OZARKS SCIENCE & ENGINEERING FAIR

HAMMONS STUDENT CENTER SOUTHWEST MISSOURI STATE UNIVERSITY

April 5, 6 & 7, 2005



2005 WINNERS

Sponsored By:

Southwest Missouri State University
Clariant
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BOARD OF DIRECTORS
OZARKS SCIENCE & ENGINEERING FAIR FOUNDATION



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KRAFT FOODS, INC.

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2005 AWARD SPONSORS

AMERICAN CHEMICAL SOCIETY - OZARK MARTIAL ARTS USA **SECTION** MISSOURI DEPARTMENT OF CONSERVATION AMERICAN FOUNDATION FOR VISION MISSOURI OPTOMETRIC ASSOCIATION **AWARENESS** MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS AMERICAN METEOROLOGICAL SOCIETY MISSOURI SOLAR ENERGY ASSOCIATION AMERICAN PSYCHOLOGICAL ASSOCIATION THE LOU & NADINE MOORE MEMORIAL AWARD AMERICAN SOCIETY OF MAMMALOGISTS MU ALPHA THETA MATHEMATICS HONOR THE ASM INTERNATIONAL FOUNDATION **SOCIETY** ASSOCIATION FOR WOMEN GEOSCIENTISTS NATIONAL SOCIETY OF PROFESSIONAL BAKER CHAIR OF INSURANCE/GAMMA IOTA **ENGINEERS** SIGMA OZARKS AREA PSYCHOLOGICAL ASSOCIATION CITY UTILITIES OF SPRINGFIELD OZARKS SCIENCE & ENGINEERING FAIR CITY OF SPRINGFIELD - SOLID WASTE **FOUNDATION** MANAGEMENT DIVISION POSITRONIC INDUSTRIES COMMUNITY FOUNDATION OF THE OZARKS THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA" COMMUNITY HOSPICE OF AMERICA SPEAR" AWARD RICOH CORPORATION CONCO COMPANIES DISCOVERY CHANNEL SCHNEIDER FOUNDATION FERRELL-DUNCAN SMITH-GLYNN-CALLOWAY FOUNDATION DRURY UNIVERSITY SOCIETY FOR IN-VITRO BIOLOGY EASTMAN KODAK SOCIETY OF MANUFACTURING ENGINEERS **EVANGEL UNIVERSITY** SMSU COLLEGE OF NATURAL & APPLIED SCIENCES EXPANDING YOUR HORIZONS (SMSU WOMEN IN SMSU DEPARTMENT OF BIOLOGY SCIENCE) TROPHIES, ETC. GREATER OZARKS AUDUBON SOCIETY UNITED STATES AIR FORCE GREENE COUNTY RESOURCE MANAGEMENT UNITED STATES ARMY DEPARTMENT UNITED STATES NAVY/MARINE CORPS UNITED STATES DEPARTMENT OF HEALTH & HERBERT HOOVER PRESIDENTIAL LIBRARY **ASSOCIATION HUMAN SERVICES** HORAN & BECKER WALLACE WEBER MEMORIAL AWARD **INTEL** WATER ENVIRONMENT FEDERATION INTERNATIONL SOCIETY OF OPTICAL ENGINEERS WATERSHED COMMITTEE OF THE OZARKS YALE SCIENCE & ENGINEERING ASSOCIATION IRENE BRUNNER MEMORIAL AWARD KRAFT FOODS, INC.

SENIOR DIVISION GRAND PRIZE WINNERS AND ALTERNATES

(Grand Prize Awards Sponsored by: Kraft Foods, Inc., 3M Corporation, E&V Engineers, Clariant, and Associated Electric Cooperative, Inc., and includes plaques for the Grand Prize Winners and Teachers.)

GRAND PRIZE Claire Clothiaux

In-Vitro Assay of CaSO₄ and PMMA Impregnated Beads

Greenwood Lab School

Hugh Brewer

GRAND PRIZE Sunny Qiu

IBA Effects on Wild and Domesticated Grapevines

Greenwood Lab School

Dave Davison

FIRST ALTERNATE Miles Barnhart

The Relationship of Dicymolomia and the Bagworm

Greenwood Lab School

Chris Barnhart

SECOND ALTERNATE Kate Probert

Environmental Estrogen Disruptors

Mansfield HS Pam Probert

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 Julie Putman

Zeitgerber: Its Effect on Circadian Rhythms of Chameleons

Pleasant View Middle School

Darlene Henne

ALTERNATE Weston Hunter

Got Gas?

St. Joseph Middle School

Kathryn Keller



WE WANT YOU!



Are you looking for a community service opportunity?

The Ozarks Science & Engineering Fair, the premier middle and high school science competition for southwest Missouri, is currently looking for persons willing to serve on the Steering Committee. The Fair is a regional competition which brings together student scientists and engineers with outstanding research projects. It also serves as an excellent opportunity for students to experience working with local scientists and professionals. Participating students are from a 16 county region which includes: Christian, Dade, Douglas, Greene, Howell, Laclede, Oregon, Ozark, Polk, Pulaski, Shannon, Stone, Taney, Texas, Webster and Wright counties. The Fair itself takes place annually during the first week of April at Hammons Student Center on the campus of Southwest Missouri State University. For more information about the Fair itself, visit http://www.k12science.smsu.edu/OSEF/enter the fair!.htm.

The Steering Committee is responsible for the annual production of the Fair, and generally meets about once a month from September to March. Subcommittees include: Elementary Fair, Placement Awards, Special Awards, Registration, Rules & Regulations, Science Day, Volunteers, Publicity, and others. Current members come from all areas of the community, and are bound together by their mutual interest in promoting science and math education, research and careers in the young people of southwest Missouri.

If you would be interested in this unique and rewarding community service opportunity, please complete the form below and leave it in the drop box at the Fair Information Desk.

Yes, I want to be on the Steering Committee!

