# THE 56TH ANNUAL OZARKS SCIENCE & ENGINEERING FAIR

HAMMONS STUDENT CENTER MISSOURI STATE UNIVERSITY

March 29 - March 31, 2016



2016 WINNERS

Sponsored By:

Missouri State University – College of Natural & Applied Sciences Missouri State University Foundation Associated Electric Cooperative, Inc. Schneider Foundation Rodney & Cheryl Wrinkle



#### **MASTER OF CEREMONIES**

MICHELLE NORGREN EXECUTIVE DIRECTOR OZARKS SCIENCE & ENGINEERING FAIR

DR. KEN VOLLMAR DEPARTMENT OF COMPUTER SCIENCE COLLEGE OF NATURAL & APPLIED SCIENCES PRESENTER OF AWARDS

DR. TOBY DOGWILER DEPARTMENT OF GEOGRAPHY, GEOLOGY, AND PLANNING COLLEGE OF NATURAL AND APPLIED SCIENCES PRESENTER OF AWARDS

#### **OSEF COMMITTEE MEMBERS**

EXECUTIVE DIRECTOR: DISPLAY & SAFETY: ELEMENTARY FAIR: MEMBERS AT LARGE: PLACEMENT AWARDS: SPECIAL AWARDS: VOLUNTEERS: WEBMASTERS: MICHELLE NORGREN KEN MCCRORY LACEY GEIGER SAMANTHA COOPER BEN DALTON MICHELLE NORGREN DENISE VINTON SUE MCCRORY DENISE VINTON SUE MCCRORY MICHELLE NORGREN

SOCIAL NETWORKING:

#### SCIENTIFIC REVIEW COMMITTEE

DR. TOM TOMASI, CHAIR DR. PAUL SCHWEIGER, MICROBIOLOGY BRIAN HIGH, CHEMISTRY DR. CARLY YADON, HUMAN BEHAVIOR DR. MICHAEL PFANDER, DVM, NONHUMAN VERTEBRATES



## **SENIOR DIVISION GRAND PRIZE WINNERS & ALTERNATES**

(Grand Prize Awards Sponsored by: Rodney and Cheryl Wrinkle, Schneider Foundation & Associated Electric Cooperative, Inc. - includes plaques & trip to the Intel International Science & Engineering Fair for the Grand Prize Winners.)

- GRAND PRIZEMikayla AllenThe Effect of Excitotoxicity on Amyotrophic LateralSclerosisThayer High SchoolAdrick Miller
- GRAND PRIZEJesse PaxtonAccuracy of Google Translate with American HighSchool VocabularyGreenwood Laboratory SchoolDenise Vinton
- <u>IST ALTERNATE</u> Maya Hudson The Effect of Wraps on the Angle of Horses' Fetlock Joints Greenwood Laboratory School Denise Vinton
- 2nd ALTERNATE George Chen How Does Treating Wood with Different Liquids Affect the Wood's Strength? Greenwood Laboratory School Denise Vinton

JUNIOR DIVISION GRAND PRIZE WINNERS

(Plaque to each Junior Grand Prize Winner & Teacher)

- <u>GRAND PRIZE</u> Egg Beats St. Agnes Middle School Lynn Vogel
- ALTERNATEDavid WellsA Method of Lunar Construction Using In-Situ MaterialsPershing Middle SchoolJeffrey Wells

#### **MAJOR SPONSORS**

#### MISSOURI STATE UNIVERSITY – COLLEGE OF NATURAL & APPLIED SCIENCES

#### MISSOURI STATE UNIVERSITY FOUNDATION

#### ASSOCIATED ELECTRIC COOPERATIVE, INC.

#### SCHNEIDER FOUNDATION

#### RODNEY AND CHERYL WRINKLE

## **2016 AWARDS AND SPONSORS**

AMERICAN METEOROLOGICAL SOCIETY AMERICAN PSYCHOLOGICAL ASSOCIATION THE AMERICAN SOCIETY OF MAMMALOGISTS THE ASM MATERIALS EDUCATIONAL SOCIETY ASSOCIATION OF WOMEN GEOSCIENTISTS BAKER CHAIR OF INSURANCE/GAMMA IOTA SIGMA THE LAWRENCE E. BANKS, JR., MEMORIAL AWARD **BROADCOM MASTERS** CITY OF SPRINGFIELD - ENVIRONMENTAL SERVICES DIVISION COMMUNITY FOUNDATION OF THE **OZARKS** CREATIVE RESEARCH FOR IN VITRO BIOLOGY GREATER OZARKS AUDUBON SOCIETY GREENE COUNTY RESOURCE MANAGEMENT INTEL MASTER NATURALISTS MISSOURI DEPARTMENT OF CONSERVATION MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS, OZARKS CHAPTER MISSOURI STATE UNIVERSITY COLLEGE OF NATURAL & APPLIED SCIENCES MISSOURI STATE UNIVERSITY DEPARTMENT OF BIOLOGY

