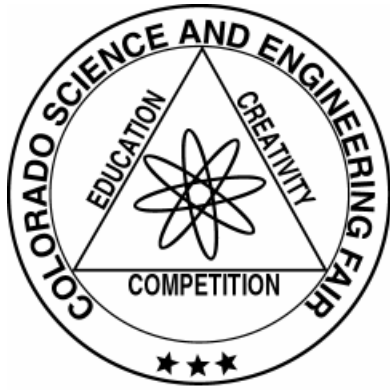


Colorado State Science Fair, Inc.

# 2003 ANNUAL REPORT





*From start to finish, and at all levels of participation, the science fair experience is one not only of competition, but also of camaraderie, creativity, cooperation, and education. This is the essence of the logo for the Colorado Science and Engineering Fair.*

August 31, 2003  
Colorado State Science Fair, Inc.  
P O Box 1465  
Fort Collins, CO 80522-1465  
Tel (970) 498-4121  
Fax (970) 491-2005  
e-mail: [csef@lamar.colostate.edu](mailto:csef@lamar.colostate.edu)  
<http://www.csef.colostate.edu>

Registered Office Location:  
CSMATE  
Colorado State University  
Fort Collins, CO 80523-1802

CSEF Director and Registered Agent:  
Courtney Butler, (970) 491-7716

## 2003 ANNUAL REPORT

The Colorado State Science Fair, Inc. was established in 1977 as a private, non-profit organization to run the Colorado Science and Engineering Fair (CSEF). The CSEF has actually been held annually since 1955 and is the state-level event in a year-long process of local and regional science fairs. More than two thousand students participate in science fair programs state-wide. The purpose of the CSEF is to stimulate student interest and encourage them in science and engineering through recognition of their research knowledge, ability and achievement.

Each year, a number of experiences are made available to the student finalists who participate in the CSEF. Tours of university and local corporate research facilities provide opportunities for students and their families to see research in action. The judges' interviews allow the finalists to interact with professional scientists and engineers. Over the years, many students

have said that having the chance to meet and speak with their peers about their science projects is the most beneficial aspect of the Colorado Science and Engineering Fair.

In addition to getting the opportunity to speak with working scientists, CSEF finalists compete for awards in the categories of Botany; Chemistry; Earth & Space Sciences; Engineering; Environmental Sciences; Health & Behavioral Sciences; Mathematics & Computer Sciences; Microbiology; Physics; and Zoology – either with an individual or team project. Recognition for outstanding research in each of these categories as well as an award for technical writing are presented each year at the CSEF Awards Ceremony. The top two Senior Division individual projects and the top Senior Division team project are awarded trips to compete at the Intel International Science and Engineering Fair (Intel ISEF).

## 2003 COLORADO SCIENCE AND ENGINEERING FAIR

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The forty-eighth Colorado Science and Engineering Fair was held at Lory Student Center on the Colorado State University campus on April 10 – 12, 2003.

This year, CSEF winners were chosen from among 271 projects represented by 305 finalists from 105 schools and 13 regions within the state. More than 110 professional scientists, engineers and mathematicians interviewed the students and evaluated their projects before selecting the Grand Award winners. In addition, over 50 businesses, professional societies, and government agencies provided more than 100 of their own representatives to judge exhibits based on their own criteria. They judged the student finalists and conferred Special Awards which represented an aspect of the bestowing organization. These included college scholarships, offers of summer employment, field trips, cash, savings bonds, and calculators. Over 1,000 people attended the Awards Ceremony this year.

The 2003 Colorado Science and Engineering Fair had 30 sponsors. Sponsors included 4 Platinum Sponsors (providing over \$2,500 of support), 10 Gold Sponsors (\$1,000 – \$2,500 of support each), 2 Silver Sponsors (\$750 - \$1,000 of support each), and 10 Regular Sponsors (\$500 - \$750 of support each). In addition, there were 13 Financial Contributors (less than \$500 each). In addition, several individuals donated through the Denver Combined Federal Campaign.

Scholarships from Adams State College (ASC) and Colorado School of Mines (CSM) were also presented. Adams State College awarded ten one-year full resident tuition and fees scholarships. The Colorado School of Mines awarded four four-year full resident tuition scholarships. The Intel Foundation also awarded a \$2,000 scholarship to a twelfth grader in the name of Ryan Patterson (Intel ISEF top winner in 2001) for use at the college or university of their choice.

This year, the CSEF was honored to have guest speaker, Dr. Joseph Golden. Dr. Golden is a senior research meteorologist with the Forecast Systems Laboratory of the National Oceanic and Atmospheric Administration (NOAA) and is an expert on vortices, principally hurricanes and tornadoes. He is the world's leading authority on waterspouts.

Dr. Golden is the author of numerous scientific articles and acts as the source of meteorological expertise for both popular and scientific news media. A fellow of the American Meteorological Society, he has held many key leadership positions, including director of NOAA's weather modification program.

Dr. Golden spoke about tornado research, where it has been and where it is going.

*(See Appendix 1 – 2003 CSEF Schedule)*

# 2003 COLORADO SCIENCE AND ENGINEERING FAIR TOP AWARDS

The top Senior Division individual project exhibitor of the 48<sup>th</sup> Colorado Science and Engineering Fair and winner of an all-expense paid trip to compete in the Intel International Science and Engineering Fair was **Jennifer McDonough**, Palmer High School in Colorado Springs, grade 9, for the project *Cruciferous Platyhelminthes*. Second place for best individual project, and also a winner of an all-expense paid trip to compete at the Intel ISEF was **Lauren Smith**, Rampart High School in Colorado Springs, grade 10, for the project *Xanthomonas campestris pv. Vesicatoria: A Study Of The Relationship Between Extra-Cellular Material & Heightened Host Response*. Awarded third place for best individual project and winner of an all-expense paid trip to observe at the Intel ISEF was **Lisa Saccomano**, Cherry Creek High School in Greenwood Village, grade 11, for the project *Abnormal Otic Invasation With Possible Associations To OAV Spectrum*. The first place Senior Division team project and winner of an all-expense paid trip to compete in the Intel ISEF was **Andrew Leifer, Raymund To, and David Pothier**, Fairview High School in Boulder, grade 12, for the project *Fractals, Power-Laws, And The Weibull Distribution: Mathematical Modeling Crumpled Paper*.

The winner of the Ralph F. Desch Memorial Technical Writing Award was **Jeff Marlow** from Cherry Creek High School in Greenwood Village, grade 12, for the project *The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*.

The winner of the Senior Division Student Choice Award was Kelly Cook, Boltz Junior High School in Fort Collins, grade 9, for the project *Is What You See What You Get? Brain Perception & The Physics Of Light*. The Junior Division Student Choice winner was **Ian Springer**, Lamar Middle School in Lamar, grade 8, for the project *Robotic Rescue – Designing And Building A Light Sensing Robot For Search And Rescue Of Disaster Victims*.

The winner of the Poster Art Contest was **Morgan Edwards**, High Country Christian Academy in Colorado Springs.

The winner of the first CSEF Teacher of the Year Award was **Gary Wilkinson** of Monte Vista High School in Monte Vista. Mr. Wilkinson received a \$1,000 grant to use towards scientific research in his classroom and school.

# 2003 COLORADO SCIENCE AND ENGINEERING FAIR SCHOLARSHIP AWARDS

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## ADAMS STATE COLLEGE

**Christina Russell**, Merino Jr/Sr High School in Merino, grade 11, for the project *Let's Read: A Comparative Study Of Child Behavior And Daily Reading*.

**Scott Headrick**, Gilpin County School in Black Hawk, grade 10, for the project *Slow Down*.

**Tyler Keck**, Monte Vista High School in Monte Vista, grade 9, for the project *The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water*.

**Rachel Doyle**, Monte Vista High School in Monte Vista, grade 11, for the project *The Effect Of Yearly Precipitation On Water Quality In The Rio Grande River Of Colorado*.

**Chad Kembel**, Brush High School in Brush, grade 10, for the project *Mathematics Of A Rotating Cylinder*.

**Jade Brooks**, Sierra Grande School in Fort Garland/Blanca, grade 11, for the project *Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed*.

**Phillip Torres**, Cherry Creek High School in Greenwood Village, grade 11, for the project *The Best Wing Angle For Absorbing Heat From Light In *Nymphalis antiopa**.

**Tom Herter**, Meeker High School in Meeker, grade 10, for the project *Hylemya sp.'s Effects On Fitness Of *Polemonium foliosissimum**.

**David Bloemker**, Brush High School in Brush, grade 11, for the project *Winging It – A Variable Camber Airfoil*.

**Kayla Zimmerman**, Hotchkiss High School in Hotchkiss, grade 11, for the project *The Effects Of Three Types of Mulches On Soil Dwelling Bacteria In A Peach Orchard In Western Colorado*.

## COLORADO SCHOOL OF MINES

**Jeff Marlow**, Cherry Creek High School in Greenwood Village, grade 12, for the project *The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*.

**Jessica Caver**, Woodlin School in Woodrow, grade 12, for the project *Designing And Testing Solids To Remove Arsenic*.

**Brian Camley**, Palmer High School in Colorado Springs, grade 12, for the project *The Telltale Heart Of Darkness: Differentiating Between Authors – Beyond Naïve Bayesian Classification*.

**Leota McDaniel**, Brush High School in Brush, grade 12, for the project *An Investigation Into The Leidnenfrost Phenomenon*.

## RYAN PATTERSON SCHOLARSHIP

The Ryan Patterson Scholarship is named after the Intel ISEF top winner of 2001, who is from Grand Junction, CO and currently attending the University of Colorado in Boulder. The Intel Foundation in Colorado Springs funds this scholarship and the winner can use it at the school of their choice. This years winner was **Leota McDaniel**, Brush High School in Brush, grade 12, for the project *An Investigation Into The Leidnenfrost Phenomenon*.

*(See Appendix 2 – CSEF Press Release for all winners)*

# 2003 INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR

The Intel International Science and Engineering Fair, the world's largest pre-college science fair, brings together more than 1,200 of the most curious and capable young science pioneers from more than 40 countries to share ideas, showcase cutting-edge science and compete for over \$3 million in awards and scholarships. The Intel ISEF is the world's only international science fair representing all sciences for students in grades 9 through 12. The ISEF has been coordinated for 54 years by Science Service, Inc., one of the most respected non-profit organizations advancing the cause of science.

Colorado students from around the state were among the award winners at the 54<sup>th</sup> Intel ISEF held in Cleveland, OH May 12 – 17, 2003.

