# OZARKS SCIENCE \& ENGINEERING FAIR 

HAMMONS STUDENT CENTER MISSOURI STATE UNIVERSITY

April 8, 9 \&\& 10, 2008


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Missouri State University
Associated Electric Cooperative, Inc.
Schneider Foundation
Positronic Industries
Missouri Society of Professional Engineers - Ozark Chapter
F \& H Food Equipment Company


# MASTER OF CEREMONIES 

MICHELLE NORGREN<br>EXECUTIVE DIRECTOR<br>OZARKS SCIENCE \& ENGINEERING FAIR<br>DR. TAMERA JAHNKE, DEAN<br>COLLEGE OF NATURAL \& APPLIED SCIENCES PRESENTER OF AWARDS<br>

## OSEF COMMITTEE MEMBERS

EXECUTIVE DIRECTOR:
EXECUTIVE ASSISTANT:
SPECIAL AWARDS:

PLACEMENT AWARDS:
WEB PAGE DEVELOPMENT:
VOLUNTEERS:
DISPLAY \& SAFETY:
ELEMENTARY FAIR:

MICHELLE NORGREN
JULIANNA NORGREN
CHERYL SCHAEFER
SAMANTHA SCHAEFER
ADAM CRANE
SUE MCCRORY
SUE MCCRORY
KEN MCCRORY
ROCHELLE MCCRORY


# SCIENTIFIC REVIEW COMMITTEE 

DR. TOM TOMASI, CHAIR
DR. JACK STEIERT, MICROBIOLOGY
DR. BRYAN BREYFOGLE, CHEMISTRY
DR. MATTHEW FANETTI, HUMAN BEHAVIOR
DR. MICHAEL PFANDER, DVM, NONHUMAN VERTEBRATES


## SENIOR DIVISION GRAND PRIZE WINNERS

 AND ALTERNATES(Grand Prize Awards Sponsored by: F \& H Food Equipment Company, Positronic Industries \& Associated Electric Cooperative, Inc., \& includes plaques for the Grand Prize Winners and Teachers.)

GRAND PRIZE MILES BARNHART
RECYCLING CARBON DIOXIDE FOR BIOFUEL
TODD VAN GORDEN
GREENWOOD LAB SCHOOL
GRAND PRIZE CANIN CHRISTELL
INTELLIGENT TASK COORDINATION WITH
MULTIPLE ROBOTS
TODD CHRISTELL
HOMESCHOOL
1st ALTERNATE Ashley Dameron
How Ice Thickness Affects Impact Craters on Europa
Rick Snyder
Kickapoo High School
2nd ALTERNATE Tron Sherman
Effects of Reflected Light on Bean Seeds
Pam Probert
Mansfield High School

## JUNIOR DIVISION GRAND PRIZE WINNERS

GRAND PRIZE STUART JUMP
THE EFFECTS OF LEAD IN SOIL
MIRIAM JUMP
ST. JOSEPH MIDDLE SCHOOL

## MAJOR SPONSORS

MISSOURI STATE UNIVERSITY
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## 2008 AWARDS AND SPONSORS

AMERICAN CHEMICAL SOCIETY - OZARK SECTION
AMERICAN METEOROLOGICAL SOCIETY
AMERICAN PSYCHOLOGICAL ASSOCIATION AMERICAN SOCIETY OF MAMMALOGISTS
THE ASM INTERNATIONAL FOUNDATION
ASSOCIATION FOR WOMEN GEOSCIENTISTS
BAKER CHAIR OF INSURANCE/GAMMA IOTA SIGMA
CITY OF SPRINGFIELD - SOLID WASTE DIVISION
CITY UTILITIES OF SPRINGFIELD
COMMUNITY FOUNDATION OF THE OZARKS DRURY UNIVERSITY
EXPANDING YOUR HORIZONS: WOMEN IN SCIENCE
GREATER OZARKS AUDUBON SOCIETY
GREENE COUNTY RESOURCE MANAGEMENT DEPARTMENT
HERBERT HOOVER PRESIDENTIAL LIBRARY ASSOCIATION
HORAN \& BECKER
INTEL
INTERNATIONAL SOCIETY OF OPTICAL ENGINEERS
IRENE BRUNER MEMORIAL AWARD
MISSOURI DEPARTMENT OF CONSERVATION
misSouri master naturalists
MISSOURI STATE UNIVERSITY COLLEGE OF NATURAL \& APPLIED SCIENCES
MISSOURI STATE UNIVERSITY DEPARTMENT OF BIOLOGY

MISSOURI STATE UNIVERSITY DEPARTMENT OF PHYSICS, ASTRONOMY \& MATERIALS SCIENCE
THE LOU \& NADINE MOORE MEMORIAL AWARD
MU ALPHA THETA MATHEMATICS HONOR SOCIETY
NATIONAL OCEANIC \& ATMOSPHERIC ADMINISTRATION
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
OZARKS SCIENCE \& ENGINEERING FAIR FOUNDATION
POSITRONIC INDUSTRIES
THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR" AWARD
SCHNEIDER FOUNDATION
SMITH-GLYNN-CALLOWAY FOUNDATION
SOCIETY FOR SCIENCE \& THE PUBLIC
SOCIETY OF MANUFACTURING ENGINEERS SYLVIA SPEAR MEMORIAL AWARD SPRINGFIELD/GREENE COUNTY ENVIRONMENTAL ADVISORY BOARD
TROPHIES, ETC.
UNITED STATES ARMY
UNITED STATES NAVY/MARINE CORPS
UNITED STATES DEPARTMENT OF HEALTH \& HUMAN SERVICES
UNITED STATES METRIC ASSOCIATION WALLACE WEBER MEMORIAL AWARD
WATER ENVIRONMENT FEDERATION WATERSHED COMMITTEE OF THE OZARKS YALE SCIENCE \& ENGINEERING ASSOCIATION

## THE 2008 JUNIOR DIVISION



PLACEMENT AWARD WINNERS!