Name		
Address		
Phone	Email	

THE 2005 JUNIOR DIVISION



PLACEMENT AWARD WINNERS!

JUNIOR DIVISION PLACEMENT AWARDS

BEHAVIORAL AND SOCIAL SCIENCES

1st Place: Erin Squires

The Power of Color Cherokee MS Jennifer Cvitak

2nd Place: Elizabeth Marler

Apparel or Awareness Springfield Lutheran Josh Wanner

Rachael Beard

When It Comes To Tests, Who's

More Stressed? St. Agnes MS Lynn Vogel

3rd Place: Martin Nguyen

Flying Fingers St. Agnes MS Lynn Vogel

Keriann Lemaster Which Color is Best? St. Agnes MS Lynn Vogel

4th Place: Peyton Yocum

Righties vs. Lefties St. Agnes MS Lynn Vogel

BIOCHEMISTRY

1st Place: Weston Hunter

Got Gas? St. Joseph MS Kathryn Keller

2nd Place: Jordyn Chelf

Who Are You? St. Agnes MS Lynn Vogel

3rd Place: Bryn Prater & Sara Swango

Do Some Protein Digesting Enzymes Found in Some Fruit

Dissolve Gelatin? Central MYSP Nova Mrad

4th Place: Shayon Sikander

Beans Creating Gas Cherokee MS Jackie Hutcherson

BOTANY

1st Place: Emily Dodd

To Plant or Not to Plant

Marshfield JH Kimberly Potter

2nd Place: Michelle Rathe

How Tall Did They Grow?

Cherokee MS Jackie Hutcherson

Anisha Rimal

A Growing Experience Cherokee MS Jackie Hutcherson

3rd Place: Seth Greer

Plant Cell Preservation

Marshfield JH Aaron Tillman

Rachel Herron Nuke Your Veggies St. Agnes MS Lynn Vogel

4th Place: Andrew Ford

Preserving Floral Life Immaculate Conception

Heather Cooke

Brittany Donellan & Elizabeth Kaatz

If You Can't Stand the Heat, Stay

Out of the Microwave

Central MYSP Nova Mrad

CHEMISTRY

1st Place: Logan Green

Soft Science St. Agnes MS Lynn Vogel

2nd Place: Matt Medley

Which Water? St. Agnes MS Lynn Vogel

Dylan Wyatt

The Oscillating Clock Reaction

Springfield Lutheran

Josh Wanner

3rd Place: Jake Ankrom

Citrus Power Halfway MS Rodney Delmont

CHEMISTRY (cont.)

John Cunningham Suds or Duds? Marshfield JH Kimberly Potter

4th Place: Taylor Barth

Things Are Heating Up

Marshfield JH Kimberly Potter

Audrey Creasy Polishing Pennies Marshfield JH Kimberly Potter

COMPUTER SCIENCE

1st Place: Matthew Bird

Visual Basic Game Program

St. Agnes MS Lynn Vogel

2nd Place: Cody Clements

Finding Files St. Joseph MS Kathryn Keller

EARTH AND SPACE SCIENCES

1st Place: Toryana Vestal

It's Raining Micrometeorites

Pleasant View MS Darlene Henne

2nd Place: Matthew Oelschaeger

Using SOHO to Determine the

Rotation of the Sun St. Agnes MS Lynn Vogel

3rd Place: Chase Eck

Spongy Rocks St. Agnes MS Lynn Vogel

4th Place: Emma McIntyre &

Laurel O'Reilly

Homemade Weather Devices: So

They Really Match Up?

Central MYSP Nova Mrad

ENGINEERING

1st Place: Natalie Rooney & Lara Bower

Whoosh! Cherokee MS Jennifer Cvitak

JUNIOR DIVISION PLACEMENT AWARDS

ENGINEERING (cont.)

2nd Place: Andrew Griesemer

Icy-Hot Attraction Immaculate Conception

Heather Cooke

3rd Place: Michael Derlicki

Lava Java St. Agnes MS Lynn Vogel

4th Place: Sam Carter

Paint Coverage Cherokee MS Jackie Hutcherson

ENVIRONMENTAL SCIENCES

1st Place: Casey Carroll

Do You Really Know Your DO?

Cherokee MS Jackie Hutcherson

2nd Place: MacKenzie Lutz

Clean Enough to Drink

Cherokee MS Jackie Hutcherson

3rd Place: Chris Mantei

Do Stream Bugs Like Heavy

Metals? St. Agnes MS Lynn Vogel

4th Place: Stephan Tipton

Dirty Water St. Agnes MS Lynn Vogel

MATHEMATICS

1st Place: Geoffrey Havens

Show Me the Money St. Agnes MS Lynn Vogel

2nd Place: Ryan Veatch

Mathematical Patterns in Bach's Two-Movement Preludes and

Fugues Thayer JH Peggy Veatch

3rd Place: Erin Cameron & Lauren Kerivan

Dice Probabilities Central MYSP Nova Mrad MATHEMATICS (cont.)

4th Place: Erin Hargis

If You Don't Know It, Guess It

St. Agnes MS Lynn Vogel

MEDICINE AND HEALTH

1st Place: Jacob Keeney

The Effect of Diet on Blood

Clotting Time Cherokee MS Jackie Hutcherson

2nd Place: Sarah Beasley

Survey of Mercury in Springfield

Lakes

Greenwood Lab School

Dave Davison

Kirtana Viswanathan Beauty is Not Skin Deep

St. Agnes MS Lynn Vogel

Kiley Husling Got Iontophoresis? Cherokee MS Jackie Hutcherson

3rd Place: Ivan Camejo

Smoking Babies St. Agnes MS Lynn Vogel

Erica Ramsey No Bones About It Cherokee MS Jackie Hutcherson

Cait Harris

Sky High Blood Sugar Cherokee MS Jackie Hutcherson

4th Place: Kevin Rice

Eye Spy

Immaculate Conception

Heather Cooke

Broc Wolfe Which Worm Wins Pleasant View MS Darlene Henne

Derek Seery Milk Mixing Marshfield JH Kimberly Potter

MICROBIOLOGY

1st Place: Jason Nunn

Effect of UV Light on Bacterial

Growth Cherokee MS Jackie Hutcherson

2nd Place: Abbie Tinlin

Bread Mold St. Joseph MS Kathryn Keller

3rd Place: Tyler Smith & J B Long

Will Caffeine & Sugar Affect Your

Heart? Central MYSP Nova Mrad

4th Place: Celka Ojakangas

Sweet & Low or Sweet & Grow?