MISSOURI STATE UNIVERSITY DEPARTMENT OF GEOGRAPHY, GEOLOGY, AND PLANNING THE LOU & NADINE MOORE MEMORIAL AWARD MU ALPHA THETA MATHEMATICS HONOR SOCIETY NATIONAL AERONAUTICS AND SPACE **ADMINISTRATION** NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION **OZARKS SCIENCE & ENGINEERING FAIR** THE MARY JEAN PLASTER MEMORIAL AWARD THE ROBERT W. PLASTER MEMORIAL AWARD **RICOH CORPORATION** THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR" AWARD SCHNEIDER FOUNDATION STOCKHOLM JUNIOR WATER PRIZE THE JAMES K. TICE MEMORIAL TEACHER AWARD UNITED HEALTHCARE UNITED STATES AIR FORCE UNITED STATES METRIC ASSOCIATION UNITED STATES NAVY WOMEN IN SCIENCE YALE SCIENCE & ENGINEERING ASSOCIATION

# THE 2016 JUNIOR DIVISION



# PLACEMENT AWARD WINNERS!

## JUNIOR DIVISION PLACEMENT AWARDS

BEHAVIORAL	AND SOCIAL SCIENCES	BOTANY (cont	<u>.)</u>	COMPUTER S	CIENCE (cont.)
1st Place:	Elizabeth Morrissey Right Hand vs Left Hand Laura Stroup The Summit Prep	2 <sup>nd</sup> Place:	Madison Rues Which Antocyanin Rich Fruit Will Produce the Most Electricity? Miriam Jump	3 <sup>rd</sup> Place:	Max Depperschmidt Walling Wi-Fi April Thompson Pleasant View MS
2 <sup>nd</sup> Place:	Tristen Noe The Stroop Effect Taylor Blankenship Mountain Grove MS	3 <sup>rd</sup> Place:	St. Joseph Academy Joseph Tetlow Plants 101 Jody Telow	4 <sup>th</sup> Place:	Memerie Choate Effect of Wavelength on Amount of Energy a Solar Panel Produces Ryan Curtis
3 <sup>rd</sup> Place:	Nate DeVoss Melody and Memory Lynn Vogel	4 <sup>th</sup> Place:	Health Sciences Academy Cooper Johnson	EARTH & SPA	Manes R-5
	St. Agnes MS		Plants Grown Inside Potatoes	1 <sup>st</sup> Place:	Timothy Harrington
4 <sup>th</sup> Place:	Bethany Moore Highlighting: Does It Make Students Brighter?	CUEMISTRY	Laura Stroup The Summit Prep		Effect of Soil Type on Riverbed Erosion Ryan Curtis Manes R-5
	Laura Stroup The Summit Prep	CHEMISTRY			
<b>BIOCHEMIST</b>		1⁵t Place:	Heidy Duarte Is There Lead in Mexican Candy? Miriam Jump	2 <sup>nd</sup> Place:	Vanessa Lampley Moon Bait Kailey Bridges Marshfield Junior High
1 <sup>st</sup> Place:	Kyler McGulgan Brandon Woods Got Calcium? Kara Shiveley Willard MS	2 <sup>nd</sup> Place:	St. Joseph Academy David Shimizu Sugar Rush Laura Stroup	3 <sup>rd</sup> Place:	Mikaya Kelley Prevent Erosion Jessica Schober Mountain Grove MS
2 <sup>nd</sup> Place:	Rhett Wakefield Electrolyte Challenge: Orange Juice vs Sport Drink Jessica Schober Mountain Grove MS	3 <sup>rd</sup> Place:	The Summit Prep Allie German Chloe Sutherland How to Put the "Pee" in Polymer April Thompson Pleasant View MS	4 <sup>th</sup> Place:	Christopher Edwards The Effects of Weather Prediction Method on Accuracy of Weather Prediction Aletha Rogers Norwood R-1
3 <sup>rd</sup> Place:	Hudson Aikins Nicoli Condon	4 <sup>th</sup> Place:	Connor Brown		
	Eye See Colors Kailey Bridges Marshfield Junior High	4" Flace.	Wood Heat Kara Shively Willard MS	ENGINEERING	2 David Wells A Method of Lunar Construction Using In-Situ
4 <sup>th</sup> Place: Ashton Contreeras <u>COMPUTER SCIEN</u>		<u>CIENCE</u>		Materials Jeffrey Wells	
DOTANY	Decomposition Aletha Rogers Norwood R-1	1⁵t Place:	Haylie Garrison Effect of Interference on Wi-Fi Strength Ryan Curtis Manes R-5	2 <sup>nd</sup> Place:	Pershing MS Gracie Stine Which Fruit Produces the Most Volts?
BOTANY		Ord Discours			Jessica Schober
1st Place:	Alyssa Harrington Effect of the Quantity of Fertilizer on Plant Growth Ryan Curtis Manes R-5	2 <sup>nd</sup> Place:	Izaak Turner Time of Charge on Battery Strength Ryan Curtis Manes R-5	3 <sup>rd</sup> Place:	Mountain Grove MS Hayden Simmons Angelina Anderson The Winds of Change Kara Shiveley Willard MS