## JUNIOR DIVISION PLACEMENT AWARDS

BEHAVIORAL AND SOCIAL SCIENCES

1st Place:
Sam Jones
The Effects of Playing Video
Games While Listening to Music
Laura Stroup
Summit Preparatory School
2nd Place: Theo Shuler
How Reliable Are Eye Witnesses'
Testimonies?
Laura Stroup
Summit Preparatory School
3rd Place: Nathan Bogart
The Effects of Various Print
Colors on Reading Speed
J. Lloyd Hinsley

Mansfield Middle School
4th Place: John Bentley
Does Sleep Affect Your Brain
Power?
Timothy Hayes
Immaculate Conception

## BIOCHEMISTRY

1st Place: Kristine Schoeder
Stains Be Gone
Lynn Vogel
St. Agnes Middle School
2nd Place: Lindsay Marmouget
Stains ... Not My Cup of Tea
Lynn Vogel
St. Agnes Middle School
3rd Place: Michael Harter
pH In Your Saliva
Miriam Jump
St. Joseph Middle School
4th Place: Thomas Halter
It's a Dog's Life
Lynn Vogel
St. Agnes Middle School

## BOTANY

1st Place: Lexi Sherman
The Effects of Temperature \&
Time on Germination \& Growth of
Bean Seeds
J. Lloyd Hinsley

Mansfield Middle School

## BOTANY (cont.)

2nd Place: Melissa Edwards
The Effects of Seed Mass on a
Plant's Germination \& Stem
Length on a Bean Plant
J. Lloyd Hinsley

Mansfield Middle School
3rd Place: David Havens
Grow Plants Grow
Lynn Vogel
St. Agnes Middle School
4th Place: Abby Davis
Mattelyn Arthur
Do Your Flowers Have a Cold?
Aaron Tillman
Marshfield Junior High

## CHEMISTRY

1st Place: Jimmy Rossiter
Pennies in Fresh Water, Salt
Water, \& Open Air
Miriam Jump
St. Joseph Middle School
2nd Place: Clarissa Gutierrez
Can I Purify Water?
Lynn Vogel
St. Agnes Middle School
3rd Place: Emma Thomas
Acid in Water
Lynn Vogel
St. Agnes Middle School
Steven Schupbach
Shrinking Solutions
Robin Hilton
Clever Middle School
4th Place: Melinda Willhite
Effects of the Change in
Temperature in Salt Crystal
Formation
Giselle Stewart
Manes Middle School
Kelsey Meyer
Alyx Rollins
Burn Baby Burn
Carolyn Mulkey
Billings Middle School

## EARTH AND SPACE SCIENCES

1st Place: Brandon Tredway
The Way I R
Lynn Vogel
St. Agnes Middle School
2nd Place: Leah Langenberg
Angle of Impact
Lynn Vogel
St. Agnes Middle School
3rd Place: Meggie Bullard
The Sun's Magnetic Personality
Timothy Hayes
Immaculate Conception

4th Place: Camden Eck
Is It Warm Enough Now?
Lynn Vogel
St. Agnes Middle School

## ENGINEERING

1st Place: Michael DeVoss
It's a Hit!
Lynn Vogel
St. Agnes Middle School

2nd Place: Zac Lawson
How Far Can You Hurl?
Darlene Henne
Pleasant View Middle School
3rd Place: Christian Gray
The Effects of Various Degrees
of Pitch \& the Number of Blades
on the RPMs of a Windmill
J. Lloyd Hinsley

Mansfield Middle School

4th Place: Nicholas Roth
A Wind, Wind Situation
Lynn Vogel
St. Agnes Middle School

## ENVIRONMENTAL SCIENCES

1st Place: Stuart Jump
The Effects of Lead in Soil
Miriam Jump
St. Joseph Middle School
2nd Place: Michelle Jarek
Committing The $\mathrm{CO}_{2}$ Crime
Laura Stroup
Summit Preparatory School

## JUNIOR DIVISION PLACEMENT AWARDS

ENVIRONMENTAL SCIENCES (cont.)
3rd Place: Macy Allison
The Effects of Radiation on
Common Household Molds
J. Lloyd Hinsley

Mansfield Middle School
4th Place: Tate Hammers
Does Magnetism Affect
Tornadoes
Timothy Hayes
Immaculate Conception
MATHEMATICS / COMPUTER SCIENCES

| 1st Place: | Evan Haleg |
| :--- | :--- |
|  | Yahtzee! |
|  | Lynn Vogel |
|  | St. Agnes Middle School |

2nd Place: Tyran Vestal
Quick Computations
Darlene Henne
Pleasant View Middle School
3rd Place: Brianna Cubellis
How Average Squared
Displacements Helps Predict the
Number of Steps in a Random
Walk
J. Lloyd Hinsley

Mansfield Middle School
4th Place: Andrew Gunnett
Going, Going, Gone
Carolyn Mulkey
Billings Middle School

## MEDICINE AND HEALTH

| 1st Place: | Savanna Steffen |
| :--- | :--- |
|  | SPF50 ...Use It |
|  | Darlene Henne |
|  | Pleasant View Middle School |

2nd Place: Jacob Beam
Physical Activity Affects Lung
Capacity
Darlene Henne
Pleasant View Middle School
Abigail Horton
Snack Attack: Good vs. Evil
Lynn Vogel
St. Agnes Middle School

MEDICINE AND HEALTH (cont.)
3rd Place: Sierra Strunk
The Effects of Salicylic Acid on
Daphnia Heart Rate
J. Lloyd Hinsley

Mansfield Middle School
Sarah Gutzke
Lead Content of Children's
Jewelry \& Toys
Laura Stroup
Summit Preparatory School
4th Place: Emily Smid
Sanitized Students - Beat the
Bug
Timothy Hayes
Immaculate Conception
Brittany Groves
Three a Day
Carolyn Mulkey
Billings Middle School

## MICROBIOLOGY

1st Place: Sierra Tasker
Yeast Pressure
Giselle Stewart
Manes Middle School
2nd Place: Valerie Quirk
The Power of Green Tea vs.
Mouthwash
Laura Stroup
Summit Preparatory School
3rd Place: Lydia Smith
Honey
Laura Stroup
Summit Preparatory School
4th Place: Lee Viorel
Germ Busters
Lynn Vogel
St. Agnes Middle School

## PHYSICS

1st Place: Julia Bumberry
Up, Up \& Away: A Hot Air Balloon
Experiment
Timothy Hayes
Immaculate Conception

## PHYSICS (cont.)

2nd Place: Trey Jones
The Effect of Various
Temperatures on the Strength of
Magnets
J. Lloyd Hinsley

