

SEFH 2017 Senior Division Award Winners

Division	Category	Place	Project	Students	District
Senior	Robotics and Intelligent Machines	1st Place	Ultrasonic Map Creator	Irineo Sanchez	ALDINE ISD
Senior	Earth & Space Sciences	1st Place	Electromagnetoreception In Planaria	Alexandra Tan	GALVESTON ISD
Senior	Animal Sciences	1st Place	The Characterization of the Retinal Determination Network in Drosophila melanogaster in order to Optimize the Diagnosis and Treatment of Human Retinal Disease	Devanshi Udeshi	FORT BEND ISD
Senior	Behavioral/Social Sciences	1st Place	Ingenuity in Arithmetic	Amaha Ghide	CONROE ISD
Senior	Chemistry	1st Place	A Pill's Perilous Pathway	Roshni Sen	CONROE ISD
Senior	Plant Sciences	1st Place	Biochar Miracles	Hamna Badat	ALDINE ISD
Senior	Physics & Astronomy	1st Place	â€œSynthesis and Characterization of Multi-Walled Carbon Nanotubes and Application in Solar Sail for Breakthrough Starshotâ€	Jaehoon Jung	PRIVATE
Senior	Medicine & Health	1st Place	Novel Blood Tests to Diagnose Preeclampsia: Saving the Lives of Mother and child	Tanya Kumar	CLEAR CREEK ISD
Senior	Biochemistry/Microbiology	1st Place	Towards Engineering a Fixed Dimer of a Tetramer: Chemokine CXCL7	Suravi Sarkar	FORT BEND ISD
Senior	Engineering: Materials & Bioengineering	1st Place	Polymeric Bio-composite Study for Replacing Polyethylene Terephthalate Through Algal Substitute	Andrew Kim	CONROE ISD
Senior	Senior Team: Life Sciences	1st Place	The Miracle Pill III	Ajitha Anand, Sreshta Margan	CONROE ISD
Senior	Senior Team: Life Sciences	1st Place	The Miracle Pill III	Sreshta Margan	CONROE ISD
Senior	Senior Team: Life Sciences	1st Place	The Miracle Pill III	Nandika Nair	CONROE ISD
Senior	Engineering: Chemical	1st Place	Engineering an Environmentally Friendly Drilling Fluid	Jill Bohnet	CONROE ISD
Senior	Computer Sciences	1st Place	Efficient Arrhythmia Detection Using Computational Methods	Rahul Yesantharao	CLEAR CREEK ISD
Senior	Engineering: Electrical/Mechanical/Civil	1st Place	A Smart Bionic Leg Brace: An Electromechanically Actuated Active-Assist Wearable Orthotic Device for Comprehensive Restoration of Gait Characteristics across Everyday Mobility Scenarios	Syamantak Payra	CLEAR CREEK ISD
Senior	Engineering: Aerospace	1st Place	Cryogenic Thermosuit for Manned Mission to Titan	Wittiker Schlauch	CLEAR CREEK ISD
Senior	Environmental Sciences	1st Place	Crude Oil: Can Microbes Eat It?	Shefali Chopra	CLEAR CREEK ISD
Senior	Energy & Transportation	1st Place	Optimizing Micro-geometric Bladeless Wind Turbines (5)	Sarah Palmer	FRIENDSWOOD ISD
Senior	Mathematics	1st Place	Predicting Mechanical Damage from Glioblastoma Tumor Growth	Shobha Dasari	CONROE ISD
Senior	Senior Team: Engineering/Physical Sciences	1st Place	Living Energy: A Novel Bioluminescent Concentrator for Enhanced Photovoltaic Performance	Smiti Gandhi, Andrew Liu	CLEAR CREEK ISD

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Senior	Earth & Space Sciences	2nd Place	First World Filtration	Alexander Pemberton	CONROE ISD
Senior	Animal Sciences	2nd Place	Bone Runner	Amanda Doyle	CONROE ISD
