

UAB-CORD CARSEF Winners

March 1, 2014

CARSEF Top Honors & Intel Winners

Amber Gibson, Billy Smith & Isaac Searcy

12th Grade

Hewitt-Trussville High School

Project Title – *Renovated Cane to Aid Indoor Travel for the Visually Impaired*

Hayden Fowler

12th Grade

Alabama School of Fine Arts

Project Title – *The Effect of α -Cyclodextrin on the Solubility of Methane into Water for the Formation of Clathrate Hydrates*

Silin Li

12th Grade

Vestavia Hills High School

Project Title – *The Reactivation of X-linked Tumor Suppressor Gene FOXP3 by Anisomycin and Xist Small Interfering RNA in Breast Cancer Cells*

Tara Market

12th Grade

Indian Springs School

Project Title – *Cytochrome c Oxidase Activity and Chemoresistance*

CARSEF Category Winners

Senior Division

Behavioral & Social Science
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1st Place

Monica Pasala

11th Grade

Alabama School of Fine Arts

Project Title – *Observing the Correlation Between Brain Wave Patterns During the Assimilation of a Student's Knowledge*

2nd Place

Pooja Wagle

12th Grade

Alabama School of Fine Arts

Project Title – *Neural Mechanisms Mediating Temporal Pavlovian Conditioning*

3rd Place

Noel Dudeck & Charles Elmer

9th Grade

Alabama School of Fine Arts

Project Title – *Does Natural Athleticism Imply Superior Hand-Eye Coordination*

Honorable Mention

Maggie Bollinger

10th Grade

Pell City High School

Project Title – *The Art of Being Yourself*

Honorable Mention

Lauryn Graff

9th Grade

Pell City High School

Project Title – *Does Caffeine Affect Short-Term Memory?*

Honorable Mention

Abby Hodgens

9th Grade

Pell City High School

Project Title – *What's In A Face?*

Biology

1st Place

Silin Li

12th Grade

Vestavia Hills High School

Project Title – *The Reactivation of X-linked Tumor Suppressor Gene FOXP3 by Anisomycin and Xist Small Interfering RNA in Breast Cancer Cells*

2nd Place

Mihir Limdi

10th Grade

Altamont School

Project Title – *Cigarette Smoke Extract (CSE) Induced Changes in Prolyl Endopeptidase (PE) in Macrophages*

3rd Place

Hannah Noah

11th Grade

Jefferson County International Baccalaureate

Project Title – *Adaptation of Yeast Strains for Increased Biofuel Production from Waste Cellulose Biomass*

Honorable Mention

Nikki Newman, Chloe Wilks & Darcy Echols

12th Grade

Hewitt-Trussville High School

Project Title – *The Development of a Phosphate Sensing Plasmid Through Use of a Shuttle Vector in S. Cerevisiae*

Honorable Mention

Elquis Castillo

10th Grade

Indian Springs School

Project Title – *Survival of Tardigrades Exposed to Ionizing Radiation*

Honorable Mention

Lydia Lindsey

11th Grade

Jefferson County International Baccalaureate

Project Title – *What is the Effect of Light Availability on Carassius auratus Growth?*

Chemistry

1st Place

Hayden Fowler

12th Grade

Alabama School of Fine Arts

Project Title – *The Effect of α -Cyclodextrin on the Solubility of Methane into Water for the Formation of Clathrate Hydrates*

2nd Place

Ian Smith, Micah Starnes & Logan McAlpin

12th Grade

Hewitt-Trussville High School

Project Title – *Absorption of Cations from Aqueous Solutions Using Functionalized Carbon Nanotubes*

3rd Place

Arrix Ryce

12th Grade

Jefferson County International Baccalaureate

Project Title – *Spectrophotometric Determination of the ATP-dependent Steady-state Kinetic Parameters of E.coli Caseinolytic Peptidase B*

Honorable Mention

Blake Adams

10th Grade

Jefferson County International Baccalaureate

Project Title – *The Effect of Sucralose, Saccharin, and Aspartame on the Fermentation of Yeast*

Honorable Mention

Cailan Bevel

10th Grade

Thompson High School

Project Title – *Investigation of Anti-Corrosive Agents for Aluminium*

Honorable Mention

Dipali Patel

11th Grade

Jefferson County International Baccalaureate

Project Title – *Optimization of Temperature in the Enzymatic Hydrolysis of Pretreated Hedera helix Biomass to Maximize the Glucose Yield for Bioethanol Production*

