# OZARKS SCIENCE \& ENGINEERING FAIR 

HAMMONS STUDENT CENTER
SOUTHWEST MISSOURI STATE UNIVERSITY

April 1, 2, \& 3, 2003


## 2003 WINNERS

Sponsored By:
Southwest Missouri State University Clariant
Kraft Foods, Inc.
Associated Electric Cooperative, Inc. 3M Corporation

OZARKS SCIENCE AND ENGINEERING FAIR


AWARDS CEREMONY

```
APRIL 3, 2003
``` 6:00 PM

\section*{THE 43RD ANNUAL}

\section*{Ozarks Science and Engineering Fair} AWARDS CEREMONY
\begin{tabular}{|c|c|c|}
\hline 6:00 PM & WELCOMING REMARKS & Michelle Norgren, Executive Director, Ozarks Science and Engineering Fair \\
\hline & PRESENTATION OF AWARDS & MASTER OF CEREMONIES: Jeff Rogers, PRESIDENT, Board of Directors, Ozarks Science and Engineering Fair FOUNDATION \\
\hline & Placement Awards & JUNIOR DIVISION \\
\hline & Placement Awards & SENIOR DIVISİN \\
\hline & Special Awards & \\
\hline & TEACHER AWARDS & \\
\hline & Grand Prize Award & JUNIOR DIVISION \\
\hline & Grand Prize Award & SENIOR DIVISİN \\
\hline
\end{tabular}

CONGRATULATIONS TO ALL OF OUR WINNERS!



MASTER OF CEREMONIES
MR. JEFF ROGERS
CHAIRMAN, BOARD OF DIRECTORS
OZARKS SCIENCE \& ENGINEERING FAIR FOUNDATION


\section*{OSEF COMMITTEE MEMBERS}

EXECUTIVE DIRECTOR:
SPECIAL AWARDS:
PLACEMENT AWARDS:
SCIENCE DAY:
PUBLICITY:
WEB PAGE DEVELOPMENT:
VOLUNTEERS:
CORPORATE DISPLAYS: RULES \& REGULATIONS:
AWARD CEREMONY:
ELEMENTARY FAIR:

MICHELLE NORGREN
JENN CVITAK, CHAIR
GINGER GRAY
MELINDA UNTIEDT
JANICE HORTON
SANDY BROERMAN
SUE MCCRORY
MICHELLE NORGREN
JAMES K. TICE
HUGH BREWER
TIM ZIEGLER
KATHY SHADE


\title{
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


\title{
MAJOR SPONSORS
}

\title{
SOUTHWEST MISSOURI STATE UNIVERSITY
}

\author{
CLARIANT \\ KRAFT FOODS, INC. \\ ASSOCIATED ELECTRIC COOPERATIVE, INC.
}

3M CORPORATION

\section*{2003 AWARD SPONSORS}

AMERICAN CHEMICAL SOCIETY - OZARK SECTION
AMERICAN FOUNDATION FOR VISION AWARENESS
AMERICAN METEOROLOGICAL SOCIETY
AMERICAN SOCIETY OF MAMMALOGISTS
ARRIS PIZZA
THE ASM INTERNATIONAL FOUNDATION
ASSOCIATION FOR WOMEN GEOSCIENTISTS
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EXPANDING YOUR HORIZONS (SMSU WOMEN IN SCIENCE)
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GREENE COUNTY RESOURCE MANAGEMENT DEPARTMENT
HEARD, HEARD \& VOGEL
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HORAN \& BECKER

INTEL
IRENE BRUNNER MEMORIAL AWARD
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THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR" AWARD
SCHNEIDER FOUNDATION
SMITH-GLYNN-CALLOWAY FOUNDATION
SOCIETY FOR IN-VITRO BIOLOGY
SOCIETY OF MANUFACTURING ENGINEERS
SOUTHWEST MISSOURI AREA HEALTH EDUCATION CENTER
SMSU COLLEGE OF NATURAL \& APPLIED SCIENCES
SMSU DEPARTMENT OF BIOLOGY
SMSU SOCIETY OF PHYSICS STUDENTS
SMSU STUDENT AFFILIATE CHAPTER OF THE AMERICAN CHEMICAL SOCIETY
TROPHIES, ETC.
UNITED STATES AIR FORCE
UNITED STATES DEPARTMENT OF HEALTH \& HUMAN SERVICES
WALLACE WEBER MEMORIAL AWARD
WATERSHED COMMITTEE OF THE OZARKS
YALE SCIENCE \& ENGINEERING ASSOCIATION

\section*{SENIOR DIVISION GRAND PRIZE WINNERS AND ALTERNATES}
(Grand Prize Awards Sponsored by: Kraft Foods, Inc., Positronic Industries, 3 M Corporation, E\&V Engineers, ESC Consulting Engineers, and F\&H Industries, Clariant, and Associated Electric Cooperative, Inc., and includes plaques for the Grand Prize Winners and Teachers.)