Pleasant View MS Sherry Ince

PHYSICS

1st Place: Meghan Arnall

Rollin' Coasters Immaculate Conception

Heather Cooke

2nd Place: Daniel Pasquale

How to Weigh an Amount of Air

Immaculate Conception

Heather Cooke

Daniel Kick

The Troublesome Trebuchet

Central MYSP Nova Mrad

Garrett Comman Wood Block Rally Marshfield JH Kimberly Potter

3rd Place: Mark Simon

Soakin' Up Some Sun Central MYSP

Nova Mrad

Elliott Wityk Speedy Robot Cherokee MS Jackie Hutcherson

Jessica Maerz Looney Tunes St. Agnes MS Lynn Vogel

JUNIOR DIVISION PLACEMENT AWARDS

PHYSICS (cont.)

Samuel Boone

Can You Hear Me Now?

St. Agnes MS Lynn Vogel

4th Place: Ryan Tate

Rubber Bands Under Heat

Spokane MS Jennifer Wheeler

Daniel Gore **Bouncing Balls** Marshfield JH Aaron Tillman

ZOOLOGY

1st Place: Julie Putman

Zeitgerber: Its Effect on Circadian Rhythms of Chameleons Pleasant View MS Darlene Henne

2nd Place: Derek Walles

Feeding Heifers Clever MS Robin Swain

3rd Place: Lonnie Gunter

Acid Affects Tongue Flicks

Skyline R-2 Lannie Hinote

THE 2005 SENIOR DIVISION



PLACEMENT AWARD WINNERS!

SENIOR DIVISION PLACEMENT AWARDS

BEHAVIORAL AND SOCIAL SCIENCES

1st Place: Shane Algiere

Does the MLIU Increase Lucid

Dreaming?

Greenwood Lab School

Hugh Brewer

2nd Place: Craig Campbell

Childhood Obesity Mansfield HS Pam Probert

3rd Place: Margee Snokhous

The Effects of Visual Field Size on Judged Distance

Mansfield HS Pam Probert

4th Place: April Risner

Color Confusion Thayer HS Peggy Veatch

BIOCHEMISTRY

1st Place: Christine Crain

Effects of Fermented Feeds

on Rumen Bacteria Hartville HS Glen Boyer

2nd Place: Chelsea House

Effects of Natural Alleotropes on Monocots and Dicots

Mansfield HS Pam Probert

3rd Place: Brandon Moore

Breakdown of Feathers for

Protein in Feeds Hartville HS Glen Boyer

4th Place: Jody Ogden

Environmental Conditions on a Symbiotic Relationship

Hartville HS

Glen Boyer

BOTANY

1st Place: Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

Dave Davison

BOTANY (cont.)

2nd Place: Brooke Lawrence

The Effects of Anti-Oxidants on Cancer Inhibitors Greenwood Lab School

Hugh Brewer

3rd Place: Elizabeth Massey

Introduction of Plant Cancer Cells to Vegetative Clones

Hartville HS Glen Boyer

4th Place: Amanda Hilton &

Rebecca Barlett

Interspecific Plant Competition

Mansfield HS Pam Probert

CHEMISTRY

1st Place: Robert Busiek

Can Ketone Concentration in Diabetics Be Tested? Greenwood Lab School

Hugh Brewer

2nd Place: Tyler Williams

Combusted Gases to Aid in

Fire Fighting Hartville HS Glen Boyer

3rd Place: Lauren Bishop

Organic or Not? Hillcrest HS Jill Johnson

4th Place: Lillian Olive & Rachael Miles

Time for a Tasty Treat: The Art of Popping Corn

Hillcrest HS
Jennifer Saylor

EARTH/SPACE SCIENCE

1st Place: Kathryn Bryant

Plate Motion & Eruption

Frequency Kickapoo HS Richard Snyder

2nd Place: Aaron Baker

The Effects of Wood Chips on

Soil Hartville HS Luke Boyer

EARTH/SPACE SCIENCE (cont.)

3rd Place: Erin Bax

The Use of High Humidity Air

for Plant Growth Hartville HS Glen Boyer

4th Place: Toby Shelhamer &

Ryan Wright

Effects of Far Wave Lengths

on Plants Mansfield HS Pam Probert

ENGINEERING

1st Place: Sam Rue

Production of Construction Materials from Organic Waste

Hartville HS Glen Boyer

2nd Place: Cassie Sanders

The Effect of Coating
Treatments on the Rate of

Corrosion Mansfield HS Pam Probert

3rd Place: Josh Shaver

Development of an All-Terrain-Wise Headlight in

ATVs Hartville HS Glen Boyer

4th Place Cody Roush & William Phillips

London Bridge is Falling Down: Comparison of Weight Length of Bridges to Their

Capacity Central HS Nova Mrad

ENVIRONMENTAL SCIENCES (sponsored by Kraft Foods, Inc.)

1st Place: Kate Probert

Environmental Estogen

Disruptors Mansfield HS Pam Probert

2nd Place: Jordan Roberts

Contaminations on Insect

Pulp Construction Hartville HS Glen Boyer

SENIOR DIVISION PLACEMENT AWARDS

ENVIRONMENTAL SCIENCES (sponsored by Kraft Foods, Inc.) (cont.)

3rd Place: Rochelle Justus

The Effects of Everyday Drinks on Plant Growth

Hillcrest HS Jill Johnson

4th Place: Ann Moran

What's in Your Water?

