2026 USEF - Senior Division

Category and Rank	Name	School	Project Title
Behavioral & Social Sciences - 1st	Aadi Mishra	The Waterford School	How AI Speaks Changes How People Think: Framing AI Advice to Keep Moral Reasoning Human
Behavioral & Social Sciences - 2nd	Ivan Turan	West High	Public Health Intervention: A Novel Hybrid Framework for Early Suicide Risk Detection and Prevention Using Real Time Linguistic and Socioeconomic Indicators
Behavioral & Social Sciences - 3rd	Sophia Zhang	The Waterford School	An Ensemble Learning Framework for Frailty Classification in Older Adults Using a Dual-Screening Approach
Behavioral & Social Sciences - 4th	Ethan Jayie Kim	West High	The Impact of Mouse Whisker Stimulation on c-Fos Expressions in Neuronal Activity
Biology, Microbiology, & Genetics - 1st	Rayne Weinstein	Rowland Hall	UnFolding Cancer: Evaluating AlphaFold's Ability to Simulate Models that Predict Pathogenic Mutations
Biology, Microbiology, & Genetics - 2nd	Aaditya Kuberan	Skyline High	PhIT-Mediated mKate2 Fluorescent Tagging of the unc-25 Gene in Caenorhabditis elegans
Biology, Microbiology, & Genetics - 3rd	Cecelia Hyman, Dylan Johnson De Lacy	Rowland Hall	Crop-Specific Microbial Biofertilizer for Indian Ricegrass: A Sustainable Strategy to Supplement Alfalfa Cultivation
Biology, Microbiology, & Genetics - 4th	Aahana Sharmacharya	Hillcrest High	Regulation of Membrane Repair Pathways by SNARE Proteins in DMD
Biology, Microbiology, & Genetics - Scientific Merit	Anvith Rangini	West High	Evaluating the Necessity of Bone Morphogenetic Protein-Binding Endothelial Cell Precursor-Derived Regulator (BMPER) in Modulating Beige Adipocyte Differentiation.
Biomedical Engineering & Health Technologies - 1st	Arin Soneji, Varun Agarwal	West High	An Adaptive Closed-Loop Vibrotactile Neuromodulation Device for Reducing Tremor-Related Propranolol Dosing Ramification
Biomedical Engineering & Health Technologies - 2nd	Olivia Jiang	West High	Electrostatically Modified Collagen Hybridizing Peptides for Noninvasive Molecular Imaging and Tissue Targeting in Pulmonary Fibrosis
Biomedical Engineering & Health Technologies - 3rd	Aimee Solzbacher	Rowland Hall	Development and testing of a simulator for multiple types of blindness and an accompanying app to help spread awareness
Biomedical Engineering & Health Technologies - 4th	Olivia Newton	Juan Diego Catholic High	Optimizing Microbial Culture Conditions to Enable a Large-Scale Production of Heparin Precursors
Biomedical Engineering & Health Technologies - Scientific Merit	Karthik Chaganti	West High	Aspect-Ratio-Driven Control of Magnetic Particle Retention and Transport in Synovial-Like Fluid
Chemistry & Biochemistry - 1st	Asher Orenstein, Samantha Wright	Rowland Hall	Combining soybean-induced carbonate precipitation (SICP) and hydroxypropyl methylcellulose (HPMC) to prevent wind erosion
Chemistry & Biochemistry - 2nd	Catriona Kawamoto	The Waterford School	Promoting Lung Branching Morphogenesis Using Xyloside, a Small Molecule that Promotes Priming of Endogenous Heparan Sulfate Glycosaminoglycans
Chemistry & Biochemistry - 3rd	Adwita Mandiwal, Aashita Mandiwal	West High	Guanine Nitrogenous Base DNA Damage due to Oxidative Stress Induced by Metals Inhaled from Great Salt Lake Dust
Chemistry & Biochemistry - 4th	Becket Evans	Juan Diego Catholic High	Machine Learning Optimization of Conducting Polymer Thin Films with Magic Blue
Chemistry & Biochemistry - Scientific Merit	Alden Rhodes, Cassidy Bahna	Rowland Hall	Restoring native riparian vegetation in Utah: Halophilic rhizobacteria to improve black cottonwood establishment in saline soils

