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The 71st Annual GREATER SAN DIEGO SCIENCE & ENGINEERING FAIR

BALBOA PARK ACTIVITY CENTER
MARCH 11 - 16, 2025

STUDENT EXHIBITOR DIRECTORY with CATEGORICAL AWARDS



71st Annual Greater San Diego Science & Engineering Fair - 2025

| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|--------|-------|-----------|------------|----|---------------|--------|-----------------|
|--------|-------|-----------|------------|----|---------------|--------|-----------------|

SENIOR DIVISION

Senior Division - Animal Sciences (ANIM)

| | | | | | | | |
|-----|-----|-----------|--------|----|---|-----------------------------|-----------------|
| 101 | 2nd | Mandyam | Tanya | 11 | Curcumin Alleviates Inflammatory Responses in an Animal Model of Systemic Inflammation | Westview High School | L. Cox |
| 102 | 3rd | Pitt | Lily | 11 | The Effects of Loratadine on <i>Dugesia Japonica</i> | Steele Canyon High School | J. Allen |
| 103 | 1st | Tachibana | Emi | 11 | Nicotine-Induced Neurotoxicity in Planarian Models: Neuronal Regeneration and Behavior | University City High School | M. Quessenberry |
| 104 | 1st | Wyatt | Ronald | 11 | Polystyrene-Based Superworm Frass and Its Theoretical Impact on Plant Nutrition | Eastlake High School | A. Williams |
| 105 | 1st | Zeng | Sophie | 11 | From Paws to People: A Statistical Assessment of the Impact of Demographic Factors on Health Outcomes in Companion Dogs | The Bishop's School | M. Jaiclin |
| 106 | 2nd | DeMott | Luke | 11 | Analysis of <i>E. Fetida</i> Productivity when Provided with Varying Compost-Based Food Sources | La Jolla High School | H. Eaton |

Senior Division - Behavioral and Social Sciences (BEHA)

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|-----|-----|-------------------|-----------------|----------|--|--------------------------------|------------------------------|
| 111 | 3rd | Arce | Larisa | 11 | The Utilization of Morals on California High School Students: Connection Between Students Morality and School Academy Performance & Extracurricular Activities | Mater Dei Catholic High School | R. Pryce |
| 112 | 1st | Ajanovic | Aya | 10 | Memory Reconstruction | Bright Horizon Academy 9-12 | N. Nasereldin |
| 113 | 1st | Bhalla Im | Nupur Hannah | 11 11 | The Relationship Between Emotional Intelligence and Academic Burnout in Adolescents | Del Norte High School | J. Cheskaty & J. Cheskaty |
| 114 | 2nd | Diep | Emily | 9 | Automatic Visual-Acoustic Feedback of Speech Articulation for Children with Speech Sound Disorders | Westview High School | D. Loo |
| 115 | 2nd | D'Souza | Aaron | 9 | Categorizing Cyber-Attacks: Analysis of Industry, Event-Type, Economic and Criminological Factors | The Cambridge School | M. Mayne |
| 116 | 2nd | Estrada Romero | Adam Dalilah | 10 10 | The Effect of Social Media On Teenager's Stress Levels | Central Union High School | L. Rueda |
| 117 | 2nd | Feng | Eric | 10 | Analyzing the Effects of Depression on Twitter Using Multimodel Analysis | The Bishop's School | M. Jaiclin |
| 118 | 2nd | Garcia | Eric | 10 | Expectations vs. Gender. Which is More Important to Careers? | Central Union High School | L. Rueda |

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|---|------------|-----------|------------|----|--|--------------------------------|-----------------|
| Senior Division - Behavioral and Social Sciences (BEHA) cont'd | | | | | | | |
| 119 | 2nd | Khushu | Ronit | 11 | Using AI Based Emotion Recognition to Improve Quality of Life for People with Alexithymia and Autism Disorder | Francis Parker School | J.P. Pierce |
| 120 | 1st | Lee | Kate | 11 | Interaction Between ApoE-genotype & Lifestyle Factors with Cognition in a Latino Cohort | Canyon Crest Academy | K. Sevilla |
| 121 | NS | Ouchmame | Zackaria | 9 | The Effects of Social Pressure on Ethical Decision Making | Bright Horizon Academy 9-12 | N. Naserelddin |
| 122 | 1st | Vadi | Ashwin | 9 | Knowledge, Attitude, Behavior and Practice Towards Microplastic Hazards among Community Dwelling Individuals in the Greater San Diego District | Del Norte High School | A. Callicott |
| 123 | 3rd | Valle | Emiley | 11 | Implementing Subway Surfers in Slideshow Presentations: Effect on High School Students' Retention | Mater Dei Catholic High School | R. Pryce |
| 124 | 2nd | Zaragoza | Clay | 10 | Unconscious Racism in Imperial Valley | Central Union High School | L. Rueda |

Senior Division - Biochemistry (BCHM)

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|-----|------------|----------------------|---------------------|----------|--|-----------------------|--------------|
| 131 | 2nd | Bollu Lagisetti | Harshith Samhita | 10 11 | Optimizing Procedures to Enhance Sesamin Content in Sesame Seeds | Del Norte High School | C. Lagisetti |
| 132 | 1st | Chalamalasetty Li | Abhiram Anze | 11 11 | GIN Based Predictions of Potential Inhibitors Targeting Mycobacterium-Tuberculosis InH A Essential for XDR-Strains | Canyon Crest Academy | E. Gerstin |

Senior Division - Biomedical/Health Sciences, and Biomedical Engineering (BMED)

| | | | | | | | |
|-----|------------|------------|----------------|----|---|---------------------------|--------------|
| 141 | 2nd | Abdulaziz | Omar | 9 | Smart Dehydration Monitoring Using Wearables: A Real-Time Sensor Fusion App | Scripps Ranch High School | A. Abdurrab |
| 142 | 3rd | Abhyankar | Sara | 11 | Migraine Bot | Scripps Ranch High School | P. Fowler |
| 143 | 2nd | Arulseivan | Adhiban | 9 | NeuroStimulate: Home-Based Neuropathy Real-Time Assessment with Vibration, Heat, and Machine Learning Model | Scripps Ranch High School | P. Fowler |
| 144 | 1st | Dogra | Saanvi | 11 | Uncovering Molecular Mechanisms for Treatment of Congenital Heart Defects through High-Content Genetic Perturbation Screens | Del Norte High School | A. Callicott |
| 145 | 1st | Ganji | Vidha Yadav | 11 | Novel siRNA Inhibitors for Immediate-Early BZLF1 Protein for Epstein-Barr Virus | Del Norte High School | N. Ganji |
| 146 | 3rd | Grapilon | Madeline | 10 | Development of a 3D Printed Gel Electrophoresis Chamber | Eastlake High School | A. Williams |

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|---|-------|--------------|------------|----|---|-----------------------------|-----------------|
| Senior Division - Biomedical/Health Sciences, and Biomedical Engineering (BMED) cont'd | | | | | | | |
| 147 | 3rd | Hirman | Leah | 11 | Testing the Effectiveness of Different Kinds of FDA Approved Sunscreens on an Acetate Film Using a UVA/UVB Light Bulb | Granite Hills High School | D. Hirt |
| 148 | 2nd | Hyun | Jihoo | 10 | Impact of Hydration, Temperature, and Age on Skin Capacitance and Capacitive Touch Screen Responsiveness | Canyon Crest Academy | K. Sevilla |
| 149 | 2nd | Javier | Andrea | 11 | The Effect of Bath Ionic Strength on 4-point Bending Properties of Articular Cartilage | La Jolla Country Day School | R. Sah |
| 150 | 1st | Jian | Jolina | 9 | Using Piezo Transducers to Break Uric Acid Crystals in Gout | Canyon Crest Academy | M. Zerwekh |
| 151 | 1st | Kalyanaraman | Anirudh | 12 | Adverse Cardiovascular Effects of Burn Pit Exposure: The Role of Oxidative Stress | Mt. Carmel High School | H. Kalyanaraman |
| 152 | 3rd | Kan | Lauren | 11 | Targeting FEN1 for the Treatment of Ewing Sarcoma Family of Tumors | Canyon Crest Academy | M. Liu |
| 153 | 1st | Kapoor | Sanya | 11 | Contribution of LMNB2 Overexpression in Brain Cancer (GBM and LGG) Progression | Del Norte High School | S. Kapoor |
| 154 | 2nd | Khushu | Riya | 11 | Novel Breast Cancer Treatment: Using Gene Expression and Differential Gene Analysis for Personalized Drug Therapy | Francis Parker School | JP. Pierce |
| 155 | 3rd | Kim | Seohyun | 11 | Smart Massage Chairs with Distributed Microsensor Systems for Personalized and Chronic Physiological Recording | Canyon Crest Academy | K. Shakeri |
| 156 | 2nd | Liang | Donny | 9 | Aqueous Humor Protein Biomarkers for Predicting Uveal Melanoma Metastasis Risk | Rancho Bernardo High School | R. Outlaw |
| 157 | 1st | Lim | Ricky | 11 | Development and Evaluation of Nanoantibody-based Disease Diagnostics | Canyon Crest Academy | E. Gerstin |
| 158 | 1st | Zeng | Lilian | 11 | Identifying Bacteriophages, Nature's Own Secret Weapon Against Antibiotic Resistant Bacteria, for Achromobacter | Del Norte High School | H. Xu |
| 159 | 2nd | Zhao | Matthew | 11 | The Contribution of Sleep Promoting Genes to Brain Volume in Drosophila | Canyon Crest Academy | K. Hare |