## JUNIOR DIVISION PLACEMENT AWARDS

Julius Thomas				
Effect of Soil Types on Bearing Capacity Ryan Curtis	1 <sup>st</sup> Place:	Taylor Russell Balloon Science Lynn Vogel St. Agnes MS	1 <sup>st</sup> Place:	Alex Herrell That's Stretching It Lynn Vogel St. Agnes MS
ENVIRONMENTAL		Nathan Good The Bitter Truth: Comparing Male and	2 <sup>nd</sup> Place:	Ayden Rouse The Bank is Open Aaron Tillman
Kayla Cotter Concentrate on		Female PTC Phenotype Laura Stroup		Marshfield Junior High
Lynn Vogel	3 <sup>rd</sup> Place		3 <sup>rd</sup> Place:	Robert Smith The Incredible Edible Egg April Thompson
Brooklyn Wiliams	5 T 1000.	Abbie Bernelis The Effect of Green Tea		Pleasant View MS
Comfort vs Convenience Aaron Tillman Marshfield Junior High		on the Breakdown of Starch Kara Shiveley Willard MS	4 <sup>th</sup> Place:	Abigail Brengle The Effects of Salt Brine Beet Juice on the Freezing Point of Water
Sierra Cornelison The Effect of Mycorrhizal Fungi on Biomass	4 <sup>th</sup> Place:	Kayla Rumley Comparing the	7001.00%	Aletha Rogers Norwood R-1
Aletna Rogers Norwood R-1		Sugar Substitutes		Abby Cordona
Justin Chadwell The Effects of the		St. Joseph Academy	I St Place:	Abby Cardone Egg Beats Lynn Vogel
Total Dissolved Solids				St. Agnes MS
Aletha Rogers Norwood R-1	1 <sup>st</sup> Place:	Evan Mason Paper Towel Terror Laura Stroup	2 <sup>nd</sup> Place:	Dylan Calhoun The Effects of Deer Attractant on White Tail
	0.15	The Summit Prep		Deer Aletha Rogers
Cole Hartman	2 <sup>nd</sup> Place:	Charles Fuller	3 <sup>rd</sup> Place	Norwood R-1 Lauryn Justiss
Aaron Tillman Marshfield Junior High		Kara Shiveley Willard MS		Effects of Caffeine on Brine Shrimp Mariam Jump
Shane Walters How Different Baseball	3 <sup>rd</sup> Place:	Laci Ipock The Effect of Stethoscope		St. Joseph Academy
Stadiums Affect Batting Averages Jessica Schober Mountain Grove MS		Location on Bacterial Colony Growth Aletha Rogers Norwood R-1	4" Place:	Katie Rumfelt Lighting Up Worms Ryan Curtis Manes R-5
Abbie Melllington The Fibonacci Sequence in Arms Kailey Bridges Marshfield Junior High	4 <sup>th</sup> Place:	Asia Wurner Mummification Taylor Blankenship Mountain Grove MS		
	Ryan Curtis Manes R-5TALKayla Cotter Concentrate on Amphipods Lynn Vogel St. Agnes MSBrooklyn Wiliams Comfort vs Convenience Aaron Tillman Marshfield Junior HighSierra Cornelison The Effect of Mycorrhizal Fungi on Biomass Aletha Rogers Norwood R-1Justin Chadwell The Effects of the Purification Method on Total Dissolved Solids Aletha Rogers Norwood R-1Daphne Boggs Cole Hartman Are You Golden? Aaron Tillman Marshfield Junior HighShane Walters How Different Baseball Stadiums Affect Batting Averages Jessica Schober Mountain Grove MSAbbie Melllington The Fibonacci Sequence in Arms Kailey Bridges	Ryan Curtis Manes R-52nd Place:IMARES2nd Place:IMARES2nd Place:IMARES2nd Place:IMARES2nd Place:Image: St. Agnes MS3rd Place:Brooklyn Wiliams Comfort vs Convenience Aaron Tillman Marshfield Junior High3rd Place:Sierra Cornelison The Effect of Mycorrhizal Fungi on Biomass Aletha Rogers Norwood R-14th Place:Justin Chadwell The Effects of the Purification Method on Total Dissolved Solids Aletha Rogers Norwood R-1MICROBIOLODaphne Boggs Cole Hartman Are You Golden? Aaron Tillman Marshfield Junior High2nd Place:Daphne Boggs Cole Hartman Are You Golden? Aaron Tillman Marshfield Junior High3rd Place:Shane Walters How Different Baseball Stadiums Affect Batting Averages Jessica Schober Mountain Grove MS4th Place:Abbie Melllington The Fibonacci Sequence in Arms Kailey Bridges4th Place:	Ryan Curtis Manes R-5St. Agnes MSTAL2nd Place:Nathan Good The Bitter Truth: Comparing Male and Female PTC Phenotype Laura Stroup The Summit PrepKayla Cotter Concentrate on Amphipods Lynn Vogel St. Agnes MS3nd Place:Kristy Branstine Abbie Bernelis The Effect of Green Tea 	Ryan Curtis Manes R-5Si. Agnes MSIMSi. Agnes MSIM2 <sup>rd</sup> Place:Nathan Good The Bitter Truth: Comparing Male and Female PT C Phenotype Laura Stroup The Summit Prep2 <sup>rd</sup> Place:Kayla Cotter Concentrate on Amphipods Lyrn Vogel St. Agnes MS3 <sup>rd</sup> Place:Nathan Good The Summit Prep2 <sup>rd</sup> Place:Brooklyn Wiliams Comfort vs Convenience Aaron Tillman Marshfield Junior High3 <sup>rd</sup> Place:Kristy Branstine Abbie Bernelis The Effect of Green Tea on the Breakdown of Starch Marshfield Junior High4 <sup>th</sup> Place:ZOOLOGYSierra Cornelison The Effect of Mycorrhizal Fungi on Biomass Aletha Rogers Norwood R-14 <sup>th</sup> Place:Kayla Rumley Comparing the Sweetness of Sugar and Sugar Substitutes Miriam Jump St. Joseph AcademyZOOLOGYJustin Chadwell The Effect of Mycorrhizal Purification Method on Total Dissolved Solids Aletha Rogers Norwood R-11 <sup>stl</sup> Place:2 <sup>rd</sup> Place:Daphne Boggs Cole Hartman Are You Golden? Aaron Tillman Marshfield Junior High3 <sup>rd</sup> Place:Lacia Stroup The Summit Prep2 <sup>rd</sup> Place:Daphne Boggs Cole Hartman Are You Golden? Aaron Tillman Marshfield Junior High3 <sup>rd</sup> Place:Lacia Jook The Effect of Stethoscope Location on Bacterial Colon y Growth Aletha Rogers Norwood R-13 <sup>rd</sup> Place:A Place:Abbie Mellington The Fibonacci Sequence in Arms Kalley Bridges4 <sup>th</sup> Place:Asia Wurner Murmification Taylor Blankenship Mountain Grove MS4 <sup>th</sup> Place:

# THE 2016 SENIOR DIVISION



# PLACEMENT AWARD WINNERS!

## SENIOR DIVISION PLACEMENT AWARDS BEHAVIORAL AND SOCIAL SCIENCES ENGINEERING (cont.)

			<i>i</i>	-	<u>(</u> /
1 <sup>st</sup> Place:	Jesse Paxton Accuracy of Google Translate with American High School Vocabulary Denise Vinton Greenwood Lab	2 <sup>nd</sup> Place:	Andrew Brassfield Does Performance Air Filters Improve Performance of Automobiles? Denise Vinton Greenwood Lab	2 <sup>nd</sup> Place:	Riley McNay Ultraviolet Light vs Disinfectant Cleaner in Reducing Hospital Acquired Infections Denise Vinton Greenwood Lab
2 <sup>nd</sup> Place:	Deric Jones The Effects of Chewing Gum on Memory Tabitha Shaver Hartville HS	3 <sup>rd</sup> Place:	Parker Mee Desalination in Public Water Fountains to Alleviate Potable Water Shortage Denise Vinton Greenwood Lab	3 <sup>rd</sup> Place:	Zach Cosby Effect of Artificial Sweeteners on Blood Glucose Levels Denise Vinton Greenwood Lab
3 <sup>rd</sup> Place: 4 <sup>th</sup> Place:	Treavor Engleman Is Procrastination Really That Bad? Denise Vinton Greenwood Lab Broc Arnall	4 <sup>th</sup> Place:	Braden Keith The Effects of Different Types of Bats on the Distance the Ball Travels Tabitha Shaver	4 <sup>th</sup> Place:	Cheyanne Mullinex The Effects of Essential Oils on Scars Tabitha Shaver Hartville HS
	The Effects of Music		Hartville HS	MICROBIOLOC	<u>ay</u>
	Genre on Concentration Tabitha Shaver			1 <sup>st</sup> Place:	Anna McGehee Silver Sol-Gel
BOTANY	Hartville HS	1 <sup>s⊤</sup> Place:	Hanning Wang Acid Rain and Damage to Plant Leaves		Solutions: Antimicrobial Coatings Denise Vinton Greenwood Lab
1 <sup>st</sup> Place:	Junvon Park Effects of Ascorbic Acid and Sodium Hypochlorite Denise Vinton Greenwood Lab	2 <sup>nd</sup> Place:	Denise Vinton Greenwood Lab Mian Wang Plastic in the Environment Denise Vinton	2 <sup>nd</sup> Place:	Marisa Cabrales The Effect of Antibiotics on Bacteria Adrick Miller Thayer HS
2 <sup>nd</sup> Place:	Lorissa Ellis Effects of Iron on Plant		Greenwood Lab	PHYSICS	
3 <sup>rd</sup> Place:	Growth Tabitha Shaver Hartville HS Alyssa Presley	3 <sup>rd</sup> Place:	Zhan Xin The Lotus Effect in Our Daily Life Denise Vinton Greenwood Lab	1 <sup>st</sup> Place:	Casey Bright Does Brand Name Mean Better Absorbancy? Joe Davis
	How Color of Light Affects Plant Growth	MEDICINE AN	D HEALTH		Parkview HS
	Joe Davis Parkview HS	1 <sup>ST</sup> Place:	Mikayla Allen The Effect of	2 <sup>nd</sup> Place:	Emily Chisum The Effects of Coconut Oil and Tea Tree Oil
ENGINEERING 1 <sup>st</sup> Place:	George Chen How Does Treating Wood With Different Liquids Affect the Wood's Strength? Denise Vinton Greenwood Lab		Excitotoxcity on Amyotrophic Lateral Sclerosis Adrick Miller Thayer HS		on the Tensile Strength and Luster of Different Hair Types Tabitha Shaver Hartville HS

