

# Colorado Science and Engineering Fair

Colorado Science and Engineering Fair

For Colorado Students in Grades 6 - 12

Hosted by the Center for Science, Mathematics & Technology Education



Marlee Canada  
Mosca, CO

April 10 - 12, 2008  
in the Lory Student Center  
at Colorado State University  
Fort Collins, Colorado



# 53<sup>rd</sup> Annual Colorado Science and Engineering Fair

Lory Student Center

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

Colorado State University

---

## Thursday, April 10, 2008

---

### Finalist Schedule

---

8:30 AM – 11:00 AM	Tour Ticket Pick-Up/Sales	Room 213/215
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 completed and an Official Photo has been taken. Finalists must be out of the exhibit area by noon.</i>	
1:00 PM – 1:20 PM	Finalist Orientation Meeting – <i>Mandatory for all exhibitors.</i>	CSU Theater
1:30 PM – 5:00 PM	Judging – <i>Students must be at their exhibits for interviews.</i>	Main Ballroom

### Adult Schedule

---

2:00 PM – 3:30 PM	Regional Fair Director's Meeting	Room 213/215
3:30 PM – 4:30 PM	ISEF Rule Updates for 2009	Room 213/215
2:00 PM – 5:00 PM	Intro to Small-Scale Science in Student Research for Teachers	B322 NESB (CSMATE)

### Judging Schedule

---

10:15 AM – 11:00 AM	Grand Awards Judging Captains' Briefing	Room 230
10:15 AM – 10:45 AM	New Grand Awards Judges' Briefing	Room 224/226
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
12:15 PM – 12:30 PM	Special Awards Judges' Briefing	Room 228
12:00 PM – 5:00 PM	Judging	Main Ballroom
12:00 – 12:30 PM	<u>Grand Awards Judges only</u> in the exhibit rooms.	
12:30 – 1:30 PM	Special Award Judges may enter the exhibit areas. <u>Judges only</u> in the exhibit rooms.	
1:30 – 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 area at this time.***

---

## Friday, April 11, 2008

---

9:00 AM – 5:00 PM	CSEF Open to the Public	Main Ballroom
9:00 AM – 10:00 AM	Guest Speaker: William Johns Chief Engineer for the NASA Orion Program	CSU Theatre
10:30 AM – 3:00 PM	Tours: Students, sponsors, families, and judges are invited to participate in the tours.	
2:00 PM	Finalist Ballots for Student Choice and Poster Contest are due.	Registration Booth
7:00 PM	Awards Ceremony	Resurrection Fellowship

---

## Saturday, April 12, 2008

---

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 213/215
11:00 AM – 12:00 PM	Pizza Party: Sponsored by Lockheed Martin and provided by Villa Pizza for finalists, sponsors, families and judges. <b>Finalists must be present to win door prizes!</b>	Main Ballroom
12:00 PM – 1:00 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 213/215

---

The upcoming Intel International Science and Engineering Fair will be in Atlanta, GA May 11 - 16, 2008.  
Next year's Colorado Science and Engineering Fair will be April 9 - 11, 2009.  
(Dates are subject to change.)

# Welcome to the 53<sup>rd</sup> Annual Colorado Science and Engineering Fair

I would like to take this opportunity to congratulate all of the finalists who have won the right to represent their regional science fair at the state event and to say thank you to the many individuals and organizations that make my job so easy and fun.

The success of each year's CSEF 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. 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.

I would also like to say thank you to my colleagues at the Center for Science, Mathematics & Technology Education (CSMATE). CSEF has called CSMATE home for the past nine years and CSMATE is proud to include the state science fair as one of its many outreach endeavors in the area of science and mathematics education.

If you've taken part in CSEF in previous years, you already know that

every year this fair exhibits the projects of over 300 scientifically talented youth from thirteen regions around Colorado. If the CSEF experience is new to you, you may not be aware that in addition to the Grand Awards, there are special awards given by professional organizations, governmental agencies, and industries for exhibits that best represent their particular emphasis or philosophies. The top two individual project winners and the top team project winners in the Senior Division, at the state level are awarded a trip to compete in the Intel International Science and Engineering Fair (ISEF) held in Atlanta, GA May 11 – 16, 2008.

The 2007/2008 year has been very exciting. CSEF has been involved in the following activities:

- Several new organizations and companies have stepped forward this year as new sponsors of the CSEF: BP, Hach Scientific Foundation, and the Society of Petroleum Engineers, Denver Section.
- CSEF has hired Miles Eddy from the San Luis Valley to produce a short video of the CSEF for use in advertising and fund raising. Short clips will be posted on the web site as well.
- Colorado had its first ever Discovery Channel Young Scientist Challenge winner. Ambrose Soehn from Boulder took 3<sup>rd</sup> Place in that competition and came home with a \$5,000 scholarship. Congratulations Ambrose!

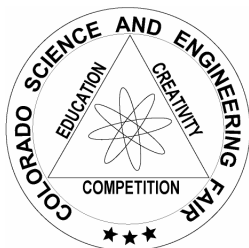
- CSMATE, in conjunction with CSEF, procured a small grant from Agilent Technologies to provide teachers with a new web site that will hopefully help guide their students through the science fair process using the innovative techniques of Small-Scale Science.
- CSEF has created a new Adult Sponsor Handbook that will aid teachers in guiding students through the science fair process. This will be available starting this Fall.