Senior Division - Cellular and Molecular Biology (CELL)

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|-----|-----|--------------|-------------------|----------|---|----------------------|-------------|
| 171 | 2nd | Le Nguyen | Maithy William | 12 12 | Synaptogenesis of Transplanted Inhibitory Neurons in the Adult Primary Visual Cortex | Westview High School | S. Halander |
| 172 | 2nd | Leem | Ethan | 10 | Paraquat Exposure Induces Microglial Dysfunction Leading to the Loss of Neuronal Neurites | Canyon Crest Academy | K. Shakeri |
| 173 | 2nd | Lim | Claire | 10 | Mitochondrial and Cellular Mechanisms Underlying Neuronal Degeneration in Parkinson's Disease | Canyon Crest Academy | K. Sevilla |

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|--|-------|-----------------|------------------|----------|--|---------------------------------------|-----------------|
| Senior Division - Cellular and Molecular Biology (CELL) cont'd | | | | | | | |
| 174 | 1st | Yao | Minghui | 11 | Illuminating Driving Mechanism of Beneficial Host-Microbe Model: Opsin in Squid-Vibrio Symbiosis | The Bishop's School | L. Keller |
| Senior Division - Chemistry (CHEM) | | | | | | | |
| 181 | 1st | Capaldi | Charlotte | 9 | Comparing Cleavage Rates of Modified Nucleosides from a Universal Solid Support | Canyon Crest Academy | E. Gerstin |
| 182 | 1st | Huang | Lucy | 11 | Morphological Changes and Kinetic Insights of Copper(I) Oxide Nanocrystals | Torrey Pines High School | E. Aghassi |
| 183 | 1st | Park Suh | Gurnho Daniel | 10 11 | Assessing the Separations of a Biodegradable Surfactant Using TLC and Image Processing | Canyon Crest Academy Altus Schools | H. Yoo |
| Senior Division - Computational Biology and Bioinformatics (CBIO) | | | | | | | |
| 191 | 1st | Aravind | Medha | 10 | NeuroRepurpose: An In Silico Approach to Repurposing Drugs for Multiple Sclerosis Treatment | Del Norte High School | M. Nathan |
| 192 | 2nd | Balam | Riti | 11 | Using Machine Learning Algorithms to Predict the Molecular Risk Score in GIST Tumors | Francis Parker School | M. Antkowiak |
| 193 | 3rd | Bantval | Dhruv | 10 | Genetic Features as Predictors of Glioblastoma Treatment Effectiveness | Canyon Crest Academy | K. Hare |
| 194 | 1st | Bapat | Mihir | 10 | Multimodal Deep Learning Approach for Brain Tumor Segmentation and Prognostic Prediction | Del Norte High School | A. Callicott |
| 195 | 2nd | Bhatt | Prakruti | 11 | Quantum Annealing and Deep Learning-Driven Plasma Optimization for Refolding Misfolded Proteins in Neurodegeneration | Del Norte High School | D. Vyas |
| 196 | 2nd | Bojja Maturi | Rohan Nikhil | 10 10 | Computational Investigation of hIAPP Oligomer Extracellular Cytotoxicity Mechanisms: Novel Therapeutic Prevention of β -cell Dysfunction | Del Norte High School | J. Maturi |
| 197 | 2nd | Cai | Ethan | 11 | Metabolomics-Based Machine Learning Diagnostics of Post-Acute Sequelae of SARS-CoV-2 Infection | Canyon Crest Academy | K. Hare |
| 198 | 1st | Chen | Hayden | 11 | EnsembioDesc: Establishment and Optimization of Molecular Descriptor AI Ensembles for Novel MAPKAPK2 Inhibitor Identification | Del Norte High School | F. Liao |
| 199 | 1st | Ganji | Vibha Yadav | 11 | Novel Screening Mechanism for Aggregation Breakers of Alzheimer's Disease A β Protofibrils | Del Norte High School | N. Ganji |

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| Senior Division - Computational Biology and Bioinformatics (CBIO) cont'd | | | | | | | |
| 200 | 1st | Gao | William | 11 | Code2Cure: A Novel Pipeline for Multiobjective Cardiovascular Drug Design Using Generative AI, Graph Neural Networks, and Molecular Dynamics | Canyon Crest Academy | H. Lee |
| 201 | 1st | Goel | Khushee | 11 | An EEG-Based Approach for Measuring IAD Risk Due to Social Media Overuse | Scripps Ranch High School | P. Fowler |
| 202 | 1st | Guha | Risha | 10 | Characterizing Calcium Propagation in Parkinson's Disease Astrocytes through Computer Simulations | Del Norte High School | A. Callicott |
| 203 | 1st | Hou | Henry | 10 | Segment-Any-Cell: Supercharging Generalized Cell Segmentation with Diffusion Synthesized Data | The Bishop's School | D. Cameron |
| 204 | 2nd | Huang Huang | Bo-En Bo-Zhi | 12 10 | CCCDRP: Enhancing Multi-Omics Cancer Drug Response Prediction with Criss-Cross Attention | Westview High School | S. Halander |
| 205 | 2nd | Li Wu | Albert Jacob | 11 10 | Automated Detection of Glioblastoma in Hyperspectral Imaging through Deep Learning | Westview High School Del Norte High School | C. Sun |
| 206 | 3rd | Liang | Cindy | 11 | Comparison of Gut Microbiota in Healthy and Alzheimer's Patients | Del Norte High School | I. Tsigelny |
| 207 | 1st | Liu | Kaelyn | 11 | A Multi-Scale Digital Twin Model for Liver Aging | Canyon Crest Academy | K. Sevilla |
| 208 | 3rd | Macha | Manasvi | 9 | A Machine Learning Solution to COPD Exacerbation Prediction | Del Norte High School | L. N. Macha |
| 209 | 1st | Madhukara | Nandana | 12 | A Novel Approach to Modeling the Effect of Protein Crowding on Cellular Membrane Shape | Canyon Crest Academy | E. Gerstin |
| 210 | 2nd | Meng | Leo | 10 | Prototype and Model of a Biological Tri-state Memory Switch in Mammalian Cells | Westview High School | D. MacMartin |
| 211 | 2nd | Menon | Varun | 10 | Image-Based Machine Learning for Alzheimer's Detection | Canyon Crest Academy | K. Shakeri |
| 212 | 3rd | Nguyen | Tri | 11 | Predicting Solubility of Drug Molecules Using Machine Learning Models | Canyon Crest Academy | E. Gerstin |
| 213 | 1st | Oguz | Tarik | 11 | Small Changes, Big Impact- miRNAs in Lung Cancer Detection | Del Norte High School | J. Cheskaty |
| 214 | 2nd | Pallapotu | Eshika | 11 | A Novel Classification Model for Alzheimer's Disease Pathogenicity Using Ligand-Receptor Variants and RNA-seq Data | Del Norte High School | R. Pallapotu |
| 215 | 3rd | Parthiban | Sidhaarth | 9 | Computational Strategies to Examine Cellular Stress-related Gene Patterns in Nicotine Treated Monocytes | Westview High School | S. Halandar |