# SENIOR DIVISION PLACEMENT AWARDS

3 <sup>rd</sup> Place:	Zach Baker Can 3-D Printed Objects Be Tempered? Denise Vinton Greenwood Lab
4 <sup>th</sup> Place:	Jace Keith The Effects of Arm Angle on the Velocity of a Ball Tabitha Shaver Hartville HS
ZOOLOGY	
1st Place:	Harry Kime Maddy Joplin Which Music is Betta? Brandi Mendenhall Central HS
2 <sup>nd</sup> Place:	Maya Hudson The Effect of Wraps on the Angle of Horse Fetlock Joints Denise Vinton Greenwood Lab
3 <sup>rd</sup> Place:	Alexia Tasker The Effects of Carbohydrates on Lumbricus Terrestris Tabitha Shaver Hartville HS
4 <sup>th</sup> Place:	Morgan Benne The Effects of Commonly Consumed Oils on Lumbricus Terrestris Tabitha Shaver Hartville HS



## College of Natural & Applied Sciences **CNAS**



## **MAJORS TO CHOOSE FROM**

Biology Chemistry Computer Science Geography Geology Geospatial Sciences Geotourism Hospitality & Restaurant Administration Mathematics Physics Planning Tourism Planning & Development Wildlife Conservation & Management



#### Cooperative Engineering Program with Missouri S&T



Electrical

For Students from the following counties in Missouri: Christian, Dade, Dallas, Greene, Lawrence, Polk, Stone, Taney & Webster

#### Secondary Education Degrees and Certification



Biology, Chemistry, Earth Science, Mathematics, Physics

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# THE 2016 JUNIOR & SENIOR DIVISION



# SPECIAL AWARD WINNERS!

#### AMERICAN METEOROLOGICAL SOCIETY

#### Certificate of Award

Senior Division:

ion: Mian Wang Greenwood Lab

> Hanning Wang Greenwood Lab

#### AMERICAN PSYCHOLOGICAL ASSOCIATION

Certificate of Award

Senior Division: Deric Jones Hartville HS

#### THE AMERICAN SOCIETY OF MAMMOLOGISTS

Certficate of Award

Junior Division:	Dylan Calhoun
	Norwood R-1

Senior Division: Maya Hudson Greenwood Lab

#### THE AMERICAN SOCIETY FOR METALS MATERIALS EDUCATION FOUNDATION

Preliminary Certificate

Senior Division: Lorissa Ellis Hartville HS

#### ARIZONA STATE UNIVERSITY WALTON SUSTAINABILITY SOLUTIONS INITIATIVES

Certificate

Senior Division: Andrew Brassfield Greenwood Lab

> Parker Mee Greenwood Lab

#### THE ASSOCIATION OF WOMEN GEOSCIENTISTS

#### Certificate of Merit

Junior Division:

Vanessa Lampley Marshfield Junior High

## SPECIAL AWARDS

#### BAKER CHAIR OF INSURANCE/GAMMA IOTA SIGMA AWARD

\$50 Cash & Certificate of Achievement

Senior Division: Riley McNay Greenwood Lab

> Ryan Ward Hartville HS

#### BROADCOM MASTERS

Certificate of Award and Advancement in National Level Competition with awards up to \$25,000