Mansfield Middle School
Keith Cissell
Need for Speed
Lynn Vogel
St. Agnes Middle School
3rd Place: Robert Kelly
The Strength in Numbers
Rebecca Jamieson-Pugh
Hickory Hills Middle School
Issac Gray
Does Your Golf Ball Make You a
"Tiger"?
Miriam Jump
St. Joseph Middle School
4th Place: Michael Bulfer
The Effect of Type of Terrain on
Distance a Marble Travels
Lannie Hinote
Skyline Middle School
Allen Phillips
Ready, Set, Launch
Lynn Vogel
St. Agnes Middle School

## ZOOLOGY

1st Place: Kaylee Caldwell
Enlightened Chickens
Carolyn Mulkey
Billings Middle School
2nd Place: Jacob Merrit
Zach O'Conner
MSBC (Mice Stimulated by
Caffeine)
Heather Aust
Ozark Junior High

## JUNIOR DIVISION PLACEMENT AWARDS

## ZOOLOGY (cont.)

3rd Place: McKenzie Gott<br>Artemia - Testing the Limits of<br>Alcohol on Hatching<br>Darlene Henne<br>Pleasant View High School<br>4th Place: Gray Malkmus<br>Will Triops Grow Better in<br>Different Kinds of Water?<br>Laura Stroup<br>Summit Preparatory School

## THE 2008 SENIOR DIVISION



## PLACEMENT AWARD WINNERS!



ENGINEERING (cont.)

4th Place

Chase Brewer The Power of Tape
Peggy Veatch Thayer High School

## ENVIRONMENTAL SCIENCES

1st Place: Miles Barnhart Recycling Carbon Dioxide for Biofuel Production with Algae Todd Van Gorden Greenwood Lab School

2nd Place: Katherine Holst
Dylan Montileone
What's in Your Water?
Todd Van Gorden
Greenwood Lab School
3rd Place: Katie Mulkey
Kelsey Cochran
Watersheds
Carolyn Mulkey
Billings High School
4th Place: Ali Randolph
Air Pollution in Springfield
Jennifer Bryant
Hillcrest High School

## MATHEMATICS

1st Place: Constance Quirk
Rachel Sowers
A Statistical Analysis of
Batting Averages in Stadiums
Pam Probert
Mansfield High School

2nd Place: Zack McClanahan
The Aspect Ratio of Cylinders
Tabitha Shaver
Hillcrest High School

MEDICINE AND HEALTH

1st Place: Ryan Veatch
Natural vs. OTC Remedies for
Reducing Flatulence
Peggy Veatch
Thayer Middle School
2nd Place: Caitlin Masterson
Kirsten Adamson
Can We See What You're
Hearing?
Todd Van Gorden
Greenwood Lab School

## MEDICINE AND HEALTH (cont.)

3rd Place: Brad Cook
Josh Burk
Sound Levels in Springfield
Todd Van Gorden
Greenwood Lab School

4th Place: James Hunt
Range of Frequencies That the Human Ear Can Detect Jennifer Bryant
Hillcrest High School

## MICROBIOLOGY

1st Place: Andrew Miller
Nolan Goth
Falling Off the Wagon with
Fruit Juice
Todd Van Gorden
Greenwood Lab School
2nd Place: Trevor Fenimore
Which Has More Bacteria:
Pasteurized, Chocolate, or
Unpasteurized
Jennifer Bryant
Hillcrest High School
3rd Place: Karen Ragsdale
Alicia Omohundro
How Disinfectants Affect
Growth of Bacteria on Objects
Tabitha Shaver
Hartville High School
4th Place: Lauren Johnston
Taryn Ellis
Antimicrobial Effect of
Nicotine on Bacteria
Todd Van Gorden
Greenwood Lab School

## PHYSICS

1st Place: Evan Whorton
Tyler Page
Effect of Trebuchet Arm on
Projectile Accuracy
Pam Probert
Mansfield High School
2nd Place: Holli Holloway
The Effect of Shape on the
Melting Rate of Ice
Tabitha Shaver
Hartville High School

## PHYSICS (cont.)

3rd Place: Thomas Auner
Sunny Qiu
Matt Hendrick
Corking the Bat
Todd Van Gorden
Greenwood Lab School

4th Place: Keenan Gore
The Frozen Baseball
Jennifer Bryant
Hillcrest High School

## ZOOLOGY

1st Place: William Lawson
Thermodynamic Advantage to
Seasonal Shedding of Antlers
Stephanie Blake
Parkview High School

2nd Place: Dallas Massey
The Effects of UV Light on
Colex Mosquito Larvae
Pam Probert
Mansfield High School

3rd Place: Anisha Rimal
Studies on Cryopreservation
in Examining Horses
Arbindra Rimal
Greenwood Lab School

4th Place: Lacie Vitzthum
The Growth of Worms
Jennifer Bryant
Hillcrest High School