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| Senior Division - Computational Biology and Bioinformatics (CBIO) cont'd | | | | | | | |
| 216 | NS | Shah | Kush | 10 | Unraveling ALS: A Computational Approach to Gene Expression and Pathway Analysis | Del Norte High School | K. Shah |
| 217 | 1st | Shah | Nisarg | 11 | Accelerating Drug Discovery with a Fragment-Based Machine Learning | Del Norte High School | J. Shah |
| 218 | 1st | Shi | Ryan | 11 | Microglial CMPK2 Inhibition as a Novel Therapeutic Strategy for Major Depressive Disorder | The Bishop's School | D. Cameron |
| 219 | 2nd | Srinivasan | Nikhil | 9 | Developing Quantitative/Computational Models for Optimizing Dosing Regimen of "Targeted Protein Degradation" Drugs and Improving Patient Survival in Breast Cancer | Canyon Crest Academy | M. Zerwekh |
| 220 | 2nd | Tao | Christopher | 11 | Deep Learning Model for Classification of Brain Tumors | The Bishop's School | M. Jaiclin |
| 221 | 2nd | Thomas | Nisa | 9 | Modeling Risk Factors for Poor Health in California Counties Utilizing the 2023 County Health Rankings Database | Del Norte High School | J. Shaia |
| 222 | 2nd | Tian | Christina | 11 | Design Monoclonal Antibody Drugs for Cancer Therapy Using Molecular Simulations | Westview High School | D. MacMartin |
| 223 | 2nd | Tipirneni | Aanika | 11 | Advancing Epilepsy Detection through MicroRNA Biomarkers: A Machine Learning Solution | Canyon Crest Academy | E. Gerstin |
| 224 | 1st | Uhegbu Yu | Kellen Ethan | 11 10 | Utilizing CNN Modeling to Detect Early and Flared Up Eczema | Del Norte High School | C. Uhegbu |
| 225 | 1st | Vivek | Nithika | 11 | Deep Learning Based Optimization of Immunoblotting Reaction Conditions | Del Norte High School | M. Sharma |
| 226 | 3rd | Wang | Ryan | 10 | Using AI for Pericyte Research | Westview High School | S. Halander |
| 227 | 3rd | Weng | Elizabeth | 10 | The Significance of Tumor Necrosis Factor in Atherosclerosis | Westview High School | D. MacMartin |
| 228 | 2nd | Yadav | Anvay | 11 | Enhancing Colorectal Cancer Diagnostics through Generative Deep Learning for Multiple Modalities | Del Norte High School | M. Yadav |
| 229 | 3rd | Yu | Linda | 11 | Structural Analysis of Virulence Factors Between S. aureus Strains MSSA476 and MRSA252 | Canyon Crest Academy | E. Garling |

Senior Division - Computer Science and Systems Software (COMP)

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|-----|------------|--------|----------|----|--|-----------------------|-----------|
| 230 | 1st | Hattar | Harkirat | 11 | Adaptive Cellular Computation: Redefining the Foundations of Machine Learning and Decentralized AI | Del Norte High School | K. Hattar |
|-----|------------|--------|----------|----|--|-----------------------|-----------|

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|--|------------|----------------------|--------------------|----------|--|------------------------------|-----------------|
| Senior Division - Computer Science and Systems Software (COMP) cont'd | | | | | | | |
| 241 | 2nd | Bai Tantisira | Ryan Brayden | 11 11 | Autonomous Multidrone Navigation and Tracking for Cinematic Aerial Filmmaking | Canyon Crest Academy | A. Dul |
| 242 | 3rd | Bisain | Aditya | 10 | Kitchen Manager | Canyon Crest Academy | E. Gerstin |
| 243 | 2nd | Chandra | Neil | 10 | D-SAFENet - DNS Security and Filtering Engine for Malicious DNS Detection and Classification | Del Norte High School | M. Varma |
| 244 | 2nd | Chen Quan | Andrew Joseph | 11 11 | Better Plane Detection in 3D Reconstruction from 2D Images | Canyon Crest Academy | K. Hare |
| 245 | 3rd | Chen Lai | Jennifer Isabel | 11 11 | Developing a Website to Assist with Dyscalculia Using Deep Learning Image Recognition | Canyon Crest Academy | K. Sevilla |
| 246 | 2nd | Choksi | Advait | 10 | Evaluating Machine Learning Models for Classifying Lung Cancer Subtypes through CT Scans | Canyon Crest Academy | A. Dul |
| 247 | 2nd | Dagar | Arnav | 11 | Mapping and Estimating Homelessness | Canyon Crest Academy | K. Hare |
| 248 | 1st | Dhar | Naveen | 11 | Fighting Poaching through High Precision Real-Time Gunshot Detection Using Deep Learning and Cross-Unit Communication | High Tech High Mesa | E. Usaha |
| 249 | 1st | Ekambaram Svetina | Nikhil Evan | 9 9 | Image Recognition Software to Detect Surgical Tools and Output Coordinates to Robot Arm | Del Norte High School | S. Soundarraju |
| 250 | 2nd | Eltepu | Shiven | 11 | Securing Multi-Agent LLM Systems Via Detection and Mitigation of Poison Propagation | Scripps Ranch High School | P. Fowler |
| 251 | 1st | Fan | Leanne | 12 | Building LLM Reasoning Models for Cheap: Salient Reasoning Traces for Cost-Efficient Test-Time Scaling | Westview High School | D. MacMartin |
| 252 | 2nd | Hyun | Jeonghoo | 11 | Automated Coaching of Basketball Actions Using Keypoint-Aware Action Recognition and Video Processing | Torrey Pines High School | R. Robinette |
| 253 | 2nd | Kintada | Sathwik | 9 | Leveraging Synthetic Data to Mitigate Racial Bias in Medical Skin Lesion Models | Del Norte High School | R. Kintada |
| 254 | 2nd | Kowsari | Kian | 11 | Vending Machine Optimization | Scripps Ranch High School | P. Fowler |
| 255 | 1st | Liang | Jaelyn | 10 | Spiking Neurons on a Chip - A Biologically- Inspired Neuromorphic-FPGA Architecture for Energy-Efficient AI Applications | Westview High School | D. MacMartin |
| 256 | 1st | Marwah | Nalin | 11 | How to Improve Novice Cricketer's "Fast Bowling Action" Using Machine Learning Pose-estimation Model | Del Norte High School | V. Marwah |

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| Senior Division - Computer Science and Systems Software (COMP) cont'd | | | | | | | |
| 257 | 1st | Rezaei | Ryan | 11 | Novel Material Discovery through Geometric Deep Learning and VAE Latent Space Diffusion | Canyon Crest Academy | D. Celniker |
| 258 | 1st | Shin | Andrew | 11 | Harmonizing Human Attention and Deep Neural Networks: Gaze-Weighted Attention for Object Recognition | Canyon Crest Academy | E. Gerstin |
| 259 | 1st | Wang | Yuekai | 11 | IFEP: A Low-Cost Large Language Model Personalization Framework for Mitigating Food Waste | Rancho Bernardo High School | M. Li |
| 260 | 2nd | Xie | Eric | 11 | New Approach for Efficient Voice Recognition Using Delay Differential Analysis | Torrey Pines High School | B. Belyea |
| 261 | 1st | Xing | Ella | 11 | An Immersion Campus Simulation Protection and Safety Improvement System Using Artificial Intelligence | The Bishop's School | M. Jaiclin |
| 262 | 1st | Xu | Kayley | 10 | Wearable Stethoscope Array and Localization & Diagnosis of Cardiopulmonary Sounds | The Bishop's School | M. Jaiclin |
| 263 | 2nd | Zubaidi | Ahmad | 9 | MindTrack: GPS for Dementia Patients | Bright Horizon Academy 9-12 | N. Naserelddin |
| 264 | 2nd | Badal | Rohan | 12 | Hallucination, Conflation and Ultracrepidarianism in Large Language Models | University City High School | V. Badal |
| 265 | 2nd | Sanchez | Alfonso | 9 | Using AI to Predict Optimal Baseball Pitch Type Based on Temperature | Extraordinary Private Home School | A. Sanchez |

Senior Division - Earth and Environmental Sciences (EAEV)

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|-----|-----|----------------|-------------|----------|---|--------------------------|------------|
| 271 | 3rd | Cardoso DeWalt | Mia Aaliyah | 11 11 | Using Mycoremediation of <i>Hysizygos tessulatus</i> Fungus (Bunapi and Bunashimeji) and <i>Agarius bisporus</i> to Mitigate Oil Spills | Bonita Vista High School | J. Ekstein |
| 272 | 1st | Chandra | Arthi | 11 | Plastic that Can Eat Itself? Improving Tensile Strength in Engineered Living Polymers | Canyon Crest Academy | A. Siegel |
| 273 | 1st | Chen | Steven | 9 | Nature-Inspired Living Device to Degrade Organic Pollutants in Water | Canyon Crest Academy | T. Agase |
| 274 | 3rd | Estrada | Thalia | 11 | The Effects of Different Amounts in Charcoal on Phosphate Filtration of the Chula Vista and Otay Lakes Reservoir | Bonita Vista High School | J. Ekstein |
| 275 | 3rd | Farias | Mariana | 11 | The Effect of Paper, Plastic, and Glass Pollution on Duckweed | Bonita Vista High School | J. Ekstein |
| 276 | 3rd | Luna Yufe | Eva Natasha | 11 11 | Examining the Impact of Invasive Compared to Native Species on Soil Health | Bonita Vista High School | J. Ekstein |