## GRAND AWARDS

**Adam Sidman** from Colorado Spring, Co won \$1,500 (2<sup>nd</sup> Place) in Engineering.

**Craig Wright** from Akron, CO won \$1,500 (2<sup>nd</sup> Place) in Engineering.

**Robert Ussery** from Fort Collins, CO won \$1,500 (2<sup>nd</sup> Place) in Engineering.

**Katherine Hermann** from Louisville, CO won \$1,000 (3<sup>rd</sup> Place) in Environmental Sciences.

**Heather Messick** from Monte Vista, CO won \$1,000 (3<sup>rd</sup> Place) in Botany.

**Andrew Leifer, Raymund To, and David Pothier** from Boulder, CO won \$1,500 (3<sup>rd</sup> Place) in the team category.

**Lauren Smith** from Colorado Springs, CO won \$500 (4<sup>th</sup> Place) in Botany.

**Adam Brundgart** from Brush, CO won \$500 (4<sup>th</sup> Place) in Chemistry.

## SPECIAL AWARDS

**Brian Camley** from Colorado Springs, CO won \$500 from the American Association for Artificial Intelligence.

**Adam Brundgart** from Brush, CO won \$100 from the American Chemical Society (4<sup>th</sup> Place).

**Andrew Leifer, Raymund TO, and David Pothier** from Boulder, CO won \$1,000 from the American Mathematical Society (1<sup>st</sup> Place).

**Lauren Smith** from Colorado Springs, CO won \$1,000 from the American Phytopathological Society (1<sup>st</sup> Place).

**Diane Gumina** from Sterling, CO won a \$20,000 scholarship (\$5,000 per year for four years) from Indiana University.

## GOVERNMENT AWARDS

**Robert Ussery** from Fort Collins, Co won an all expense paid trip to the US Space Camp in Huntsville, AL from NASA.

## ORGANIZATION

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The success of each year's Colorado Science and Engineering Fair is directly dependent upon the support of public and private organizations, government agencies, school districts and universities, as well as the efforts of hundreds of committed volunteers. It is no exaggeration to say that CSEF volunteers indeed make the event possible. At the state level, there is the Board of Directors (volunteers from the sponsoring organizations working on overseeing the running of the CSEF and the non-profit organization); the Advisory Council (volunteers from around the state who are on the CSEF Working Committees to make sure everything runs smoothly at the event); judges (both for Grand and Special Awards who interview the finalists and choose the winners); and hundreds of on-site volunteers who do the actual work of the CSEF. Prior to the state event, thirteen regional science fairs and a great number of local school science fairs are conducted throughout the state and each of these is supported and promoted by hardworking and dedicated educators. And before a student's project even makes it to a local science fair, it requires the encouragement and support from individual teachers, adult sponsors, and parents to help students see their projects through from inception to finished exhibit. The Colorado Science and Engineering Fair is a product of all of these people.

## MISSION STATEMENT

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*Colorado State Science Fair, Inc. honors excellence in science, engineering, and technology; providing opportunities for students from all regions of the state to create and present their research in environments that nurture interests in science and technology; promoting professional skills, high ethical standards, diversity and continuing intellectual development.*

## GOALS & OBJECTIVES

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The Colorado State Science Fair, Inc. is an organization that:

- Organizes the infrastructure of the Colorado Science and Engineering Fair for students from all regions of the state of Colorado to present science projects to judges, representatives of scientific organizations, the public and their peers;
- Honors winners from Colorado regional science fairs at the annual Colorado Science and Engineering Fair;
- Sends finalists from the state of Colorado to the Intel International Science and Engineering Fair (Intel ISEF);
- Provides experiences for Colorado students to interact with their peers, with Colorado science teachers and Colorado scientists and engineers in professional and social settings;
- Promotes science, engineering and technology as careers, inspiring excellence, high ethical standards and emphasizing the immense satisfaction that comes from confronting and solving intellectual problems and serving societal needs;
- Reinforces in students the wonder nature instills, wherever and however possible empowering them to follow their questions and dreams; and
- Encourages a culture that values and nurtures diversity

We support regional science fairs by:

- Acting as an alternative to the Science Service affiliation as a means of attending the Intel ISEF;
- Providing a forum where regional science fairs can influence policies, rules and by-laws for the state science fair;
- Providing rules and requirements for participation in the Colorado Science and Engineering Fair;
- Facilitating communication, where practical, between regional science fairs and their participants;
- Providing information and resources to the regional fair directors, teachers and students which will promote interest in science, engineering and technology, and excellence in scientific research; and
- Increasing public awareness and appreciation of science, engineering and technology in the schools.

## CSEF SPONSORS

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### PLATINUM SPONSORS

(Providing over \$2,500 in support of CSEF.)

Colorado Dental Association

Colorado State University

Hach Scientific Foundation

LSI Logic

### GOLD SPONSORS

(Providing \$1,000 - \$2,500 in support of CSEF.)

Agilent Technologies

Anheuser-Busch, Inc.

Ball Corporation

Colorado Medical Society  
Education Foundation

Domino's of Fort Collins

Kodak Colorado Division

Lockheed Martin Space Systems Company

Safe Sites of Colorado, LLC

Seagate Technology

US Department of Commerce/NTIA/ITS

### SILVER SPONSORS

(Providing \$750 - \$1,000 in support of CSEF.)

Kaiser-Hill Company

US Department of Commerce/NIST

### REGULAR SPONSORS

(Providing \$500 - \$750 in support of CSEF.)

Center for Science, Mathematics &  
Technology Education - CSU

Colorado Engineering Council

Denver Chapter of the IEEE Lasers and  
Electro-Optics Society

National Renewable Energy Laboratory

Norgren

San Luis Valley Regional Science Fair, Inc.

University of Colorado – College of  
Engineering & Applied Science

US Department of Commerce/NOAA

Utility Engineering Corporation

Washington Group International

### CONTRIBUTORS

(Providing up to \$500 in support of CSEF.)

Ag Services

Edmon & Lucy Adams

Sam & Eileen Bartlett

Trudy Forsyth

Bonnie Hames

Gina Holland

In Memory of Donald Holland

Jerome-Ricker Wholesale Distributions

Sigma Xi – CSU Chapter

Wal-Mart Store #1008

Xcel Energy Foundation – Dollars for Doing

Xcel Energy Foundation – Matching Gifts

Many federal employees also contributed  
through the Combined Federal Campaign



## CSEF ADVISORY COUNCIL

The CSEF Advisory Council is comprised of the Board of Directors, the Regional Fair Directors and Assistant Directors, and many at-large members.

## CSSF BOARD OF DIRECTORS

*US Department of Commerce/NOAA*

Al Bedard – President

Regular Member since 1996

*San Luis Valley Regional Science Fair, Inc.*

David Holm - Vice President

Regular Member since 1997

*National Renewable Energy Laboratory*

Bonnie Hames – Secretary

Regular Member since 1999

*Colorado Engineering Council*

Sam Bartlett – Treasurer

Regular Member since 2001

*San Luis Valley Regional Science Fair, Inc.*

Harvey Teyler - Immediate Past President

Regular Member since 1996

*Safe Sites of Colorado, LLC*

Mike Bemski - Regular Member since 2002

*Morgan Washington Bi-County RSF*

Elemer Bernath

Associate Member since 2002

*Lockheed Martin Space Systems Company*

Paul Cheng - Regular Member since 1996

*US Department of Commerce/NOAA*

David Clark -Regular Member since 1995

*Colorado Dental Association*

Carol Denning

Regular Member since 2002

*US Department of Commerce/NIST*

Bill Dube

Regular Member since 2002

*Agilent Technologies*

Barry Eppler - Regular Member since 2003

*National Renewable Energy Laboratory*

Trudy Forsyth - Regular Member since 2003

*Colorado State University*

Edward Geary - Regular Member since 2001

*Colorado Engineering Council*

Gina Holland - Regular Member since 1991

*Colorado Medical Society*

Dean Holzkamp

Regular Member since 2003

*Colorado Medical Society*

A. Bill Kieger - Regular Member since 2002

*LSI Logic*

Vishy Lakshmanan

Regular Member since 2001

*Colorado Dental Association*

Bob Morrow - Regular Member since 1995

*Colorado State University*

Jan Nerger - Regular Member since 2003

*San Luis Valley Regional Science Fair, Inc.*

Jody Oaks - Regular Member since 2003

*Lockheed Martin Space Systems Company*

John Parker - Regular Member since 2002

*US Department of Commerce/NIST*

Sonja Ringen - Regular Member since 2002

*University of Colorado*

Sherry Snyder - Regular Member since 1998

*Infinite Links*

Linda Strine - Associate Member since 2003

*US Department of Commerce/NTIA*

Amy Weich - Regular Member since 2000

*Denver Chapter of the IEEE/LEOS Society*

Gary Wilson - Regular Member since 2000

## REGIONAL FAIR DIRECTORS

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*Arkansas Valley Regional Science Fair*

Joel Grey & Jim Herrell

*Boulder Valley Regional Science Fair*

Gary Marx & Anitta Frant

*Denver Metro Regional Science Fair*

Jim Stevens & Kristina Wenzel

*East Central Regional Science Fair*

William Mallory & Marguerite Yowell

*Longs Peak Regional Science Fair*

Terry Scott & Courtney Willis

*Morgan/Washington Regional Science Fair*

Elemer Bernath & Nancy Gettman

*Northeast Regional Science Fair*

Janet Klein

*Pikes Peak Regional Science Fair*

Georgia Matteson

*San Juan Basin Regional Science Fair*

Martha Iverson

*San Luis Valley Regional Science Fair*

Lucy Adams

*Southeast Regional Science Fair*

Terri Lira & Robin Staker

*Southern Colorado Regional Science Fair*

Carol Crossley & Oralia Gil

*Western Regional Science Fair*

Harmony Voorhies & Rob Robison

## MEMBERS AT LARGE

---

Steve Iona

Russ Schnell

Larry Jakel

Deanna Schrock

Charles Johnson

Jim Sites

John McConnell

Doug Steward

Beverly Meier

Laura Ussery

David Pfuhl

Dan Van Gorp

## PAST CSEF DIRECTORS

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\* *Charles Bragaw*

1956 – 1967

\* *Calvin Fisher*

1968 – 1974

\* *Sam Shushan*

1975 – 1977

*Gordon Moore*

1978 – 1979

\* *Russell B. Stoner*

1979 – 1981

*Virgil A. Sandborn*

1981 – 1983

*James R. Sites*

1984 – 1985

*Lloyd Walker*

1986 – 1988

*Connie Vader-Lindholm*

1989 – 1990

*Lynn Butler*

1991 – 1992

*Kate Taylor*

1992 – 1994

1997 - 1998

*Christal McDougall*

1995 – 1996

*Lucy Adams*

1998 – 1999

*Courtney Butler*

1999 – present

\* *Director Emeritus for outstanding contributions to CSEF and more than two years of service as CSEF Director.*

## WORKING COMMITTEES

---

### *Alumni*

Bob Morrow

### *Awards Ceremony*

Courtney Butler, Al Bedard, David Holm,  
Sam Bartlett, Gina Holland, Eileene  
Gooding, Bonnie Hames, Beverly Meier