# THE 2008 JUNIOR \& SENIOR DIVISION <br>  <br> <br> SPECIAL AWARD <br> <br> SPECIAL AWARD WINNERS! 

 WINNERS!}

| SPECIAJ A |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AMERICAN CHEMICAL SOCIETY, OZARKS SECTION |  | THE ASSOCIATION OF WOMENGEOSCIENTISTS |  | CITY UTILITIES OF SPRINGFIELD |  |
|  |  |  |  |  |  |
|  |  | \$100 Cash Award |  |  |
| The Ozark ACS Senior Division Award of a Certificate Award |  |  |  | Cerrificate of Recognition |  |  |  |
|  |  | Junior Division: | Nicholas Roth |  |  |
|  |  | Senior Division: | Stephanie Anderson |  | A Wind, Wind Situation |
| Senior Division: | Joshua Priest |  | Effects of Oceanic |  | Lynn Vogel |
|  | The Efficiency of Biofuels |  | Temperature on pH \& |  | St. Agnes Middle School |
|  | Peggy Veatch |  | $\mathrm{CO}_{2}$ Storage Capacity |  |  |
|  | Thayer High School |  | Rick Snyder | Senior Division: | Miles Barnhart |
|  |  |  | Kickapoo High School |  | Recycling Carbon Dioxide |
| AMERICAN SOCIETY OF MAMMALOGISTS |  |  |  |  | for Biofuel |
|  |  | BAKER CHAIR OF INSURANCE/GAMMA |  |  | Todd Van Gorden |
| Cerrificates of Award |  | IOTA SIGMA AWARD |  |  | Greenwood Lab School |
| Junior Division: | Josh Carroll | \$50 Cash \& Cerrificate of Achievement |  | CONSTELLATION CLUB - TROPHIES ETC. |  |
|  | Teach an Old Horse New | Senior Division: | Veronica Buchanan | "GALAXY EXPLORERS" AWARD |  |
|  | Tricks |  | How Safe Is Your Baby? |  |  |
|  | Lynn Vogel |  | Jennifer Bryant | Plaque \& $\$ 25$ Cash to each |  |
|  | St. Agnes Middle School |  | Hillcrest High School |  |  |
|  |  |  |  | Junior Division: | Maggie Bullard |
| Senior Division: | William Lawson | IRENE BRUNER MEMORIAL AWARD |  |  | The Sun's Magnetic |
|  | Thermodynamic |  |  |  | Personality |
|  | Advantages to Seasonal | \$25 Cash \& Certificate |  |  | Timothy Hayes |
|  | Shedding of Antlers |  |  |  | Immaculate Conception |
|  | Stephanie Blake | Junior Division: | Brianna Love |  |  |
|  | Parkview High School |  | Magnets + Plants $=$ ? | Junior Division: | Julia Bumberry |
|  |  |  | Lynn Vogel |  | Up, Up \& Away: A Hot Air |
| THE ASM INTERNATIONAL FOUNDATION |  | St. Agnes Middle School |  |  | Balloon Experiment |
|  |  |  | Timothy Hayes |  |
| Certificate of Award |  |  |  | CITY OF SPRINGFIELD - SOLID WASTE DIVISION |  |  | Immaculate Conception |
| Senior Division: | Kati Sherman |  |  | Senior Division: | Canin Christell |
|  | Enhancing Concrete | Recycled T-Shirt |  |  | Intelligent Task |
|  | Stability Under Acid |  |  | Coordination with Multiple |
|  | Attack | Junior Division: | Sarah Nichols |  | Robots |
|  | Pam Probert |  | Which Paper Degrades |  | Todd Christell |
|  | Mansfield High School |  | the Fastest? |  | Homeschool |
|  |  |  | Laura Stroup |  |  |
| THE AMERICAN METEOROLOGICAL |  |  | Summit Preparatory |  |  | Zachary Saunders |
| SOCIETY |  | Senior Division: |  |  | Effects of a Sulfur Dioxide |
|  |  |  | Miles Barnhart |  | Rich Environment on |
| Certificate of Award |  |  | Recycling Carbon Dioxide |  | Mars |
|  |  |  | for Biofuel Production with |  | Rick Snyder |
| Senior Division: | Erin Cady |  | Algae |  | Kickapoo High School |
|  | Kate Mattax |  | Todd Van Gorden |  |  |
|  | Climate Changes \& Its |  | Greenwood Lab School | DISCOVERY EUDCATION'S YOUNG |  |
|  | Effects on Water Quality |  |  | SCIENTIST CHALLENGE |  |
|  | Todd Van Gorden |  | Aaron Baker |  |  |
|  | Greenwood Lab School |  | Further Studies into Use of Waste Materials as | Eligibility to Compete in the Next Level of Competition |  |
|  |  |  | Insulators |  |  |
|  |  |  | Tabitha Shaver | Junior Division: | Sam Jones |
|  |  |  | Hartville High School |  | The Effects of Playing |
|  |  |  |  |  | Video Games While |
|  |  |  |  |  | Listening to Music |
|  |  |  |  |  | Laura Stroup |
|  |  |  |  |  | Summit Preparatory |



| SPECIAJA AWARDS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DRURY UNIVERSITY (cont.) |  | DRURY UNIVERSITY (cont.) |  | EVANGEL UNIVERSITY (cont.) |  |
| Senior Division: | Tron Sherman | Senior Division: | Evan Whorton | Senior Division: | Devin Moore |
|  | The Effects of Reflected |  | Tyler Page |  | Carter Cunningham |
|  | Light From Varied Colors |  | Effect of Trebuchet Arm |  | Light Emissions of |
|  | of Mulch on Phaseolus |  | on Projectile Accuracy |  | Chemiluminescent |
|  | Vulgaris Seeds |  | Pam Probert |  | Reactions |
|  | Pam Probert |  | Mansfield High School |  | Charlotte Mistler |
|  | Devin Moore |  | Thermodynamic |  | Erin Dierksen |
|  | Carter Cunningham |  | Advantage to Seasonal |  | A Toxicology Study of Cu |
|  | Light Emissions of |  | Shedding of Antlers |  | \& Cr on Radish Seeds |
|  | Chemiluminescent |  | Stephanie Blake |  | Pam Probert |
|  | Reactions |  | Parkview High School |  | Mansfield High School |
|  | Charlotte Mistler |  |  |  |  |
|  | Logan-Rogersville HS | 6 Hours Undergradrer | duate Credit to the Senior |  | Kati Sherman |
|  |  | High Grand Prize | Award Winners |  | Enhancing Concrete |
|  | Erin Dierksen |  |  |  | Stability Under Acid |
|  | A Toxicology Study of Cu | Senior Division: | Miles Barnhart |  | Attack |
|  | \& Cr on Radish Seeds |  | Reclycling Carbon |  | Pam Probert |
|  | Pam Probert |  | Dioxide for Biofuel |  | Mansfield High School |
|  | Mansfield High School |  | Todd Van Gorden Greenwood Lab School |  | Miles Barnhart |
|  | Kati Sherman |  |  |  | Recycling Carbon Dioxide |
|  | Enhancing Concrete |  | Canin Christell |  | for Biofuel Production with |
|  | Stability Under Acid |  | Intelligent Task |  | Algae |
|  | Attack |  | Coordination with Multiple |  | Todd Van Gorden |
|  | Pam Probert |  | Robots |  | Greenwood Lab School |
|  | Mansfield High School |  | Todd Christell |  |  |
|  |  |  | Homeschool |  | Constance Quirk |
|  | Miles Barnhart |  |  |  | Rachel Sowers |
|  | Recycling Carbon Dioxide | EVANGEL UNIV | RSITY |  | A Statistical Analysis of |
|  | for Biofuel Production with |  |  |  | Batting Averages in |
|  | Algae | \$1,500 Scholars | to each Senior Division |  | Stadiums |
|  | Todd Van Gorden | First Place Winn | as Entering Freshmen |  | Pam Probert |
|  | Greenwood Lab School |  |  |  | Mansfield High School |
|  | Constance Quirk | Senior Division: | Molly Carnahan Alice Haseltine |  | Ryan Veatch |
|  | Rachel Sowers |  | Battle of Bands |  | Natural vs. OTC |
|  | A Statistical Analysis of |  | Todd Van Gorden |  | Remedies for Reducing |
|  | Batting Averages in |  | Greenwood Lab School |  | Flatulence |
|  | Stadiums |  |  |  | Peggy Veatch |
|  | Pam Probert |  | Josh Dorcy |  | Thayer Middle School |
|  | Mansfield High School |  | Effect of Endocrine |  |  |
|  |  |  | Disruptors on Raphanus |  | Andrew Miller |
|  | Ryan Veatch |  | Pam Probert |  | Nolan Goth |
|  | Natural vs. OTC |  | Mansfield High School |  | Falling Off the Wagon |
|  | Remedies for Reducing |  |  |  | with Fruit Juice |
|  | Flatulence |  | Tron Sherman |  | Todd Van Gorden |
|  | Peggy Veatch |  | The Effects of Reflected |  | Greenwood Lab School |
|  | Thayer Middle School |  | Light From Varied Colors of Mulch on Phaseolus |  | Evan Whorton |
|  | Andrew Miller |  | Vulgaris Seeds |  | Tyler Page |
|  | Nolan Goth |  | Pam Probert |  | Effect of Trebuchet Arm |
|  | Falling Off the Wagon |  | Mansfield High School |  | on Projectile Accuracy |
|  | with Fruit Juice |  |  |  | Pam Probert |
|  | Todd Van Gorden |  |  |  | Mansfield High School |
|  | Greenwood Lab School |  |  |  |  |