Hillcrest HS Jill Johnson

Carley Keith

The Effects of Phosphorous

on Duckweed Hartville HS Luke Boyer

MATHEMATICS

1st Place: William Vandergrift

Wireless RS-232 PC Data

Control Hartville HS Glen Boyer

2nd Place: Kristin Campbell

Application of Pick's Theorem

Mansfield HS Pam Probert

3rd Place: Alex Miller

Board Game on a Computer

Mansfield HS Pam Probert

4th Place: Alice Lawrence

Betcha Can't Price Just One

Hillcrest HS Jennifer Saylor

MEDICINE AND HEALTH

1st Place: Claire Clothiaux

In Vitro Assay of CaSO4 and PMMA Impregnated Beads Greenwood Lab School

Hugh Brewer

2nd Place: Andrew Miller

You've Got Gall Greenwood Lab School

Dave Davison

MEDICINE AND HEALTH (cont.)

3rd Place: Jessica Biekert

Brown Recluse Toxin Effects

on Dermis of Lumbricus

Terrestris Hartville HS Glen Boyer

4th Place: Shane Novell

Use of Beta Carotenes in Cataract Prevention Mansfield HS Pam Probert

MICROBIOLOGY

1st Place: Katie Loomis

Effects of Parasite Control

Chemicals on Soil Hartville HS Glen Boyer

2nd Place: Philip Clothiaux

Backpackers Bug Juice Greenwood Lab School

Dave Davison

3rd Place: Tim Shelhamer

Mutagenicity of Orthene Pesticide on a Non-Target

Organism Mansfield HS Pam Probert

4th Place: Braden Pitts

Treating Acidic Feeds with

Sodium Bicarbonate

Hartville HS Glen Boyer

PHYSICS

1st Place: William Flynn

Development of a Muffler with Sound-Absorbing Baffles

Hartville HS Glen Boyer

2nd Place: Christopher Doria

The Better Ballistic Gel Greenwood Lab School

Hugh Brewer

Marilyn Moore Noise Abatement in Convertible Top Design

Kickapoo HS Jill Palmer

PHYSICS (cont.)

3rd Place: Jon Haghayeghi

Pressure's Interference With

Magnetic Fields Greenwood Lab School

Hugh Brewer

Charli Steed

The Effects of the Motion Path of the Downswing and Upswing of the Golf Swing

Thayer HS Peggy Veatch

4th Place: Nathan Redd

To the 1,000,000th Floor,

Please Halfway HS Rodney Delmont

Brian Kincaid

Collection & Concentration of Short-Wave Radiation Greenwood Lab School

Hugh Brewer

ZOOLOGY

1st Place: Miles Barnhart

The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

Chris Barnhart

2nd Place: Nyessa Briggs

Ants: Sweet Or Sour

Hillcrest HS Jill Johnson

3rd Place: Jamie Crider

Herbicide Effects on Juvenile

Spiders Hartville HS Glen Boyer

4th Place: Adam Keith

Effects of Salt Water Intrusion

on Invertebrates Mansfield HS Pam Probert

THE 2005 JUNIOR & SENIOR DIVISION



SPECIAL AWARD WINNERS!

<u>AEROSPACE SUMMIT – CONSTELLATION</u> CLUB – TROPHIES ETC.

Plaque & \$25 Cash

Junior Division: Toryana Vestal

It's Raining Micrometeorites Pleasant View MS

Chase Eck Spongy Rocks St. Agnes MS

Caleb Witt Am I Shrinking? St. Joseph MS

Plague & \$50 Cash

Junior Division: Matthew Oelschlaeger

Using SOHO to

Determine the Rotation of

the Sun St. Agnes MS

Senior Division: Danny McCorkendale

A New Rocket Fuel

Buffalo HS

AMERICAN CHEMICAL SOCIETY, OZARKS SECTION

The Ozark ACS Award is given to both the student and the sponsoring teacher.

Junior Division: Jordan Chastain &

Shelby Bass

Temperature vs. Stains

Billings JH Carolyn Mulkey

Senior Division: Tyler Williams

Combusted Gases to Aid

in Firefighting Hartville HS Glen Boyer

AMERICAN METEROLOGICAL SOCIETY

Certificate of Award

Junior Division: Kristen Bertoldie

Tornado in a Box Marshfield JH

AMERICAN PSYCHOLOGICAL ASSOCIATION AND TEACHERS OF PSYCHOLOGY IN SECONDARY SCHOOLS

Certificate of Award

Senior Division: Shane Algiere

Does MLIU Increase Lucid Dreaming? Greenwood Lab School

AMERICAN SOCIETY OF MAMMALOGISTS

Certificates of Award

Junior Division: Angela Thuro

Generations of Cavies Immaculate Conception

Patrick Nace

In the Life of an Elephant

St. Agnes MS

THE ASM INTERNATIONAL FOUNDATION

Certificate of Award

Senior Division: Cassie Sanders

The Effect of Coating Treatments on the Rate of

Corrosion Mansfield HS

THE ASSOCIATION OF WOMEN GEOSCIENTISTS

Certificate of Recognition

Senior Division: Kathryn Bryant

Plate Motion & Eruption

Frequency Kickapoo HS

BAKER CHAIR OF INSURANCE/GAMMA IOTA SIGMA AWARD

\$25 Cash and Certificate of Achievement

Senior Division: Kathryn Bryant

Plate Motion & Eruption

Frequency Kickapoo HS

Tyler Williams

Combusted Gases to Aid

in Firefighting Hartville HS

IRENE BRUNER MEMORIAL AWARD

\$25 Cash and Certificate (if given to partners, cash prize will be divided equally)

Junior Division: Starlyn Murphy

Color Before the Season

Cherokee MS

Brittany Donnellan & Elizabeth Kaatz If You Can't Stand the Heat, Stay Out of the

Microwave Central MYSP

<u>CITY OF SPRINGFIELD – SOLID WASTE</u> <u>DIVISION</u>

Recycled Plastic Soda Bottle T-Shirt

Junior Division: Devon Bench

Grain Size and Its Effect on H₂0 Absorption Pleasant View MS

Valerie Effland Better Mulch? Cherokee MS

Deirdre Irwin Apples Gone Bad Marshfield JH

CITY UTILITIES OF SPRINGFIELD

\$200 Cash

Junior Division: Sarah Beasley

Survey for Mercury in Springfield Area Lakes Greenwood Lab School

Senior Division: Lauren Moore

Is It Hot In Here To You?