### *Display & Safety*

Dan Van Gorp, Elemer Bernath, Deanna  
Schrock

### *Grand Awards Judging*

Gina Holland, Bonnie Hames

### *Photography*

Amy Weich, Eileene Gooding

### *Publicity*

David Clark, Al Bedard, Gary Wilson

### *Registration*

Courtney Butler, Lucy Adams

### *Room Set-Up*

Jim Sites, Laura Ussery, Courtney Butler

### *Scholarships*

Davdi Holm (CSU), Lucy Adams (ASC),  
Judy Cara (Intel)

### *Scientific Review*

Elemer Bernath, Charles Johnson, Jody  
Oaks, Doug Steward, Lucy Adams, Steve  
Iona, Courtney Butler, Larry Jakel, Rachel  
Torgerson, Cecilia Walker

### *Special Awards*

Sam Bartlett, Paul Cheng, Beverly Meier

### *Student Activities*

Lucy Adams, David Holm

### *Tours*

### *Volunteer Coordination*

Courtney Butler

Appendix 1  
**48<sup>th</sup> Annual Colorado Science and Engineering Fair**

Lory Student Center

Fair Headquarters: 2<sup>nd</sup> Floor Lobby

Colorado State University

**Thursday, April 10, 2003**

**Finalist Schedule**

8:30 AM – 11:00 AM	Tour Ticket Sales	Room 224/226
8:30 AM – 11:30 AM	SRC Interviews – <i>Students requiring an interview, must comply <b>BEFORE</b> project may be set up.</i>	Room 203/205
9:00 AM – 11:00 AM	Finalist Check-In	Registration Booth
<i>Finalists MUST stay with their exhibit until Display &amp; Safety Check has been done and an Official Photo has been taken. Finalists must be out of the exhibit areas by noon.</i>		
1:45 PM – 2:00 PM	Finalist Orientation Meeting – <i>Mandatory for all exhibitors.</i>	CSU Theater
2:00 PM – 5:00 PM	Judging – <i>Students must be at their exhibits for interviews.</i>	Main Ballroom

**Adult Schedule**

2:00 PM – 5:00 PM	Regional Fair Director’s Meeting	Room 224/226
3:30 PM	Human Subjects Protocols Presentation	Room 224/226
4:00 PM	All ISEF Adult Delegates Meeting	Room 224/226

**Judging Schedule**

10:30 AM – 11:00 AM	Grand Awards Judge Captains’ Briefing	Cherokee Park Room
11:00 AM - 11:30 AM	Grand Awards Judges’ Briefing	Cherokee Park Room
11:30 AM - 12:30 PM	Grand Awards Judges’ Luncheon	North Ballroom
12:30 PM – 1:00 PM	Special Awards Judges’ Briefing	Room 228
12:00 PM – 5:00 PM	Judging	Main Ballroom
12:00 – 1:00 PM	<u>Grand Awards Judges only</u> in the exhibit rooms.	
1:00 – 2:00 PM	Special Judges may enter the exhibit areas. <u>Judges only</u> in the exhibit rooms.	
2:00 – 5:00 PM	<i>Students will be at their exhibits for interviews.</i>	
5:30 PM	Exhibit areas are locked. Final Judging continues.	

***No one else is permitted in the exhibit areas at this time.***

**Friday, April 11, 2003**

9:00 AM – 5:00 PM	CSEF Open to the Public Guest Speaker: Joe Golden	Main Ballroom
9:00 AM – 9:50 AM	<i>The Truth Behind the Movie Twister: Tornadoes – Past, Present, and Future</i>	CSU Theatre
10:00 AM – 3:00 PM	Tours: Students, their sponsors, and family, and judges are invited to participate in the tours by pre-registering on Thursday morning.	
2:00 PM	Student Choice and Poster Contest ballots are due.	Registration Booth
7:00 PM	Awards Ceremony	Thompson Valley HS

**Saturday, April 12, 2003**

9:00 AM – 11:00 AM	CSEF Open to the Public – <i>Finalist must be at their projects for interaction with the public.</i>	Main Ballroom
9:00 AM – 11:00 AM	Advisory Council Meeting – open to all	Room 224/226
11:00 AM – 12:00 PM	Pizza Party: Sponsored by <i>Domino’s</i> for finalists, their sponsors and families and judges.	North Ballroom
<b>Finalists must be present to win door prizes!</b>		
12:00 PM – 2:00 PM	Exhibit Dismantling	
<b>Everything must be out by 1:00 PM.</b>		
1:00 PM – 3:00 PM	Board of Director’s Meeting – open to all	Room 224/226

The upcoming Intel International Science and Engineering Fair will be in Cleveland, OH May 11 - 17, 2003.  
 Next year’s Colorado Science and Engineering Fair will be April 8-10, 2004.

Appendix 2  
**2003 Colorado Science and Engineering Fair**  
**Grand Awards Press Release**

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**Junior Division Best Individual Projects**

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<b>1st Place</b>		
Meredith MacGregor	8th grade	
<i>Dropping Into Chaos</i>		
Burbank Middle School	Boulder	
<b>2nd Place</b>		
Timothy Schneider	7th grade	
<i>Can You Hear Me?</i>		
Miller Middle School	Durango	
<b>3rd Place</b>		
Adreanne Brungardt	8th grade	
<i>A Possible Mechanism For Explaining The Lake Nyos Tragedy</i>		
Brush Middle School	Brush	

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**Senior Division Best Individual Projects**

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<b>1st Place</b>		
Jennifer McDonough	9th grade	
<i>Cruciferous Platyhelminthes</i>		
Palmer High School	Colorado Springs	
<b>2nd Place</b>		
Lauren Smith	10th grade	
<i>Xanthomonas campestris pv. Vesicatoria: A Study Of The Relationship Between Extra-Cellular Material &amp; Heightened Host Response</i>		
Rampart High School	Colorado Springs	
<b>3rd Place</b>		
Lisa Saccomano	11th grade	
<i>Abnormal Otic Invagination With Possible Associations To OAV Spectrum</i>		
Cherry Creek High School	Greenwood Village	

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**Junior Division Best Team Projects**

---

<b>1st Place</b>		
Andy Ralston	8th grade	
Josh King	8th grade	
<i>Bouncing Light</i>		
Bookcliff Middle School	Grand Junction	
<b>2nd Place</b>		
Brian Russell	7th grade	
Vincent Rouse	7th grade	
<i>Bac In The Dish</i>		
St. Mary's School	Littleton	
<b>3rd Place</b>		
Natalia Wilkins	8th grade	
Sarah Cornish	7th grade	
<i>Gravity vs. Velocity</i>		
Ricks Center for Gifted Students	Denver	

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**Senior Division Best Team Projects**

---

<b>1st Place</b>		
Andrew Leifer	12th grade	
Raymund To	12th grade	
David Pothier	12th grade	
<i>Fractals, Power-Laws, And The Weibull Distribution: Mathematically Modeling Crumpled Paper</i>		
Fairview High School	Boulder	
<b>2nd Place</b>		
Brad Engel	10th grade	
Brian Henning	10th grade	
<i>Ramifications Of Temperature Fluctuations And Thrombolytic Enzymes</i>		
Cherry Creek High School	Greenwood Village	
<b>3rd Place</b>		
Levi Klausner	12th grade	
Harold Klausner	9th grade	
<i>Wheat Variety Response To Drought</i>		
Woodlin School	Woodrow	

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**Junior Division Botany**

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<b>1st Place</b>		
Michaela Kaiser	8th grade	
<i>How Fast Is The Clock Ticking? Titer vs. Time</i>		
Sargent Junior High School	Monte Vista	
<b>2nd Place</b>		
Ashley Wilkinson	7th grade	
<i>Got Water?</i>		
Timberview Middle School	Colorado Springs	
<b>3rd Place</b>		
Jason Pope	6th grade	
<i>Hydroponics vs. Soil</i>		
Fort Lupton Middle School	Fort Lupton	
<b>Honorable Mention</b>		
Amber Widgery	7th grade	
<i>To Grow Or Not To Grow</i>		
Haxtun Middle School	Haxtun	
<b>Honorable Mention</b>		
Lydia Van Deraa	8th grade	
<i>Corn Emergence</i>		
Yuma Middle School	Yuma	
<b>Honorable Mention</b>		
Stephen Ben Majed	6th grade	
<i>Survival Of The Fittest</i>		
Fort Lupton Middle School	Fort Lupton	

## Appendix 2

<b>Senior Division Botany</b>	
<b>1st Place</b>	
Lauren Smith	10th grade
<i>Xanthomonas campestris</i> pv. <i>Vesicatoria</i> : A Study Of The Relationship Between Extra-Cellular Material & Heightened Host Response	
Rampart High School	Colorado Springs
<b>2nd Place</b>	
Tom Herter	10th grade
<i>Hylemya</i> sp.'s Effects On Fitness Of <i>Polemonium foliosissimum</i>	
Meeker High School	Meeker
<b>3rd Place</b>	
Heather Messick	11th grade
<i>The Effects Of Seed Treatments In Tubercization Of Potatoes</i>	
Sargent High School	Monte Vista
<b>Team Award Nomination</b>	
Levi Klausner	12th grade
Harold Klausner	9th grade
<i>Wheat Variety Response To Drought</i>	
Woodlin School	Woodrow
<b>Honorable Mention</b>	
Linell Griffin	10th grade
<i>Dead Or Dormant? The Effects Of Herbicides On <i>Convolvulus arvensis</i></i>	
Walsh Jr/Sr High School	Walsh

<b>Junior Division Chemistry</b>	
<b>1st Place</b>	
Justin Garoutte	7th grade
<i>The Milky Way</i>	
Centauri Middle School	La Jara
<b>2nd Place</b>	
KJ Ward	8th grade
<i>Does Your Drink Have The Kick Of Carbonation?</i>	
Genoa-Hugo School	Hugo
<b>3rd Place</b>	
Lauren Butero	8th grade
<i>Up In Smoke - Flammability Testing Children's</i>	
Bayfield Middle School	Bayfield
<b>Honorable Mention</b>	
Leah Flink	8th grade
<i>What Color Was The Black Ink?</i>	
Turner Middle School	Berthoud

<b>Senior Division Chemistry</b>	
<b>1st Place</b>	
Tyler Keck	9th grade
<i>The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water</i>	
Monte Vista High School	Monte Vista
<b>2nd Place</b>	
Adam Brungardt	12th grade
<i>Effect Of Varying Electrical Potential On Liesegang Rings Growth</i>	
Brush High School	Brush
<b>3rd Place</b>	
Autumn Petros-Good	10th grade
<i>Colored Chemical Chaos: The Absorption Of Light Wavelengths</i>	
Palmer High School	Colorado Springs
<b>Honorable Mention</b>	
Emily Gu	11th grade
<i>The Effects Of Synthetic Surfactants On Surface Motility Of <i>Bacillus subtilis</i></i>	
Fairview High School	Boulder

