

UAB-CORD CARSEF Winners

March 3, 2018

CARSEF TOP HONORS & INTEL WINNERS

Elizabeth Gresham

12th Grade

Alabama School of Fine Arts

Project Title – *Peer Group Influences on High School Girls Interest in STEM*

Aniket Pant

10th Grade

Jefferson County International Bacculaureate

Project Title – *Optical Studies of Nanostructures for Biosensing Applications*

Analise Chambers

11th Grade

Jefferson County International Bacculaureate

Project Title – *Carbon Dioxide Removal in Coniferous and Deciduous Trees*

Alexandra Pritchard

11th Grade

The Altamont School

Project Title – *Exosomes and Macrophage Polarization in Lung Cancer*

CARSEF Category Winners

Senior Division

BEHAVIORAL AND SOCIAL SCIENCES

1st Place

Elizabeth Gresham

12th Grade

Alabama School of Fine Arts

Project Title – *Peer Group Influences on High School Girls' Interest in STEM*

2nd Place

Sommer Carnes

9th Grade

Jefferson County International Baccalaureate

Project Title – *Music and Memorization Relations*

3rd Place

Shaniya Plump

9th Grade

Ramsay High School

Project Title – *Circadian Rhythm and the School Day*

Honorable Mention

Allejandro Morillon, Joel Rios & Jeffrey Haygood

10th Grade

George Washington Carver High School

Project Title – *Reaction Time*

BIOLOGY

1st Place

Myra Rana

12th Grade

Alabama School of Fine Arts

Project Title – *Association of Streptococcus Mutans Containing Phage Related CRISPRs and Caries*

2nd Place

Janina Wu

9th Grade

Indian Springs School

Project Title – *Effects of Dietary Sugars on Streptococcus Mutans Colonization on Fruit Flies*

3rd Place

Richard Fu

12th Grade

Vestavia Hills High School

Project Title – *Ketogenic Diet Promotes the Therapeutic Efficacy of Anti-PD1 Therapy in Melanoma*

Honorable Mention

Shehzan Maredia & Benjamin Hartwiger

11th Grade

Hoover High School & Spain Park High School

Project Title – *The Influences Behind Declining Population of Sea Otters and the Larger Global Scale Consequences*

Honorable Mention

Josh Bobelbower

9th Grade

Indian Springs School

Project Title – *The Effects of Radiation on Green Bean Seeds*

Honorable Mention

Arshnoor Grewal

11th Grade

Jefferson County International Baccalaureate

Project Title – *Effect of Allium Sativum on the Growth of Saccharomyces Cerevisiae*

CHEMISTRY

1st Place

Aniket Pant

10th Grade

Jefferson County International Baccalaureate

Project Title – *Optical Studies of Nanostructures of Biosensing Applications*

2nd Place

Brody Mickle

11th Grade

Jefferson County International Baccalaureate

Project Title – *Periodicity of Enthalpy*

ENERGY AND TRANSPORTATION

1st Place

Ian Knopp, David Murrell & Michael Rodriguez

12th Grade

Hewitt Trussville High School

Project Title – *Braking the Longboard*

2nd Place

Vraj Patel & Emily Coggins

12th Grade

Hewitt-Trussville High School

Project Title – *Blind Spot Detection Device*

3rd Place

Hayden Parks, Drew Kinzer & Nathan Feagans

12th Grade

Hewitt-Trussville High School

Project Title – *Sunbrella*

Honorable Mention

Stephen Bush

12th Grade

Crossroads Christian

Project title – *Temperature Effects on Solar Generation*

Honorable Mention

Labdhi Mehta

10th Grade

Indian Springs

Project title – *Converting Solar Energy into Electromagnetic Energy to Power Devices Wirelessly*

Honorable Mention

Devin Patel

10th Grade

Indian Springs School

Project title – *Wireless Transfer of Energy Using Magnetic Inductive Coupling to Transfer Through Space*