GRAND PRIZE Siir Kilkis
Engineering Visual Orchestration Technology: Music Painter Greenwood High School
Hugh Brewer
GRAND PRIZE Ryan Cady
The Effects of Botulinum Toxin on Trigeminal Cells
Greenwood High School
Hugh Brewer
FIRST ALTERNATE
Sarah Haseltine
Stinky Stimulation
Greenwood High School
Hugh Brewer
SECOND ALTERNATE Beth Brockman
Tetracycline Effects on Triclosan Resistant E. coli
Glendale High School
Charles Rey

\section*{JUNIOR DIVISION GRAND PRIZE WINNERS}

AND ALTERNATE
(The Junior Division Grand Prize Award is Sponsored by Conco Companies, and includes a \(\$ 75.00\) Cash Award and Plaque for the Grand Prize Winner and Teacher, and a \(\$ 75.00\) Cash Award for the Grand Prize Alternate and Teacher.)

GRAND PRIZE Kendra Weatherford
Of Mus Musculus Domestsicus and Men
Pleasant View Middle School
Darlene Henne

\section*{ALTERNATE}

Neal Pinkerton
To Feed or Not To Feed: That is the Question
Immaculate Conception Middle School
Elaine Marzolla

1st Place: Kendra Weatherford
Of Mus Musculus Domesticus and
Men
Darlene Henne, Pleasant View
2nd Place: Sebastian Karuppan
Does Music Affect Your Pulse?
Elaine Marzolla, Immaculate
Conception
Brittani Shockley
Male or Female?
Aaron Tillman, Marshfield MS
Bryant Donelson
The Effectiveness of Various Colored
Lights
Lynn Vogel, St. Agnes MS
3rd Place: Rachel Franka
Competition vs. Practice Session
Lynn Vogel, St. Agnes MS
Breanna Daniels
Don't Let the Pressure Get You!
Jeff Ellison, Hollister MS
Sara Strong
Taken to Heart
Aaron Tillman, Marshfield JH
4th Place: Kellen McLean Lutz
What Is Fuchsia and Why Should
You Care?
Rebecca Jamieson-Pugh, Hickory
Hills MS
Kaitlyn McConnel
To Read or Not to Read
Aaron Tillman, Marshfield MS

\section*{BIOCHEMISTRY}

1st Place: Abby Callen
Are My Teeth Really Clean?
Tim Zeigler, Pipkin MS
2nd Place: Ann Moran
Dialysis Diffusion
Darlene Henne, Pleasant View
3rd Place: Erin Spicher
Paper or Plastic
Aaron Tillman, Marshfield JH
4th Place: Brian Linneman
How Good Are Your Taste Buds?
Elaine Marzolla, Immaculate
Conception

\section*{BOTANY}

1st Place: Hailey Kiser
Plants \& Pollution
Kim Potter, Marshfield JH

BOTANY (cont.)
\begin{tabular}{ll} 
2nd Place: & \begin{tabular}{l} 
Michael Rensche \\
Zeb Wallace \\
\\
\\
\\
White, Red, Black, or Green: Which \\
is Better? \\
\\
\\
Karla Shiveley, Billings MS \\
\\
\\
\\
\\
Lauren Dorris \\
\\
\\
Smart or Mysterious: I Need to Know \\
3rd Place:
\end{tabular} \\
& \begin{tabular}{l} 
Tony Marzolla \\
Growth to the Beat
\end{tabular} \\
& Kathryn Keller, St. Joseph MS \\
& Kurtis Grothuff \\
& That's One Weird Plant \\
& Lynn Vogel, St. Agnes MS \\
4th Place: & Brady Yates \\
& Symbiosis of Redwigglers and \\
& Fescue Grass \\
& Darlene Henne, Pleasant View \\
& Andrew Rhodes \\
& The Effect of Phototropism in Lima \\
& Bean Plants \\
& Elaine Marzolla, Immaculate \\
Conception
\end{tabular}

\section*{CHEMISTRY}

1st Place: Olivia McGoon
Weather Cookies
Kim Potter, Marshfield JH
2nd Place: Ronald Dy
True Colors
Elaine Marzolla, Immaculate
Conception
Katie Finch
Super Bubble
Lynn Vogel, St. Agnes MS
Kim Koch
Extravagant or Frugal?
Lynn Vogel, St. Agnes MS
Joseph Highley
Strong Ash Can Be
Jennifer Cvitak, Cherokee
3rd Place: Ben Ceaser
Matt Halvorson
Acid Action
Crystal Wood, Cherokee
Alonzo Shockley
Dissolving: Fast or Slow?
Tim Zeigler, Pipkin MS
Emily Wagman
Ionically Speaking
Jackie Hutcherson, Cherokee