Hillcrest HS

COMMUNITY HOSPICE OF AMERICA

\$25 Gift Cards for Outstanding Invention

Junior Division: Zac Pittman

Dogs Dogs Dogs Cherokee MS

Laura Stevens

Should You Take a Puff?

Cherokee MS

THE DISCOVERY CHANNEL YOUNG SCIENTIST CHALLENGE

2005 DCYSC Entry Booklet, 2005 DCYSC Certificate of Recognition, and 2005 DCYSC Lapel Pin

Junior Division:

Erin Squires Cherokee MS

Elizabeth Marler Springfield Lutheran

Rachael Beard St. Agnes MS

Weston Hunter St. Joseph MS

Jordyn Chelf St. Agnes MS

Emily Dodd Marshfield JH

Michelle Rathe Cherokee MS

Anisha Rimal Cherokee MS

Logan Green St. Agnes MS

Matt Medley St. Agnes MS

Dylan Wyatt Springfield Lutheran

Matthew Bird St. Agnes MS

Cody Clements St. Joseph MS

Toryana Vestal Pleasant View MS

Matthew Oelschlaeger St. Agnes MS

Natalie Rooney Cherokee MS

Lara Bower Cherokee MS

Andrew Griesemer Immaculate Conception

THE DISCOVERY CHANNEL YOUNG SCIENTIST CHALLENGE (cont.)

Casey Carroll Cherokee MS

MacKenzie Lutz Cherokee MS

Geoffrey Havens St. Agnes MS

Ryan Veatch Thayer JH

Jacob Keeney Cherokee MS

Sarah Beasley Greenwood Lab School

Kiley Husling Cherokee MS

Kirtana Viswanathan St. Agnes MS

Jason Nunn Cherokee MS

Abbie Tinlin St. Joseph MS

Meghan Arnall

Immaculate Conception

Daniel Pasquale Immaculate Conception

Daniel Kick Central MYSP

Garrett Comman Marshfield JH

Julie Putman Pleasant View mS

Derek Walles Clever MS

DRURY UNIVERSITY

3 Hours Undergraduate Credit to each Senior High First Place Award Winner

Senior Division: Shane Algiere

Does the MLIU Increase Lucid Dreaming? Greenwood Lab School

DRURY UNIVERSITY (cont.)

Christine Crain
Effects of Fermented
Feeds on Rumen Bacteria
Hartville HS

Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

Robert Busiek Can Ketone

Concentration in Diabetics

Be Tested?

Greenwood Lab School

Kathryn Bryant

Plate Motion & Eruption

Frequency Kickapoo HS

Sam Rue Production of

Construction Materials from Organic Waste

Hartville HS

Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

William Vandergrift Wireless RS-232 PC Data

Control Hartville HS

Claire Clothiaux

In Vitro Assay of CaSO₄ & PMMA Impregnated

Beads

Greenwood Lab School

Katie Loomis

Effects of Parasite Control Chemicals on Soil Hartville HS

William Flynn

Development of a Muffler with Sound-Absorbing

Baffles Hartville HS

DRURY UNIVERSITY (cont.)

Miles Barnhart The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

6 Hours Undergraduate Credit to the Senior High Grand Prize Award Winners

Senior Division: Claire Clothiaux

In Vitro Assay of CaSO₄ & PMMA Impregnated

Beads

Greenwood Lab School

Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

EASTMAN-KODAK PHOTOGRAPHY AWARD

Kodak digital 35mm one-use camera for student and teacher, plus Certificate of Award

Senior Division: Christopher Doria

The Better Balistic Gel Greenwood Lab School

Hugh Brewer

EVANGEL UNIVERSITY

\$1,500 Scholarship to each Senior Division First Place Winner

Senior Division: Shane Algiere

Does the MLIU Increase Lucid Dreaming? Greenwood Lab School

Christine Crain
Effects of Fermented
Feeds on Rumen Bacteria
Hartville HS

Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

Robert Busiek Can Ketone

Concentration in Diabetics

Be Tested?

Greenwood Lab School

EVANGEL UNIVERSITY (cont.)

Kathryn Bryant Plate Motion & Eruption Frequency

Kickapoo HS

Sam Rue Production of

Construction Materials from Organic Waste Hartville HS

Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

William Vandergrift
Wireless RS-232 PC Data

Control Hartville HS

Claire Clothiaux In Vitro Assay of CaSO₄& PMMA Impregnated

Beads

Greenwood Lab School

Katie Loomis

Effects of Parasite Control

Chemicals on Soil Hartville HS

William Flynn

Development of a Muffler with Sound-Absorbing

Baffles Hartville HS

Miles Barnhart The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

\$2,500 Scholarship to each Senior Division Grand Prize Winner

Senior Division: Claire Clothiaux

In Vitro Assay of CaSO₄& PMMA Impregnated

Beads

Greenwood Lab School

Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

EXPANDING YOUR HORIZONS: WOMEN IN SCIENCE

Science "Surprise Bag"

Junior Division: Natalie Rooney &

Lara Bower Whoosh! Cherokee MS

Jessica Maerz Looney Tunes St. Agnes MS

GREATER OZARKS AUDUBON SOCIETY

Environmental Awareness Award

Junior Division: James Barber

Bird Surprise Marshfield JH

THE GREENE COUNTY GROUNDWATER
GUARDIAN AWARD (sponsored by the
GREENE COUNTY RESOURCE
MANAGEMENT DEPARTMENT)

Award Certificate and Environmental Activity Participation

Junior Division: Casey Carroll

Do You Know Your DO?