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| Senior Division - Earth and Environmental Sciences (EAEV) cont'd | | | | | | | |
| 277 | 3rd | Montiel | Nina | 11 | Correlation Between Carbon Monoxide Emissions and Life Expectancy in India | Bonita Vista High School | J. Ekstein |
| 278 | 1st | Munoz | Esteban | 11 | Dust Suppression Using Biocementation on Exposed Salton Sea Lakebed | Central Union High School | L. Rueda |
| 279 | 1st | Murphy Perry | Siffrin Janeiro | 10 10 | Optimal Ratio of Superworms in Polystyrene Biodegradation | Health Sciences High and Middle College | J. Bonine |
| 280 | 3rd | Perez | Lisa | 11 | Effects of Copper, Chromium, and Iron on Imperial Beach vs. La Jolla | Bonita Vista High School | J. Ekstein |
| 281 | 3rd | Rosal | Sophia | 11 | To What Extent Will Nicotine at Various Concentration Levels Impact <i>Phaseolus vulgaris</i> (Blue Lake Bush Bean) Growth and Germination? | Bonita Vista High School | J. Ekstein |
| 282 | 2nd | Williams | Kaden | 11 | Tracking Carbon Footprint: Does Awareness Lead to Action? | Eastlake High School | A. Williams |
| 283 | 2nd | Xia | Olina | 11 | Investigating Carbon Debt and Socio-Environmental Inequality in Transportation Using AI-GIS Modeling | Rancho Bernardo High School | B. Xia |
| 284 | 1st | Zhang | Austin | 11 | Smart Park Management: A Drone-Based AI Solution for Vegetation Health and Wildfire Risk Mitigation | Del Norte High School | S. Li |
| 285 | 1st | Zhu | Virginia | 9 | Design of a Low-Cost WiFi-Enabled PM2.5 Sensor Network Using IoT for Real-Time Air Quality Monitoring | Del Norte High School | Y. Yu |

Senior Division - Engineering: Electrical, Mechanical, and Robotics (EEMR)

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|-----|-----|---------------|-----------------|----|--|-----------------------------|---------------|
| 291 | 3rd | He | Daniel | 9 | Pinhole Optics Imager | Canyon Crest Academy | T. Agase |
| 292 | 1st | Hong | David | 11 | Design and Construction of an Innovative Semi-Rigid Lower Limb Exoskeleton | The Bishop's School | M. Jaiclin |
| 293 | 3rd | Mansour | Malik | 10 | Advanced Robot for Precision Water Leak Detection and Autonomous Repair | High Tech High Mesa | E. Usaha |
| 294 | 2nd | Parthasarathy | Jeyanth Narayan | 9 | Advanced Terrain-Adaptive Suspension Framework: Leveraging Machine Learning for Optimized Vehicle Dynamics and Adaptive Response | Canyon Crest Academy | E. Gerstin |
| 295 | 2nd | Sadek | Adham | 11 | AI Based Automated Search & Rescue Unmanned Aerial Vehicle | High Bluff Academy | A. Ashour |
| 296 | 1st | Siddiqui | Aminah | 9 | Advancing Cost-Effective Space Exploration Using LESAR (Low Cost Extraterrestrial Surface Analysis Rover) | Bright Horizon Academy 9-12 | N. Nasereldin |

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| Senior Division - Engineering: Electrical, Mechanical, and Robotics (EEMR) cont'd | | | | | | | |
| 297 | 1st | Sung | Ihan | 10 | Universal Mass Scale | Eastlake High School | A. Williams |
| 298 | 1st | Verma | Rahul | 11 | Optimization of Kinematics and Control of a Coaxial Swerve Omni Based Drive | Del Norte High School | R. Verma |
| 299 | 2nd | Zheng | Chris | 10 | Optimizing the Performance of Machine Learning Algorithms for UAV-based Search-and-Rescue Systems | The Bishop's School | A. Pelletier |
| Senior Division - Engineering: Energy, Materials, and Transport (EEMT) | | | | | | | |
| 311 | 1st | Chandra | Anju | 11 | Immobilization of Cyanobacteria within Hydrogels Aiding in Purified Protein Drug Delivery | Canyon Crest Academy | K. Shakeri |
| 312 | 2nd | Delgado | Maya | 11 | The Thermal Resistance of Environmentally Sustainable Insulation Materials vs. Unsustainable Polystyrene Insulation | Bonita Vista High School | J. Ekstein |
| 313 | 3rd | Mahendran | Pranav | 9 | Utilizing Piezoelectricity to Harness Ocean Waves for Power | Torrey Pines High School | B. Belyea |
| 314 | 1st | Ray Chaudhuri | Shounak | 11 | Novel Scalable Multiphase Autonomous Vehicle Systems for Emerging Markets | Francis Parker School | J.P. Pierce |
| Senior Division - Mathematics (MATH) | | | | | | | |
| 321 | 1st | Qiu | Nathan | 11 | Reinforcement Learning Based Simulated Annealing | Canyon Crest Academy | K. Shakeri |
| 322 | 2nd | Ryu | Wonhee | 11 | Breaking Modern Cryptography by Quantum Computing | Canyon Crest Academy | K. Shakeri |
| 323 | 1st | Xuan | Kailin | 11 | Efficient Algorithm and Implementation for Boole Reduction of Large Logic Expressions | The Bishop's School | M. Jaiclin |
| Senior Division - Microbiology (MCRO) | | | | | | | |
| 331 | 1st | Foss | Spencer | 12 | Sucralose Exposed Bacteria's Relationship to Future Increases in Antibiotic Resistance Genes | San Diego Jewish Academy 9-12 | P. Hagarman |
| 332 | 1st | He | David | 11 | An Integrated Analysis of Marine Polyurethane Microplastic Degradation with Genetically Engineered Bacterial Biofilms | Westview High School | S. Halander |
| 333 | 2nd | Lerman | Ava | 9 | Effectiveness of Ultrasonic Waves on Cyanobacteria for Algal Bloom Mitigation | San Diego Jewish Academy 9-12 | P. Hagraman |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|---|------------|----------------------|---------------------|----------|---|-----------------------------|-----------------|
| Senior Division - Microbiology (MCRO) cont'd | | | | | | | |
| 334 | 3rd | Reyes Wong | Matthew Emmanuel | 10 10 | The Effect of Acidity on the Growth of Bacteria (Non Pathogenic E. Coli.) | Central Union High School | L. Rueda |
| 335 | 1st | Zhang | Amber | 10 | Designing an Ideal Pseudomonas aeruginosa Nanoparticle Vaccine Focusing on Core and Size | The Bishop's School | E. Bjanec |
| Senior Division - Physics and Astronomy (PHYS) | | | | | | | |
| 341 | 3rd | Barrett Cervantes | Maryanne Alexa | 10 10 | Determining the Best Material to Create an Armor | Central Union High School | L. Rueda |
| 342 | 2nd | Chen | Lucas | 9 | Evaluating Effective Waveform Analysis Methods for Minimizing Background Noise in Pulsar Navigation | Francis Parker School | J.P. Pierce |
| 343 | 1st | Chen | Trevor | 12 | Perfecting Infrared Gratings for Polarized and Non-Polarized Applications | Westview High School | S. Halander |
| 344 | 1st | Choubey | Shubhay | 11 | MicroNet: A Novel Deep Learning Framework For Exoplanet Classification In Microlensing Events | Del Norte High School | F. Liao |
| 345 | 2nd | Nayak | Aneesh | 9 | Using N-Body Simulations and Augmented Kepler/TESS Data for a CNN- ML Driven TTV Detection System | Westview High School | S. Halander |
| 346 | 1st | Sen | Ritam | 9 | Utilizing Deep Learning to Explore the Physics of Sprinting: A Novel Sprinting Analysis Framework | Francis Parker School | J.P. Pierce |
| 347 | 1st | Smith | Joe | 12 | Lost in the Stars: Chemical Tagging of Magellanic Clouds and Accreted Populations | Stanford Online High School | V. Sandoval |
| 348 | 1st | Sternson | Samuel | 9 | Optimization of Height and Angle of Repose of Lunar Berms | Canyon Crest Academy | A. Siegel |
| 349 | 2nd | Xie | Joann | 10 | Predicting Atmospheric Spectra of Exoplanets Using Deep Learning Algorithms | Del Norte High School | J. Cheskaty |