CHEMISTRY (cont.)
4th Place: \begin{tabular}{l} 
Jack Hume \\
Rust or Bust \\
\\
\\
Elaine Marzolla, Immaculate \\
\\
\\
\\
\\
Wyko Ter Haar \\
\\
\\
Put It On A Penny \\
\\
\\
\\
\\
\\
\\
Shnn Vogel, St. Agnes MS Beckers \\
\\
Which Cleaner is Meaner? \\
Lynn Vogel, St. Agnes MS \\
\\
\\
Katrina Otagan \\
Do You Know Your Soda? \\
Kathryn Keller, St. Joseph
\end{tabular}

\section*{EARTH AND SPACE SCIENCES}

1st Place: Nick Hurt
The Effects of the Time of Day \&
Changing of Seasons
Lynn Vogel, St. Agnes MS
2nd Place: David Miller
Does Weather Affect the Accuracy of
a Sundial?
Andrea Cox, Pipkin MS
3rd Place: Luke Burmeister
Heat Effects on Land Forms
Lynn Vogel, St. Agnes MS
4th Place: Kyle Pavlin
Dark Shades Aren't Always Cool
Jennifer Cvitak, Cherokee

\section*{ENGINEERING}

1st Place: James Bird
Blast Off!
Lynn Vogel, St. Agnes
2nd Place: Jake Harmon
Trebuchet Catapult
Debbie Powell, Mark Twain
Ryan Hutsell
Car Oils
Elaine Marzolla, Immaculate
Conception
3rd Place: Kelly Toner
Cold and Water?
Colleen Merrigan, Cherokee
Kelsey Lott
You're Drinking This?
Aaron Tillman, Marshfield JH
4th Place: Jacob Wardein
Tune In!
Lynn Vogel, St. Agnes MS

Kyle Ellman
Riding on Air
Elaine Marzolla, Immaculate
Conception
ENVIRONMENTAL SCIENCES
\begin{tabular}{ll} 
1st Place: & \begin{tabular}{l} 
Eric Powell \\
Killer Salt \\
Jackie Hutcherson, Cherokee
\end{tabular} \\
2nd Place: & \begin{tabular}{l} 
Mike Renkoski \\
Aquaponics: The Future of Food? \\
Lynn Vogel, St. Agnes MS
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Kelly McCurry \\
Effects of Rivercut Housing \\
Development on Water Quality of the \\
James River
\end{tabular}
\end{tabular}

4th Place: Raeann Edson
Fuel Cells: Power of the Future
Jeff Ellison, Hollister MS
MATHEMATICS / COMPUTER SCIENCE
1st Place: Paul Huang
Cryptology: Data Security
Nova Mrad, Central
2nd Place: Johnny Tucker
Great Soccer Goals
Lynn Vogel, St. Agnes MS
Lacy Geiger
Distant Cousins
Margaret LaCavera, Spokane
3rd Place: Maverick Smith
Golden Section!
Margaret LaCavera, Spokane
Sam Williams
Jess Renner
Rollin', Rollin', Rollin'
Aaron Tillman, Marshfield JH
4th Place: Rebekah Francisco
Pascal \& Probability
Nancy Coffelt, Spokane MS

\section*{MEDICINE AND HEALTH}

1st Place: Sarah Beasley
Is Dissolved Aluminum Found in
Asceptic Containers?
Hugh Brewer, Greenwood MS
2nd Place: Hanna Dobard
How Bright Are Your Pearly Whites?
Elaine Marzolla, Immaculate
Conception

MEDICINE AND HEALTH (cont.)
\begin{tabular}{|c|c|}
\hline \multirow[t]{3}{*}{2nd Place:} & Julie Putman \\
\hline & Location, Location, Location \\
\hline & Darlene Henne, Pleasant View \\
\hline \multirow[t]{7}{*}{3rd Place:} & Wenonah Toney \\
\hline & Sucrose Boost \\
\hline & Aaron Tillman, Marshfield JH \\
\hline & Nicholas Neighbors \\
\hline & Destructive Decay \\
\hline & Elaine Marzolla, Immaculate \\
\hline & Conception \\
\hline \multirow[t]{7}{*}{4th Place:} & Brandon Lewis \\
\hline & Rot, Rot, Rot Away \\
\hline & Elaine Marzolla, Immaculate \\
\hline & Conception \\
\hline & Divya Viswanathon \\
\hline & Baby Within \\
\hline & Lynn Vogel, St. Agnes MS \\
\hline
\end{tabular}