Cherokee MS

HERBERT HOOVER PRESIDENTIAL LIBRARY ASSOCIATION "YOUNG ENGINEER AWARD"

Certificate of Award and Medallion

Senior Division: Cassie Sanders

The Effect of Coating
Treatmens on the Rate of

Corrosion

Mansfield HS

HORAN & BECKER MEDICAL SCIENCE AWARD (sponsored by HORAN & BECKER, DDS, AFFILIATED ORAL SURGEONS)

\$100 Health Science Award

Senior Division: Kendra Weatherford &

Julie Wootton The Price Is Right? Hillcrest HS

INTEL EXCELLENCE IN COMPUTER SCIENCE AWARD

\$200 Cash and Certificate of Award

Senior Division: William Vandergrift

Wireless RS-232 PC Data

Control Hartville HS

INTERNATIONAL SOCIETY FOR OPTICAL **ENGINEERS**

Certificate of Award

Junior Division: Kevin Rice

Eye Spy

Immaculate Conception

THE 2005 KRAFT AWARD (sponsored by Kraft Foods, Inc.)

\$50 Cash Award (if given to partners, each partner will receive \$50)

Senior Division: Cassie Sanders

> The Effects of Coating Treatments on Rates of

Corrosion Mansfield HS

Michelle Beier

Keep Your Eyes On Your

Tonque Hillcrest HS

Josh Shaver

Development of an All-Terrain-Wise Headlight in

ATVs

William Vandergrift Wireless RS-232 PC Data

Control Hartville HS

MARTIAL ARTS USA

\$75 Cash and free month of Tae Kwon Do membership

Junior Division: Cory McVey

At Your Max

Immaculate Conception

MISSOURI DEPARTMENT OF CONSERVATION

1st Place: Plaque & Conservation Guide with Magazine Subscription

Chris Mantei Junior Division:

> Do Stream Bugs Like Heavy Metals? St. Agnes MS

Senior Division: Miles Barnhart

> The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

2nd place: Certificate & Conservation Award

with Magazine Subscription

Junior Division: Samantha Jenkins

> Nature's Blankets Cherokee MS

Ashley Perryman Overcome the Chill Niangua MS

Senior Division: Jamie Crider

> Herbicide Effects on Juvenile Spiders Hartville HS

Chelsea House Effects of Natural

Alleotropes on Monocots

& Dicots Mansfield HS

Honorable Mention: Conservationist Subscription

Junior Division: Jordan Phillabaum

> Praying to Hatch Cherokee MS

Stephan Tipton Dirty Water St. Agnes MS

Ian Kenny Go With the Flow Cherokee MS

Ariel White & Cassandra Roberts Which Bird House Will Absorb the Most

Sunlight? Central MYSP

MISSOURI DEPARTMENT OF CONSERVATION (cont.)

Deidre Irwin Apples Gone Bad Marshfield JH

MISSOURI OPTOMETRIC ASSOCIATION

\$100 Cash and Plague

Junior Division: Kevin Rice

Eye Spy

Immaculate Conception

MISSOURI SOCIETY OF PROFESSIONAL **ENGINEERS, Ozarks Chapter**

\$100 Cash

Senior Division: Cassie Sanders

> The Effects of Coating Treatments on the Rate of

Corrosion

Mansfield HS

\$75 Cash

Junior Division: Andrew Griesemer

> Icv-Hot Attraction Immaculate Conception

MISSOURI SOLAR ENERGY ASSOCIATION

Certificates of Award & Calculators

Junior Division: Matthew Oelschaeger

Using SOHO to

Determine the Rotation of

the Sun St. Agnes MS

Senior Division: Brian Kincaid

Collection &

Concentration of Short-Wave Radiation Greenwood Lab School

Justin Leirz Solar H20 Hillcrest HS

LOU & NADINE MOORE MEMORIAL **AWARD**

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

Junior Division: Cayleigh Medina

The Color of Memory Cherokee MS

LOU & NADINE MOORE MEMORIAL AWARD (cont.)

Megan Hughes Babies Gone Wild St. Agnes MS

MU ALPHA THETA NATIONAL MATHEMATICS HONOR SOCIETY

Certificate of Award

Senior Division: Kristin Campbell

Application of Pick's

Theorem Mansfield HS

NATIONAL SOCIETY OF PROFESSIONAL **ENGINEERS**

Certificate of Award in folder & lapel pin

Senior Division: Sam Rue

Production of

Construction Materials from Organic Waste Hartville HS

OZARK AREA PSYCHOLOGICAL **ASSOCIATION**

A First Place Certificate

Senior Division: Shane Algiere

> Does the MLIU Increase Lucid Dreaming? Greenwood Lab School

A Second Place Certificate

Senior Division: Caleb Moon

"Barbie Doll" Syndrome:

What Society Sees as

Ideal Hartville HS

A Third Place Certificate

Senior Division: Marqee Snokhous

Effects of Visual Field Size on Judged Distance

Mansfield HS

A Fourth Place Certficate

Craig Campbell Senior Division:

> Childhood Obesity Mansfield HS

POSITRONIC INDUSTRIES RESEARCH **AWARD**

Certificates of Award and Desk Clocks to Students

Junior Division: Conor McCaskill

Weighing in on Basketball

St. Agnes MS

Erich Hufford

Science in Motor Sports

St. Joseph MS

Miles Kimbrough

Shutter Speed Sharpness

Cherokee MS

Rachael Beard

When it Comes to Tests. Who's More Stressed?

