School
D: Montebello Unified School District
C: Gastelum, Lizette

S1202 Hong, Mason Gr: 9

Spectral Autofluorescence: Towards Quantitative Pathology

S: La Salle College Preparatory
D: Pasadena Unified School District
C: Parga, Elizabeth

S1203 Martinez, Jade Gr: 9
Espinoza, Elias Gr: 9

The Battle Between The Hand Sanitizers

S: Applied Technology Center High School
D: Montebello Unified School District
C: Gastelum, Lizette

S1204 Cendejas, Samuel Gr: 11

Evolving ecoli

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S1205 Shen, Gilbert Gr: 10

The Investigation of Various Factors Affecting Yeast Growth

S: Walnut High School
D: Walnut Valley Unified
C: Lim, Garrett

S1206 Tang, Lingyi Gr: 11
Wei, Chelsea Gr: 10

Chemical Inhibition of Yeast Growth

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1207 Le, Katherine Gr: 12

Efficacy of Bacteriophage Cocktails on E. Coli K-12 in HEK Cells

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S1208 Dost, Abira Gr: 9

What's Poppin'? Evaluating Effective Treatments for Acne and Examining the Psychological Impact of It on Adolescents

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena

S1209 Lin, Mark Gr: 11

Sustaining Spacecraft: Application of Novel Photobioreactor System in Aerospace Oxygen Exchange Systems

S: Cabrillo Marine Aquarium
D: LAUSD
C: Spies, Brenton



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S13 • Pharmacology - Sr

S1301 Young, Brielle Gr: 12

OpenBook: A Novel Machine Learning Tool for Prescription and Pharmacologic Management of Drug Dosage for Patients with Depression and Anxiety

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S1302 Chung, Michelle Gr: 11

Testing Antimicrobial Effects of PYED-1 Derived Corticosteroids

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1303 Kao, Brandon Gr: 11

Teigen, Neo Gr: 11

Chu, Ryan Gr: 11

The Correlation Between Pesticide Exposure and Alzheimer's Disease: A Meta-Analysis

S: La Salle College Preparatory
D: Pasadena Unified School District
C: Parga, Elizabeth

S1304 Jaramillo, Nathaniel Gr: 10

The Evaluation of 20-Hydroxyecdysone's Potential to be Further Investigated as an Alternative Therapy for Osteoporosis

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1305 Arunachalam, Mahesh Gr: 11

New Generation Drug Development Pipeline From in-silico Identification to Preclinical Evaluation for Novel Drug Candidates in Glioblastoma

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1306 Ganguly, Mohuli Gr: 11

Examining how different medications and electrolytes affect Pluripotent Stem Cell to Cardiomyocyte Differentiation and Cell Pulse Rate

S: La Salle College Preparatory
D: Pasadena Unified School District
C: Parga, Elizabeth

S1307 Negrin, Layla Gr: 9

Making Life Sweeter: A study on how Sugar and Coenzyme Q10 reduce Huntington's Disease Symptoms

S: Archer School for Girls - Senior division
D: Private
C: Neshek, Jerilyn

S1308 Choi, Joseph Gr: 10

Kim, Aiden Gr: 10

Han, Ezra Gr: 10

Comparing Methods of Reducing Matrix Metalloproteinase Mediated Cartilage Degradation Through the NF-kB Pathway

S: Crescenta Valley High School
D: Glendale Unified School District
C: Tuason, Orenda

S1309 Vincent, Finley Gr: 9

Keen on Green Tea: Can Epigallocatechin Gallate prevent Cadmium Chloride induced Cancerous Tumorigenesis within Planarians?

S: Archer School for Girls - Senior division
D: Private
C: Neshek, Jerilyn

S1310 Yang, Helen Gr: 11

Association of genetic polymorphisms with pancreatic adenocarcinoma progression

S: Harvard- Westlake High School
D: District 4
C: Reed, Tripp

S1311 Vipapan, Nathan Gr: 10

Modification of Bee Venom Peptide Melittin for Reduced Cytotoxicity to Increase Usefulness in Treating Ovarian Cancer

S: Institute for Educational Advancement
D: PUSD
C: Barsever, Monica

S1312 Gao, Ruotong Gr: 9

Investigation of controlled underexpression of IGFBP7 on geriatric diseases using a Bayesian Network and Protein-Ligand complex models/simulations

S: The Webb Schools
D: Claremont
C: Nacionales, Lisa

S1313 Motala, Muhammad Gr: 9

Unequal Relief: Examining Racial Disparity in the Pharmacokinetics of Acetaminophen

S: Institute of Knowledge High School
D: Walnut
C: Khan, Selena



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S14 • Physics - Sr

S1401 Revolorio, Nicolas Gr: 11

Electromagnetism and it's affecting Variables

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S1402 Gross, Madeline Gr: 11