Junior Division: E

Elizabeth Morrissey The Summit Prep

Kyler McGulgan Willard MS

Brandon Woods Willard MS

Alyssa Harrington Manes R-5

Heidy Duarte St. Joseph Academy

Haylie Garrison Manes R-5

Timothy Harrington Manes R-5

David Wells Pershing MS

Kayla Cotter St. Agnes MS

Daphne Boggs Marshfield Junior High

Taylor Russell St. Agnes MS

Evan Mason The Summit Prep

Alex Herrell St. Agnes MS

Abby Cardone St. Agnes MS

#### <u>CITY OF SPRINGFIELD –</u> ENVIRONMENTAL SERVICES AWARD

Recycled Lunch Bag

Junior Division: Brooklyn Williams Marshfield Junior High

Senior Division: Mian Wang Greenwood Lab

#### GREATER OZARK AUDOBON SOCIETY "ENVIRONMENTAL AWARENESS AWARD"

One Year Membership in the National Audobon Society & Field Guide

Junior Division: Ariadna Galaviz Willard MS

> Kanija Blackmon Willard MS

#### GREENE COUNTY RESOURCE MANAGEMENT "GROUNDWATER GUARDIAN" AWARD

Certificate and Bonus Item

Junior Division: Kayla Cotter St. Agnes MS

#### INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR AWARD

Certificate and Trip to INTEL ISEF

Senior Division: Mikayla Allen Thayer HS

> Jesse Paxton Greenwood Lab

#### INTEL SCIENCE TALENT SEARCH

Opportunity to Advance to National Competition with awards up to \$150,000

Senior Division:

Jesse Paxton Greenwood Lab

Junvon Park Greenwood Lab

George Chen Greenwood Lab

Hanning Wang Greenwood Lab

#### INTEL SCIENCE TALENT SEARCH (cont.)

Senior Division: Mikayla Allen Thayer HS

> Anna McGehee Greenwood Lab

Casey Bright Parkview HS

Harry Kime Central HS

Maddy Joplin Central HS

#### MASTER NATURALISTS ENVIRONEMTNAL AWARD

\$50 Cash

Junior Division:	Kayla Cotter St. Agnes MS

Senior Division: Zhan Xin Greenwood Lab

#### MISSOURI DEPARTMENT OF CONSERVATION "CONSERVATION AWARD"

DVDs, Field Guides, and Materials

Junior Division: Dylan Calhoun Norwood R-1

Conservation CD, DVD, and Books

Senior Division: Hanning Wang Greenwood Lab

#### MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS, OZARKS CHAPTER, "FUTURE ENGINEER" AWARD

Cash Award

Junior Division:	David Wells Pershing MS
	Savannah Baus Mountain Grove MS
Senior Division:	Parker Mee Greenwood Lab
	Braden Keith

Braden Keith Hartville HS

## SPECIAL AWARDS

#### MISSOURI STATE UNIVERSITY "GRAND AWARD"

\$1,000 Scholarship to each Senior Division Grand Prize Winner if they decide to attend Missouri State University full-time (if the winning category project is a team, the scholarship is shared).

Senior Division:

Jesse Paxton Greenwood Lab

Junvon Park Greenwood Lab

George Chen Greenwood Lab

Hanning Wang Greenwood Lab

Mikayla Allen Thayer HS

Anna McGehee Greenwood Lab

Casey Bright Parkview HS

Harry Kime Central HS

Maddy Joplin Central HS

#### <u>MISSOURI STATE UNIVERSITY</u> <u>DEPARTMENT OF GEOGRAPHY,</u> <u>GEOLOGY, PLANNING AND GEOSPATIAL</u> SCIENCE AWARD

Subscription to National Geographic Magazine

Junior Division: Ariadna Galaviz Willard MS

> Kanija Blackmon Willard MS

Kayera Cornelison Norwood R-1

Justin Chadwell Norwood R-1

Savannah Baus Mountain Grove MS

#### MISSOURI STATE UNIVERSITY DEPARTMENT OF GEOGRAPHY, GEOLOGY, PLANNING AND GEOSPATIAL SCIENCE AWARD (cont.)

Junior Division:

Kayla Cotter St. Agnes MS

Timothy Harrington Manes R-5

#### MISSOURI STATE UNIVERSITY COLLEGE OF NATURAL AND APPLIED SCIENCES

\$50 Cash Award

Junior Division: Abby Cardone St. Agnes MS

Senior Division: Mikayla Allen Thayer HS

> Jesse Paxton Greenwood Lab

#### MISSOURI STATE UNIVERSITY COLLEGE OF NATURAL AND APPLIED SCIENCE SCHOLARSHIP AWARD

\$1,000 Scholarship to each Senior Division Grand Prize Winner if they decide to attend Missouri State University full-time (if the winning category project is a team, the scholarship is shared).