<b>Junior Division Earth &amp; Space Sciences</b>	
<b>1st Place</b>	
Adreanne Brungardt	8th grade
<i>A Possible Mechanism For Explaining The Lake Nyos Tragedy</i>	
Brush Middle School	Brush
<b>2nd Place</b>	
Jeffrey Hrcir	8th grade
<i>Reconstructing The Paleoclimate Of The Green River Formation</i>	
East Middle School	Grand Junction
<b>3rd Place</b>	
Dailey Kluck	6th grade
<i>Wind Blocks</i>	
Centennial Middle School	Boulder
<b>Honorable Mention</b>	
Carmen Winn	8th grade
<i>The Orientation Of Spiral Galaxies</i>	
Redlands Middle School	Grand Junction

## Appendix 2

<b>Senior Division Earth &amp; Space Sciences</b>		
<b>1st Place</b>		
Graham Anderson	9th grade	
<i>What A Scorching State! Is Urban Growth Worsening Drought In Colorado?</i>		
Palmer High School	Colorado Springs	
<b>2nd Place</b>		
Tyler Benton	10th grade	
<i>Determining Ice Core Storage Efficacy Using Oxygen Isotope Comparisons</i>		
Stratton High School	Stratton	
<b>3rd Place</b>		
Danielle Nuding	10th grade	
<i>Lightning . . . Is It The Answer?</i>		
Liberty High School	Joes	
<b>Honorable Mention</b>		
Janel Brown	10th grade	
<i>Observing The Asteroid 808 Merxia</i>		
Cherry Creek High School	Greenwood Village	

<b>Senior Division Engineering</b>		
<b>1st Place</b>		
Robert Ussery	11th grade	
<i>Sailplane Winch Launch Telemetry And Data-Logging</i>		
Ussery Home School	Fort Collins	
<b>2nd Place</b>		
Craig Wright	11th grade	
<i>Designing An Innovative Micropump</i>		
Woodlin School	Woodrow	
<b>3rd Place</b>		
Adam Sidman	9th grade	
<i>Spinning Wind Energy In A New Direction: The Darrieus Vertical Axis Wind Turbine</i>		
Palmer High School	Colorado Springs	
<b>Honorable Mention</b>		
Jeff Marlow	12th grade	
<i>The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films</i>		
Cherry Creek High School	Greenwood Village	

<b>Junior Division Engineering</b>		
<b>1st Place</b>		
Timothy Schneider	7th grade	
<i>Can You Hear Me?</i>		
Miller Middle School	Durango	
<b>2nd Place</b>		
Zachary Zillmann	8th grade	
<i>Wireless Moisture Detector For G-Tube Feedings</i>		
Jefferson Academy Junior High School	Broomfield	
<b>3rd Place</b>		
Molly May	7th grade	
<i>Magnets And Maglev</i>		
St. Columba School	Durango	
<b>Team Award Nomination</b>		
Andy Ralston	8th grade	
Josh King	8th grade	
<i>Bouncing Light</i>		
Bookcliff Middle School	Grand Junction	
<b>Team Award Nomination</b>		
Kendall Murphy	6th grade	
Joaquin Milburn	6th grade	
Alex Zemach	6th grade	
<i>Helping the Hearing Impaired</i>		
Miller Middle School	Durango	
<b>Honorable Mention</b>		
Kevin Gao	8th grade	
<i>Ion Propulsion Engine: To Space And Beyond</i>		
Burbank Middle School	Boulder	
<b>Honorable Mention</b>		
Aaron Sommer	8th grade	
<i>Lights, Projector, Action!</i>		
Rocky Mountain Hebrew Academy	Denver	
<b>Honorable Mention</b>		
Kristine Thompson	6th grade	
<i>A Water Powered Gameboy</i>		
West Jefferson Middle School	Conifer	

<b>Junior Division Environmental Sciences</b>		
<b>1st Place</b>		
Cacia Steensen	8th grade	
<i>Forest Fire Fuels</i>		
West Jefferson Middle School	Conifer	
<b>2nd Place</b>		
Katie Luff	8th grade	
<i>The Rehabilitation Of Burned Areas</i>		
North Middle School	Colorado Springs	
<b>3rd Place</b>		
John Heermann	8th grade	
<i>Oil Pollution Solution II</i>		
Haxtun Middle School	Haxtun	
<b>Honorable Mention</b>		
Cody Caver	7th grade	
<i>Lights Out: Exploring The Electrical Conductivity Of MgCL<sub>2</sub></i>		
Woodlin School	Woodrow	
<b>Honorable Mention</b>		
Lauren Doty	7th grade	
<i>Cooking: A Matter Of Life Or Death</i>		
St. Mary's School	Littleton	

## Appendix 2

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### Senior Division Environmental Sciences

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<b>1st Place</b>		
Jessica Caver	12th grade	
<i>Designing And Testing Solids To Remove Arsenic</i>		
Woodlin School	Woodrow	
<b>2nd Place</b>		
Katherine Hermann	10th grade	
<i>The Development Of An Analytical Method By Which To Measure 1, 3, 7 - Trimethyl-xanthine In Water Samples</i>		
Boulder High School	Boulder	
<b>3rd Place</b>		
Laurie Cornell	12th grade	
<i>Pass The Salt: The Ecological Impacts Of Magnesium Chloride De-Icer On Roadside Vegetables In The Netherland Region</i>		
Nederland Middle/Senior High School	Nederland	
<b>Honorable Mention</b>		
Kendra Kailey	12th grade	
<i>Watch The Burn: Promoting Fire Resistance In Grass Landscapes</i>		
Merino Jr/Sr High School	Merino	

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### Junior Division Health & Behavioral Sciences

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<b>1st Place</b>		
Yael Munishor	7th grade	
<i>Got Milk?</i>		
Rocky Mountain Hebrew Academy	Denver	
<b>2nd Place</b>		
Richelle Fritzler	7th grade	
<i>Got Milk? Got Hormones? A Study Done With Bovine Somatotropin And Grout</i>		
Merino Jr/Sr High School	Merino	
<b>3rd Place</b>		
Taylor Thompson	7th grade	
<i>The Effect Of Ephedra On Hissing Cockroaches</i>		
Merino Jr/Sr High School	Merino	
<b>Team Award Nomination</b>		
Rebecca Siegel	6th grade	
Zoe Dostal	6th grade	
<i>Memorize To The Beat</i>		
West Middle School	Colorado Springs	
<b>Honorable Mention</b>		
Shana Keilson	7th grade	
<i>Calcium - Do You Get Enough? Perception vs. Reality</i>		
Boulder Country Day School	Boulder	
<b>Honorable Mention</b>		
Julia Nell	6th grade	
<i>Driving Reaction Times</i>		
Pagosa Springs Intermediate School	Pagosa Springs	
<b>Honorable Mention</b>		
Emily Rotbart	7th grade	
<i>It's All Chinese To Me! The Effect Of Women's And Girl's Ages On Learning And Retention</i>		
Rocky Mountain Hebrew Academy	Denver	

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### Senior Division Health & Behavioral Sciences

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<b>1st Place</b>		
Lisa Saccomano	11th grade	
<i>Abnormal Otic Invagination With Possible Associations To OAV Spectrum</i>		
Cherry Creek High School	Greenwood Village	
<b>2nd Place</b>		
Kelly Cook	9th grade	
<i>Is What You See, What You Get? Brain Perception &amp; The Physics Of Light</i>		
Boltz Junior High School	Fort Collins	
<b>3rd Place</b>		
Diane Gumina	11th grade	
<i>A Possible Breast Cancer Treatment: Interferon Alpha Combined With Indole-3-Carbinol</i>		
Merino Jr/Sr High School	Merino	
<b>Team Award Nomination</b>		
Brad Engel	10th grade	
Brian Henning	10th grade	
<i>Ramifications Of Temperature Fluctuations And Thrombolytic Enzymes</i>		
Cherry Creek High School	Greenwood Village	
<b>Honorable Mention</b>		
Andrea Buxton	9th grade	
<i>The Abrasive Question: Amalgam vs. Composites</i>		
McClave High School	McClave	
<b>Honorable Mention</b>		
Amber Henry	11th grade	
<i>Biometric Identification: An Analysis Of Lannarelli's System Of Ear Identification</i>		
Hi-Plains High School	Seibert	

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### Junior Division Mathematics & Computer Sciences

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<b>1st Place</b>		
Chelsea Oden	7th grade	
<i>Pursuing Patterns In Primes</i>		
Monte Vista Middle School	Monte Vista	
<b>2nd Place</b>		
Matt Zubiell	7th grade	
<i>Visual Password System</i>		
Creekside Middle School	Monument	
<b>3rd Place</b>		
Caitlin Pomeroy	7th grade	
<i>Diggin' Trig: Sun Light, Sun Bright, Can I Measure The Sun Before Night?</i>		
Merino Jr/Sr High School	Merino	
<b>Honorable Mention</b>		
Ian Springer	8th grade	
<i>Robotic Rescue - Designing And Building A Light Sensing Robot For Search And Rescue Of Disaster</i>		
Lamar Middle School	Lamar	



## Appendix 2

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### Senior Division Mathematics & Computer Sciences

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#### 1st Place

Brian Camley 12th grade  
*The Telltale Heart Of Darkness: Differentiating Between Authors - Beyond Naïve Bayesian Classification*  
 Palmer High School Colorado Springs

#### 2nd Place

Brad Klingenberg 12th grade  
*Tinder Box: An Exploration In Geopolitical Modeling, Abstraction, And Statistical Inference*  
 Greeley Central High School Greeley

#### 3rd Place

Gabriel Recchia 12th grade  
*Creating Application-Independent Accessibility Software For The Mobility Impaired*  
 Berthoud High School Berthoud

#### Team Award Nomination

Andrew Leifer 12th grade  
 Raymund To 12th grade  
 David Pothier 12th grade  
*Fractals, Power-Laws, And The Weibull Distribution: Mathematically Modeling Crumpled Paper*  
 Fairview High School Boulder

#### Honorable Mention

Nathan McNew 9th grade  
*An Analysis Of Complexity Measures For Computer Generated Mazes*  
 Jefferson Academy High School Broomfield

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### Junior Division Microbiology

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#### 1st Place

Anita Lowe 8th grade  
*The Effects Of Pulsed DC Electricity On Pond Water Bacteria*  
 Turner Middle School Berthoud

#### 2nd Place

Mikaila Way 7th grade  
*An Apple A Day Keeps The Dentist Away?*  
 West Jefferson Middle School Conifer

#### 3rd Place

Michael Dango 8th grade  
*Augmenting Bioremediation*  
 Challenger Middle School Colorado Springs

#### Team Award Nomination

Brian Russell 7th grade  
 Vincent Rouse 7th grade  
*Bac In The Dish*  
 St. Mary's School Littleton