\section*{MICROBIOLOGY}
\(\left.\begin{array}{ll}\text { 1st Place: } & \begin{array}{l}\text { Raymond Wong } \\
\text { Doing My Laundry With UV Light }\end{array} \\
\text { Elaine Marzolla, Immaculate } \\
\text { Conception }\end{array}\right\}\)\begin{tabular}{ll} 
2nd Place: & \begin{tabular}{l} 
Ehren Ekhause \\
Germathon \\
Jackie Hutcherson, Cherokee
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Aleshia Fenimor \\
Got Bacteria? \\
Darlene Henne, Pleasant View
\end{tabular} \\
4th Place: & \begin{tabular}{l} 
Eric Camejo \\
Bacterianator \\
Lynn Vogel, St. Agnes MS
\end{tabular}
\end{tabular}

\section*{PHYSICS}

1st Place: Josh Holland
Magnetism, Attraction and Reaction Jennifer Cvitak, Cherokee

2nd Place: Emily Watt
Radiation Exposure: Which Little Pig
is the Safest?
Lynn Vogel, St. Agnes MS
Kevin Satzinger
Variant Light Sources and
Photovoltaic Cell Output
Nova Mrad, Central
Claire Dohmen
Time Flies When the Clock Starts Lynn Vogel, St. Agnes MS

3rd Place: Claire Lukachick
Strength By Color
Lynn Vogel, St. Agnes MS

PHYSICS (cont.)
\begin{tabular}{ll} 
3rd Place: & Chelsea Stieb \\
& What's the Strength? \\
& Elaine Marzolla, Immaculate \\
& Conception \\
& Emily Potts \\
& Want to Go the Distance? \\
& Elaine Marzolla, Immaculate \\
& Conception \\
& Nick Bratten \\
& A Light Bulb and A Microwave Oven \\
& Jeff Ellison, Hollister MS \\
4th Place: & David Camejo \\
& It's Just a Matter of Time \\
& Lynn Vogel, St. Agnes MS \\
& Lauren Long \\
& Light It Up \\
& Kathryn Keller, St. Joseph MS
\end{tabular}

\section*{ZOOLOGY}

1st Place: Neal Pinkerton
To Feed or Not to Feed: That is the
Question
Elaine Marzolla, Immaculate
Conception
2nd Place: Patrick Merrigan
Shocking Shrimp
Elaine Marzolla, Immaculate
Conception
Laura Glenn
Ashley Gastineau
Ant Invasion
Aaron Tillman, Marshfield JH
3rd Place: Hillary Betzen
How Eating Habits Affect Animal
Blood Glucose
Elaine Marzolla, Immaculate
Conception
Jessica Quintus
A "Maze"ing Mice
Lynn Vogel, St. Agnes MS
4th Place: Casey Clark
Let 'Em Grow
Lannie Hinote, Skyline MS
Abbey Eoff
Got Worms?
Jackie Hutcherson, Cherokee
\begin{tabular}{ll} 
BEHAVIORAL AND SOCIAL SCIENCES \\
1st Place: & \begin{tabular}{l} 
Megan Keith \\
Brand Value Perception: Effect of \\
Gender, Age, \& Product \\
\\
Hugh Brewer, Greenwood
\end{tabular} \\
2nd Place: & \begin{tabular}{l} 
Caleb Masterson \\
Perceived Exertion in Elementary \\
Children \\
Hugh Brewer, Greenwood
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Sara Dunseth \\
The Right Brain Connection to \\
Sound \\
Rodney Delmont, Halfway
\end{tabular}
\end{tabular}

\section*{BIOCHEMISTRY}
\(\left.\begin{array}{ll}\text { 1st Place: } & \begin{array}{l}\text { Sarah Haseltine } \\
\text { Stinky Stimulation } \\
\text { Hugh Brewer, Greenwood }\end{array} \\
\text { 2nd Place: } & \begin{array}{l}\text { Tyler Montileone } \\
\text { A Correlation Between Blood } \\
\text { Glucose Levels \& Saliva } \\
\text { Hugh Brewer, Greenwood }\end{array} \\
\text { 3rd Place: } & \begin{array}{l}\text { Heather Claunch } \\
\text { How Simple is That Sugar? } \\
\text { Rodney Delmont, Halfway }\end{array} \\
\text { 4th Place: } & \begin{array}{l}\text { Nikki Meltabarger } \\
\text { Look Y'all, Vitamin C }\end{array} \\
& \text { David Smith, Billings HS }\end{array}\right\}\)\begin{tabular}{ll} 
BOTANY & \begin{tabular}{l} 
Kaleen Long \\
Super Strawberry Saver \\
Hugh Brewer, Greenwood
\end{tabular} \\
1st Place:
\end{tabular}

\section*{CHEMISTRY}

1st Place: Karen Ward
A Comparison of Friction
Reducing Agents
Hugh Brewer, Greenwood