Using Conservation of Energy to Optimize Results of Women Pole Vaulters

S: New West Charter High School
D: California Charter
C: Stephenson, Maurice

S1403 Srivatsav, Brindha Gr: 11

ERND (Electromagnetic Radiation Neutralization Device): A Novel Device to Counter Detrimental Effects of 5G Radiation

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S1404 Cordova, Gerardo Gr: 11

Magnets Matter

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S1405 Li, Madelyn Gr: 10

Electrical Wire Heating with Portable Battery for Preventive Masks

S: Mira Costa High School
D: MBUSD
C: Nodado, Ernesto



2023 LOS ANGELES COUNTY SCIENCE FAIR

Senior Division
S15 • Plant Biology & Physiology - Sr

S1501 Monteon, Adrian (Xavier) Gr: 11

"chloromeleon"

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S1502 Duenas Padilla, Anai Gr: 10

Drip Drip Sprinkle

S: Magnolia Science Academy 4 Venice
D: LAUSD
C: Katmer, Ahmet

**S1503 Macedo, David Gr: 11
Rivera, Felipe Gr: 11**

How does fertilizer effect plant life

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S1504 Gamez, Gabriella Gr: 10

Proceso de germinacion y alteraciones

S: BELL GARDENS HIGH SCHOOL
D: Montebello Unified
C: Huerta, Jorge

S1505 Ramos , Vianka Gr: 10

How does different types of water affect the rate of growth in algae

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

S1506 Zamacona, Xiomara Gr: 10

How does the temperature affect plant growth?

S: Pioneer High School
D: Whittier Union High School District
C: Murray, Matthew

**S1507 Ramirez, Diego Gr: 9
Marquez , Anthony Gr: 9**

Homemade Fertilizer

S: Discovery Charter Preparatory High School
D: LAUSD
C: Bagoyan, Ashkhen

**S1508 Wynn, Sydney Gr: 9
Soliman, Maryam Gr: 9**

How Genetically Modified Glycine max Interferes with the Growth of Sorghum bicolor

S: Palos Verdes High School
D: Palos Verdes Unified School District
C: Munoz, Julie

**S1509 Dominguez, Nicholas Gr: 11
Tanada, Ryan Gr: 11
De La Cruz, Andrei Gr: 11**

All Hail Hydroponics

S: Don Bosco Technical Institute
D: Private (Catholic)
C: Jenkins, Jomaquai

S1510 Kim, Andrew Gr: 12

Transformation of Chromochloris Zofingiensis to Enhance Lipid Production for Biofuel Development

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

S1511 Liu, Lucy Gr: 11

Effect of Human Multivitamins on the Health of Epipremnum aureum

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

**S1512 Omidvar, Arman Gr: 12
Yang, Chris Gr: 12**

The Significance of Iridescence in Selaginella uncinata as a Strategy to Reduce Leaf Damage from Sunflecks

S: Palos Verdes Peninsula High School
D: PVPUSD
C: Greenberg, Mark

S1513 G, Zoe Gr: 12

Sweltering Soil: Counteracting Heat and Water Stress in Agriculture Using Hygroscopic Materials

S: Archer School for Girls - Senior division
D: Private
C: Neshek , Jerilyn

S1514 gomez, angel Gr: 10

soil temperature and plant growth

S: BELL GARDENS HIGH SCHOOL
D: Montebello Unified
C: Huerta, Jorge

**S1515 Mancilla, Valentina Gr: 10
Schaeffer, Rowan Gr: 10
Dermovsesian, Nicholas Gr: 10**

How Temperature Affects The Rate of Photosynthesis

S: Flintridge Preparatory School
D: Independent
C: Frewen, Shane

KEY TO STUDENT PROJECT CATEGORIES

JUNIOR DIVISION	
J01	Animal Biology
J02	Animal Physiology
J03	Behavioral Sciences- Non Human
J04	Behavioral/Social Sciences- Human
J05	Biochemistry & Molecular Biology
J06	Chemistry- Applied
J07	Chemistry- General
J08	Earth/Space Sciences
J09	Ecology
J10	Engineering Applications
J11	Engineering Research
J12	Environmental Management
J13	Materials Science
J14	Mathematics/Computer Sciences
J15	Microbiology
J16	Pharmacology
J17	Physics- Aerodynamics/Hydrodynamics
J18	Physics- Electricity & Magnetism
J19	Physics- General
J20	Plant Biology & Physiology
J22	Product Science

SENIOR DIVISION	
S01	Animal Biology
S02	Animal Physiology
S03	Behavioral/Social Sciences
S04	Biochemistry & Molecular Biology
S05	Chemistry
S06	Earth/Space Sciences
S07	Ecology
S08	Engineering Applications
S09	Engineering Research
S10	Environmental Management
S11	Mathematics/Computer Sciences
S12	Microbiology
S13	Pharmacology
S14	Physics
S15	Plant Biology & Physiology

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