Senior Division: Mikayla Allen Thayer HS

> Jesse Paxton Greenwood Lab

#### MISSOURI STATE UNIVERSITY DEPARTMENT OF BIOLOGY AWARD

Certificates to students & plaques to teachers

Junior Division:

Madison Rues St. Joseph Academy

Timothy Harrington Manes R-5

Dylan Calhoun Norwood R-1

Kayla Cotter St. Agnes MS

Evan Mason The Summit Prep

#### MISSOURI STATE UNIVERSITY DEPARTMENT OF BIOLOGY AWARD (cont.)

Senior Division: Junvon Park Greenwood Lab

> Alexia Tasker Hartville HS

Mian Wang Greenwood Lab

Anna McGehee Greenwood Lab

#### MISSOURI STATE UNIVERSITY DEPARTMENT OF BIOLOGY

\$1,000 Work Study Award

Senior Division: Anna McGehee Greenwood Lab

#### LOU & NADINE MOORE MEMORIAL AWARD

\$50 Cash Award to the top Junior Division projects covering Education or Special Needs

Junior Division: Will Garand St. Agnes MS

> McKenzie Blakey The Summit Prep

Danielle Freeman The Summit Prep

#### MU ALPHA THETA NATIONAL MATHEMATICS HONOR SOCIETY

Certificate of Award

Senior Division: Maya Hudson Greenwood Lab

#### NASA EARTH SCIENCE AWARD

#### Certificate

Junior Division:

Timothy Harrington Manes R-5

## SPECIAL AWARDS

#### NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION "TAKING THE PULSE OF THE PLANET" AWARD

Letter, Certificate of Award, and NOAA Medallion

Junior Division: Ti Ma

: Timothy Harrington Manes R-5

#### RICOH CORPORATION SUSTAINABLE DEVELOPMENT AWARD

Certificate of Award

Junior Division: Sierra Cornelison Norwood R-1

#### SCHNEIDER FOUNDATION

\$200 Cash & Certificate

Junior Division: Elizabeth Morrissey The Summit Prep

> Abby Cardone St. Agnes MS

Kyler McGulgan Willard MS

Braden Woods Willard HS

David Wells Pershing MS

#### \$500 Cash & Certificate

Senior Division: Jes

Jesse Paxton Greenwood Lab

Mikayla Allen Thayer HS

Junvon Park Greenwood Lab

George Chen Greenwood Lab

Hanning Wang Greenwood Lab

#### SOCIETY FOR IN VITRO BIOLOGY

Certificate of Award

Senior Division: Anna McGehee Greenwood Lab

#### STOCKHOLM JUNIOR WATER PRIZE

Certificate & Promotion to National Competition

Senior Division: N

Mian Wang Greenwood Lab

Hanning Wang Greenwood Lab

Parker Mee Greenwood Lab

#### UNITED STATES AIR FORCE

#### Certificate of Award

Junior Division: Jaron Harrod Marshfield Junior High

Laken Fairweather Marshfield Junior High

Senior Division: Anna McGehee

Greenwood Lab

#### UNITED STATES METRIC ASSOCIATION

Certificate of Award

Junior Division:

Zac Allen Willard MS

Austin Allen Willard MS

#### UNITED STATES NAVY

Certificate, Medallion, Gift Cards

Junior Division:

Savannah Baus Mountain Grove MS

Jacob Holloway Norwood R-1

George Chen

Senior Division:

Parker Mee Greenwood Lab

Greenwood Lab

#### WOMEN IN SCIENCE

Certificate of Award and \$25 Gift Certificate

Junior Division:	Abby Cardone St. Agnes MS

Senior Division: Anna McGehee Greenwood Lab

#### YALE SCIENCE & ENGINEERING ASSOCIATION AWARD

Certificate of Award

Senior Division: Parker Mee Greenwood Lab

> Casey Bright Parkview HS

#### THE ROBERT W. PLASTER MEMORIAL EXCELLENCE IN TEACHING AWARD

\$1,000 Cash Award to the Teacher with the most Placement Awards in the Senior Division

Denise Vinton Greenwood Laboratory School

#### THE MARY JEAN PLASTER MEMORIAL EXCELLENCE IN TEACHING AWARD

\$1,000 Cash Award to the Teacher with the Most Placement Awards in the Junior Division

> Aletha Rogers Norwood R-1

Ryan Curtis Manes R-5

#### THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR MEMORIAL AWARD"

\$25 Cash to a First Time Teacher

Taylor Blankenship Mountain Grove MS

Jessica Schober Mountain Grove MS

## SPECIAL AWARDS

#### THE JAMES K. TICE MEMORIAL TEACHER AWARD

This award of \$250 cash and a certificate has been established in memory of James K. Tice, whose constant support and encouragement of Missouri's teachers and students changed so many lives.

