2017 Central Sound Regional Science and Engineering Fair

Special Awards

American Institute for Aeronautics and Astronomy
- Andrea Dang and Sandra Militaru (Tesla STEM) Solketal Additive for Aviation Fuel
- Nathaniel Cockbain, Joseph Gardner, and Bukhari Shakil (Mountlake Terrace) Airfoil Dimpling
- Quinn Nicholson and Simon Zombor (Mountlake Terrace) Effects of Ice on Airfoils
- Michael McNaughton, Ingrid Phillips, and Jack Softcheck (Stanwood) Blueprint For Safety - Robotically Assisted Machinist

American Meteorological Society
- Sophia Nelson (Mountlake Terrace) High Altitude Ballooning as a Method for Analyzing Stratospheric Ozone
- Damon Shelby and Keagan McTee (Lake Stevens) Water Condenser

ASM Materials Education Foundation
- Terrance Li (Newport) Exploring Piezoelectrc Properties of Atomically Thin WSe2

ASU Walton Sustainability Solutions Award
- Vesta Baumgartner and Maxwell Leidig (Mountlake Terrace) Testing the effectiveness of *Stropharia rugoso-annulata* and *Pleurotus ostreatus* in reducing total petroleum hydrocarbon content found in an urban stormwater runoff bioretention system
- Olivia DiAcetis (Cedarcrest) Evaluating Food Waste as a Source of Electricity

Inspiring Excellence
- Mary Elizabeth Adler (Newport) A Bird's Eye View: Investing the Relationship Between Local Bird Syrinx Structure and their Phylogenetic Status Using Cladogram Analysis
- Clayton Kristiansen (Cedarcrest) Predictive Highway Lighting System
- Grace von Scheliha and Christina Goto (Tesla STEM) Plant Assisted Learning: The Effect of

American Chemical Society (Local Chapter)
1. Hannah Schuster (Mountlake Terrace) Comparative Field Study of Washington Ocean Wellness
2. Kira Doan and Kylie Otani (Mountlake Terrace) Testing the Effectiveness of Varying Concentrations of *Opuntia ficus-indica* Extract on Dispersing Oil in Seawater
3. Yogitha Sunkara (Tesla STEM) Comparative Analysis of Total Mercury Concentration in Salmon Species using Atomic Florescence

American Psychological Association
- Grace von Scheliha and Christina Goto (Tesla STEM) Plant Assisted Learning: The Effect of *Epipremnum aureum* on Student Cognition and Neural Oscillations

Association for Women Geoscientists (National and Local Seattle Chapter)
1. Hannah Schuster (Mountlake Terrace) Comparative Field Study of Washington Ocean Wellness
2. Kira Doan and Kylie Otani (Mountlake Terrace) Testing the Effectiveness of Varying Concentrations of *Opuntia ficus-indica* Extract on Dispersing Oil in Seawater
3. Sydney Meade (Tesla STEM) The Analysis of the Effects of Animal Agricultural Runoff on Water Quality based on Nitrates, pH, Dissolved Oxygen, Total Dissolved Solids, and Turbidity

- Yogitha Sunkara (Tesla STEM) Comparative Analysis of Total Mercury Concentration in Salmon Species using Atomic Florescence
- Ryan Dunne (Mountlake Terrace) Flood Early Warning System
- Mitchell Campbell (Mountlake Terrace) Mechanical Flight Simulator
- Sriharshita Musunuri (Henry M. Jackson) Next Generation Organic Transistors: Aqueous Phase

Epipremnum aureum on Student Cognition and Neural Oscillations

Intel Excellence in Computer Science
- Eshika Saxena (Interlake) Extracting Biometrics From Video

Ricoh Americas Corporation
- Stuart Brown and Eric Fan (Tesla STEM) Cost-Benefit Analysis of Domestic Biogas Generation

Yale Science and Engineering Association
- Helen Carson (Home school) Explaining Aeolian Features in Meridiani Planum Mars: Winds and Saltation in Past Orbital States

Washington State Science and Engineering Fair Outstanding Research-Based Project Achievement Award
Richard Halbert and Daniel Hoffman (Tesla STEM) Tribalism in Two-Party Politics

Synthesis of Lyotropic Liquid Crystalline Polymer Films with Enhanced Nanomorphology and Stability

National Oceanographic and Atmospheric Association
- Jadelyn Lippmann, Mikey Munoz, and Claudia Newell (Lake Stevens) Bycatch Begone

Society for In Vitro Biology
- Veenadhari Kollipara (Interlake) Farmer, Test Thyself!

Stockholm Junior Water Prize
- Kira Doan and Kylie Otani (Mountlake Terrace) Testing the Effectiveness of Varying Concentrations of *Opuntia ficus-indica* Extract on Dispersing Oil in Seawater
- Hannah Schuster (Mountlake Terrace) Comparative Field Study of Washington Ocean Wellness
- Sydney Meade (Tesla STEM)-The Analysis of the Effects of Animal Agricultural Runoff on Water Quality based on Nitrates, pH, Dissolved Oxygen, Total Dissolved Solids, and Turbidity

Supernova awards are CSRSEF special awards that recognize potential and creativity within each category.

- Popular Yang (Annie Wright) Hydroponics: Regrowing Vegetable Roots
- Sana Fatima (Tesla STEM) The Combined Effect of Music and Running on Fluid Intelligence
- Olivia Blevins and Audrey Tseng (Tesla STEM) Designing a Cost-Effective and Customizable 3D-Printed Tongue, for the Purpose of Gaining Sufficient Unsupported Synthetic Tongue Muscle Articulation for Use in Speech and Swallowing, Comparable to Organic Tongue Muscle Articulation
- Navdha Chadha and Elizabeth Kisler (Mountlake Terrace) Using DNA Barcoding to Determine the Phylogenetic Relationships Between Mushrooms
- Alexandra Herrmann, Hailee Malins, and Alina Poff (Mountlake Terrace) Urban Water Runoff Quality
- Ryan Lipour, Daniel Dirdala, and Minhquan Dang (Aviation) Minimizing impact of tsunamis
- Ryan Dunne (Mountlake Terrace) Flood Early Warning System
- Paul Phillips Nichols, Francesco Rachetto, and Thomas Zemene (Aviation) Battery from Scratch
- Aurora Hake and Simran Rakhra (Annie Wright) The Capability of Different Plane Wing Materials
- Quinn Burford (Cedarcrest) The Optimal Position of Micro-bubble Emission Systems on the Hull of a Ship
- Mira Shin and Natalie Sutton (Mountlake Terrace) Second Language App