#### Honorable Mention

Alex Schnaderbeck 7th grade  
*Density Of Bacteria On Public Surfaces II*  
 Sargent Junior High School Monte Vista

#### Honorable Mention

Martha Carol 6th grade  
*The Safe Kitchen: Sponge vs. Paper Towel*  
 Summit Middle School Boulder

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### Senior Division Microbiology

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#### 1st Place

Kayla Zimmerman 11th grade  
*The Effect Of Three Types Of Mulches On Soil Dwelling Bacteria In A Peach Orchard In Western Colorado*  
 Hotchkiss High School Hotchkiss

#### 2nd Place

Jessica Stroud 9th grade  
*Along Came A Spider*  
 Palmer High School Colorado Springs

#### 3rd Place

Heather McGuire 10th grade  
*Selenium Utilization As Protection From Oxidative Stress Induced By Ultraviolet Radiation*  
 Woodlin School Woodrow

#### Honorable Mention

Sasha Montgomery 9th grade  
 Alicia Eggen 9th grade  
*Mold: Covert Killer*  
 Rifle High School Rifle

#### Honorable Mention

Holly McGuire 12th grade  
*Phospholipid Uptake And Production In Toxoplasma*  
 Woodlin School Woodrow

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### Junior Division Physics

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#### 1st Place

Meredith MacGregor 8th grade  
*Dropping Into Chaos*  
 Burbank Middle School Boulder

#### 2nd Place

Jake Harman 6th grade  
*Predicting Viscosity Using Rotational Velocity*  
 Centennial Middle School Boulder

#### 3rd Place

Dominic Fuller-Rowell 6th grade  
*Sound Is Supersonic*  
 Summit Middle School Boulder

#### Team Award Nomination

Natalia Wilkins 8th grade  
 Sarah Cornish 7th grade  
*Gravity vs. Velocity*  
 Ricks Center for Gifted Students Denver

#### Honorable Mention

Lenny Benton 8th grade  
*Mousetrap Dragster*  
 Benton Home School Saguache

#### Honorable Mention

Diana Qiu 8th grade  
*Lorentz Force*  
 North Middle School Colorado Springs

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**Senior Division Physics**


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**1st Place**

Leota McDaniel 12th grade  
*An Investigation Into The Leidenfrost Phenomenon*  
 Brush High School Brush

**2nd Place**

William Eucker 11th grade  
*Field Emission Capability vs. Diameter Of Vertically  
 Aligned MWNTs*  
 George Washington High School Denver

**3rd Place**

Colin Olivier 9th grade  
*Landslide Generated Mega-Tsunami*  
 Palmer High School Colorado Springs

**Honorable Mention**

Scott Headrick 10th grade  
*Slow Down*  
 Gilpin County School Black Hawk

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**Junior Division Zoology**


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**1st Place**

Holli Linman 8th grade  
*Flying Jewels*  
 Crawford School Crawford

**2nd Place**

Clare O'Connor-Seville 6th grade  
*Ips Beetles*  
 Dolores Middle School Dolores

**3rd Place**

Lisa Han 6th grade  
*Comparison Of Life Spans Of The Free Living Nematode C.  
 elegans From Three Geographical*  
 Summit Middle School Boulder

**Honorable Mention**

Justin Boren 7th grade  
*Dead Or Alive*  
 St. Columba School Durango

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**Senior Division Zoology**


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**1st Place**

Jennifer McDonough 9th grade  
*Cruciferous Platyhelminthes*  
 Palmer High School Colorado Springs

**2nd Place**

Courtney Eichengreen 10th grade  
*Bioenergetics And Echinacea*  
 Palmer High School Colorado Springs

**3rd Place**

Mackenzie Peake 12th grade  
*Parkinson's Medication Dilemma: Folate Supplementation  
 To Reduce L-dopa's Risk*  
 Merino Jr/Sr High School Merino

**Honorable Mention**

Phillip Torres 11th grade  
*The Best Wing Angle For Absorbing Heat From Light In  
 Nymphalis antiopa*  
 Cherry Creek High School Greenwood Village

Appendix 2  
**2003 Colorado Science and Engineering Fair**  
**Special Awards Press Release**

**Military**

**United States Air Force**

*United States Air Force Award*

Daniel Armstrong 8th grade  
 certificate, planner  
 Monte Vista Middle School Monte Vista  
*Medieval Physics*

Jennifer McDonough 9th grade  
 certificate, planner  
 Palmer High School Colorado Springs  
*Cruciferous Platyhelminthes*

Nolan Cmerek 12th grade  
 certificate, planner  
 Hotchkiss High School Hotchkiss  
*Effects Of Specific Design Modifications On The  
 Capabilities Of Airfoils - Phase II*

**United States Air Force Research Laboratory**

*The Century of Flight Award*

Timothy Schneider 7th grade  
 Miller Middle School Durango  
*Can You Hear Me?*

Craig Wright 11th grade  
 Woodlin School Woodrow  
*Designing An Innovative Micropump*

**United States Army**

*United States Army Award*

Matt Zubieli 7th grade  
 certificate, \$50 savings bond  
 Creekside Middle School Monument  
*Visual Password System*

Jessica Sidman 11th grade  
 certificate, \$50 savings bond  
 Palmer High School Colorado Springs  
*The Filtering Effects Of Anodonta grandis*

Amy Davies 11th grade  
 certificate, \$50 savings bond  
 Brush High School Brush  
*Shakin' It Up: A Study On Sedimentation*

Emma McArdle 12th grade  
 Monte Vista High School Monte Vista  
*Is Your Plastic Board?*

Mackenzie Peake 12th grade  
 certificate, \$100 savings bond, bronze medallion  
 Merino Jr/Sr High School Merino  
*Parkinson's Medication Dilemma: Folate Supplementation To  
 Reduce L-dopa's Risk*

**United States Navy, United States Marine Corps**

*US Navy & US Marine Corps Award*

Chelsea Oden 7th grade  
 certificate  
 Monte Vista Middle School Monte Vista  
*Pursuing Patterns In Primes*

Brian Camley 12th grade  
 certificate, educational recognition award valued at over \$50.00  
 to be used for educational purposes including supplies for a fu-  
 ture science project  
 Palmer High School Colorado Springs  
*The Telltale Heart Of Darkness: Differentiating Between  
 Authors - Beyond Naïve Bayesian Classification*

William Eucker 11th grade  
 certificate, educational recognition award valued at over \$50.00  
 to be used for educational purposes including supplies for a fu-  
 ture science project  
 George Washington High School Denver  
*Field Emission Capability vs. Diameter Of Vertically Aligned  
 MWNTs*

Leyton Laybourn 11th grade  
 certificate, educational recognition award valued at over \$50.00  
 to be used for educational purposes including supplies for a fu-  
 ture science project  
 Arickaree School Anton  
*Designing A Constant Temperature Reduced Pressure Drying  
 System*

Sarah Owens 7th grade  
 certificate  
 Merino Jr/Sr High School Merino  
*The Cutting Edge: The Union of Staphylococcus And  
 Lactobacillus In Limiting Surgical Infection*

**Organizational**

**American Association of University Women**

*Association of University Women Award*

Molly May 7th grade  
 \$100  
 St. Columba School Durango  
*Magnets And Maglev*

**American Chemical Society, Colorado Section**

*American Chemical Society Award*

Lauren Butero 8th grade  
 certificate, cash award  
 Bayfield Middle School Bayfield  
*Up In Smoke - Flammability Testing Children's Sleepwear*

## Appendix 2

Tyler Keck  
certificate, cash award  
Monte Vista High School  
*The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water*

9th grade

Monte Vista

### American Institute of Chemical Engineers Rocky Mountain Section

#### American Institute of Chemical Engineers Award

John Heermann  
\$75  
Haxtun Middle School  
*Oil Pollution Solution II*

8th grade

Haxtun

Jessica Caver  
\$100  
Woodlin School  
*Designing And Testing Solids To Remove Arsenic*

12th grade

Woodrow

### American Meteorological Society Denver/Boulder Chapter

#### American Meteorological Society Award

Danielle Nuding  
certificate, prize worth \$50  
Liberty High School  
*Lightning . . . Is It The Answer?*

10th grade

Joes

Allyson Claybaugh  
certificate, prize worth \$50  
West Jefferson Middle School  
*Tornadoes: The Fearful Weather Of Extreme Destruction To Nature*

6th grade

Conifer

### American Vacuum Society Rocky Mountain Chapter

#### American Vacuum Society Award

Jeff Marlow  
\$50, \$50 for winner's school  
Cherry Creek High School  
*The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*

12th grade

Greenwood Village

Kevin Gao  
\$50, \$50 for winner's school  
Burbank Middle School  
*Ion Propulsion Engine: To Space And Beyond*

8th grade

Boulder

Jessica Caver  
\$100, \$100 for winner's school  
Woodlin School  
*Designing And Testing Solids To Remove Arsenic*

12th grade

Woodrow

Jake Harman  
\$100, \$100 for winner's school  
Centennial Middle School  
*Predicting Viscosity Using Rotational Velocity*

6th grade

Boulder

### American Water Works Association Rocky Mountain Chapter

#### American Water Works Association Award

Balaji Sridhar  
plaque, \$100  
Cherry Creek High School  
*Removal Of Arsenic Residues From Drinking Water Treatment*

10th grade

Greenwood Village

Tyler Keck  
plaque, \$75  
Monte Vista High School  
*The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water*

9th grade

Monte Vista

Rachel Doyle  
plaque, \$50  
Monte Vista High School  
*The Effect Of Yearly Precipitation On Water Quality In The Rio Grande River Of Colorado*

11th grade

Monte Vista

### Analex Corporation Analex Corporation Award

Gabriel Recchia  
certificate, \$100  
Berthoud High School  
*Creating Application-Independent Accessibility Software For The Mobility Impaired*

12th grade

Berthoud

Brad Klingenberg  
certificate, \$100  
Greeley Central High School  
*Tinder Box: An Exploration In Geopolitical Modeling, Abstraction, And Statistical Inference*

12th grade

Greeley

### ASM International, Rocky Mountain Chapter ASM International Award

Jeff Marlow  
\$75  
Cherry Creek High School  
*The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*

12th grade

Greenwood Village

Emily Jones  
\$50  
Windsor Charter Academy  
*The Tensile Strength Of Guitar Strings*

6th grade

Windsor

## Appendix 2

### **Association for Women Geoscientists Denver Chapter**

#### *Association for Women Geoscientists Award*

Jade Brooks 11th grade  
\$50, rock sample  
Sierra Grande School Fort Garland/Blanca  
*Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed*

Elizabeth Garcia 6th grade  
\$50, rock sample  
Sargent Elementary School Monte Vista  
*Rock-n-Roll*