ENGINEERING

1st Place

Joseph Riccio, Long Nguyen & Ethan Swatek

12th Grade

Hewitt-Trussville High School

Project Title – *Affordable Adjustable Leg Brace*

2nd Place

Jacob Hayes & Joseph Seagle

12th Grade

Hewitt-Trussville High School

Project Title – *J&J Dispense*

3rd Place

Alex Forbes

9th Grade

Indian Springs School

Project Title – *Intracranial Pressure Monitoring and Patient Care*

Honorable Mention

Samuel Thompson, Caleb Knox & Brandon Breau

12th Grade

Hewitt-Trussville High School

Project Title – *Automatic Stop Sign*

Honorable Mention

Anna Houser, Jade Thompson & Jaylan Maddox

12th Grade

Hewitt-Trussville High School

Project Title – *Adjustable Gripping Attachment with Stylus for Touch Screen Devices*

Honorable Mention

Connor Gallagher

12th Grade

Hewitt-Trussville High School

Project Title – *Compactable Eyeglass Frames*

ENVIRONMENTAL AND EARTH SCIENCES

1st Place

Analise Chambers

11th Grade

Jefferson County International Baccalaureate

Project Title – *Carbon Dioxide Removal in Coniferous and Deciduous Trees*

2nd Place

Miguel Gonzalez-Mota

11th Grade

Jefferson County International Baccalaureate

Project Title – *Effect of Burnt Motor Oil on the Well Being of Cynodon dactylon, and Absorber as a Potential Way to Waive the Effect*

3rd Place

Benjamin Kim

11th Grade

Jefferson County International Baccalaureate

Project Title – *The Effects of Different Types of Waters (Distilled, Salt, Flood) on Seed Germination of Brassica rapa*

Honorable Mention

Hope Forrester

11th Grade

Jefferson County International Baccalaureate

Project Title – *The Effect of Cover Crop Biodiversity on Soil Nutrient Levels*

Honorable Mention

Baleigh Jones

11th Grade

Bessemer Academy

Project Title – *LD50 of Daphnia*

Honorable Mention

Gracie Smith

11th Grade

Jefferson County International Baccalaureate

Project Title – *The Effect of Fertilizers and Other Chemicals on Water Quality of Golf Courses*

MATHEMATICS AND COMPUTER SCIENCES

1st Place

Amrita Lakhnarpal

11th Grade

Altamont School

Project Title – *Use of Computational Analysis to Identify Gens Disproportionately Affected by NFKBIA Deletions and Implicated in Breast Cancer*

2nd Place

Quen Parson

12th Grade

Alabama School of Fine Arts

Project Title – *Determining Necessity of Optimization in Matrix Chain Multiplication*

3rd Place

Hooper Markert

9th Grade

Indian Springs School

Project Title – *Shot Optimization and Analysis Using Calculus Methods*

Honorable Mention

Matthew Hamrick

12th Grade

Altamont School

Project Title – *Designing an Interactive Interface for Exploring the Farey Sequence*

Honorable Mention

Tianyi Miao

11th Grade

Indian Springs School

Project Title – *Versatile Forest: An Extended Framework of Decision Forests*

Honorable Mention

Joshua Holland

12th Grade

Alabama School of Fine Arts

Project Title – *Extensible Question Based Identification App*

MEDICINE AND HEALTH SCIENCES

1st Place

Alexandra Pritchard

11th Grade

The Altamont School

Project Title – *Exosomes and Macrophage Polarization in Lung Cancer*

2nd Place

Maya Cassidy

11th Grade

Indian Springs School

Project Title – *The Effect of Flow Rate, Media and Maturation on Esophageal Stimulus Induced Upper Aerodigestive Reflexes in Infants with BPD*

3rd Place

Josh Markert

11th Grade

Indian Springs School

Project Title – *The Relationship Between IOP, IOP Transient Impulse, OPP and MAP in Non-Human Primates (NHP) Instrumented with Telemetry*

Honorable Mention

Huan-Yu Chang

11th Grade

The Altamont School

Project Title – *Post-Transcriptional Regulation of Interleukin-1 Induced by Cigarette Exposure*