Energy & Transportation

1st Place

Will Pannell

11th Grade

Altamont School

Project Title – *Exploring Magnetohydrodynamic Propulsion Part 2*

2nd Place

Cole Crownhart

10th Grade

Jefferson County International Baccalaureate

Project Title – *Comparing the Efficiency of Kudzu by Section for Use as a Biomass*

3rd Place

Aartni Namasivayam

9th Grade

Altamont School

Project Title – *Optimizing Microbial Fuel Cells*

Honorable Mention

Josh Evens

9th Grade

Pell City High School

Project title – *Natural Vs. Synthetic Insulation*

Honorable Mention

Craig Cantley

10th Grade

Altamont School

Project title – *Will Dimples on the Wing of a Glider Affect its Drag*

Honorable Mention

Hanna Becerra

9th Grade

Jefferson County International Baccalaureate

Project title – *Use of Enzymes in the Production of Biogas from Biodegradable Materials*

Engineering

1st Place

Amber Gibson, Billy Smith & Isaac Searcy

12th Grade

Hewitt-Trussville High School

Project Title – *Renovated Cane to Aid Indoor Travel for the Visually Impaired*

2nd Place

Lue Riddle, Callie Olszak & Thomas Maynard

12th Grade

Hewitt-Trussville High School

Project Title – *High Altitude Battery Charge Using Temperature Differential as Sole Source*

3rd Place

Jonah Sharkins

12th Grade

Alabama School of Fine Arts

Project Title – *Fatigue Testing of Biodegradable Magnesium Implants Processed by Laser Shock Peening*

Honorable Mention

Marisa Garrett

12th Grade

Hewitt-Trussville High School

Project Title – *Hydraulic Cannon Bone Brace*

Honorable Mention

Carson Bruce

11th Grade

Pell City High School

Project Title – *Testing 1,2,3*

Honorable Mention

Mary Beth Eaves, Tiffany Thornhill & Skylar Reaves

12th Grade

Hewitt Trussville High School

Project Title – *Development of a Hand Prosthetic for an Arm Amputee*

Environmental & Earth Science

1st Place

Katelynne Herron

11th Grade

Jefferson County International Bacculaureate

Project Title – *The Effects of Sedimentation on the Biodiversity of Benthic Macro-Invertebrates*

2nd Place

Quinn McCormick

10th Grade

Jefferson County International Bacculaureate

Project Title – *The Effect of Bisphenol A(BPA) On Oxidative Stress Enzymes in Artemia Salina and Neocaridina heteropoda: A Potential Mechanism of Increased Risk of Breast Cancer From Environmental Exposure*

3rd Place

Briganna Abernathy

10th Grade

Jefferson County International Bacculaureate

Project Title – *Various Water Filters Using Charcoal, Sand and Gravel*

Honorable Mention

Azim Merchant

12th Grade

Alabama School of Fine Arts

Project Title – *The Effects of Environmental Stimuli on Phenotypic Trends for Wild and Mutant Types for Arabidopsis Thaliana*

Honorable Mention

Lauren Wall

12th Grade

Jefferson County International Bacculaureate

Project Title – *Feeder Color Preferences of Hummingbirds*

Honorable Mention

William Morgan

11th Grade

Pell City High School

Project Title – *Fertilizer Impact on Paper White Narcissus Growth and Blooming*

Mathematics & Computer Science

1st Place

Eric Lienert
12th Grade

Alabama School of Fine Arts

Project Title – *Stimulation of Genetic Algorithms: Traffic Light Efficiency*

2nd Place

Jack Ullrich
11th Grade
Altamont School

Project Title – *Protecting Intellectual Property with Code Virtualization*

3rd Place

Devin Sun
12th Grade

Alabama School of Fine Arts

Project Title – *Control of Robotic Arm Through Facial Expressions: An Exploration of EEG Technology in Prosthetics*

Honorable Mention

Wesley Biddie
11th Grade

Evangel Christian School

Project Title – *Creating a Java Program to Evaluate Newtonian Physics*

Honorable Mention

Ali Hakim
12th Grade

Alabama School of Fine Arts

Project Title – *Using Non-parametric Techniques and the CAPM to Better Model Returns on an Asset*

Honorable Mention

Cade Carter
10th Grade

Pell City High School

Project Title – *Can You Make Your Wireless Faster*

Medicine & Health Science

1st Place

Tara Market

12th Grade

Indian Springs School

Project Title – *Cytochrome c Oxidase Activity and Chemoresistance*

2nd Place

Nicole Johnson

10th Grade

Altamont School

Project Title – *Will the Use of Non-abrasive Potentially Harmful Bleaching Substances Affect the Rate at Which Stains are Removed from the Enamel*