### **Association of Engineering Geologists Rocky Mountain Section**

#### *Association of Engineering Geologists Award*

Joelle Dozoretz 7th grade  
AEG folder w/calculator, invitation to present at the AEG Annual Meeting this September in Vail, CO  
Rocky Mountain Hebrew Academy Denver  
*Shake 'n' Break*

Jade Brooks 11th grade  
AEG folder w/calculator, invitation to present at the AEG Annual Meeting this September in Vail, CO  
Sierra Grande School Fort Garland/Blanca  
*Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed*

### **Colorado Association of Science Teachers**

#### *Colorado Association of Science Teachers Award*

Forrest Friesen 8th grade  
\$50, certificate  
North Middle School Colorado Springs  
*Magnetically Levitated vs. Conventional Vehicles: The Effects Of Friction On Velocity And Acceleration*

Brian Camley 12th grade  
\$50, certificate  
Palmer High School Colorado Springs  
*The Telltale Heart Of Darkness: Differentiating Between Authors - Beyond Naïve Bayesian Classification*

Janice Bowers 12th grade  
\$50, certificate  
Woodlin School Woodrow  
*Using Blood Spattering As A Forensic Analysis*

Taylor Thompson 7th grade  
\$50, certificate  
Merino Jr/Sr High School Merino  
*The Effect Of Ephedra On Hissing Cockroaches*

### **Colorado Biology Teachers Association**

#### *Colorado Biology Teachers Association Award*

Levi Klausner 12th grade  
Harold Klausner 9th grade  
\$50, plaque  
Woodlin School Woodrow  
*Wheat Variety Response To Drought*

Amber Ladd 7th grade  
\$50, plaque  
Merino Jr/Sr High School Merino  
*It's Time To Change: A Comparison Of Growth And Leaching Of Rotated And Non-Rotated Soils*

### **Colorado Dental Association**

#### *Colorado Dental Association Award*

Abi McGaha Miller 8th grade  
certificate, quasar pen  
Boltz Junior High School Fort Collins  
*The Effects Of Whitening Agents On Teeth*

Andrea Buxton 9th grade  
\$50, plaque  
McClave High School McClave  
*The Abrasive Question: Amalgam vs. Composites*

Mikaila Way 7th grade  
\$25, plaque  
West Jefferson Middle School Conifer  
*An Apple A Day Keeps The Dentist Away?*

### **Colorado Division of Wildlife**

#### *Colorado Division of Wildlife Award*

Maggie Reinsvold 9th grade  
packet of Colorado Wildlife products, free admission to a Wildlife Watch Workshop  
Frontier Academy Greeley  
*The Effect Of Magnesium Chloride On Aquatic Life*

### **Colorado Environmental Health Association**

#### *Colorado Environmental Health Association Award*

Jessica Sidman 11th grade  
\$100, plaque  
Palmer High School Colorado Springs  
*The Filtering Effects Of Anodonta grandis*

### **Colorado Foundation for Agriculture**

#### *Agriculture in the Classroom Award*

Justin Boren 7th grade  
certificate, \$50  
St. Columba School Durango  
*Dead Or Alive*

## Appendix 2

Heather Messick 11th grade  
certificate, \$50  
Sargent High School Monte Vista  
*The Effects Of Seed Treatments In Tuberization Of Potatoes*

Adrienne Blum 8th grade  
certificate, \$50  
Rocky Mountain Hebrew Academy Denver  
*Saltgreens*

Kayla Zimmerman 11th grade  
certificate, \$50  
Hotchkiss High School Hotchkiss  
*The Effect Of Three Types Of Mulches On Soil Dwelling  
Bacteria In A Peach Orchard In Western Colorado*

### **Colorado Geological Survey** *The Best Junior Earth Science Award*

Jeffrey Hrcir 8th grade  
\$75  
East Middle School Grand Junction  
*Reconstructing The Paleoclimate Of The Green River  
Formation*

### *The Best Senior Earth Science Award*

Jade Brooks 11th grade  
\$75  
Sierra Grande School Fort Garland/Blanca  
*Hydrophobicity: How Hydrophobic Soils Affect Runoff Within  
A Watershed*

### **Colorado Medical Society Education Foundation** *Colorado Medical Society Award*

Jaimie Jennings 6th grade  
\$100, invitation to exhibit at the Annual meeting and attendance  
at Presidential Inaugural Dinner  
North Middle School Colorado Springs  
*Just Wash Your Hands!*

Diane Gumina 11th grade  
\$100, invitation to exhibit at the Annual meeting and attendance  
at Presidential Inaugural Dinner  
Merino Jr/Sr High School Merino  
*A Possible Breast Cancer Treatment: Interferon Alpha  
Combined With Indole-3-Carbinol*

### **Colorado Mineral Society** *Colorado Mineral Society Award*

Tyler Keck 9th grade  
\$40, 2 mineral specimens, certificate, book  
Monte Vista High School Monte Vista  
*The Super Absorber: Using Sodium Polyacrylate To Absorb  
Metals In Water*

Elizabeth Garcia 6th grade  
\$40, 2 mineral specimens, certificate, book  
Sargent Elementary School Monte Vista  
*Rock-n-Roll*

Tyler Benton 10th grade  
\$25, 2 mineral specimens, certificate, book  
Stratton High School Stratton  
*Determining Ice Core Storage Efficacy Using Oxygen Isotope  
Comparisons*

Jeffrey Hrcir 8th grade  
\$25, 2 mineral specimens, certificate, book  
East Middle School Grand Junction  
*Reconstructing The Paleoclimate Of The Green River  
Formation*

### **Colorado Mycological Society** *Colorado Mycological Society Award*

Michael Dango 8th grade  
\$25, book on fungi, certificate  
Challenger Middle School Colorado Springs  
*Augmenting Bioremediation*

### **Colorado Science and Engineering Fair** *Teacher of the Year Award*

Gary Wilkinson  
certificate, \$1,000 to use towards science fair research in the  
classroom, nomination for the 2004 Intel Teacher of the Year  
award  
Monte Vista High School Monte Vista

### *Ralph Desch Memorial Technical Writing Award*

Jeff Marlow 12th grade  
\$100, certificate  
Cherry Creek High School Greenwood Village  
*The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin  
Films*

### *Poster Art Contest*

Morgan Edwards  
certificate, \$100  
High Country Christian Academy Colorado Springs

### *Student Choice Award*

Kelly Cook 9th grade  
\$25, trophy  
Boltz Junior High School Fort Collins  
*Is What You See, What You Get? Brain Perception & The  
Physics Of Light*

Ian Springer 8th grade  
\$25, trophy  
Lamar Middle School Lamar  
*Robotic Rescue - Designing And Building A Light Sensing  
Robot For Search And Rescue Of Disaster Victims*

## Appendix 2

### **Colorado Scientific Society** *Colorado Scientific Society Award*

Adreanne Brungardt \$50 Brush Middle School <i>A Possible Mechanism For Explaining The Lake Nyos Tragedy</i>	8th grade Brush
Tyler Benton \$100 Stratton High School <i>Determining Ice Core Storage Efficacy Using Oxygen Isotope Comparisons</i>	10th grade Stratton
Jeffrey Hrnecir \$75 East Middle School <i>Reconstructing The Paleoclimate Of The Green River Formation</i>	8th grade Grand Junction
Adam Maerz \$75 Monarch High School <i>Avalanche Prediction Using High Frequency Radar</i>	12th grade Louisville

### **Colorado Sustainability Project** *Colorado Sustainability Project Award*

Michael Dango \$100, certificate, information on sustainability Challenger Middle School <i>Augmenting Bioremediation</i>	8th grade Colorado Springs
Leyton Laybourn \$100, certificate, information on sustainability Arickaree School <i>Designing A Constant Temperature Reduced Pressure Drying System</i>	11th grade Anton
Adam Sidman \$50, certificate, information on sustainability Palmer High School <i>Spinning Wind Energy In A New Direction: The Darrieus Vertical Axis Wind Turbine</i>	9th grade Colorado Springs
John Heermann \$50, certificate, information on sustainability Haxtun Middle School <i>Oil Pollution Solution II</i>	8th grade Haxtun

### **Colorado Veterinary Medical Association** *Colorado Veterinary Medical Association Award*

Kelly Haller certificate, gold medallion, \$50 Woodlin School <i>The Effects Of N-3 Fatty Acids On Inflammatory Mediators In Arthritic Patients</i>	12th grade Woodrow
Richelle Fritzler certificate, gold medallion, \$50 Merino Jr/Sr High School <i>Got Milk? Got Hormones? A Study Done With Bovine Somatotropin And Grout</i>	7th grade Merino

### **CSU, Dept of Biochemistry & Molecular Biology** *Dept of Biochemistry & Molecular Biology Award*

Lisa Saccomano certificate, \$100 Cherry Creek High School <i>Abnormal Otic Invagination With Possible Associations To OAV Spectrum</i>	11th grade Greenwood Village
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### **CSU, Department of Chemistry** *CSU Department of Chemistry Award*

Leah Flink certificate, cash award Turner Middle School <i>What Color Was The Black Ink?</i>	8th grade Berthoud
Autumn Petros-Good certificate, cash award Palmer High School <i>Colored Chemical Chaos: The Absorption Of Light Wavelengths</i>	10th grade Colorado Springs

### **CSU** **Dept of Horticulture & Landscape Architecture** *Dept of Horticulture & Landscape Architecture Award*

Tom Herter \$100 Meeker High School <i>Hylemya sp.'s Effects On Fitness Of Polemonium foliosissimum</i>	10th grade Meeker
Michaela Kaiser \$100 Sargent Junior High School <i>How Fast Is The Clock Ticking? Titer vs. Time</i>	8th grade Monte Vista
Lauren Smith \$100 Rampart High School <i>Xanthomonas campestris pv. Vesicatoria</i>	10th grade Colorado Springs

### **Fort Collins Soil Conservation District** *Fort Collins Soil Conservation District Award*

Jason Pope \$50, plaque Fort Lupton Middle School <i>Hydroponics vs. Soil</i>	6th grade Fort Lupton
Heather Messick \$50, plaque Sargent High School <i>The Effects Of Seed Treatments In Tuberization Of Potatoes</i>	11th grade Monte Vista

### **Intel Corporation** *Intel Corporation Award*

Timothy Schneider laptop computer Miller Middle School <i>Can You Hear Me?</i>	7th grade Durango
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## Appendix 2

Jennifer McDonough 9th grade  
laptop computer  
Palmer High School Colorado Springs  
*Cruciferous Platyhelminthes*

### **Kodak Colorado Division** *Kodak Colorado Division Award*

Danielle Nuding 10th grade  
APS camera  
Liberty High School Joes  
*Lightning . . . Is It The Answer?*

Lauren Butero 8th grade  
APS camera  
Bayfield Middle School Bayfield  
*Up In Smoke - Flammability Testing Children's Sleepwear*