Chemistry & Biochemistry - Scientific Merit	Ethan Tao	West High	Selective Oncolytic Replication of Human Rhinoviruses in MCPyV-Associated Merkel Cell Carcinoma
Civil & Energy Engineering - 1st	Vasishta Palagiri	West High	Utilizing a Monte Carlo Particle Transport Simulation to Evaluate Lithium-based Materials for Enhanced Tritium Breeding, Shielding, and Energy Deposition Performance in Nuclear Fusion Reactor Systems.
Computer Science & Applied Computational Methods - 1st	Atharv Khemka	West High	Optimizing Epilepsy Neurostimulation Therapies Through Analysis of Electrode Distance and Regional Neural Firing Dynamics
Computer Science & Applied Computational Methods - 2nd	Lavanya Mohnani	Hillcrest High	Employing the Synthesis Machine Learning Algorithm to Synthesize New Novel Crystal Structures
Computer Science & Applied Computational Methods - 3rd	Jacob Arnold	West High	Topological Optimization of Multi-Layer Perceptrons: A Comparative Analysis of Architectural Symmetry and Computational Efficiency across Diverse Data Domains
Computer Science & Applied Computational Methods - 4th	Wenray Zhang	Hillcrest High	Early Detection of Skin Cutaneous Melanoma with Artificial Intelligence Techniques
Electrical & Computer Engineering - 1st	Srivatsav Sura, Navin Karthik, Srinath Ramakrishnan	Hillcrest High	Backdrivable, Motor-Actuated Knee Exoskeleton Using IMU-Based Gait Detection for Adaptive Assistance and Haptic Feedback
Electrical & Computer Engineering - 2nd	Ishanth Sooram	Hillcrest High	Signal Processing Optimization for Universal Bioamplifier Systems
Electrical & Computer Engineering - 3rd	Mikhail Starykh	West High	A Computational Framework for Transmission Line Theory Using Physics-Informed Neural Networks
Electrical & Computer Engineering - 4th	Harrison Lasater	Rowland Hall	Automated Table Recognition and Data Extraction using Hybrid CNN-YOLO Architectures
Environmental Sciences & Engineering - 1st	Aiden Karnam	The Waterford School	Foaming Out Forever Chemicals: Air-Water Partitioning of PFAS in Wastewater Treatment and Implications for Human Exposure
Environmental Sciences & Engineering - 2nd	Scott Vars	Skyline High	Seeing Drought Sooner: Comparing SIF and NDVI for Vegetation and Drought Monitoring in the Wasatch Front from 2013-2024
Environmental Sciences & Engineering - 3rd	Ananya Pallinti	West High	Development of Novel Water Treatment Technologies for Enhanced Removal of Nutrients and Trace Contaminants in Aquatic Systems and Formation of Freshwater and Fertilizer.
Environmental Sciences & Engineering - 4th	Kethan Reddy	Hillcrest High	AI-Based System for Detection, Classification, and Removal of Microplastics: A Novel Approach Using Artificial Intelligence, Machine Learning and Magnetic Oil-Based Nanoparticles for the Detection, Identification, and Removal of Primary, Polyethylene, and Polypropylene Microplastics Aged with UV and Hydrogen Peroxide from Water
Mechanical & Materials Engineering - 1st	Ethan Bo	Judge Memorial	Applying Principles of Electromagnetism and Resistive Heating to Develop a More Accessible Method of Metal Additive Manufacturing
Mechanical & Materials Engineering - 2nd	Ryland Lueders	The Waterford School	The Effect of Tire Inflation Pressure on the Rolling Resistance of a Mountain Bike on Rough Terrain

Mechanical & Materials Engineering - 3rd	Alvin Gao	Hillcrest High	Development and Analysis of Mass & High-Speed Effectiveness of a Polyester-Based Underride Mitigation System
Mechanical & Materials Engineering - 4th	Evan Elkin	Rowland Hall	A Model for the Distribution of Cadmium Interstitials in Cadmium Telluride Photovoltaics
Medicine & Health Sciences - 1st	Ian Jake Kim	West High	Liposomal Encapsulation to Reduce Propofol Adsorption in Extracorporeal Membrane Oxygenation (ECMO) Systems
Medicine & Health Sciences - 2nd	Samuel Lu	Rowland Hall	Tumor microenvironmental signatures associated with low DARC/ACKR1 expression in solid tumors, and potential mechanistic insights
Medicine & Health Sciences - 3rd	Sreeram Patcha	Skyline High	The role of CDP-Choline in the metabolism of ctnnb1-driven Hepatocellular Carcinoma
Medicine & Health Sciences - 4th	Aanika Boe, Darshan Pani, Jacob Conover	Rowland Hall	Molecular docking and in silico ADMET approach to identify potential phytochemical lead molecules targeting the oncoprotein ATAD2 for treatment of AR-low triple-negative breast cancer
Medicine & Health Sciences - Scientific Merit	Victor Young, Forest Young	Skyline High	From Risk to Action: Time-Series Prediction of Respiratory Support Requirements in Sepsis Patients
Medicine & Health Sciences - Scientific Merit	Jialai Ying	Skyline High	ARF6 as a Regulator of Amyloid-β Trafficking and a Potential Therapeutic Target in Alzheimer's Disease
Medicine & Health Sciences - Scientific Merit	Bhavya Soni	West High	Development of an ex vivo human retinal model to investigate inflammation-mediated neurodegeneration in Retinal Disease
Medicine & Health Sciences - Scientific Merit	Edward Pan	The Waterford School	Bifenthrin Disrupts Neuroimmune Cell Viability and BMP-4 Expression in Human and Invertebrate Models: Emerging Public Health and Ecosystem Safety Risks
Physics, Astronomy & Math - 1st	Mo Spiegel	Skyline High	Applying Black Holes as Cosmological Standard Rulers
Physics, Astronomy & Math - 2nd	Leo Pickron, Jane Borst, Hans Baker	Rowland Hall	Predicting Cycling Aerodynamics: Can Statistical Models Replace CFD and Wind Tunnel Testing?
Physics, Astronomy & Math - 3rd	Kendra Larson	Rowland Hall	Effect of Charon's Mass in the Stability of the Pluto-Charon System
Physics, Astronomy & Math - 4th	Maximus Widmaier	Juan Diego Catholic High	Stellar Simulations: How fuel density and temperature affect fusion reaction rates
Plant Sciences - 1st	Aneesh Rao	Skyline High	A Novel Biochar-Based Approach to Reduce Runoff Toxicity and Modulate Epigenetic Stress Memory in Crops
Plant Sciences - 2nd	Betty Otterstrom-Young	Salt Lake Center for Science Education (SLCSE)	Ameliorating the farming process with Mycorrhizae by improving plant growth and soil remediation

Regeneron ISEF Grand Champion Winners			
Regeneron International Science and Engineering Fair (ISEF)	Ian Jake Kim	West High	Liposomal Encapsulation to Reduce Propofol Adsorption in Extracorporeal Membrane Oxygenation (ECMO) Systems
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Regeneron International Science and Engineering Fair (ISEF)	Mo Spiegel	Skyline High	Applying Black Holes as Cosmological Standard Rulers
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