PHYSICAL SCIENCES

1st Place

Christian Hayes

11th Grade

Bessemer Academy

Project Title – *Magnetic Effects*

2nd Place

Viraj Kacker

10th Grade

Jefferson County International Baccalauerate

Project Title – *Computational Investigation of Protein Diffusion*

3rd Place

Deven Wright

10th Grade

Ramsay High School

Project Title – *Bounciness of a Golf Ball*

Honorable Mention

Deniya Wallace Hiawatha Peterson & Aturo Shell

11th Grade

George Washington Carver

Project Title – *Can Fabrics Return to its Original Size*

CARSEF Category Winners

Junior Division

BEHAVIORAL AND SOCIAL SCIENCES

1st Place

Rosie Otter & Shadie Shrestha

8th Grade

Indian Springs School

Project Title – *How Do Different Dogs React to Different Noises?*

2nd Place

Salma Mahdi

8th Grade

Islamic Academy of Alabama

Project Title – *Stroop Effect: ESL vs. Native*

3rd Place

Saifaldeen Alzyat

7th Grade

Islamic Academy of Alabama

Project Title – *The Music of Study*

Honorable Mention

Hala Mallah

6th Grade

Islamic Academy of Alabama

Project Title – *Thoughts on Caffeine*

Honorable Mention

Talia Hunaidi

6th Grade

Islamic Academy of Alabama

Project Title – *Fast Reaction*

Honorable Mention

Te-Janae Williams

7th Grade

Ossie-Ware Mitchell Middle School

Project Title – *Concentration*

BIOLOGY

1st Place

Sarah Miller

7th Grade

The Altamont School

Project Title – *Assessment of Water Contamination Through Planaria Growth*

2nd Place

Max Hull & Luke Poole

8th Grade

Indian Springs School

Project Title – *Water Purification with Copper and Silver*

3rd Place

Lewis Rand

7th Grade

The Altamont School

Project Title – *Bioremediation of Different Types of Oil*

Honorable Mention

Sarah Jasser

7th Grade

Islamic Academy of Alabama

Project Title – *Amylase Activity*

Honorable Mention

Benjamin Barnett

7th Grade

Huffman Middle School

Project Title – *Reverse Osmosis in Eggs*

Honorable Mention

Rasaun Echols

6th Grade

Huffman Middle School

Project Title – *Are Acids Effective Antioxidants*

CHEMISTRY

1st Place

Mason Coleman

6th Grade

The Altamont School

Project Title – *Which Household Products Clean More Effectively*

2nd Place

Amro Nasser

7th Grade

Huffman Middle School

Project Title – *Pants on Fire*

3rd Place

Eric Allen, Mariah Phelps & Rickle Washington

8th Grade

W.J. Christian School

Project Title – *We Blue Your Mind!*

Honorable Mention

Zainab Nabi

6th Grade

Islamic Academy of Alabama

Project Title – *Guilt Free Nails*

Honorable Mention

Simon Ma

8th Grade

Indian Springs School

Project Title – *Comparing the Polyphenols and the pH of Teas*

Honorable Mention

Taylor Kenty, Nia Mcgaughy & Tiya Carter

8th Grade

W.J. Christian School

Project Title – *Evaporace*

ENERGY AND TRANSPORTATION

1st Place

Aishah Diallo

6th Grade

Islamic Academy of Alabama

Project Title – *Sunny Yummy*

2nd Place

Arsalan Ahmed

7th Grade

Islamic Academy of Alabama

Project Title – *Consumption Reduction*

3rd Place

Mark Underwood

7th Grade

Hilltop Montessori School

Project Title – *Biofuels from Farm and Household Waste*

Honorable Mention

Noah Warren

7th Grade

The Altamont School

Project Title – *Flying Carpets*

Honorable Mention

Ayman Mahdi

7th Grade

Islamic Academy of Alabama

Project Title – *Pass the Salt!*

Honorable Mention

Harrison Walley

6th Grade

The Altamont School

Project Title – *Are Homemade Solar Panels More Efficient Than Professional Solar Panels?*