### **Lockheed Martin Astronautics** *Lockheed Martin Astronautics Award*

Nolan Cmerek 12th grade  
Atlas V rocket model  
Hotchkiss High School Hotchkiss  
*Effects Of Specific Design Modifications On The Capabilities Of Airfoils - Phase II*

### **National Geophysical Data Center** *National Geophysical Data Center Award*

Dailey Kluck 6th grade  
certificate, plaque, \$100 savings bond  
Centennial Middle School Boulder  
*Wind Blocks*

### **National Renewable Energy Laboratory** *National Renewable Energy Laboratory Award*

Dylan McKie 7th grade  
\$100  
Yuma Middle School Yuma  
*Fossil Fuels: Who Needs Them?*

### **Optical Society of America Rocky Mountain Section** *Optical Society of America Award*

Lisa Campbell 6th grade  
subscription to Discover magazine, certificate  
Centennial Middle School Boulder  
*As Far As The Eye Can See: Experiments With Solar Beads*

Kelly Cook 9th grade  
subscription to Discover magazine, certificate  
Boltz Junior High School Fort Collins  
*Is What You See, What You Get? Brain Perception & The Physics Of Light*

### **Rocky Mountain Association of Geologists** *Rocky Mountain Association of Geologists Award*

Jeffrey Hrcir 8th grade  
certificate, cash award (mailed later)  
East Middle School Grand Junction  
*Reconstructing The Paleoclimate Of The Green River Formation*

Elizabeth Garcia 6th grade  
certificate, cash award (mailed later)  
Sargent Elementary School Monte Vista  
*Rock-n-Roll*

Tyler Benton 10th grade  
certificate, cash award (mailed later)  
Stratton High School Stratton  
*Determining Ice Core Storage Efficacy Using Oxygen Isotope Comparisons*

### **Rocky Mountain Inventors and Entrepreneurs Congress** *Educational Applications Award*

Gabriel Recchia 12th grade  
Berthoud High School Berthoud  
*Creating Application-Independent Accessibility Software For The Mobility Impaired*

#### *Best Junior Exhibit Award*

Sarah Owens 7th grade  
\$50  
Merino Jr/Sr High School Merino  
*The Cutting Edge: The Union of Staphylococcus And Lactobacillus In Limiting Surgical Infection*

#### *Excellent Senior Exhibit Award*

Lauren Smith 10th grade  
\$50  
Rampart High School Colorado Springs  
*Xanthomonas campestris pv. Vesicatoria: A Study Of The Relationship Between Extra-Cellular Material & Heightened Host Response*

#### *Excellent Senior Exhibit Award*

Robert Ussery 11th grade  
\$50  
Ussery Home School Fort Collins  
*Sailplane Winch Launch Telemetry And Data-Logging*

#### *Outstanding Innovation Award*

Zachary Zillmann 8th grade  
Jefferson Academy Junior High School Broomfield  
*Wireless Moisture Detector For G-Tube Feedings*



## Appendix 2

**Rocky Mountain Water Environment Association**  
*Rocky Mountain Water Environment Association Award*

Katherine Hermann	10th grade
savings bond (mailed later)	
Boulder High School	Boulder
<i>The Development Of An Analytical Method By Which To Measure 1, 3, 7 - Trimethyl-xanthine In Water Samples</i>	
Jessica Sidman	11th grade
savings bond (mailed later)	
Palmer High School	Colorado Springs
<i>The Filtering Effects Of Anodonta grandis</i>	
Jeffrey Lipinski	8th grade
savings bond (mailed later)	
St. John the Evangelist School	Loveland
<i>What Is The Water Quality Of Boyd Lake During A Drought Season?</i>	
Adreanne Brungardt	8th grade
savings bond (mailed later)	
Brush Middle School	Brush
<i>A Possible Mechanism For Explaining The Lake Nyos Tragedy</i>	

**Society of Manufacturing Engineers**  
**Chapter 354, Electro-Mechanical**  
*Society of Manufacturing Engineers Award*

Forrest Friesen	8th grade
certificate, savings bond	
North Middle School	Colorado Springs
<i>Magnetically Levitated vs. Conventional Vehicles: The Effects Of Friction On Velocity And Acceleration</i>	
Craig Wright	11th grade
certificate, savings bond	
Woodlin School	Woodrow
<i>Designing An Innovative Micropump</i>	

**Society of Women Engineers**  
**Rocky Mountain Section**  
*Society of Women Engineers Award*

Kristine Thompson	6th grade
certificate, \$75	
West Jefferson Middle School	Conifer
<i>A Water Powered Gameboy</i>	
Sarah Finney	12th grade
certificate, \$50	
Hotchkiss High School	Hotchkiss
<i>Unstoppable Windpower</i>	
Molly May	7th grade
certificate, \$50	
St. Columba School	Durango
<i>Magnets And Maglev</i>	

Emma McArdle	12th grade
certificate, \$75	
Monte Vista High School	Monte Vista
<i>Is Your Plastic Board?</i>	

**Soil and Water Conservation Society**  
**Colorado Chapter**  
*Soil and Water Conservation Society Award*

Levi Klausner	12th grade
Harold Klausner	9th grade
\$50, certificate, ribbon	
Woodlin School	Woodrow
<i>Wheat Variety Response To Drought</i>	
Dailey Kluck	6th grade
\$50, certificate, ribbon	
Centennial Middle School	Boulder
<i>Wind Blocks</i>	
Maggie Reinsvold	9th grade
\$25, certificate, ribbon	
Frontier Academy	Greeley
<i>The Effect Of Magnesium Chloride On Aquatic Life</i>	
Jason Pope	6th grade
\$25, certificate, ribbon	
Fort Lupton Middle School	Fort Lupton
<i>Hydroponics vs. Soil</i>	

**UC, Health Sciences Center**  
**Medical Scientist Training Program**  
*UC Health Sciences Center Award*

Diane Gumina	11th grade
certificate, \$50	
Merino Jr/Sr High School	Merino
<i>A Possible Breast Cancer Treatment: Interferon Alpha Combined With Indole-3-Carbinol</i>	
Kelly Haller	12th grade
certificate, \$50	
Woodlin School	Woodrow
<i>The Effects Of N-3 Fatty Acids On Inflammatory Mediators In Arthritic Patients</i>	

**United States Department of Commerce**  
*United States Department of Commerce Award*

Laurie Cornell	12th grade
summer employment opportunity	
Nederland Middle/Senior High School	Nederland
<i>Pass The Salt</i>	
Adam Maerz	12th grade
alternate for summer employment opportunity	
Monarch High School	Louisville
<i>Avalanche Prediction Using High Frequency Radar</i>	

## Appendix 2

### United States Geological Survey United States Geological Survey Award

Elizabeth Garcia 6th grade  
Sargent Elementary School Monte Vista  
*Rock-n-Roll*

Jade Brooks 11th grade  
Sierra Grande School Fort Garland/Blanca  
*Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed*

### Zonta Club of Boulder County Amelia Earhart Award

Natalia Wilkins 8th grade  
Sarah Cornish 7th grade  
\$100  
Ricks Center for Gifted Students Denver  
*Gravity vs. Velocity*

### Scholarships

#### Adams State College Foundation Adams State College Scholarship

Christina Russell 11th grade  
one-year full resident tuition & fees scholarship  
Merino Jr/Sr High School Merino  
*Let's Read: A Comparative Study Of Child Behavior And Daily*

Scott Headrick 10th grade  
one-year full resident tuition & fees scholarship  
Gilpin County School Black Hawk  
*Slow Down*

Tyler Keck 9th grade  
one-year full resident tuition & fees scholarship  
Monte Vista High School Monte Vista  
*The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water*

Rachel Doyle 11th grade  
one-year full resident tuition & fees scholarship  
Monte Vista High School Monte Vista  
*The Effect Of Yearly Precipitation On Water Quality In The Rio Grande River Of Colorado*

Chad Kembel 10th grade  
one-year full resident tuition & fees scholarship  
Brush High School Brush  
*Mathematics Of A Rotating Cylinder*

Jade Brooks 11th grade  
one-year full resident tuition & fees scholarship  
Sierra Grande School Fort Garland/Blanca  
*Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed*

Phillip Torres 11th grade  
one-year full resident tuition & fees scholarship  
Cherry Creek High School Greenwood Village  
*The Best Wing Angle For Absorbing Heat From Light In Nymphalis antiopa*

Tom Herter 10th grade  
one-year full resident tuition & fees scholarship  
Meeker High School Meeker  
*Hylemya sp.'s Effects On Fitness Of Polemonium foliosissimum*

David Bloemker 11th grade  
one-year full resident tuition & fees scholarship  
Brush High School Brush  
*Winging It - A Variable Camber Airfoil*

Kayla Zimmerman 11th grade  
one-year full resident tuition & fees scholarship  
Hotchkiss High School Hotchkiss  
*The Effect Of Three Types Of Mulches On Soil Dwelling Bacteria In A Peach Orchard In Western Colorado*

### Colorado School of Mines Colorado School of Mines Scholarship

Jeff Marlow 12th grade  
four-year full resident tuition  
Cherry Creek High School Greenwood Village  
*The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*

Jessica Caver 12th grade  
four-year full resident tuition  
Woodlin School Woodrow  
*Designing And Testing Solids To Remove Arsenic*

Brian Camley 12th grade  
four-year full resident tuition  
Palmer High School Colorado Springs  
*The Telltale Heart Of Darkness: Differentiating Between Authors - Beyond Naïve Bayesian Classification*

Leota McDaniel 12th grade  
four-year full resident tuition  
Brush High School Brush  
*An Investigation Into The Leidenfrost Phenomenon*

### Intel Corporation Ryan Patterson Scholarship

Leota McDaniel 12th grade  
\$2,000 scholarship to the college of choice  
Brush High School Brush  
*An Investigation Into The Leidenfrost Phenomenon*

## Appendix 2

### Science Service

#### Discovery Communications, Inc. *Discovery Young Scientist Challenge*

Chelsea Oden 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Monte Vista Middle School Monte Vista  
*Pursuing Patterns In Primes*

Holli Linman 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Crawford School Crawford  
*Flying Jewels*

Anita Lowe 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Turner Middle School Berthoud  
*The Effects Of Pulsed DC Electricity On Pond Water Bacteria*

Katie Luff 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
North Middle School Colorado Springs  
*The Rehabilitation Of Burned Areas*

Ashley Wilkinson 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Timberview Middle School Colorado Springs  
*Got Water?*

Matt Zubiell 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Creekside Middle School Monument  
*Visual Password System*

Adreanne Brungardt 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Brush Middle School Brush  
*A Possible Mechanism For Explaining The Lake Nyos Tragedy*

Cacia Steensen 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
West Jefferson Middle School Conifer  
*Forest Fire Fuels*

Jake Harman 6th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Centennial Middle School Boulder  
*Predicting Viscosity Using Rotational Velocity*