3rd Place

Arjun Guru

9th Grade

Altamont School

Project Title – *Hyperoxia Increases Endoglin, a Transforming Growth Factor-Beta-Co-Receptor III, in Newborn Mouse Lung Fibroblasts*

Honorable Mention

Maria Wall

10th Grade

Jefferson County International Bacculaureate

Project Title – *Growth Rate of Bacteria in Room Temperature Infant Formula Over Time*

Honorable Mention

Arjun Lakhanpal

9th Grade

Altamont School

Project Title – *The Effect of Niclosamide Analogs on Triple Negative Breast Cancer Cells*

Honorable Mention

Rofael Aleezada

12th Grade

Alabama School of Fine Arts

Project Title – *Association Between BMI and Surgical Outcome in Patients with Crohn's Disease*

Physical Science

1st Place

Jasmine Revanna

11th Grade

Alabama School of Fine Arts

Project Title – *Linking Images to Digital Cameras by Observing Noise Patterns*

2nd Place

Michael McGinnis

10th Grade

Jefferson County International Baccalaureate

Project Title – *Tensile Strength and Bell's Spaceship Paradox*

3rd Place

Madison Sinak

10th Grade

Jefferson County International Baccalaureate

Project Title – *Effect of Shielding on Moon Radiation*

Honorable Mention

Takiria Lee & Denisha McNearly

11th Grade

Wenonah High School

Project Title – *Temperature: Cold or Warm Does the Temperature on a Surface Effect the Extracting of Fingerprints*

Honorable Mention

Alyssa Carpenter

9th Grade

Pell City High School

Project Title – *Unknown Strength*

Honorable Mention

Jacob Murdock

10th Grade

Cornerstone Christian School

Project Title – *The Battery*

CARSEF Category Winners

Junior Division

Behavioral & Social Sciences

1st Place

Duha Aishah

7th Grade

Islamic Academy of Alabama

Project Title – *Curiosity Killed the Cat*

2nd Place

Alexandra Pritchard

7th Grade

Altamont School

Project Title – *Is it Really That Funny?*

3rd Place

David Zell

8th Grade

Altamont School

Project Title – *Do “Hands Free” Devices Make Driving While Conserving Safer?*

Honorable Mention

Ada Cohen

8th Grade

Indian Springs School

Project Title – *Do You Remember?*

Honorable Mention

Sarah Toms

8th Grade

Indian Springs School

Project Title – *Light at Night*

Honorable Mention

Aliyah Abasy

7th Grade

Islamic Academy of Alabama

Project Title – *Dare to Doodle*

Biology

1st Place

Seema Mallah

7th Grade

Islamic Academy of Alabama

Project Title – *Effect of Drinks on the Heart*

2nd Place

Wamda Eltoum

7th Grade

Islamic Academy of Alabama

Project Title – *Can Cinnamon Act as a Rooting Hormone*

3rd Place

Sophie Sabri

8th Grade

Altamont School

Project Title – *Lights for Flies*

Honorable Mention

Jackson Shields

7th Grade

Our Lady of the Valley School

Project Title – *No Ants in My Pants!*

Honorable Mention

Rama Mansar

7th Grade

Islamic Academy of Alabama

Project Title – *Chewy Bacteria*

Honorable Mention

Elizabeth Murry

7th Grade

Altamont School

Project Title – *Ladybug Eyesight*

Chemistry

1st Place

Vivek Sasse

7th Grade

Altamont School

Project Title – *How Blue Are You? Concentration of Food Dyes in Everyday Drinks*

2nd Place

William Dennistan

7th Grade

Altamont School

Project Title – *Let Them See You Sweat: The Evaporative Cooling Effect*

3rd Place

Andrea Nicastro

8th Grade

Duran Junior High School

Project Title – *Fruit Juices Vs. Sport Drinks: Which Beverage Contains More Electrolytes to Replenish the Body?*

Honorable Mention

Malik El-Husari

8th Grade

Islamic Academy of Alabama

Project Title – *Challenge of the Fittest pH*

Honorable Mention

Saba Al-Mansoob

6th Grade

Islamic Academy of Alabama

Project Title – *Drinks, Teeth, How?*

Honorable Mention

Huan Yu Chang

7th Grade

Altamont School

Project Title – *Which Drink to Choose?*

Energy and Transportation

1st Place

Jake Colvert & Robert Plummer

8th Grade

Riverchase Middle School

Project Title – *How Does a Spoiler Affect the Speed and Handling of a Car?*

2nd Place

Bela Patel

8th Grade

Indian Springs School

Project Title – *The Human Antenna*

3rd Place

Asia Childs

8th Grade

Duran Junior High School

Project Title – *What Type of Oil is Denser*

Honorable Mention

Isabella Boackle

7th Grade

St. Rose Academy

Project Title – *Who's the Brightest in the Class: Saltwater or Freshwater*

Honorable Mention

Reece Jones

8th Grade

Duran Junior High School

Project Title – *How Long can a Water Rocket Stay in the Air with Different Volumes of Water and Different Launch Air Pressures?*