CHEMISTRY (cont.)
\begin{tabular}{ll} 
2nd Place: & \begin{tabular}{l} 
Stuart Lloyd-Smith \\
Let It Burn \\
Jill Palmer, Kickapoo
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Dennis Spisak \\
Power of Enzymes \\
Hugh Brewer, Greenwood
\end{tabular} \\
4th Place: & \begin{tabular}{l} 
Brad Stockdale \\
Don't Get Burned: The Study of \\
UV Absorption of Sunscreen \\
Protima Roy, Central HS
\end{tabular}
\end{tabular}

\section*{EARTH/SPACE SCIENCE}
\begin{tabular}{ll} 
3rd Place: & \begin{tabular}{l} 
Jonathan McWilliams \\
Cave Restoration \\
Charles Rey, Glendale HS
\end{tabular} \\
4th Place: & \begin{tabular}{l} 
Christopher Loges \\
Crinoids \\
Dan McCorkendale, Buffalo
\end{tabular} \\
&
\end{tabular}

\section*{ENGINEERING}
\begin{tabular}{ll} 
1st Place: & \begin{tabular}{l} 
Siir Kilkis \\
Engineering Visual Orchestration \\
Technology: Music Painter \\
Hugh Brewer, Greenwood
\end{tabular} \\
2nd Place: & \begin{tabular}{l} 
Christopher Jones \\
Internet Braille Chat \\
Fred Fotsch, Glendale HS
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Patrick Binning \\
The Effects of Helium in \\
Aeronautics \\
Hugh Brewer, Greenwood
\end{tabular} \\
4th Place & \begin{tabular}{l} 
Joe Todd \\
A Trebuchet On Wheels \& Off \\
Treva Henderson, Sparta
\end{tabular}
\end{tabular}

ENVIRONMENTAL SCIENCES (this category sponsored by Kraft Foods, Inc.)
\(\left.\left.\begin{array}{ll}\text { 1st Place: } & \begin{array}{l}\text { Michael Holst } \\ \text { The Effects of Caffeine on } \\ \\ \text { Freshwater Daphnia }\end{array} \\ & \text { Hugh Brewer, Greenwood }\end{array}\right\} \begin{array}{ll}\text { 2nd Place: } & \text { Ashley Goad } \\ & \text { What are the Effects of a } \\ & \text { Lowered Potentiometric Surface? } \\ \text { Geri Brown, Strafford HS }\end{array}\right\}\)

ENVIRONMENTAL (cont.)

4th Place: Brad Young
A Correlation Between Darter
Population \& Physical Habitat on the North Dry Sac
Gail Emrie, Pleasant Hope
MEDICINE AND HEALTH
\(\left.\begin{array}{ll}\text { 1st Place: } & \begin{array}{l}\text { Ryan Cady } \\
\text { The Effects of Botulinum Toxin on } \\
\text { Trigeminal Cells } \\
\text { Hugh Brewer, Greenwood }\end{array} \\
\text { 2nd Place: } & \begin{array}{l}\text { Claire Clothiaux } \\
\text { Does Synthetic Hyaluronic Acid } \\
\text { Improve Joint Lubrication? }\end{array} \\
\text { Hugh Brewer, Greenwood }\end{array}\right\}\)\begin{tabular}{ll} 
3rd Place: & \begin{tabular}{l} 
Jeremy Long \\
Quigong \& Its Medical Benefits \\
Charles Rey, Glendale HS
\end{tabular} \\
4th Place: & \begin{tabular}{l} 
Zachary Seagrave \\
Mandible Mastication \\
Hugh Brewer, Greenwood
\end{tabular}
\end{tabular}

\section*{MICROBIOLOGY}
\begin{tabular}{ll} 
1st Place: & \begin{tabular}{l} 
Beth Brockman \\
Tetracycline Effects on Triclosan \\
Resistant E. Coli \\
Charles Rey, Glendale HS
\end{tabular} \\
2nd Place: & \begin{tabular}{l} 
Tricia McNeive \\
The Effect of Antibacterial Hand \\
Sanitizer on Microccus Roseus \\
Bacteria \\
James Flora, Pleasant Hope
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Triet Ngo \\
To Use or To Misuse \\
Karen Reed, Central HS
\end{tabular}
\end{tabular}