| SPACASAS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EVANGEL UNIVERSITY (cont.) |  | HERBERT HOOVER PRESIDENTIAL LIBRARY ASSOCIATION "YOUNG |  | MISSOURI DEPARTMENT OF |  |
| Senior Division: | William Lawson | ENGINEER AWARD" |  |  |  |
|  | Thermodynamic |  |  | Plaque, Field Guide, CD \& DVD |  |
|  | Advantage to Seasonal | Certificate of Award \& Medallion |  |  |  |
|  | Shedding of Antlers |  |  | Junior Division: | Stuart Jump |
|  | Stephanie Blake | Senior Division: | Canin Christell |  | The Effects of Lead in Soil |
|  | Parkview High School |  | Intelligent Task |  | Miriam Jump |
|  |  |  | Coordination with Multiple |  | St. Joseph School |
| EXPANDING YOUR HORIZONS: WOMEN |  |  | Robots | Senior Division: William Lawson |  |
| IN SCIENCE |  |  | Todd Christell |  |  |
|  |  | Homeschool |  |  | Thermodynamic |
| Certificate of Award |  |  |  |  | Advantages to Seasonal |
|  |  | HORAN \& BECKER MEDICAL SCIENCE |  |  | Shedding of Antlers |
| Junior Division: | Savanna Steffen | AWARD (sponsored by HORAN \& |  |  | Stephanie Blake |
|  | SPF 50: Use It | BECKER, DDS, AFFILIATED ORAL |  |  | Parkview High School |
|  | Darlene Henne | SURGEONS) |  |  |  |
|  | Pleasant View MS |  |  | MISSOURI MASTER NATURALIST |  |
|  |  | \$100 Health Science Award |  | AWARD, JUNIOR DIVISION |  |
| Senior Division: | Anisha Rimal |  |  |  |  |
|  | Studies on | Senior Division: | Ryan Veatch | Certificate of Award \& \$50 Cash |  |
|  | Cryopreservation in |  | Natural vs. OTC |  |  |
|  | Examining Horses |  | Remedies for Reducing | Junior Division: | Sarah Nichols |
|  | Albindra Rimal |  | Flatulence |  | Which Paper Degrades |
|  | Greenwood Lab School |  | Peggy Veatch |  | Fastest? |
|  |  |  | Thayer High School |  | Laura Stroup |
| GREATER OZARK AUDOBON SOCIETY |  |  |  |  | Summit Preparatory |
| "ENVIRONMENTAL AWARENESS |  | INTEL "EXCELLENCE IN COMPUTER |  |  |  |
| AWARD" |  |  |  | MISSOURI MASTER NATURALIST |  |
|  |  | SCIENCE" AWARD |  | AWARD, SENIOR DIVISION |  |
| One Year Membership in the National |  | Certificate of Award \& \$200 Cash |  |  |  |
| Audubon Society \& Bird Identification Book |  |  |  | Certificate of Award \& \$50 Cash |  |
| Junior Division: | Jordan Francis | Senior Division: | Canin Christell | Senior Division: William Lawson |  |
|  | Our Feathered Friends |  | Intelligent Task | Senior Division: | Thermodynamic |
|  | Rebecca Jamieson-Pugh |  | Coordination with Multiple |  | Advantages to Seasonal |
|  | Hickory Hills MS |  | Robots |  | Shedding of Antlers |
|  |  |  | Todd Christell |  | Stephanie Blake |
| THE GREENE COUNTY GROUNDWATER |  |  | Homeschool |  | Parkview High School |
| GUARDIAN AWARD (sponsored by the |  | INTERNATIONAL SOCIETY FOR OPTICAL |  |  |  |
| GREENE COUNTY RESOURCE |  |  |  |  |  |
| MANAGEMENT DEPARTMENT) |  | INTERNATIONAL SOCIETY FOR OPTICALENGINEERS |  | MISSOURI STATE UNIVERSITY <br> DEPARTMENT OF BIOLOGY |  |
| Plaque \& Tickets to Discovery Center \& Fantastic Caverns |  | Certificate of Award |  | Certificates to students \& plaques to teachers |  |
|  |  | Senior Division: | Canin Christell | Junior Division: | Lexi Sherman |
| Junior Division: | Emma Thomas |  | Intelligent Task |  | The Effects of |
|  | Acid in Water |  | Coordination with Multiple |  | Temperature \& Time on |
|  | Lynn Vogel |  | Robots |  | Germination \& Growth of |
|  | St. Agnes Middle School |  | Todd Christell |  | Bean Seeds |
|  |  |  | Homeschool |  | J. Lloyd Hinsley |
|  |  |  |  |  | Mansfield Middle School |
|  |  |  |  |  | Stuart Jump |
|  |  |  |  |  | The Effects of Lead in Soil |
|  |  |  |  |  | Miriam Jump |
|  |  |  |  |  | St. Joseph Middle School |