St. Agnes MS

Jordyn Chelf Who Are You? Pleasant View MS

Ben Conway **Domain Diversity** St. Agnes MS

Logan Green Soft Science St. Agnes MS

Matt Medley Which Water? St. Agnes MS

RICOH CORPORATION

Certificate of Award & Subscription to Science Magazine

Senior Division: Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

SCHNEIDER FOUNDATION (in cooperation with the Community Foundation of the Ozarks)

\$200 Cash and Certificates

Junior Division: Julie Putman

> Zeitgerber: Its Effect on Circadian Rhythms of Chameleons Pleasant View MS

SCHNEIDER FOUNDATION (in cooperation with the Community Foundation of the Ozarks) (cont.)

Weston Hunter Got Gas? St. Joseph MS

Natalie Rooney & Lara Bower Whoosh! Cherokee MS

Casey Carroll

Do You Know Your DO?

Cherokee MS

Jacob Keeney The Effect of Diet on Blood Clottina Time Cherokee MS

\$500 Cash & Certificate

Claire Clothiaux Senior Division:

In Vitro Assav of CaSO₄&

PMMA Impregnated

Beads

Greenwood Lab School

Sunny Qiu

IBA Effects on Wild & **Domesticated Grapevines** Greenwood Lab School

Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

Robert Busiek Can Ketone

Concentration in Diabetics

Be Tested?

Greenwood Lab School

Sam Rue Production of

Construction Materials from Organic Waste

Hartville HS

THE SMITH-GLYNN-CALLOWAY MEDICAL FOUNDATION AWARD

\$100 Cash Award

Junior Division: Broc Wolfe

Which Worm Wins? Pleasant View MS

Kirtana Viswanathan Beauty is Not Skin Deep

St. Agnes MS

Julian Koenig Hand Soap vs. Hand

Sanitizer St. Agnes MS

Shayan Sikander Beans Creating Gas Cherokee MS

\$150 Cash Award

Senior Division: Andrew Miller

You've Got Gall

Greenwood Lab School

Raymond Plaster Sodium Polyacrylate in

Bandages Greenwood Lab

Shane Norell

Use of beta-Carotenes in Cataract Prevention Mansfield HS

Claire Clothiaux

In Vitro Assay of CaSO₄& PMMA Impregnated

Beads

Greenwood Lab School

SOCIETY FOR IN VITRO BIOLOGY

Certificate of Award

Senior Division: Julie Hutton

Impact of Salicylic Acid on Symbiotic Relations Mansfield HS

SOCIETY OF MANUFACTURING ENGINEERS

Palm Pilots

Junior Division: Natalie Rooney &

Lara Bower Whoosh! Cherokee MS

Senior Division: William Vandergrift

Wireless RS-232 PC Data

Control Hartville HS

Cassie Sanders The Effect of Coating Treatments on the Rate of

Corrosion Mansfield HS

SMSU DEPARTMENT OF BIOLOGY

Certificates to student and plaques to teachers

teachers

Junior Division: Michelle Rathe

How Tall Did They Grow?

Cherokee MS

Christopher Mantei Do Stream Bugs Like Heavy Metals? St. Agnes

Julie Putman

Zeitgerber: Its Effects on Circadian Rhythms of

Chameleons
Pleasant View MS

Kirtana Viswanathan Beauty is Not Skin Deep

St. Agnes MS

Jason Nunn Effect of UV Light on Bacterial Growth Cherokee MS

Certificates to student and plaques to

teachers

Senior Division: Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

SMSU DEPARTMENT OF BIOLOGY (cont.)

Miles Barnhart The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

Claire Clothiaux

In Vitro Assay of CaSO₄& PMMA Impregnated

Beads

Greenwood Lab School

Katie Loomis

Effects of Parasite Control

Chemicals on Soil Hartville HS

Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

\$1,000 Work/Study Award

Senior Division: Kate Probert

Environmental Estrogen

Disruptors Mansfield HS

SMSU COLLEGE OF NATURAL AND APPLIED SCIENCES

\$50 Cash

Junior Division: Julie Putman

Zeitgerber: Its Effects on Circadian Rhythms of Chameleons

Pleasant View MS

Senior Division: Claire Clothiaux

In Vitro Assay of CaSO₄& PMMA Impregnated

Beads

Greenwood Lab School

Sunny Qiu

IBA Effects on Wild & Domesticated Grapevines Greenwood Lab School

SMSU DEPT. OF COMMUNICATION **SCIENCES & DISORDERS AWARD**

\$50 Cash Award

Senior Division: Travis Lewing

Effects of Sound Waves

on Cockroaches Greenwood Lab School

UNITED STATES AIR FORCE

Electronic planners and binders

Senior Division: Nathan Redd

To the 1,000,000th Floor,

Please Halfway HS

Danny McCorkendale A New Rocket Fuel

Buffalo HS

Kathryn Bryant

Plate Motion & Eruption

Frequency Kickapoo HS

William Vandergrift Wireless RS-232 PC Data

Control Hartville HS

UNITED STATES ARMY

Bronze Medallion and Certificate of Achievement

Senior Division:

Kristin Campbell

Application of Pick's

Theorem Mansfield HS

Jordan Roberts

Contaminations on Insect

Pulp Construction Hartville HS

Polo shirt and Certificate of Achievement

Senior Division: Elizabeth Massey

Introduction of Plant Cancer Cells to Vegetative Clones Hartville HS

Sam Rue Production of

Construction Materials from Organic Waste

Hartville HS

UNITED STATES ARMY (cont.)

Lauren Moore Is It Hot In Here To You? Hillcrest HS

UNITED STATES DEPARTMENT OF **HEALTH & HUMAN SERVICES**

Certificate of Award

Senior Division: Jessica Biekert

> Brown Recluse Toxin Effects on Dermis of Lumbricus Terrestris Hartville HS

UNITED STATES METRIC ASSOCIATION

Certificate of Award

Miles Barnhart Senior Division:

> The Relationship of Dicymolomia and the

Bagworm

Greenwood Lab School

UNITED STATES NAVY/MARINE CORPS

Award Letter & Medallions

Junior Division: Matthew Bird

Visual Basic Game

Program St. Agnes

Cody Clements Finding Files St. Joseph MS

Kristen Bertoldie Tornado in a Box Marshfield JH

Toryana Vestal It's Raining Micrometeorites Pleasant View MS

Chase Eck Spongy Rocks St. Agnes MS

Matthew Oelschlaeger Using SOHO to

Determine the Rotation of

the Sun St. Agnes MS

UNITED STATES NAVY/MARINE CORPS (cont.)