\section*{PHYSICS}
\begin{tabular}{ll} 
1st Place: & \begin{tabular}{l} 
David Mathews \\
Too Many Spoilers to Choose \\
\\
From \\
Treva Henderson, Sparta
\end{tabular} \\
2nd Place: & \begin{tabular}{l} 
Matthew Nichols \\
Trajectory - What's Your Angle? \\
Treva Henderson, Sparta
\end{tabular} \\
3rd Place: & \begin{tabular}{l} 
Brandon Hacker \\
\\
What Are Spoilers For? \\
Treva Henderson, Sparta
\end{tabular} \\
4th Place: & \begin{tabular}{l} 
Jenny Stillwell \\
A Closer Look at the Entropy \& \\
Specific Heat Deviation of Metals \\
in Instruments \\
Geri Brown, Strafford HS
\end{tabular} \\
&
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline & COTAT」A MAT & S \\
\hline AEROSPACE SUMMIT - CONSTELLATION & \$25.00 Cash & \\
\hline CLUB - TROPHIES ETC. & & 6 Hours Undergraduate Credit to the Senior High \\
\hline & Junior Division: & Grand Prize Award Winners \\
\hline \multicolumn{3}{|l|}{Small Plaque \& \$50.00 Cash} \\
\hline & \$25.00 Cash & Senior Division: \\
\hline \multicolumn{3}{|l|}{Junior Division:} \\
\hline & Senior Division: & EASTMAN-KODAK PHOTOGRAPHY AWARD \\
\hline \multicolumn{3}{|l|}{Large Plaque \& \$50.00 Cash} \\
\hline & CITY OF SPRINGFIELD - SOLID WASTE & Photographic Award Kit for Student and \\
\hline Senior Division: & DIVISION & Sponsoring Teacher \\
\hline AMERICAN CHEMICAL SOCIETY, OZARKS & Recycled Plastic Soda Bottle T-Shirt & Junior Division: \\
\hline \multicolumn{3}{|l|}{\begin{tabular}{l|l} 
AMERICAN CHEMICAL SOCIETY, OZARKS & Recycled Plastic Soda Bottle T-Shirt \\
\hline\(\underline{\text { SECTION }}\) & Junior Division:
\end{tabular}} \\
\hline & Junior Division: & EVANGEL UNIVERSITY \\
\hline \multicolumn{3}{|l|}{Set of Books} \\
\hline \multirow[t]{2}{*}{Senior Division:} & CITY UTILITIES OF SPRINGFIELD & \$1,500.00 Scholarship to each Senior Division First Place Winner \\
\hline & \multicolumn{2}{|l|}{\$200.00 Cash} \\
\hline AMERICAN CHEMICAL SOCIETY, STUDENT & & Senior Division: \\
\hline \multirow[t]{2}{*}{CHAPTER} & \multirow[t]{2}{*}{Junior Division:} & \\
\hline & & \$2,500.00 Scholarship to each Senior Division \\
\hline Subscription to Scientific American & \begin{tabular}{l}
Senior Division: \\
COMMUNITY HOSPICE OF AMERICA
\end{tabular} & Grand Prize Winner \\
\hline \multirow[t]{2}{*}{Junior Division:} & & Senior Division: \\
\hline & \$25.00 Gift Cards & EXPANDING YOUR HORIZONS: WOMEN IN \\
\hline AWARENESS - MISSOURI & Junior Division: & SCIENCE \\
\hline \multirow[t]{2}{*}{\$100.00 Cash and a Plaque} & DEPARTMENT OF HEALTH AND HUMAN & Women In Science Kits \\
\hline & \multirow[t]{2}{*}{SERVICES} & \\
\hline \multirow[t]{2}{*}{Junior Division:} & & Junior Division: \\
\hline & \multirow[t]{2}{*}{Certificate of Award} & \\
\hline AMERICAN METEROLOGICAL SOCIETY & & JUNE FENDER MEMORIAL BIOLOGY AWARD \\
\hline Cerrificate of Award & Senior Division: & \$50.00 Cash \\
\hline \multirow[t]{2}{*}{Senior Division:} & THE DISCOVERY CHANNEL YOUNG & Junior Division: \\
\hline & \multirow[t]{2}{*}{SCIENTIST CHALLENGE} & \\
\hline AMERICAN SOCIETY OF MAMMALOGISTS & & \$50.00 Cash \\
\hline & 2003 DCYSC Entry Booklet, 2003 DCYSC & \\
\hline Certificates of Award & Certificate of Recognition, and 2003 DCYSC Lapel Pin & Senior Division: \\
\hline \multirow[t]{2}{*}{Junior Division:} & & GREATER OZARKS AUDUBON SOCIETY \\
\hline & Junior Division: & Membership and Guide \\
\hline THE ASM INTERNATIONAL FOUNDATION & THE DISCOVERY CHANNEL YOUNG & \\
\hline & SCIENTIST CHALLENGE (cont.) & Junior Division: \\
\hline \multicolumn{3}{|l|}{Award Certificate and Medallion} \\
\hline & & THE GREENE COUNTY GROUNDWATER \\
\hline \multirow[t]{2}{*}{Senior Division:} & \multirow[t]{2}{*}{Certificate of Recognition, and 2003 DCYSC Lapel Pin} & GUARDIAN AWARD (sponsored by the \\
\hline & & GREENE COUNTY RESOURCE MANAGEMENT \\
\hline THE ASSOCIATION OF WOMEN & & DEPARTMENT) \\
\hline GEOSCIENTISTS & Junior Division: & \\
\hline Cerrificate of Award & Honorable Mention - T-shirts & Travel \& Expenses Paid to Groundwater University during the summer of 2003 \\
\hline Senior Division: & Junior Division: & Junior Division: \\
\hline BAKER CHAIR OF INSURANCE/GAMMA IOTA & \multirow[t]{2}{*}{DRURY UNIVERSITY} & DR. JEFFREY S. HEARD DENTISTRY AWARD \\
\hline SIGMA AWARD & & \\
\hline \multirow[t]{2}{*}{\$25.00 Cash and certificate of achievement} & \multirow[t]{2}{*}{3 Hours Undergraduate Credit to each Senior High First Place Award Winner} & \$25 Cash for the Dental Field \\