| | | | | | | | |
|--|------------|--------------------|-------------------|----------|---|--------------------------|------------|
| Senior Division - Plant Sciences (PLNT) | | | | | | | |
| 361 | 2nd | Acevedo Chaidez | Isabel Roberto | 11 11 | To What Extent Does Soil Erosion Effect Plant Growth? | Bonita Vista High School | J. Ekstein |
| 362 | 3rd | Bannister | Delilah | 11 | The Affect of Acid Rain pH Levels 3, 4, and 7 on the Growth and Germination of <i>Triticum aestivum</i> | Bonita Vista High School | J. Ekstein |
| 363 | 1st | Baruch | Hila | 10 | <i>Triticum aestivum</i> Seed Response to Electromagnetic and Magnetic Stimuli: A Comparative Investigation | Altus Schools | M. Ramirez |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|---|------------|-------------------------|-------------------|----------|---|------------------------------|-----------------|
| Senior Division - Plant Sciences (PLNT) cont'd | | | | | | | |
| 364 | 2nd | Berke Hernandez-Ruiz | Jeremy Valeria | 11 11 | How Effective is Coral-Safe Sunscreen in Protecting Water Plants Like Water-Weed? | Bonita Vista High School | J. Ekstein |
| 365 | 2nd | Dela Cruz | Charissa Myka | 11 | Investigating the Impact of Buried Plastic on Germination and Growth of <i>Raphanus sativus</i> | Bonita Vista High School | J. Ekstein |
| 366 | 3rd | Luna | Diego | 12 | Organic Versus Synthetic Soil Affect on the Growth and Germination of Radishes (<i>Raphanus sativus</i>) | Bonita Vista High School | J. Ekstein |
| 367 | 1st | Luo | Anna | 11 | Allelopathic Effects of <i>Cynara cardunculus</i> on Native Coastal Sage Scrub Species | Canyon Crest Academy | K. Shakeri |
| 368 | 1st | Rodriguez | Nicholas | 12 | UV-B Radiations impact on Growth and Germination of <i>Triticum aestivum</i> - Cat Grass | Bonita Vista High School | J. Ekstein |
| 369 | 3rd | Rojas | Areli | 11 | To What Extent Does the Toxicity of Chlorine Affect the <i>Raphanus sativus</i> ? | Bonita Vista High School | J. Ekstein |
| 370 | 3rd | Roman | Andrea | 11 | The Effect of Microplastics on Elodea Plants | Bonita Vista High School | J. Ekstein |
| 371 | 2nd | Saxena | Parth | 11 | A Novel AI-Driven Rainfall Monitoring System for Sustainable Irrigation in Developing Regions (category changed to EEMR) | Scripps Ranch High School | P. Fowler |
| 372 | 1st | Tipirneni | Siri | 9 | From Plants to Ecosystems: Using Nitrogen- 15 to Detect Stress | Canyon Crest Academy | E. Gerstin |
| 373 | 3rd | Vergara | Frida | 11 | Fluoride vs. Growth: Analyzing Pinto Bean Germination | Bonita Vista High School | J. Ekstein |
| 374 | 1st | Zhang | Elvin | 11 | Automated Plant Disease Detection through Multi-sensory Analysis for Space Travel Application | Del Norte High School | J. Cheskaty |

JUNIOR DIVISION

Junior Division - Animal Sciences (ANIM)

| | | | | | | | |
|-----|------------|--------------------|-------------------|--------|--|--------------------------------------|-------------|
| 501 | 1st | Hollmann | Thrace | 6 | Do Young or Adult Guinea Pigs Learn Faster? | Muirlands Middle School | L. Trombley |
| 502 | 2nd | Rappoport | Joshua | 8 | Music's Impact on Dogs | San Diego Hebrew Day School | D. Pink |
| 503 | 3rd | Sanchez Sanchez | Eleanor Esther | 7 8 | Which Light Will Increase Your Height? | Extraordinary Private Home School | S. Sanchez |
| 504 | 3rd | Toor | Sareena | 7 | Effects of Chemicals Found in Perfumes upon Planarian Head/Tail Development | La Jolla Country Day School | M. Bessler |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|--|-------|-------------------------|---------------|--------|---|--|-------------------|
| Junior Division - Behavioral and Social Sciences (BEHA) | | | | | | | |
| 511 | 1st | Anello | Dominic | 8 | The Effects of Physical Activity on Test Scores | The Children's School | D. Quincannon |
| 512 | 3rd | Carver Jacobson-Dill | Jacob Cruz | 7 7 | Can Humans Identify AI Generated Materials | Mt. Helix Academy | K. MacDonald |
| 513 | 1st | Cooper | Aaron | 8 | Does Neurodivergence Affect the Way People See Ambiguous Illusions? | Community Montessori Charter School Carlsbad | I. Cooper |
| 514 | 2nd | Essa | Reem | 8 | The Role of Learning Styles on Creative vs Analytical Problems | Bright Horizon Academy 6-8 | N. Naserelddin |
| 515 | 2nd | Ferry | Aaron | 8 | Does Sympathy Affect Generosity | San Diego Hebrew Day School | D. Pink |
| 516 | 2nd | Hammad | Ida | 8 | The Impact of Peer Pressure on Decision-Making | Bright Horizon Academy 6-8 | N. Naserelddin |
| 517 | 3rd | Huguely | Raniyah | 8 | The Effect of Music on Test Performance | City Tree Christian School 6-8 | C. Glick |
| 518 | 3rd | Johnson | Jayden | 7 | The Effect of Age on Human Reaction Time | City Tree Christian School 6-8 | C. Glick |
| 519 | 1st | Karthik | Arjun | 7 | The Impact of Social Media on Teen Mental Health | Oak Valley Middle School | K. Latonio-Wilson |
| 520 | 1st | Mughal | Zara | 6 | Role of Emotional State on Visual and Auditory Perception | Bright Horizon Academy 6-8 | N. Naserelddin |
| 521 | 2nd | Ouznali | Duaa | 8 | Are Bilinguals Cognitively Superior to Monolinguals? | Bright Horizon Academy 6-8 | N. Naserelddin |
| 522 | 2nd | Plasencia | Adrian | 7 | Can AI Trick Humans | Nazareth School | M. Reed |
| 523 | 2nd | Ron | Ayelet | 7 | The Effect of Music on Arithmetic Abilities | The Bishop's School | K. Kleinertz |
| 524 | 1st | Salem | Yusra | 7 | Exploring the Impact of Immersive Vs. Traditional Learning on Student Performance | Bright Horizon Academy 6-8 | N. Naserelddin |
| 525 | 1st | Sternson | Olympia | 7 | Generational Effects on Resilience from Gen Z to the Greatest Generation | The Rhoades School | R. Hunker |

Junior Division - Biochemistry (BCHM)

| | | | | | | | |
|-----|-----|-----------|-----------|---|--|----------------------------|----------------|
| 541 | 3rd | Bustos | Sebastian | 7 | Preserving Fruit with Natural Preservatives | Mt. Helix Academy | K. MacDonald |
| 542 | 2nd | Hernandez | Meena | 8 | Different Sugars in Bread Rising | The Bishop's School | K. Kleinertz |
| 543 | 1st | Jasim | Reema | 8 | Will Juice Lose Its Vitamin C and How Can It Be Preserved? | Bright Horizon Academy 6-8 | N. Naserelddin |

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|---|-------|------------|------------------|----|--|----------------------------------|-----------------|
| Junior Division - Biochemistry (BCHM) cont'd | | | | | | | |
| 544 | 1st | Pyla | Tanvi | 8 | Personalized Drug Design: Targeting H1 Receptor Mutations to Improve Allergy Treatment | Pacific Trails Middle School | E. Main |
| 545 | 3rd | Silva | Alexia | 8 | Which Bread will Grow Mold the Fastest? | Chula Vista Middle School | T. Tom |
| 546 | 2nd | Villalobos | Belen | 7 | La Dolce Vida: The Sweet Life of Bananas | St. Mary's School - El Centro | C. Lizarraga |
| Junior Division - Biomedical/ Health Sciences, and Biomedical Engineering (BMED) | | | | | | | |
| 551 | 1st | Broudy | Golda | 8 | The Effects of Radiofrequency Radiation on the Development of Cancer | San Diego Hebrew Day School | D. Pink |
| 552 | 2nd | Cubukcu | Emel | 7 | Back to Bach: Our Brain's Perception of Music | Muirlands Middle School | L. Trombley |
| 553 | 3rd | Delgado | Flora | 7 | The Effect of Different Substances on Tooth Decay | City Tree Christian School 6-8 | C. Glick |
| 554 | 1st | Ehsan | Anabia | 8 | Reducing Pain and Anxiety During Medical Procedures in Children with Needle Phobia | Thurgood Marshall Middle School | F. Zaman |
| 555 | 2nd | Gorzelski | Nicholas | 8 | Under Pressure | De Portola Middle School | M. Bridges |
| 556 | 2nd | He | Lawrence | 8 | Engineering a Functionally Enhanced PD-1 Agonistic Antibody for Improved Autoimmune Disease Treatment | The Bishop's School | B. Barry |
| 557 | 2nd | Kim Park | Hyunggyu JoonWoo | 8 | Reliable Gaze-Driven Medical Communication Boards Using Consistency Loss with Conjugate Gaze | Pacific Trails Middle School | M. Mareth |
| 558 | 2nd | Mejia | Alitzia | 7 | Are You Drinking Plastic? Which Water Bottle Type Releases More BPA Under Heat: Thick or Thin Plastic? | Nazareth School | M. Reed |
| 559 | 3rd | Noriega | Nicolas | 6 | What is the Best Way to Protect Your Skin from Ultra Violet Radiation? | St. Mary's School - El Centro | C. Lizarraga |
| 560 | 1st | Saha | Karishma | 8 | Structural Brain Volume Differences Across Cognitive Aging Stages: Evidence from MRI | Bernardo Heights Middle School | C. Mukherjee |
| 561 | 1st | Valkanov | Martin | 7 | Eco-Safe Marine Sunscreen: Development and Effectiveness Testing Against Conventional Products | San Diego French American School | A. Mobley |
| 562 | 1st | Zhang | Amy | 8 | The Healthy Consumption of Popular Drinks for Teenagers | The Bishop's School | K. Kleinertz |