$\frac{\text { MISSOURI STATE UNIVERSITY }}{\text { DEPARTMENT OF BIOLOGY (cont.) }}$

Senior Division: Sierra Strunk
The Effects of Salicylic Acid on Daphnia Heart
J. Lloyd Hinsley Mansfield Middle School

Sierra Tasker
Yeast Pressure
Giselle Stewart Manes Middle School

Kaylee Caldwell
Enlightened Chickens
Carolyn Mulkey
Billings Middle School
Rebecca Hardman
How Electricity Affects the Germination \& Growth of Brassica Rapa
Rick Snyder
Kickapoo High School
Katherine Holst Dylan Montileone What's In Your Water?
Todd Van Gorden Greenwood Lab School

Ryan Veatch
Natural vs. OTC
Remedies for Reducing
Flatulence
Peggy Veatch
Thayer High School
Senior Division: Andrew Miller
Nolan Goth
Falling Off the Wagon
with Fruit Juice
Todd Van Gorden Greenwood Lab School

William Lawson
Thermodynamic
Advantage to Seasonal Shedding of Antlers Stephanie Blake Parkview High School
\$1,000 Work/Study Award
Senior Division: Katherine Holst
Dylan Montileone
What's In Your Water?
Todd Van Gorden Greenwood Lab School

MISSOURI STATE UNIVERSITY COLLEGE OF NATURAL AND APPLIED SCIENCES
$\$ 50$ Cash Award
Junior Division: Stuart Jump
The Effects of Lead in Soil
Miriam Jump
St. Joseph Middle School
Senior Division: Miles Barnhart
Recycling Carbon Dioxide
for Biofuel
Todd Van Gorden
Greenwood Lab School
Senior Division: Canin Christell
Intelligent Task
Coordination with Multiple
Robots
Todd Christell
Homeschool
MISSOURI STATE UNIVERSITY
DEPARTMENT OF PHYSICS, ASTRONOMY \& MATERIALS SCIENCE

Certificate of Award
Senior Division: Thomas Auner
Sunny Qu
Matt Hendrick
Corking the Bat
Todd Van Gorden
Greenwood Lab School
Senior Division: Keenan Gore
The Frozen Baseball
Jennifer Bryant
Hillcrest High School
Holli Holloway
Effects of Shape on
Melting of Ice
Tabitha Shaver
Hartville High School

LOU \& NADINE MOORE MEMORIAL AWARD
\$50 Cash Award to the top Junior Division projects covering Education or Special Needs

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Junior Division: Devin Merz
How Hard Is Your Math?
Lynn Vogel
St. Agnes Middle School
Taylor Lower
Morning, Noon or Night?
Miriam Jump
St. Joseph Middle School
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## MU ALPHA THETA NATIONAL

 MATHEMATICS HONOR SOCIETYCertificate of Award
Senior Division: Constance Quirk
Rachel Sowers
An Analysis of Batting
Averages in Stadiums
Pam Probert
Mansfield High School
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Certificate of Award
Senior Division: Erin Cady
Kate Mattax
Climate Changes \& Its
Effects on Water Quality
Todd Van Gorden
Greenwood Lab School

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS "INNOVATIVE ENGINEERING" AWARD

Certificate of Award \& Lapel Pin

| Senior Division: | Kati Sherman |
| :--- | :--- |
|  | Enhancing Concrete |
|  | Stability Under Acid |
|  | Attack |
|  | Pam Probert |
|  | Mansfield High School |