\hline & & Senior Division: \\
\hline Senior Division: & \multirow{2}{*}{Senior Division:} & HERBERT HOOVER PRESIDENTIAL LIBRARY \\
\hline IRENE BRUNNER MEMORIAL AWARD & & ASSOCIATION "YOUNG ENGINEER AWARD" \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline & \({ }^{\text {CHEATA}}\) A A M & \\
\hline \multirow[t]{2}{*}{Certificate of Award and Medallion} & OZARK AREA PHARMACEUTICAL & \\
\hline & ASSOCIATION & SOCIETY FOR IN VITRO BIOLOGY \\
\hline \multirow[t]{2}{*}{Senior Division:} & & \\
\hline & \$75.00 Cash & Certificate of Merit, Letter of Congratulations, and \\
\hline HORAN \& BECKER MEDICAL SCIENCE & & Publication of Honor in Newsletter and web site \\
\hline AWARD (sponsored by HORAN \& BECKER, & Junior Division: & \\
\hline \multirow[t]{2}{*}{DDS, AFFILIATED ORAL SURGEONS)} & & Senior Division: \\
\hline & \$75.00 Cash & \\
\hline \multirow[t]{2}{*}{\$100.00 Health Science Award} & & SOCIETY OF MANUFACTURING ENGINEERS \\
\hline & Senior Division: & \\
\hline \multirow[t]{2}{*}{Senior Division:} & & Hewlett Packard Calculators \\
\hline & OZARK AREA PSYCHOLOGICAL & \\
\hline THE INTEL EXCELLENCE IN COMPUTER & ASSOCIATION & Junior Division: \\
\hline \multirow[t]{2}{*}{SCIENCE AWARD} & & \\
\hline & A First Place Plaque & Senior Division: \\
\hline \multirow[t]{2}{*}{Certificate of Award} & & \\
\hline & Senior Division: & SOUTHWEST MISSOURI AREA HEALTH \\
\hline Senior Division: & A Second Place Plaque & AWARDS" \\
\hline THE 2003 KRAFT AWARD (sponsored by Kraft & & \\
\hline Foods, Inc.) & Senior Division: & \$20 Cash and Certificate of Achievement \\
\hline \multirow[t]{2}{*}{\(\$ 50.00\) Cash (if given to partners, each partner will receive \(\$ 50.00\) )} & A Third Place Plaque & Junior Division: \\
\hline & Senior Division: & Senior Division: \\
\hline Senior Division: & Honorable Mention Plaque & \$30 Cash and Certificate of Achievement \\
\hline \multirow[t]{2}{*}{MARK IV AUTOMOTIVE} & & \\
\hline & Senior Division: & Junior Division: \\
\hline Plaque and Gift Certificate & POSITRONIC INDUSTRIES ENVIRONMENTAL & Senior Division: \\
\hline \multirow[t]{2}{*}{Junior Division:} & AWARD & \\
\hline & & SOUTHWEST MISSOURI AREA HEALTH \\
\hline \multirow[t]{2}{*}{Senior Division:} & \$25.00 Cash and Certificate of Award & EDUCATION CENTER "MEDICINE \& HEALTH \\
\hline & & AWARDS" (cont.) \\
\hline \multirow[t]{2}{*}{MARTIAL ARTS USA} & Senior Division: & \\
\hline & & \$50 Cash and Certificate of Achievement \\
\hline \multirow[t]{2}{*}{\$75.00 Cash (shared) and free month of Tae Kwon Do membership (each)} & POSITRONIC INDUSTRIES RESEARCH AWARD & \\
\hline & Certificates of Award and Desk Clocks to Students & Junior Division: \\
\hline \multirow[t]{2}{*}{Junior Division:} & & SOUTHWEST MISSOURI AREA HEALTH \\
\hline & Junior Division: & EDUCATION CENTER "MEDICINE \& HEALTH \\
\hline MISSOURI SOCIETY OF PROFESSIONAL & & AWARDS" (cont.) \\
\hline ENGINEERS, Ozarks Chapter & Certificates of Award and Desk Clocks to Teachers & \\
\hline & SCHNEIDER FOUNDATION (in cooperation with & \$50 Cash and Certificate of Achievement \\
\hline \$75.00 Cash & the Community Foundation of the Ozarks) & Senior Division: \\
\hline \multirow[t]{2}{*}{Senior Division:} & & \\
\hline & \$200.00 Cash and Cerrificates & SOUTHWEST MISSOURI AREA HEALTH \\
\hline \multirow[t]{2}{*}{\$50.00 Cash} & & EDUCATION CENTER "RURAL HEALTH \\
\hline & Junior Division: & SCHOLAR" AWARD \\
\hline \multirow[t]{2}{*}{Junior Division:} & & \\
\hline & \$500.00 Cash & \$100 Cash and Cerrificate of Achievement \\
\hline \multirow[t]{2}{*}{MISSOURI SOLAR ENERGY ASSOCIATION} & & \\
\hline & Senior Division: & Junior Division: \\
\hline Calculators & THE SMITH-GLYNN-CALLOWAY MEDICAL & \$200 Cash and Certificate of Achievement \\
\hline \multirow[t]{2}{*}{Junior Division:} & FOUNDATION AWARD & \\
\hline & \$50.00 Cash & Senior Division: \\
\hline \multirow[t]{2}{*}{AWARD} & \$50.00 Cash & SOUTHWEST MISSOURI AREA HEALTH \\
\hline & Junior Division: & EDUCATION CENTER "MEDICINE \& HEALTH \\
\hline \multirow[t]{2}{*}{Graphing Calculators} & & SCHOLAR" AWARD \\
\hline & \$100.00 Cash & \\
\hline \multirow[t]{2}{*}{Junior Division:} & Senior Division: & \$250.00 Cash and Cerrificate of Achievement \\
\hline & & Senior Division: \\
\hline
\end{tabular}