Sam Carter Paint Coverage Cherokee MS

Andrew Griesemer Icy-Hot Attraction Immaculate Conception

Michael Derlicki Lava Java St. Agnes MS

Certificate of Award, Award Letter and \$50 Gift Certificate

Senior Division:

William Flynn

Development of a Muffler with Sound-Absorbing

Baffles Hartville HS

Jon Haghayeghi Pressure's Interference With Magnetic Fields Greenwood Lab School

Brian Kincaid Collection &

Concentration of Short-Wave Radiation Greenwood Lab School

Alex Miller Board Game on a Computer Mansfield HS

William Vandergrift Wireless RS-232 PC Data

Control Hartville HS

Marilyn Moore Noise Abatement in Convertible Top Design Kickapoo HS

Sunny Qiu

IBA Effects on Wild & **Domesticated Grapevines** Greenwood Lab School

WALLACE WEBER MEMORIAL AWARD FOR BOTANY

\$60 Cash Award for Outstanding Botany Project

Senior Division: Elizabeth Massey

Introduction of Plant Cancer Cells to Vegetative Clones Hartville HS

WATER ENVIRONMENT FEDERATION

Certificate of Award and Folder

Senior Division: Ann Moran

What's In Your Water?

Hillcrest HS

WATERSHED COMMITTEE OF THE OZARKS

\$50 Cash Award

Junior Division: Ian Kennedy

Go With The Flow Cherokee MS

Casey Carroll

Do You Know Your DO?

Cherokee MS

Senior Division: Ann Moran

What's In Your Water?

Hillcrest HS

YALE SCIENCE & ENGINEERING ASSOCIATION, INC.

Award Certificate

Senior Division: Robert Busiek

Can Ketone

Concentration in Diabetics

Be Tested?

Greenwood Lab School

DR. GARY A. KELL AWARD, sponsored by Ferrell-Duncan Clinics

This award of \$250 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 2005 is:

Lynn Vogel St. Agnes Middle School

THE REGIONAL FAIR DIRECTOR EMERITUS "SYLVIA SPEAR NEW TEACHER AWARD"

\$25 Cash to a First Time Teacher.

Robin Swain Clever MS

<u>POSITRONIC INDUSTRIES TEACHER</u> <u>AWARD</u>

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 2005 is:

Lynn Vogel St. Agnes Middle School

OZARKS SCIENCE & ENGINEERING FAIR FOUNDATION JUNIOR DIVISION TEACHER AWARDS

This award of a book of abstracts from the International Science and Engineering Fair is awarded to the teachers of the Junior Division First Place Category winners. The recipients of the Junior Division Teacher Awards for 2005 are:

Jennifer Cvitak, Cherokee MS Kathryn Keller, St. Joseph MS Kimberly Potter, Marshfield JH Lynn Vogel, St. Agnes MS Darlene Henne, Pleasant View MS Jackie Hutcherson, Cherokee MS Heather Cooke, Immaculate Conception

OZARKS SCIENCE & ENGINEERING FAIR FOUNDATION SENIOR DIVISION TEACHER AWARDS

This award of a book of abstracts from the International Science and Engineering Fair is awarded to the teachers of the Senior Division First Place Category winners. The recipients of the Senior Division Teacher Awards for 2005 are:

Hugh Brewer, Greenwood Lab School Glen Boyer, Hartville HS Dave Davison, Greenwood Lab School Richard Snyder, Kickapoo HS Pam Probert, Mansfield HS

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

This award of \$25 cash and a plaque is awarded to the teacher(s) of the Junior Division Grand Prize student project. The recipient of the OSEF Foundation Junior Division Grand Prize Teacher Award for 2005 is:

Darlene Henne, Pleasant View MS

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

This award of \$25 cash and 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 2005 are:

Hugh Brewer, Greenwood Lab School Dave Davison, Greenwood Lab School



The Ozarks Science & Engineering Fair Foundation



We hope you have enjoyed this year's Ozarks Science & Engineering Fair, and that your student had a enriching as well as rewarding experience.

The Ozarks Science & Engineering Fair is THE premier middle and high school science competition for southwest Missouri. The Fair is a regional competition which brings together student scientists and engineers with outstanding research projects. It also serves as an excellent opportunity for students to experience working with local scientists and professionals. Participating students are from a 16 county region which includes: Christian, Dade, Douglas, Greene, Howell, Laclede, Oregon, Ozark, Polk, Pulaski, Shannon, Stone, Taney, Texas, Webster and Wright counties. The Fair itself takes place annually during the first week of April at Hammons Student Center on the campus of Southwest Missouri State University. For more information about the Fair itself, visit http://www.k12science.smsu.edu/OSEF/ enter the fair!.htm.

Funds for the Fair come exclusively from contributions by individuals, organizations, foundations, businesses, and industries in our region. These funds are used for operational costs, prizes, awards, and expenses for participation in the annual International Science and Engineering Fair, where our students interact and compete with student scientists from around the world.

Our supporters come from all areas of the community, and are bound together by their mutual interest in promoting science and math education, research and careers in the young people of southwest Missouri. OSEF invites you to support and encourage young scientists, and has established cumulative and annual giving levels, which will be recognized. The recognition levels achieved by those who support the Fair will be publicized in the annual Entry and Award Books as well as newspaper announcements following the Fair.

We already know you value science and math education for our young people—your generous donations are vital to the continued success of this important outreach in our community. If you would like to contribute to the Fair Foundation, please use the attached envelope—a drop box will be available at the information desk as you leave the Fair, or you can mail your donation at a later date.

Thank You!