Senior	Behavioral/Social Sciences	2nd Place	The Influence of Technology on Teenage Driving Behavior	Rohit Kamath	KATY ISD
Senior	Chemistry	2nd Place	Evaporation & Condensation 2.0	Keilah South	ALDINE ISD
Senior	Plant Sciences	2nd Place	Isolation and Characterization of Novel Bacillus Strain in Houston, TX with High Rates of Siderophore Effect	Adesuwa Ehioghae	CHARTER
Senior	Physics & Astronomy	2nd Place	Modeling Intrinsic Spin of Massive Gauge Bosons through Angular Distributions	Gabrielle Olinger	HOUSTON ISD
Senior	Medicine & Health	2nd Place	The Link Between Insulin Resistance and Memory	Alex Abate	CLEAR CREEK ISD
Senior	Biochemistry/Microbiology	2nd Place	Adipose Derived Stem Cells for Wound Closure Following Massive Burn Injuries	Raima Siddiqui	CLEAR CREEK ISD
Senior	Engineering: Materials & Bioengineering	2nd Place	High Resolution Magnetic Resonance Imaging Using Superconducting RF Coils	Kavita Selva	CLEAR CREEK ISD
Senior	Senior Team: Life Sciences	2nd Place	Pharmaceuticals and Nanoparticle Medicines Downstream	Juliana Steward, Megan Alam	CONROE ISD
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Senior	Engineering: Chemical	2nd Place	Synthesis of a Graphene Based Fixative to Combat Naval Air Pollution	Hannah Meiseles	CONROE ISD
Senior	Computer Sciences	2nd Place	Detection of Alzheimer's Disease	Adarsh Suresh	CLEAR CREEK ISD
Senior	Engineering: Electrical/Mechanical/Civil	2nd Place	The Piezoelectric Pacemaker: A Rechargeable Cardiac Device	Dhiren Wijesinghe	CLEAR CREEK ISD
Senior	Engineering: Aerospace	2nd Place	Artificial Gravity for Deep Space Exploration	Ashley Hoffman	CLEAR CREEK ISD
Senior	Environmental Sciences	2nd Place	Microbial Fuel Cells for Environmental Monitoring II	Hudson Nash	CONROE ISD
Senior	Energy & Transportation	2nd Place	Testing and Improving Factors of Energy Efficiency	Praneel Joshi	CONROE ISD
Senior	Mathematics	2nd Place	Effect of Intensive Nutrition and Lifestyle Intervention on Cancer Survival Rates	Sithija Manage	CONROE ISD
Senior	Senior Team: Engineering/Physical Sciences	2nd Place	A New Type of Imaging: Automatic Acquisition with Near-Infrared Technology	Ruchika Dongre, Swetha Gangu	FORT BEND ISD
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Senior	Engineering: Aerospace	3rd Place	Undetected	Abdulbari Agboola	ALIEF ISD
Senior	Animal Sciences	3rd Place	Evaluating an Alternative Food Source to Optimize the Growth Rate and Overall Size of Juvenile Aurelia aurita	Madeleine Thompson	FRIENDSWOOD ISD
Senior	Behavioral/Social Sciences	3rd Place	The Ethics of Medicine	Kayal Parthiban	CLEAR CREEK ISD
Senior	Chemistry	3rd Place	Synthetic vs Natural Antacids	Pallavi Mundra	CONROE ISD
Senior	Plant Sciences	3rd Place	Effect of Various Light Colors on Plant Growth	Dlvi Batra	FORT BEND ISD
Senior	Physics & Astronomy	3rd Place	Magnetic Monopoles	Alexy Skoutnev	CONROE ISD
Senior	Medicine & Health	3rd Place	A Defense System for Cancer Drug Delivery Vehicles	Pearlyn Ang	CONROE ISD