\section*{SMSU DEPARTMENT OF BIOLOGY}

Certificates to student and plaques to teachers Junior Division:

Certificates to student and plaques to teachers
Senior Division:
\$1,000 Work/Study Award
Senior Division:
SMSU COLLEGE OF NATURAL AND APPLIED SCIENCES
\(\$ 50.00\) Cash
Junior Division:
Senior Division:

\section*{SMSU SOCIETY OF PHYSICS STUDENTS}

One Year Subscription to "Scientific American" Magazine

Senior Division:

\section*{STOCKHOLM JUNIOR WATER PRIZE}

Award Certificate and Nomination for State Competition

Senior Division:

\section*{UNITED STATES AIR FORCE}

Messenger Bag, DayPlanner with Databank, Certificate of Achievement and Medallion

Junior Division:
Messenger Bag, DayPlanner with Databank, Certificate of Achievement and Medallion, T-shirt and Nomination to Air Force Research Lab "Century of Flight" Award

Senior Division:
UNITED STATES METRIC ASSOCIATION
Certificate of Award
Senior Division:
WALLACE WEBER MEMORIAL AWARD FOR BOTANY
\(\$ 25.00\) Cash

Senior Division:
WATERSHED COMMITTEE OF THE OZARKS

Savings Bonds
Junior Division:
Senior Division:
YALE SCIENCE \& ENGINEERING ASSOCIATION, INC.

Award Certificate and Medallion

Senior Division:
ARRIS PIZZA NEW TEACHER RECOGNITION AWARD
\(\$ 20.00\) Cash and a \(\$ 20.00\) Gift Certificate for the First Time High School Teacher with the most total entries.

CHRISTIAN PUBLISHERS OUTLET NEW TEACHER RECOGNITION AWARD
\(\$ 20.00\) Cash and a \(\$ 15.00\) Gift Certificate to the First Time Middle School Teacher with the most total entries.

\section*{DR. GARY A. KELL AWARD, sponsored by} Ferrell-Duncan Clinics

This cash award of \(\$ 250.00\) is awarded to the Junior High or Middle School Teacher who sponsored the most students winning placement awards. The award will be used for the purchase of research equipment for his/her classroom. The recipient of the Kell Award for 2003 is:

\section*{DR. WARFORD B. JOHNSON, SR., MEMORIAL AWARD}

This cash award of \(\$ 1,000.00\) is awarded to the Senior High Teacher who sponsored the most students winning placement awards. Half of the award is to be used for the purchase of classroom research equipment for his/her classroom, and half is for the teacher personally. The recipient of the Johnson Award for 2003 is:

THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR NEW TEACHER AWARD"
\$20 Cash to a First Time Teacher.

\section*{POSITRONIC INDUSTRIES TEACHER AWARD}

This cash award of \(\$ 75.00\) is awarded to the Teacher, either Junior High, Middle School or Senior High, with the most total entries. The recipient of the Positronic Award for 2003 is: FOUNDATION TEACHER OF THE YEAR AWARD

This award of a plaque and all-expenses-paid trip to the 2003 International Science and Engineering Fair is awarded to:```