*Mr.* Tice served for many years as a teacher, principal and superintendent of K-12 schools. Even after he retired from public education, *Mr.* Tice continued his tireless dedication to improving educational opportunities for everyone. He was devoted to creating learning communities, by integrating current and emerging technologies into the classroom.

*Mr.* Tice was a coach, a teacher, a mentor, a surrogate parent, and a friend. He never failed to say "I appreciate you". It is our hope that the recipient of this award also hears "We appreciate you".

The recipient of this year's award is:

Denise Vinton Greenwood Laboratory School

#### THE LAWRENCE E. BANKS, JR., MEMORIAL TECHNOLOGY FOR TEACHERS AWARD

This award of \$250 cash and a certificate has been established in memory of Lawrence E. Banks, Jr., the former Dean of the Missouri State University College of Natural and Applied Sciences and a long-time friend and supporter of the Fair.

Dr. Banks was dedicated to education in the state of Missouri and was a strong proponent of innovative educational projects at the K-12 level as well as higher education. In 2000, he received the Science Teachers' of Missouri Distinguished Service Award in recognition of his tireless support and commitment to science education.

In memory of Dr. Banks' enthusiasm and interest in technology, the recipient of this award is encouraged to integrate technology in their classroom.

The recipient of this year's award is:

Ryan Curtis Manes R-5

#### OZARKS SCIENCE & ENGINEERING FAIR JUNIOR DIVISION TEACHER AWARDS

This Certificate is awarded to the teachers of the Junior Division First Place Category winners. The recipients of the Junior Division Teacher Awards for 2016 are:

> Laura Stroup The Summit Prep

> > Kara Shiveley Willard MS

Ryan Curtis Manes R-5

Miriam Jump St. Joseph Academy

> Jeffrey Wells Pershing MS

Lynn Vogel St. Agnes MS

Aaron Tillman Marshfield Junior High

#### OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION TEACHER AWARDS

This Certificate is awarded to the teachers of the Senior Division First Place Category winners. The recipients of the Senior Division Teacher Awards for 2016 are:

> Denise Vinton Greenwood Lab

Adrick Miller Thayer HS

Joe Davis Parkview HS

Brandi Mendenhall Central HS

## SPECIAL AWARDS

#### OZARKS SCIENCE & ENGINEERING FAIR JUNIOR DIVISION GRAND PRIZE TEACHER AWARD

This award of a plaque is awarded to the teacher of the Junior Division Grand Prize student project. The recipient of the OSEF Foundation Junior Division Grand Prize Teacher Award for 2016 is:

> Lynn Vogel St. Agnes MS

#### OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION GRAND PRIZE ALTERNATES TEACHER AWARD

This award of a certificate is awarded to the teacher(s) of the Senior Division Grand Prize Alternates student projects. The recipients of the OSEF Foundation Senior Division Grand Prize Alternates Teacher Award for 2016 is:

> Denise Vinton Greenwood Laboratory School

#### OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION GRAND PRIZE TEACHER AWARD

This award of a plaque is awarded to the teacher(s) of the Senior Division Grand Prize student projects. The recipients of the OSEF Foundation Senior Division Grand Prize Teacher Award for 2016 is:

Denise Vinton Greenwood Laboratory School

> Adrick Miller Thayer High School

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The Ozarks Science & Engineering Fair Foundation and Steering Committee would like to recognize those volunteers, both individuals and organizations, without whom this event would not be possible. This week alone, over 600 hours of volunteer time and effort were donated – our deepest thanks and appreciation especially to the following:

- Dr. Myra Hughes' BIO 210 Students
- Sue McCrory's CIS 200 Students
- Dr. Jill Black's GRY 240 Students
- Dr. Michelle Bowe's BIO 334 Students
- Alpha Delta Pi Members
- Kathy Shade's Ozarks Technical Community College Students

In addition, approximately 100 judges from local colleges, companies and organizations donated their time and expertise Tuesday evening to judge the over 200 projects at this year's Fair. We cannot recognize them all by name, but their efforts are greatly appreciated.

We would also like to extend a very special Thank You to Copy Products for their generous loan of a copier for the duration of the Fair, and Mike Murphy of the College of Natural and Applied Sciences' Electronic Support Services for the loan of printers for the duration of the Fair.

Finally, we especially want to acknowledge the generous donation contributed by Associated Electric Cooperative, Schneider Foundation, and Rodney and Cheryl Wrinkle toward the substantial travel expenses incurred by the Senior Division Grand Prize Winners for travel to the 2016 International Science & Engineering Fair on May 8, 2016 to May 13, 2016 in Phoenix, Arizona.

Volunteers are the lifeblood of an event of this magnitude. Without you, we could not continue the Fair's tradition of excellence. Thank you!