Junior Division - Cellular and Molecular Biology (CELL)

| | | | | | | | |
|-----|-----|--------------------|-----------------|---|--|------------------------|-------------|
| 571 | 2nd | Palombo Valenzuela | Giovanna Sophia | 8 | How Does Jellyfish Gene Affect Bacteria? | Eastlake Middle School | G. Carrillo |
|-----|-----|--------------------|-----------------|---|--|------------------------|-------------|

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|---|-------|---------------|---------------|----|---|--------------------------------|-----------------|
| Junior Division - Chemistry (CHEM) | | | | | | | |
| 581 | 1st | Amin | Ilyas | 8 | Eco-Friendly Corrosion Inhibitors: The Effectiveness of Plant Extracts in Rust Prevention | Bright Horizon Academy 6-8 | N. Nasereldin |
| 582 | 2nd | Chua Jones | Oleisa Kenzie | 8 | How the Quality of Water In Poway Schools Compares to the State and Federal Water Quality Regulations | St. Michael's School - Poway | L. Ray |
| 583 | 2nd | Cordes | Noah | 7 | Ice Ice Maybe | All Hallows Academy | M. Horvath |
| 584 | 2nd | Croff | Nicholas | 7 | At Twelve Volts DC, What is the Most Effective Amperage to Etch Copper? | Nazareth School | M. Reed |
| 585 | NS | Dougherty | William | 7 | The Effect of Temperature on pH and Total Dissolved Solids (TDS) in Drinking Water | Mt. Helix Academy | K. MacDonald |
| 586 | 2nd | Gonzales | Camille | 7 | Fabrics to Dye For: Which Fabrics Stand Out? | Nazareth School | M. Reed |
| 587 | 1st | Jaiswal | Nityaa | 7 | Will the Amount of Time You Spend Mixing the Cake Batter Affect the Height of the Cake? | Oak Valley Middle School | P. Hewett |
| 588 | 3rd | Jones | Ari'Yana | 6 | How Different Liquids Rust Metal OverTime | City Tree Christian School 6-8 | C. Glick |
| 589 | 2nd | Mitchell | Ryan | 7 | The Coke Explosions | Mt. Helix Academy | K. MacDonald |
| 590 | NS | Nguyen Nguyen | Kason Katie | 6 | The Recipe for Making the Longest Fizzing Bath Bomb | Mt. Helix Academy | K. MacDonald |
| 591 | 2nd | Niebres | Anthony Jaye | 8 | Does the Shape of Ice Affect How Long it Takes to Melt? | Chula Vista Middle School | T. Tom |
| 592 | 1st | Oster | Oliver | 8 | The Effectiveness of Various Desiccants on Moisture Absorption | The Children's School | T. Brown |
| 593 | 3rd | Parker | Sofia | 6 | Ratio of Cornstarch to Water and Its Effect on Oobleck | Mt. Helix Academy | K. MacDonald |

Junior Division - Computational Biology and Bioinformatics (CBIO)

| | | | | | | | |
|-----|-----|------------|--------------|---|--|--------------------------|----------|
| 601 | 1st | Bojja Jian | Ishan Howell | 6 | Congenital Nystagmus Diagnosis with Artificial Intelligence Eye Tracking | Oak Valley Middle School | N. Bojja |
|-----|-----|------------|--------------|---|--|--------------------------|----------|

Junior Division - Computer Science and Systems Software (COMP)

| | | | | | | | |
|-----|-----|---------|---------|---|---|------------------------------|-----------|
| 611 | 1st | Bantval | Maya | 8 | Voice-Based Object Detection Device for the Visually Impaired | Pacific Trails Middle School | E. Main |
| 612 | 1st | Bhatia | Rishabh | 7 | Applying Image Recognition Algorithms for Identification of Strongylocentrotus Purpuratus | The Rhoades School | R. Hunker |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|--|-------|-------------------|----------------|--------|--|------------------------------|-----------------|
| Junior Division - Computer Science and Systems Software (COMP) cont'd | | | | | | | |
| 613 | 2nd | Bhatt | Arya | 6 | AMT+: Exploration of Machine Learning Based Automatic Music Transcription Algorithms | Oak Valley Middle School | K. Bhatt |
| 614 | 3rd | Cendana Puentes | Michael Carlos | 8 8 | Identifying Colors: A Solution for Colorblindness | Eastlake Middle School | J. Kasem |
| 615 | 2nd | Hande | Samarth | 8 | Strategic Simulations of Warfare in a Multipolar World | Oak Valley Middle School | P. Hande |
| 616 | 1st | Kathiravan Peiris | Yaalini Dylan | 8 8 | Ride Safe, Ride Smart: Ensuring E-bike Safety with AI-Based Helmet Monitoring | Pacific Trails Middle School | M. Abelmann |
| 617 | 3rd | Matzen | Rigel | 7 | Can Prompts Improve ChatGPT Response Consistency? | The Rhoades School | R. Hunker |
| 618 | 2nd | Mohammed | Yusuf | 6 | Predict Air Quality with Machine Learning | Bright Horizon Academy 6-8 | N. Nasereldin |
| Junior Division - Earth and Environmental Sciences (EAEV) | | | | | | | |
| 631 | 3rd | Bi | Mia | 8 | Can Pond Water Purify Wastewater? | La Jolla Country Day School | M. Bessler |
| 632 | 1st | Blais Samady | Embry Ariana | 8 8 | Investigating the Effects of Rail Corridor Proximity on Microplastic Beach Pollution | The Rhoades School | R. Hunker |
| 633 | 1st | Combs | Valerie | 7 | The Detection of Microplastics in Drinking Water Using Machine Learning | The Bishop's School | K. Kleinertz |
| 634 | 1st | Feng Xu | Andy Henry | 8 8 | Mapping Invasive Species with a Drone and Machine Learning Algorithm in San Diego | Pacific Trails Middle School | A. Xu |
| 635 | 2nd | Hendrix | Elise | 7 | Quantifying the Effects of Interstate Emissions on Local Air Quality | The Rhoades School | R. Hunker |
| 636 | 3rd | Howton Packer | Dustin Daniel | 7 7 | The Effect of Different Moss Types on a Room's Temperature | The Children's School | T. Brown |
| 637 | 1st | Jia | Melody | 8 | Which Types of Straws Decompose the Quickest? | La Jolla Country Day School | M. Bessler |
| 638 | 1st | Kattamuri | Uma | 6 | Effect of Increased CO2 Levels on CAM Plant Kalanchoe pH and Stomatal Density | Oak Valley Middle School | S. Gorugantu |
| 639 | 1st | Kelsey | Skye | 8 | The Effect of Arthrospira Platensis on Plastic Degradation | The Children's School | T. Brown |
| 640 | 3rd | Lengel | Jake | 7 | Which Ground Cover Ice Plant Best Slows Erosion, Mesembryanthemum or Delspenma? | Nazareth School | M. Reed |
| 641 | 2nd | Merkey | Olivia | 8 | Absorbing Oil | Coastal Academy | B. Biernacki |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|---|-------|----------------------|-------------|--------|--|---------------------------------|-----------------|
| Junior Division - Earth and Environmental Sciences (EAEV) cont'd | | | | | | | |
| 642 | 2nd | Norman | Cora | 8 | Is It Possible to Protect Coral Reefs from Sunscreen Using Tennis Balls? | Coastal Academy | B. Biernacki |
| 643 | 1st | O'Donnell | Sydney | 7 | Surveying Biodiversity In Various Marine Habitats | The Rhoades School | R. Hunker |
| 644 | 2nd | Qiao | Isabelle | 8 | Green Roof Technology for Urban Heat Island Reduction | The Bishop's School | K. Kleinertz |
| 645 | 2nd | Snodgrass | Ariana | 6 | Are Biodegradable Hydrogels Better than Commercially Available Hydrogels? | Mt. Helix Academy | K. MacDonald |
| 646 | 3rd | Spolidoro Sullens | Mila Ava | 6 6 | Water Filters | St. Michael's School - Poway | K. McHale |
| 647 | 3rd | Waits | Damian | 8 | San Diego What's In Your Water | Mt. Helix Academy | K. MacDonald |
| 648 | 2nd | Weiser | Nava | 8 | An Untimely Demise: Reflecting on CO2 Optimization and Algae Growth for a Sustainable Future | San Diego Hebrew Day School | D. Pink |
| 649 | 1st | Schuh | Chloe | 8 | Can Eelgrass Remove Toxic Copper Levels from the San Diego Bay? | The Children's School | D. Quincannon |