ENGINEERING

1st Place

Ethan Young

8th Grade

Duran North Junior High School

Project Title – *Producing Electricity with Magnets*

2nd Place

Rishab Samant

7th Grade

Pizitz Middle School

Project Title – *Cracking an Arch*

3rd Place

Izaldeen Alzyat

6th Grade

Islamic Academy of Alabama

Project Title – *Give the Earth a Break*

Honorable Mention

Isaac Bush

7th Grade

Crossroads Christian

Project Title – *The Wonder of Engineering*

Honorable Mention

Daniel Stanley

8th Grade

W.J. Christian School

Project Title – *Oh No a Flood!*

Honorable Mention

Marshall Gulley, Bryant Roscoe & Kamora Porter

8th Grade

W.J. Christian School

Project Title – *Clean It Up*

ENVIRONMENTAL AND EARTH SCIENCES

1st Place

Siddharth Doppalapudi

7th Grade

The Altamont School

Project Title – *Effect of CO2 and Temperature on Aedes aegypti*

2nd Place

Sura Ahmed

8th Grade

Islamic Academy of Alabama

Project Title – *Leaves on Pollution Markers*

3rd Place

Colin Hatcher

7th Grade

The Altamont School

Project Title – *Effects of Ocean Acidification on Marine Shells*

Honorable Mention

Annalise Johnson & Anthony Dunkin

8th Grade

W.J. Christian School

Project Title – *All Washed Up*

Honorable Mention

Rae Cato

7th Grade

Agape Academy

Project Title – *Myth Flushers*

Honorable Mention

Lauren Rogers

6th Grade

The Altamont School

Project Title – *Testing Flower Drying Methods*

MATHEMATICS AND COMPUTER SCIENCES

1st Place

Mohammad Ashouri & Samba Jalloh

8th Grade

Islamic Academy of Alabama

Project Title – *Set Your Clocks*

2nd Place

Jerry Zheng

8th Grade

Indian Springs School

Project Title – *Radiation Emitted by Cell Phone*

3rd Place

Talal Naser

8th Grade

Islamic Academy of Alabama

Project Title – *Indirect Measurements II*

Honorable Mention

Nadeem Johnson

6th Grade

Islamic Academy of Alabama

Project Title – *Security Questions – Are They Really Secure*

MEDICINE AND HEALTH SCIENCES

1st Place

Virginia Slaughter & Zola Thompson

8th Grade

Indian Springs School

Project Title – *Color Opticarum*

2nd Place

Ahmed Omar Jasser

7th Grade

Islamic Academy of Alabama

Project Title – *Miracle Oils*

3rd Place

Lina Jabr

8th Grade

Islamic Academy of Alabama

Project Title – *Smart Meds*

Honorable Mention

Caleigh Moose & Caitlin Cornelius

6th Grade

The Altamont School

Project Title – *Common Drinks and Their Effects on Tooth Decay*

Honorable Mention

Abdul Hammied Jalloh

6th Grade

Islamic Academy of Alabama

Project Title – *Aacchoo! I'm Sneezing*

Honorable Mention

Yusuf Zengul

6th Grade

Islamic Academy of Alabama

Project Title – *Nasal Olympics*

PHYSICAL SCIENCES

1st Place

Harshil Mehta

8th Grade

Indian Springs School

Project Title – *Increasing the Distance of Wireless Energy Transfer for Potential Use in Future Technology*

2nd Place

Jack Generally

6th Grade

W.J. Christian School

Project Title – *Going Graphite*

3rd Place

Ali Mughal

6th Grade

Islamic Academy of Alabama

Project Title – *Elevator Terminator*

Honorable Mention

Sa'ad McNair

7th Grade

Ossie-Ware Mitchell Middle School

Project Title – *Planet Orbital Period*

Honorable Mention

Jessica Baker

8th Grade

Duran North Junior High

Project Title – *What Determines the Strength of an Electromagnet?*

Honorable Mention

Lauren Cady, Amani-Moraiyah Dawkins & Asia Garner

8th Grade

W.J. Christian School

Project Title – *Let It Burn*