|  |  | HCIA | 」AWAR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| RICOH CORPORATION |  | SCHNEIDER FOUNDATION (in cooperation with the Community Foundation of the |  | THE SMITH-GLYNN-CALLOWAY MEDICAL |  |
| Cerrificate of Award \& Progression to NationalCompetition |  | Ozarks) (cont.) |  |  |  |
|  |  | \$250 Cash Award |
| Senior Division: |  |  |  | Senior Division: | Josh Dorcy |  |  |
|  | Joshua Priest | Effects of Endocrine | Senior Division: |  | Brad Cook |
|  | The Efficiency of Biofuels | Disruptors on Raphanus |  |  | Josh Burke |
|  | Peggy Veatch | Pam Probert |  |  | Sound Levels in |
|  | Thayer High School | Mansfield High School |  |  | Springfield, MO |
|  |  |  |  |  | Todd Van Gorden |
| SCHNEIDER FOUNDATION (in cooperation |  |  | Miles Barnhart |  | Greenwood Lab School |
| with the Community Foundation of the |  |  | Recycling Carbon Dioxide |  |  |
| Ozarks) |  |  | for Biofuel | \$300 Cash Award |  |
|  |  |  | Todd Van Gorden |  |  |
| \$200 Cash \& Certificate |  |  | Greenwood Lab School | Senior Division: | Caitlin Masterson |
|  |  |  |  |  | Kirsten Adamson |
| Junior Division: | Lexi Sherman |  | Tron Sherman |  | Can We See What You're |
|  | The Effects of |  | Effects of Reflected Light |  | Hearing? |
|  | Temperature \& Time on |  | on Bean Seeds |  | Todd Van Gorden |
|  | Germination \& Growth on |  | Pam Probert |  | Greenwood Lab School |
|  | Bean Seeds |  | Mansfield High School |  |  |
|  | J. Lloyd Hinsley |  |  | SOCIETY FOR SCIENCE \& THE PUBLIC |  |
|  | Mansfield Middle School |  | Canin Christell Intelligent Task | Certificate of Award \& Progression to National Competition |  |
|  | Kristine Schoeder |  | Coordination with Multiple |  |  |
|  | Stains Be Gone |  | Robots |  |  |
|  | Lynn Vogel |  | Todd Christell | Junior Division: | Sam Jones |
|  | St. Agnes Middle School |  | Homeschool |  | The Effects of Playing Video Games While |
|  | Julia Bumberry | THE SMITH-GLYNN-CALLOWAY MEDICAL |  |  | Listening to Music |
|  | Up, Up \& Away: A Hot Air | FOUNDATION AWARD |  |  | Laura Stroup |
|  | Balloon Experiment |  |  |  | Summit Preparatory |
|  | Timothy Hayes | \$150 Cash Award |  |  |  |
|  | Immaculate Conception |  |  |  | Theo Shuler |
|  |  | Senior Division: | James Hunt |  | How Reliable Are Eye |
|  | Stuart Jump |  | Range of Frequencies |  | Witnesses' Testimonies? |
|  | The Effects of Lead in Soil |  | That the Human Ear |  | Laura Stroup |
|  | Miriam Jump |  | Hears |  | Summit Preparatory |
|  | St. Joseph Middle School |  | Jennifer Bryant |  |  |
|  |  |  | Hillcrest High School |  | Kristine Schoeder |
|  | Savanna Steffen |  |  |  | Stains Be Gone |
|  | SPF 50: Use It |  | Ryan Veatch |  | Lynn Vogel |
|  | Darlene Henne |  | Natural vs. OTC |  | St. Agnes Middle School |
|  | Pleasant View Middle |  | Remedies for Reducing |  |  |
|  | School |  | Flatulence |  | Lindsay Marmouget |
|  |  |  | Peggy Veatch |  | Stains . . . Not My Cup of |
| \$500 Cash \& Certificate |  |  | Thayer High School |  | Tea |
|  |  |  |  |  | Lynn Vogel |
| Senior Division: | Ryan Veatch |  | Kirtana Viswanathan |  | St. Agnes Middle School |
|  | Natural vs. OTC |  | Prevention of Bowel |  |  |
|  | Remedies for Reducing |  | Inflammation in |  | Lexi Sherman |
|  | Flatulence |  | Premature Infants |  | The Effects of |
|  | Peggy Veatch |  | Lynn Vogel |  | Temperature \& Time on |
|  | Thayer High School |  | Springfield Catholic |  | Germination \& Growth of |
|  |  |  |  |  | Bean Seeds |
|  |  |  |  |  | J. Lloyd Hinsley |
|  |  |  |  |  | Mansfield Middle School |



| SPECIAJAEMS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SPRINGFIELD/GREENE COUNTY ENVIRONMENTAL ADVISORY BOARD |  | UNITED STATES ARMY - Excellence in Environmental Science |  | UNITED STATES NAVY/MARINE CORPS(cont.) |  |
| \$50 Cash |  | Cerrificate of Award \& Daypack Calculator |  | Junior Division: | Steven Schupbach Shrinking Solutions |
| Senior Division: | Kamber Brown | Senior Division: | Katherine Holst |  | Robin Hilton |
|  | Wind Speed \& Dew |  | Dylan Montileone |  | Clever Middle School |
|  | Points Influence on |  | What's in Your Water? |  |  |
|  | Radon Levels |  | Todd Van Gorden |  | Patrick Ashcraft |
|  | Rick Snyder |  | Greenwood Lab School |  | Jesse Adams |
|  | Kickapoo High School |  |  |  | The Simple Electric |
|  |  | UNITED STATES ARMY - Excellence in |  |  | Generator |
| SPRINGFIELD/GREENE COUNTY |  | Physics |  |  | Heather Aust |
| ENVIRONMENTAL ADVISORY BOARD |  |  |  |  | Ozark Junior High |
| "INNOVATIVE ENVIRONMENTAL |  | Cerrificate of Award \& Daypack Calculator |  |  |  |
| PROJECT" AWARD |  | Senior Division: |  |  | Trey Jones |
| \$50 Cash |  |  | Holli Holloway |  | The Effect of Various |
|  |  |  | The Effects of Shape on the Melting Rate of Ice |  | Temperatures on Strength of Magnets |
| Senior Division: | Michelle Jarek |  | Tabitha Shaver |  | J. Lloyd Hinsley |
|  | Greenhouse Gases: |  | Hartville High School |  | Mansfield Middle School |
|  | Committing the $\mathrm{CO}_{2}$ |  |  |  |  |
|  | Crime | UNITED STATES ARMY - Award of |  | Senior Division: | James Hunt |
|  | Laura Stroup | Excellence |  |  | Range of Frequencies |
|  | Summit Preparatory | Bronze Medallion |  |  | That the Human Ear Can Hear |
| UNITED STATES ARMY - Excellence in |  |  |  |  | Jennifer Bryant |
| Biology |  | Senior Division: | Katherine Holst |  | Hillcrest High School |
|  |  | Dylan Montileone |  |  |  |
| Certificate of Award \& Daypack Calculator |  |  |  | What's in Your Water? <br> Todd Van Gorden | Medal, $\$ 50$ Gift Certificate \& Certificate of Award |  |
| Senior Division: | Brad Cook |  | Greenwood Lab School |  |  |
|  | Josh Burk |  |  | Senior Division: | Brad Cook |
|  | Sound Levels in | UNITED STATES | METRIC ASSOCIATION |  | Josh Burk |
|  | Springfield, MO |  |  |  | Sound Levels in |
|  | Todd Van Gorden | Certificate of Awa |  |  | Springfield, MO |
|  | Greenwood Lab School |  |  |  | Todd Van Gorden |
|  |  | Senior Division: | Josh Priest |  | Greenwood Lab School |
| UNITED STATES ARMY - Excellence in |  |  | The Efficiency of Biofuels |  |  |
| Chemistry |  |  | Peggy Veatch <br> Thayer High School |  | Evan Whorton Tyler Page |
| Cerrificate of Award \& Daypack Calculator |  |  |  |  | Effect of Trebuchet Arm |
|  |  | UNITED STATES NAVY/MARINE CORPS |  |  | on Projectile Accuracy |
| Senior Division: | Veronica Buchanan |  |  |  | Pam Probert |
|  | How Safe Is Your Baby? | Medal \& Certificate of Award |  |  | Mansfield High School |
|  | Hillcrest High School | Junior Division: | Bailey Mittman |  | Lindsay Burke |
|  |  |  | To Compete or Not |  | Alicia Taylor |
| UNITED STATES ARMY - Excellence in |  |  | Compete: That is the |  | The Effect of Temperatur |
| Engineering |  |  | Question |  | on Vitamin C in Juice |
|  |  |  | Laura Stroup |  | Tabitha Shaver |
| Cerrificate of Award \& Daypack Calculator |  |  | Summit Preparatory |  | Hartville High School |
| Senior Division: | Blaine Cheek |  | Jacob Merrit |  |  |
|  | Changing a Simple Solar |  | Zach O'Connor |  |  |
|  | Cell for More Efficiency |  | MSBC (Mice Stimulated |  |  |
|  | Jennifer Bryant |  | By Caffeine) |  |  |
|  | Hillcrest High School |  | Heather Aust |  |  |
|  |  |  | Ozark Junior High |  |  |