Engineering

1st Place

Joey Brown

8th Grade

Altamont

Project Title – *Swimming Hand Position*

2nd Place

Will Stahlhut

8th Grade

Duran Junior High School

Project Title – *What is the Best Material and Design to Protect Against Tsunamis?*

3rd Place

Caleb Page

8th Grade

Riverchase Middle School

Project Title – *Electric Motor Conductivity*

Honorable Mention

Jacob Steele & Hall Welborn

5th Grade

Our Lady of the Valley

Project Title – *Fling It*

Honorable Mention

Mason Finch

8th Grade

Duran Junior High School

Project Title – *Robots to the Rescue! Building and Testing a Search and Rescue Robot*

Environmental and Earth Sciences

1st Place

Colin Mobley
6th Grade

Islamic Academy of Alabama
Project Title – *The Effect of Artificial Lights on Plants*

2nd Place

Malak Nasser
7th Grade

Huffman Middle School
Project Title – *Does Homemade Fertilizer Help with Plant Growth*

3rd Place

Nooraldein Alabsi
6th Grade

Islamic Academy of Alabama
Project Title – *The Effect of Music on Plant Growth*

Honorable Mention

Noor Ashouri
6th Grade

Islamic Academy of Alabama
Project Title – *How Microwaves Affect Plants*

Honorable Mention

Chandni Patel
7th Grade

Altamont School
Project Title – *What Sorbent Absorbs the Most Oil*

Honorable Mention

Fred Bonnie
7th Grade

Columbiana Middle School
Project Title – *Temperature Variation in Atmospheric Air Vs. CO2 Enriched Air*

Mathematics & Computer Science

1st Place

Tianxin Zhang

8th Grade

Indian Springs School

Project Title – *Golden Ratio: Standards of Beauty*

2nd Place

Conner Hamlin

8th Grade

Duran Junior High School

Project Title – *Which Holds More Data: a CD or DVD?*

3rd Place

Tyler Morris

8th Grade

Columbiana Middle School

Project Title – *Linear Frequencies*

Honorable Mention

Kaylie Adcox

8th Grade

Duran Junior High School

Project Title – *Which Genre of Music has the Most Mathematical Sequences: Classical, Country, Rap, Pop or Rock?*

Honorable Mention

Karli Blankenship

8th Grade

Duran Junior High School

Project Title – *Does the Birthday Paradox Stand True?*

Honorable Mention

Amrita Lakhanpal

7th Grade

Altamont School

Project Title – *Covering Numbers: The C++ Way*

Medicine & Health Sciences

1st Place

Danna Refai
8th Grade

Indian Springs School

Project Title – *Sugar Rush Part 2*

2nd Place

Nivedita Rao
8th Grade
Altamont

Project Title – *Vitamin C - "A Wonder Nutrient" - How to Get More In a Healthy and Delicious Way!*

3rd Place

Hader Ahmed
6th Grade

Islamic Academy of Alabama

Project Title – *Spices Vs. Bacteria*

Honorable Mention

Zuka Al-Safarjalani
8th Grade

Islamic Academy of Alabama

Project Title – *Sleep for Memory*

Honorable Mention

Will Morris
7th Grade

Columbiana Middle School

Project Title – *What Does the Meter Say?*

Honorable Mention

Mohammad Ashow
7th Grade

Islamic Academy of Alabama

Project Title – *Augmentin? Think Again!*

Physical Sciences

1st Place

Jonathan Sexton

7th Grade

St. Rose Academy

Project Title – *Weight Versus Inertia – Which Wins?*

2nd Place

Will Roberts

7th Grade

Columbiana Middle School

Project Title – *Weighing in on Density*

3rd Place

Jacob Walton

7th Grade

Columbiana Middle School

Project Title – *Swoosh! Starting Position of Basketball Hit or Miss*

Honorable Mention

Hollie Thweatt

8th Grade

Duran Junior High School

Project Title – *How Does Vocal Range Change with Age?*

Honorable Mention

Danielle Hanrahan, Nicole Wilson & Dalton Hanrahan

7th Grade

Nichols-Lawson Middle School

Project Title – *Busted*

Honorable Mention

Noah Harper

6th Grade

Columbiana Middle School

Project Title – *Battle of the Battery Brands*