Senior	Biochemistry/Microbiology	3rd Place	Targeting Triple Negative Breast Cancer with Anthrax Toxin and Cancer Cell-Specific Monoclonal Antibodies	Jennifer Lin	HOUSTON ISD
Senior	Engineering: Materials & Bioengineering	3rd Place	Formulating a Kidney: How to Differentiate hiPSCs Into Functional Nephrocytes	Brazil Bartholomew	FORT BEND ISD
Senior	Senior Team: Life Sciences	3rd Place	Antibacterial Effects of Carbon Monoxide: A novel study on the combative effects of CO on bacterial growth in organisms	Kelly Zhou, Jessica Steward	CONROE ISD
Senior	Engineering: Chemical	3rd Place	Splitting the Air	Isaac Whitley	HOUSTON ISD
Senior	Computer Sciences	3rd Place	Mighty Ants: Optimizing Path-Planning Algorithm with "Vision"	Daniel Zou	CONROE ISD
Senior	Engineering: Electrical/Mechanical/Civil	3rd Place	A solution to a disability	Santiago Camargo	CONROE ISD
Senior	Environmental Sciences	3rd Place	Zirconium Based Microbial Fuel Cell	Adham Kassem	CONROE ISD
Senior	Energy & Transportation	3rd Place	A Novel Approach to Solar Heat Localization via Carbon Felt	Kevin Svetlitski	CONROE ISD
Senior	Mathematics	3rd Place	Cancer Cellphone Tower Correlation	Sahej Ahuja	CLEAR CREEK ISD
Senior	Senior Team: Engineering/Physical Sciences	3rd Place	Autonomous Water Driven Micromotors: Photocatalytic Breakdown of CWB Agents and Pollutants	Jenny Qu, Vidisha Ganesh	CONROE ISD
Senior	Medicine & Health	Honorable Mention	MRSA252 Versus TW20 and ST398	Maria Lopez	CONROE ISD
Senior	Engineering: Chemical	Honorable Mention	Hydrogen Always #1	Joseph Martinez	HOUSTON ISD
Senior	Animal Sciences	Honorable Mention	Assessment of Local Varroa Mite Infestation Levels and Viability of Powdered Sugar as a Method of Control	Daniel McSween	Montgomery ISD
Senior	Behavioral/Social Sciences	Honorable Mention	Survey of parents attitudes towards the HPV vaccine	Sean Kwatra	CONROE ISD
Senior	Senior Team: Life Sciences	Honorable Mention	Hydroponic Cultivation Using Algae	Matthew Winningham, Justin Foster, Dominic Beck	CONROE ISD
Senior	Biochemistry/Microbiology	Honorable Mention	Phage Therapy: An Alternative to Antibiotics III	Christopher Calizzi	CONROE ISD
Senior	Engineering: Electrical/Mechanical/Civil	Honorable Mention	Pipe it up	Muning Fan	CONROE ISD
Senior	Computer Sciences	Honorable Mention	The Enigmatic Cryptograph	Austin Bouley	CONROE ISD
Senior	Energy & Transportation	Honorable Mention	Effects of a Vacuum on the Efficiency of a Magnetically Levitated Flywheel	Marcus Schlauch	CLEAR CREEK ISD
Senior	Senior Team: Engineering/Physical Sciences	Honorable Mention	Piezoelectric Energy Production Using Hydropower	Annie Zhang, Hina Akbar	CONROE ISD
Senior	Biochemistry/Microbiology	Honorable Mention	The Effect of Dantrolene Sodium on Calcification of Porcine Aortic Valve Cells	Vaidya Parthasarathy	CLEAR CREEK ISD
Senior	Behavioral/Social Sciences	Honorable Mention	Copy Cat	Henry Stanford	CONROE ISD
Senior	Plant Sciences	Honorable Mention	Different Water Types Effect on Bean Germination	Rebecca Bass	CONROE ISD
Senior	Plant Sciences	Honorable Mention	An Attraction to Hunger	Elias Hamilton	FORT BEND ISD