Junior Division - Engineering: Electrical, Mechanical, and Robotics (EEMR)

| | | | | | | | |
|-----|-----|-----------------------|-------------------|--------|---|-------------------------------------|--------------|
| 661 | 1st | Akkarakaran | Eric | 8 | Sensor-Based Irrigation System | St. Michael's School - Poway | D. Jacob |
| 662 | 2nd | Alonso | Agustin | 8 | Making a Robotic Hand Speak Sign Language | Eastlake Middle School | G. Carrillo |
| 663 | 1st | Azevedo | Valente | 7 | Raspberry Eye | Francis Parker School | JP. Pierce |
| 664 | 2nd | Cottrell | Oliver | 7 | Personalized Homework Tutor Robot | La Jolla Country Day School | M. Bessler |
| 665 | 2nd | Fishler-Barraza | Vincent | 8 | Hand-Powered Energy: Electromagnetism for Portable Power Generation | Mt. Helix Academy | K. MacDonald |
| 666 | 3rd | Gonzalez Robertson | Alvaro Alec | 7 7 | V-22 Osprey Downwash During Takeoff | Mt. Helix Academy | K. MacDonald |
| 667 | 3rd | Gordon | Noah | 7 | Electronic Access Control | Mt. Helix Academy | K. MacDonald |
| 668 | 3rd | Gorman | Andrew | 6 | We Didn't Start the Fire | Rolling Hills Ranch Academy | S. Gorman |
| 669 | 1st | Lee Yang | Nathan Matthew | 8 8 | The Braille Box: Revolutionize Teaching to the Vision-impaired | The Cambridge School High School | M. Mayne |
| 670 | 1st | Monpays Swigart | Eva Juliana | 7 7 | DIY Beach Cleaning Robot | San Diego French American School | A. Mobley |

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|--|-------|-----------------------|----------------------|--------|---|--------------------------------|-----------------|
| Junior Division - Engineering: Electrical, Mechanical, and Robotics (EEMR) cont'd | | | | | | | |
| 671 | 2nd | Paband | Humayra | 8 | The Eco-Buoy: An Ocean-Monitoring Smart Buoy | Bright Horizon Academy 6-8 | N. Naserelddin |
| 672 | 1st | Siddiqui | Aishah | 6 | D3: Diabetic Drink Doctor - A Tri-Sensor Beverage Testing Device for Diabetics | Bright Horizon Academy 6-8 | N. Naserelddin |
| 673 | 1st | Zoch | Ryan | 8 | The Effects of Sensor Configuration on Autonomous Vehicles | De Portola Middle School | M. Bridges |
| 674 | 1st | Xu Hu | Andrew Ethan | 7 8 | Low-cost Portable Braille Embosser for Education | The Bishop's School | B. Barry |
| Junior Division - Engineering: Energy, Materials, and Transport (EEMT) | | | | | | | |
| 681 | 1st | Ahmad | Yasmine | 6 | Engineering a Ramp for Guinea Pigs | Muirlands Middle School | L. Trombley |
| 682 | 3rd | Albertson | Connor | 8 | A Free Mainsheet | The Children's School | T. Brown |
| 683 | NS | Anderson Jr Ballew | Jonathan Tidus | 8 8 | Balloon Powered Car | Stella Maris Academy | E. Carrano |
| 684 | 1st | Bi | Amanda | 6 | The Flexible, Reusable Sound Insulator | La Jolla Country Day School | M. Bessler |
| 685 | 2nd | Burns Kassar | Alexander Charlie | 8 7 | SKID: A Kid Friendly Way to Get to the Slopes | The Children's School | T. Brown |
| 686 | 2nd | Garcia | Jenna | 7 | What Materials in Water Filters Work Best to Purify Water? | Nazareth School | M. Reed |
| 687 | 1st | Goldman | Stella | 8 | VolleyBlast: An Improved Way to Practice Volleyball on Your Own | The Children's School | T. Brown |
| 688 | 2nd | Hardy | Ellie | 7 | Cool or Warm? Hot or Cold? How Does Layering Shingles Affect House Temperature? | Nazareth School | M. Reed |
| 689 | 3rd | Hernandez Hoss | Roman Aiden | 7 7 | Anti-Bird Trash Stealer | The Children's School | T. Brown |
| 690 | 1st | Juan Gaxiola | Elias | 6 | How the Quality of Sand and Gravel Affects Concrete Strength | St. Mary's School - El Centro | C. Lizarraga |
| 691 | 3rd | Krishna | SaiPranav | 7 | Flight Distance | Bernardo Heights Middle School | D. Flynn |
| 692 | 2nd | Lerner | Aiden | 8 | GPSBall: A Way to Prevent Lost Golf Balls | The Children's School | T. Brown |
| 693 | 1st | Merten | Niall | 6 | Improving Solar Panel Efficiency | The Rhoades School | R. Hunker |
| 694 | 2nd | Park | Leia | 7 | Extending the Life of Dry Erase Markers | The Bishop's School | K. Kleinertz |

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|--|------------|--------------------|----------------|--------|---|---------------------------------|-----------------|
| Junior Division - Engineering: Energy, Materials, and Transport (EEMT) cont'd | | | | | | | |
| 695 | 1st | Rupiper Yandell | Nora Katie | 6 6 | Project RF | St. Michael's School - Poway | K. McHale |
| 696 | NS | Thomas | Edward | 6 | Smart Medication Pouch | St. Michael's School - Poway | K. McHale |
| 697 | 1st | Wadhvani | Aarav | 8 | Application of Machine Learning to Decrease Aviation Incident Rates | Oak Valley Middle School | R. Villi |
| 698 | 2nd | Wallace | Spencer | 7 | Shower Dynamo | La Jolla Country Day School | M. Bessler |
| 699 | 3rd | Wang | Kiley | 8 | Charger Holders: A Way to Organize and Prevent Damage to Device Chargers | The Children's School | T. Brown |
| 700 | 3rd | Gambhir Kassar | Kaden Ollie | 7 7 | MegaMolds: Making Old Clothes into Toys | The Children's School | T. Brown |

Junior Division - Mathematics (MATH)

| | | | | | | | |
|-----|------------|-------|------|---|--|----------------------------|-------------|
| 711 | 1st | Green | Joie | 7 | May the Best Strategy Win: The Optimal Approach to Battleship | Muirlands Middle School | L. Trombley |
|-----|------------|-------|------|---|--|----------------------------|-------------|

Junior Division - Microbiology (MCRO)

| | | | | | | | |
|-----|------------|-------------------|--------------------|--------|---|--|----------------|
| 721 | 2nd | Beraha | Isaac | 8 | The Effect of UV Light, Blue Light, and Laser Light on Bacteria | San Diego Hebrew Day School | D. Pink |
| 722 | 1st | Byun Liu | Hayden Olivia | 6 6 | Can Bacteria Fly? | Solana Pacific La Jolla Country Day | M. Bessler |
| 723 | 3rd | Flora Gallegos | Brittany Stella | 6 6 | Mold Vs. Burgers | St. Peter the Apostle Catholic School | C. Diem |
| 724 | 1st | Hammad | Alya | 6 | How Well Do Disinfectants Work? | Bright Horizon Academy 6-8 | N. Naserelddin |
| 725 | 3rd | Hanigan | Julie | 8 | Which Produces Mold Sooner, Organic or Non Organic Strawberries? | Chula Vista Middle School | T. Tom |
| 726 | 2nd | Hendrix | Austin | 8 | Investigating Potentially Antibacterial Properties of Mastic Resin and Goldenseal | The Rhoades School | R. Hunker |
| 727 | 1st | Hensley | Abigail | 8 | What Kinds of Bacteria are Found in the Waters of Imperial Beach? | Chula Vista Middle School | T. Tom |
| 728 | 2nd | Katari | Aahan | 6 | Nature's Rinse: How Effective Are Natural Produce Washes? | Oak Valley Middle School | S. Katari |
| 729 | 2nd | Lin | Michael | 7 | Can Beneficial Bacteria Survive Growth Suppression in the Presence of Antibiotics? | The Rhoades School | R. Hunker |
| 730 | 1st | Pereira | Veronica | 8 | Is There Scary Bacteria on Cutting Boards? | Chula Vista Middle School | T. Tom |