Meredith MacGregor 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Burbank Middle School Boulder  
*Dropping Into Chaos*

Justin Garoutte 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Centauri Middle School La Jara  
*The Milky Way*

Michaela Kaiser 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Sargent Junior High School Monte Vista  
*How Fast Is The Clock Ticking? Titer vs. Time*

Yael Munishor 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Rocky Mountain Hebrew Academy Denver  
*Got Milk?*

KJ Ward 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Genoa-Hugo School Hugo  
*Does Your Drink Have The Kick Of Carbonation?*

Jeffrey Hrcir 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
East Middle School Grand Junction  
*Reconstructing The Paleoclimate Of The Green River Formation*

Richelle Fritzler 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Merino Jr/Sr High School Merino  
*Got Milk? Got Hormones? A Study Done With Bovine Somatotropin And Grout*

Zachary Zillmann 8th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Jefferson Academy Junior High School Broomfield  
*Wireless Moisture Detector For G-Tube Feedings*

Mikaila Way 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
West Jefferson Middle School Conifer  
*An Apple A Day Keeps The Dentist Away?*

Clare O'Connor-Seville 6th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Dolores Middle School Dolores  
*Ips Beetles*

Timothy Schneider 7th grade  
certificate, DYSC nomination, t-shirt will be provided to those  
submitting their projects for competition  
Miller Middle School Durango  
*Can You Hear Me?*

## Appendix 2

### **Eastman Kodak Company** *Eastman Kodak Company Award*

Linsi Stoddard 10th grade  
certificate, Kodak camera and film (mailed later)  
Stoddard Home School Colorado Springs  
*Flaming Firs*

### **Herbert Hoover Presidential Library Association** *The Herbert Hoover Young Engineer Award*

Robert Ussery 11th grade  
medallion, certificate  
Ussery Home School Fort Collins  
*Sailplane Winch Launch Telemetry And Data-Logging*

### **Intel Corporation** *Intel Excellence in Environmental Health and Safety Award*

Jessica Caver 12th grade  
certificate, \$200 (mailed later)  
Woodlin School Woodrow  
*Designing And Testing Solids To Remove Arsenic*  
*Intel Excellence in Computer Science Award*

Brian Camley 12th grade  
certificate, \$200 (mailed later)  
Palmer High School Colorado Springs  
*The Telltale Heart Of Darkness: Differentiating Between Authors - Beyond Naïve Bayesian Classification*

### **International Society for Optical Engineering** *International Society for Optical Engineering Award*

Andy Ralston 8th grade  
certificate, entry into drawing for cash award  
Josh King 8th grade  
Bookcliff Middle School Grand Junction  
*Bouncing Light*

### **NACE International** *NACE International Award*

Jeff Marlow 12th grade  
certificate  
Cherry Creek High School Greenwood Village  
*The Role Of Oxygen In Cobalt Doped Titanium Oxide Thin Films*

### **Scientific American** *Scientific American Award*

Andrew Leifer 12th grade  
certificate, subscription to Scientific American  
Raymund To 12th grade  
David Pothier 12th grade  
Fairview High School Boulder  
*Fractals, Power-Laws, And The Weibull Distribution: Mathematically Modeling Crumpled Paper*

Brian Camley 12th grade  
certificate, subscription to Scientific American  
Palmer High School Colorado Springs  
*The Telltale Heart Of Darkness: Differentiating Between Authors - Beyond Naïve Bayesian Classification*

Graham Anderson 9th grade  
certificate, subscription to Scientific American  
Palmer High School Colorado Springs  
*What A Scorching State! Is Urban Growth Worsening Drought In Colorado?*

Jessica Caver 12th grade  
certificate, subscription to Scientific American  
Woodlin School Woodrow  
*Designing And Testing Solids To Remove Arsenic*

Tyler Keck 9th grade  
certificate, subscription to Scientific American  
Monte Vista High School Monte Vista  
*The Super Absorber: Using Sodium Polyacrylate To Absorb Metals In Water*

Lisa Saccomano 11th grade  
certificate, subscription to Scientific American  
Cherry Creek High School Greenwood Village  
*Abnormal Otic Invagination With Possible Associations To OAV Spectrum*

Robert Ussery 11th grade  
certificate, subscription to Scientific American  
Ussery Home School Fort Collins  
*Sailplane Winch Launch Telemetry And Data-Logging*

Jennifer McDonough 9th grade  
certificate, subscription to Scientific American  
Palmer High School Colorado Springs  
*Cruciferous Platyhelminthes*

Kayla Zimmerman 11th grade  
certificate, subscription to Scientific American  
Hotchkiss High School Hotchkiss  
*The Effect Of Three Types Of Mulches On Soil Dwelling Bacteria In A Peach Orchard In Western Colorado*

Lauren Smith 10th grade  
certificate, subscription to Scientific American  
Rampart High School Colorado Springs  
*Xanthomonas campestris pv. Vesicatoria: A Study Of The Relationship Between Extra-Cellular Material & Heightened Host Response*

Leota McDaniel 12th grade  
certificate, subscription to Scientific American  
Brush High School Brush  
*An Investigation Into The Leidenfrost Phenomenon*

**Society for In Vitro Biology**  
*Society for In Vitro Biology Award*

Diane Gumina 11th grade  
certificate  
Merino Jr/Sr High School Merino  
*A Possible Breast Cancer Treatment: Interferon Alpha  
Combined With Indole-3-Carbinol*

**United States Metric Association**  
*United States Metric Association Award*

Jessica Caver 12th grade  
certificate  
Woodlin School Woodrow  
*Designing And Testing Solids To Remove Arsenic*

**United States Public Health Service**  
*US Department of Health and Human Services/US  
Public Health Service Award*

Mackenzie Kitson 7th grade  
certificate  
Pagosa Springs Junior High School Pagosa Springs  
*Sugar And Weight: How Do They Relate?*

**Water Environment Federation**  
*Stockholm Junior Water Prize*

Jessica Sidman 11th grade  
certificate, nomination to compete in the US State, National, and  
International SJWP competition  
Palmer High School Colorado Springs  
*The Filtering Effects Of Anodonta grandis*

**Yale University Science & Engineering Association**  
*Yale University Science and Engineering Association  
Award*

Craig Wright 11th grade  
certificate, pewter medallion (mailed later)  
Woodlin School Woodrow  
*Designing An Innovative Micropump*

Appendix 3  
**2002/2002 Expense Report**  
**September 1, 2002 – August 31, 2003**

Category Description	Budget	Actual	Difference
<b>INCOME</b>			
Sponsorships	\$27,050.00	\$25,700.00	(\$1,350.00)
Contributions	\$2,970.00	\$2,296.13	(\$673.87)
In-Kind	\$4,955.00	\$9,232.59	\$4,277.59
Registrations	\$11,655.00	\$11,165.00	(\$490.00)
General Income			
Interest	\$400.00	\$327.20	(\$72.80)
Misc. Sales	\$200.00	\$118.00	(\$82.00)
RSF Outreach Funds	\$0.00	\$0.00	\$0.00
Photo Sales	\$600.00	\$330.00	(\$270.00)
Scholarships	\$2,000	\$2,000	\$0.00
Silent Auction	\$0.00	\$220.00	\$220.00
Tour Ticket Sales	\$300.00	\$250.50	(\$49.50)
TOTAL General Income	\$3,500.00	\$3,245.70	(\$254.30)
<b>TOTAL INCOME</b>	<b>\$50,130.00</b>	<b>\$51,639.42</b>	<b>\$1,509.42</b>
<b>EXPENSES</b>			
Awards Ceremony			
Cash Awards	\$6,600.00	\$7,290.00	(\$690.00)
Other Awards	\$2,800.00	\$2,588.62	\$211.38
Photos	\$400.00	\$292.53	\$107.47
Press Release	\$400.00	\$422.40	(\$22.40)
Room Rental	\$500.00	\$482.50	\$17.50
TOTAL Awards Ceremony	\$10,700.00	\$11,076.05	(\$376.05)
CSSF, Inc. Board			
Communications	\$530.00	\$442.41	\$87.59
Equipment	\$0.00	\$0.00	\$0.00
Meetings	\$700.00	\$865.16	(\$165.16)
Operations	\$5,900.00	\$7,121.81	(\$1,221.81)
Services	\$0.00	\$493.58	(\$493.58)
Supplies	\$200.00	\$201.23	(\$1.23)
TOTAL CSSF, Inc. Board	\$7,300.00	\$9,124.19	(\$1,794.19)
Finalists			
Activities	\$3,050.00	\$2,084.14	\$965.86
Publications	\$1,175.00	\$1385.71	(\$220.71)
Registration	\$4,030.00	\$7,386.88	(\$3,356.88)
Room Rental	\$900.00	\$900.00	\$0.00
Transportation	\$0.00	\$750.00	(\$750.00)
TOTAL Finalists	\$9,155.00	\$12,516.73	(\$3,361.73)

Appendix 3  
**2002/2002 Expense Report**  
**September 1, 2002 – August 31, 2003**

Category Description	Budget	Actual	Difference
ISEF			
Affiliation	\$500.00	\$500.00	\$0.00
Travel	\$8,710.00	\$6,876.13	\$1,833.87
TOTAL ISEF	\$8,710.00	\$6,876.13	\$1,833.87
Judging			
Communications	\$1,270.00	\$229.75	\$1,040.25
Room Rental	\$250.00	\$275.00	(\$25.00)
Travel	\$0.00	\$217.60	(\$217.60)
Supplies	\$150.00	\$223.11	(\$73.11)
Thank Yous	\$2,925.00	\$2,794.42	\$130.58
TOTAL Judging	\$4,595.00	\$3,739.88	\$855.12
Outreach	\$1,000.00	\$1,496.84	(\$496.84)
RSF Outreach	\$0.00	\$0.00	\$0.00
CSEF Expenses			
Adult Sponsors	\$300.00	\$371.81	(\$71.81)
Advisory Council	\$100.00	\$30.36	\$69.64
Fund Raising	\$100.00	\$135.57	(\$35.57)
Personnel	\$4,100.00	\$4,100.00	\$0.00
Publicity	\$600.00	\$0.00	\$600.00
Regional Fair Directors	\$400.00	\$181.02	\$218.98
Supplies	\$300.00	\$256.50	\$43.50
Volunteers	\$1,050.00	\$1,211.09	(\$161.09)
TOTAL CSEF Expenses	\$6,950.00	\$6,286.35	\$663.65
SRC/Display & Safety			
Communications	\$100.00	\$8.07	\$91.93
Meetings	\$600.00	\$573.84	\$26.16
Supplies	\$200.00	\$82.32	\$117.68
TOTAL SRC/Display & Safety	\$900.00	\$664.23	\$235.77
TOTAL EXPENSES	\$49,340.00	\$51,780.00	(\$2,440.40)
OVERALL TOTAL	\$790.00	(\$140.98)	