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| :---: | :---: | :---: | :---: | :---: |
| UNITED STATES DEPARTMENT OF |  | YALE SCIENCE \& ENGINEERING |  | OZARKS SCIENCE \& ENGINEERING FAIR |
| HEALTH \& HUMAN SERVICES |  | ASSOCIATION, |  | FOUNDATION SENIOR DIVISION GRAND |
|  |  |  |  | PRIZE TEACHER AWARD |
| Certificate of Award \& Binder |  | Award Certificate |  |  |
| Senior Division: | Ryan Veatch | Senior Division: | Matt Reese | This award of a plaque is awarded to the teacher(s) of the Senior Division Grand Prize |
|  | Natural vs. OTC |  | Mac Collins | student projects. The recipients of the OSEF |
|  | Remedies for Reducing |  | Design of an Oceanic | Foundation Senior Division Grand Prize |
|  | Flatulence |  | Chemical Mapping | Teacher Award for 2008 are: |
|  | Peggy Veatch |  | Instrument |  |
|  | Thayer High School |  | Fred Fotsch | Todd Van Gorden |
|  |  |  | Glendale High School | Greenwood Lab School |
| WALLACE WEBER MEMORIAL AWARD |  |  |  |  |
| FOR BOTANY |  | THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR MEMORIAL |  | Todd Christell |
|  |  |  |  | Homeschool |
| \$25 Cash \& Certificate of Award for |  | AWARD" |  |  |
| Outstanding Botany Project |  | \$25 Cash to a First Time Teacher. |  |  |
| Junior Division: | Grace Prewitt |  |  |  |
|  | Herbal Remedies to Slow | Timothy Hayes <br> Immaculate Conception Middle School |  |  |
|  | the Growth of Crown Gall |  |  |  |
|  | Charlotte Mistler |  |  |  |
|  | Logan-Rogersville HS |  |  |  |
|  |  | POSITRONIC IN | USTRIES TEACHER |  |
| WATER ENVIRONMENT |  | AWARD |  |  |
| FEDERATION/STOCKHOLM WATER PRIZE |  | This cash award of $\$ 75$ is awarded to the Teacher, Junior High, Middle School or Senior High, with the most total entries. The recipient of the Positronic Award for 2008 is: |  |  |
| Certificate of Award, Advancement to National Level Competition |  |  |  |  |
|  |  |  |
|  |  |  |
| Senior Division: | Kelsey Cochran |  |  | recipientor he Posironic Award for 2008 is. |  |  |
|  | Katie Mulkey |  |  |  |  |  |
|  | Watersheds | St. Ag | es Middie School |  |
|  | Carolyn Mulkey |  |  |  |
|  | Billings High School | OZARKS SCIEN | E \& ENGINEERING FAIR |  |
| WATERSHED COMMITTEE OF THE |  | FOUNDATION JUNIOR DIVISION GRAND |  |  |
|  |  |  |
| OZARKS |  |  |  |  |
| \$50 Cash 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 2008 is: <br> Miriam Jump <br> St. Joseph Middle School |  |  |
| Junior Division: | Alex Goans |  |  |  |
|  | Feeding Nemo |  |  |  |
|  | Lynn Vogel |  |  |  |
|  | St. Agnes Middle School |  |  |  |
| Senior Division: | Kelsey Cochran |  |  |  |
|  | Katie Mulkey |  |  |  |
|  | Watersheds |  |  |  |
|  | Carolyn Mulkey |  |  |  |
|  | Billings High School |  |  |  |



The Ozarks Science \& Engineering Fair Steering Committee would like to extend a very special Thank You and acknowledgement to Head Football Coach Terry Allen, Assistant Coach-Defensive Line Derrick LeBlanc \& the Missouri State Football Bears for their generous donation of time and effort in setting up and
 dismantling the Fair.

## Go Bears!




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. Georgianna Saunders' BIO 100 Class
- Dr. Roberta Aram's ELE 434 Class
- Michelle Hulett's CIS 101 Classes
- Missouri State University Biology Department
- Missouri State University Football Team \& Coaches (Go BEARS!)
- Missouri State University Pre-Medical Society
- Missouri State University Wrestling Club
- Sue McCrory's CIS 101 \& RIL 211 Classes
- Dr. Janice Greene's BIO 205 Class
- Kelly Hansen's IDS 110 Class
- Citizenship \& Service Learning Students
- Theta Chi, Iota Beta Chapter
- Harry Shea's CSC 101 Class
- Aimee Marcello's CIS 101 Class
- Dr. Meyer's GRY 108 Class
- Alpha Phi Omega, Beta Mu Chapter
- Dr. Cheryl Schaefer's PHY 123 Class

In addition, nearly 200 judges from local colleges, companies and organizations donated their time and expertise Tuesday evening to judge the approximately 400 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 Maschino's for their generous donation of 48 umbrella bases, and to Robinett Business Systems for their generous donation of a copier.

In addition, we would like to recognize Allen Rents for their continuing support of the Fair by providing a substantial number of the folding tables used during the Fair.

Finally, we especially want to acknowledge the generous donation contributed by Positronic Industries, Schneider Foundation, and F \& H Food Equipment Company toward the substantial travel expenses incurred by the Senior Division Grand Prize Winners for travel to the 2008 International Science \& Engineering Fair in Atlanta, Georgia.

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