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|---|-------|----------------|-----------------|--------|---|---------------------------------------|-----------------|
| Junior Division - Microbiology (MCRO) cont'd | | | | | | | |
| 731 | 3rd | Raschtschenia | Stasha | 8 | Which Room is the Dirtiest? | Mt. Helix Academy | K. MacDonald |
| 732 | 2nd | Sebalj | Keira | 7 | Spotless Showdown | St. Peter the Apostle Catholic School | C. Diem |
| 733 | 3rd | Snyder | Adina | 8 | Beneficial Bacteria in the Human Microbiome and its Correlation to Sound Frequencies Microbiology | San Diego Hebrew Day School | D. Pink |
| 734 | 1st | Way | Eleanor | 8 | How Does UV Exposure Affect the Growth of Yeast Colonies? | Chula Vista Middle School | T. Tom |
| Junior Division - Physics and Astronomy (PHYS) | | | | | | | |
| 741 | 2nd | Benz | Matyas | 7 | Can You Improve the Safety of Driving in the Dark | Nazareth School | M. Reed |
| 742 | 2nd | Boniske | Ines | 8 | The Effect of Different Pirouette Turn Preparations | San Diego Hebrew Day School | D. Pink |
| 743 | 1st | Brum | Charles | 8 | StarSync: Local Orientation Synchronization Device | Elite Academic Academy | D. Brum |
| 744 | 1st | Factor | Simon | 8 | Basketball Bounce and Friction | San Diego Hebrew Day School | D. Pink |
| 745 | 3rd | Giby | Timothy | 6 | Extinguishing Fire Using Sound Waves | St. Michael's School - Poway | K. McHale |
| 746 | 1st | Giunta-Beeche | Juliette | 7 | Does the Strength of a Magnet Change with Temperature? | All Hallows Academy | M. Horvath |
| 747 | 3rd | Hendrick Monk | Kayden Annalise | 8 8 | The Mpemba Effect | Farb Middle School | P. Huntington |
| 748 | 3rd | Jordan | Thomas | 7 | How Does Court Surface Affect the Bounce of a Tennis Ball? | Nazareth School | M. Reed |
| 749 | 1st | Karetny | Emma | 7 | The Effect of Altitude of a Rocket Based on Varying Ratios of Baking Soda to Vinegar | Mt. Helix Academy | K. MacDonald |
| 750 | 2nd | Lara | Adalyn | 8 | The Effect of Cold Temperatures on Battery Lifespan | De Portola Middle School | M. Bridges |
| 751 | 1st | Lovette-Colyer | Ella | 7 | The Effects of Tap Boards on Tap Shoes | Nazareth School | M. Reed |
| 752 | 2nd | Mesnik | Evelyn | 7 | What Flooring Produces the Most and Least Friction? | Nazareth School | M. Reed |
| 753 | 2nd | Rasmussen | Kekoa | 8 | The Effect of Scuffing on Wiffle Ball Curve | De Portola Middle School | M. Bridges |
| 754 | 3rd | Roysdon | Penny | 6 | How Different Substances Affect the Melting Rate of an Ice Cube | City Tree Christian School 6-8 | C. Glick |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|--|-------|---------------|------------|--------|---|----------------------------------|-----------------|
| Junior Division - Physics and Astronomy (PHYS) cont'd | | | | | | | |
| 755 | 2nd | Tedesco | Giovanni | 8 | The Different Distances Pickleballs Travel with Different Sized Holes | De Portola Middle School | M. Bridges |
| 756 | 1st | Stroud-Healey | Franklin | 6 | Measuring Magnetic Susceptibility of Liquids for Contaminates | Mt. Helix Academy | K. MacDonald |
| Junior Division - Plant Sciences (PLNT) | | | | | | | |
| 761 | 1st | Ax-Keating | Isaac | 8 | The Salinity Trinity: The Relationship Between Kelp, Temperature, and Salt Levels | San Diego Hebrew Day School | D. Pink |
| 762 | 3rd | Daniels | Gemma | 7 | What Fertilizer Grows Grass the Best | All Hallows Academy | M. Horvath |
| 763 | 3rd | Delgado | Elena | 6 | The Effect of Colored Light on Plant Growth | City Tree Christian School 6-8 | C. Glick |
| 764 | 2nd | Diep | William | 6 | Are Genetically Modified Plants a Solution for Farming on Mars? | Connect Academy Poway Unified | C. Matos |
| 765 | 3rd | Gammage | Kennedy | 7 | Do Sound Vibrations Derived from Classical Music Stimulate Plant | All Hallows Academy | M. Horvath |
| 766 | 1st | Goel Ye | Leela Luna | 8 8 | Effects of Salinity on California Coastal Sage Scrub Seed Germination | The Rhoades School | R. Hunker |
| 767 | 2nd | Joby | Maria | 6 | What Type of Water Helps the Plant Grow? | St. Michael's School - Poway | K. McHale |
| 768 | 2nd | Nair | Vyom | 7 | Can Expired Vitamin Supplements Be Used to Help Plant Growth? | The Bishop's School | K. Kleinertz |
| 769 | 2nd | Palmer | Will | 7 | Does Positivity and Negativity Affect Plants? | All Hallows Academy | M. Horvath |
| 770 | 1st | Roy | Amelie | 8 | Sustainable Gardening: Kitchen Scraps to Thriving Tomatoes! | San Diego French American School | A. Mobley |
| 771 | 3rd | Wilson | Hannah | 7 | The Effect of Different Types of Water on Cut Flowers | City Tree Christian School 6-8 | C. Glick |

Junior Division - Product Testing (PROD)

| | | | | | | | |
|-----|-----|-----------------------|-----------------|--------|---|---------------------------|------------|
| 781 | 3rd | Acabado | Jose | 8 | Drying Textiles | Chula Vista Middle School | T. Tom |
| 782 | 1st | Andersen | Zachary | 8 | Decomposition of Compostable Bags and Best Brand for Carrying San Diego's Waste | De Portola Middle School | M. Bridges |
| 783 | 1st | Barzal | Lily | 7 | Which Hand Soap is Best for Killing Bacteria? | All Hallows Academy | M. Horvath |
| 784 | 1st | Bharadwaj Rajagopalan | Harshini Advita | 8 8 | MoisTRUE - Which Ingredient is Best in Retaining Moisture for Lip Balm? | Oak Valley Middle School | I. Chester |

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| Prj ID | Award | Last Name | First Name | Gr | Project Title | School | Teacher/Advisor |
|--|------------|---------------|---------------------|--------|---|-------------------------------|-----------------|
| Junior Division - Product Testing (PROD) cont'd | | | | | | | |
| 785 | 2nd | Byrne | Jack | 7 | Which Packaging Material Preserves Heat Longer: Eco Friendly or Not Eco Friendly? | Nazareth School | M. Reed |
| 786 | 2nd | Conway | Sydney | 7 | Which 40 oz. Stainless Steel Water Bottle Keeps Water Coldest the Longest | Nazareth School | M. Reed |
| 787 | 1st | Dimenstein | Anael | 8 | The Effect of Natural Heat Protectant Versus Synthetic Heat Protectant on Hair Tensile Strength and Cells | San Diego Hebrew Day School | D. Pink |
| 788 | 3rd | Forrest | Trevor | 7 | What is the Stickiest Surf Wax | All Hallows Academy | M. Horvath |
| 789 | 2nd | Gerrity | Miren | 6 | Do You Need That \$40 Water Bottle? | St. Michael's School - Poway | K. McHale |
| 790 | 2nd | Gordon | Mila | 8 | Effects of Top and Base Coat on a Manicure | San Diego Hebrew Day School | D. Pink |
| 791 | 1st | Hall | Eleanor | 7 | Strongest and Most Eco-Friendly Adhesive for Wood and Model- Making | Nazareth School | M. Reed |
| 792 | 1st | Kaziha | Mariam | 8 | Can Beeswax Wrap Replace Plastic Wrap? | De Portola Middle School | M. Bridges |
| 793 | 3rd | Medina | Grace | 7 | How to Determine the Height in Muffins Between Different Types of Flours | Mt. Helix Academy | K. MacDonald |
| 794 | 3rd | Padron | Carlos | 8 | Which Brand of Potato Chips Has the Least Grease? | Chula Vista Middle School | T. Tom |
| 795 | 2nd | Parker | Angelina | 8 | Do Certain Fabrics Absorb Higher Intensities of Heat from the Sun | Mt. Helix Academy | K. MacDonald |
| 796 | 1st | Samuth | Vela | 8 | How Does the Amount of Vitamin C Vary in Different Fruit Juices? | De Portola Middle School | M. Bridges |
| 797 | 2nd | Kozo | Auline | 7 | Do Different Types of Flours Affect Cookie Elevation | All Hallows Academy | M. Horvath |
| 798 | 1st | Zanani | Gaia | 8 | Hair Damage from Chlorine | San Diego Hebrew Day School | D. Pink |
| 799 | 2nd | Cadena Dagdug | Ana Daniela Luisana | 6 6 | Shrinking Crocs | Our Lady of Guadalupe Academy | J. Patton |