The dedication displayed by Colorado Science and Engineering Fair participants is commendable. Each of you is already a winner, having successfully initiated and completed your outstanding research project, and winning the opportunity to represent your region at the state level. We are here to celebrate your success and applaud your parents and teachers for their enthusiastic support. From start to finish, and at all levels of participation, the science and engineering fair experience is one of not only competition, but also of camaraderie, creativity and education. Well done, participants!

Sincerely,



Courtney Butler  
CSEF Director



## CSEF Historical Items Needed

The CSEF Historian, Elemer Bernath would like to encourage anyone who may have some items from past state science fairs (programs, photos, trophies, plaques, etc.) that would be willing to part with to contact him at [elemerbernath@twol.com](mailto:elemerbernath@twol.com) so we can continue to add to our archives in the CSU library.



## **Colorado Science and Engineering Fair Financial Contributors**

The Colorado State Science Fair, Inc. is an independent, nonprofit organization. For this reason, CSSF, Inc. is totally dependent upon the generous donations of those private businesses, organizations, and individuals that provide support for the prize money, the ISEF trip, and other science fair expenses. CSEF Sponsors are also invited to provide up to two volunteers to serve on the CSSF, Inc. Board of Directors. These dedicated board members represent the non-profit corporation and set fair policy. They are part of the overall Advisory Council that provides the volunteer staff and working committees that produce this valuable event. The thanks of everyone who participates in the Colorado Science and Engineering Fair goes to these private organizations, corporations, government agencies, universities, and individuals that encourage Colorado's young scientists, engineers, and mathematicians through their generous support.

---

### **Platinum Sponsors**

provide \$2500 or more in support, and up to two dedicated volunteers to serve on the CSSF, Inc. Board of Directors.

Agilent Technologies

BP America

Colorado Dental Association

Colorado State University – Office of the Provost and Senior Vice President

Colorado State University – College of Natural Sciences

Hach Scientific Foundation

Intel Foundation

Lockheed Martin

Qwest

Seagate Technology

(in-kind – posters for teachers)

Society of Petroleum Engineers, Denver Section

US Department of Commerce/NTIA/ITS

(in-kind – official photos)

Xcel Energy Foundation

---

### **Gold Sponsors**

provide from \$1000 to \$2500 in support, and up to two dedicated volunteers to serve on the CSSF, Inc. Board of Directors.

Ball Corporation

Colorado Medical Society Education Foundation

Colorado State University – Center for Science, Mathematics & Technology Education

(in-kind - office space, technology support, web site hosting)

LSI Corporation

University of Colorado – College of Engineering & Applied Science

---

# Silver Sponsors

provide from \$750 to \$1000 in support, and up to two dedicated volunteers to serve on the CSSF, Inc. Board of Directors.

US Department of Commerce/NIST

---

# Regular Sponsors

provide from \$500 to \$750 in support, and up to two dedicated volunteers to serve on the CSSF, Inc. Board of Directors.

Anheuser-Busch, Inc.

Canberra Industries

Colorado Engineering Council

Denver Chapter of the IEEE Lasers and Electro-Optics Society

ICAT Managers

Robert Lamperuer

National Renewable Energy Laboratory

(in-kind – pencils for packets)

Norgren

John Edward Parker Trust

San Luis Valley Regional Science Fair, Inc.

US Department of Commerce/NOAA

(in-kind – Annual Report & posters)

---

# Contributors

provide financial or in-kind support of up to \$500.

Ed & Lucy Adams

Samuel & Eileen Bartlett

(in-kind – Special Awards judging supplies & coordination)

Cherry Creek Basin Water Quality Authority

Colorado Geological Survey

(in-kind – postcards for packets)

Gina Holland & Isaac Britton

David & Vonda Holm

King Soopers

Kristi Mountain Sports

Marjorie McLellan

Dr. Robert Morrow

(in-kind – helium for balloons)

Pro Sports

(T-shirt design)

Sundyne Corporation

URS Corporation

Villa Pizza & Butler Pizza Company

Wal-Mart

The many federal employees who contributed through the Combined Federal Campaign.

The many community members who use the Albertson's Community Partnerships that donates a portion of sales to CSEF.

The many community members who use Goodsearch to raise money for CSEF with their internet searches.

# Thank You

Friday, April 11<sup>th</sup>



Tours such as the CSU Campus Nature Walk

## What to do at CSEF!

Thursday, April 10<sup>th</sup>



Project Set-Up

### Small-Scale Science Mini-Workshop for Teachers & Parents Thursday, April 10, 2008 2:00 – 5:00 PM B322 Natural & Environmental Sciences Building

Dr. Stephen Thompson, creator of Small-Scale Science research technique and Director of the Center for Science, Mathematics & Technology Education at CSU, will give a mini-workshop for teachers and parents interested in seeing how these techniques can be used by students in their science fair research

Saturday, April 12<sup>th</sup>

### CSEF Pizza Party

**Lockheed Martin** generously sponsors the CSEF Pizza Party as a final celebration for exhibitors, teachers and parents. The pizza is provided by *Villa Pizza & Butler Pizza Company* and cookies are provided by *King Soopers*.

#### Door Prize Donors:

- Bent's Old Fort
- Chili's
- Colorado Division of Wildlife
- Colorado State Parks
- Colorado State University Bookstore
- Colorado State University College of Natural Sciences
- Denver Botanical Gardens
- Denver Zoo
- Earth Foundation
- Great Sand Dunes National Park
- Kroenke Sports Enterprise
- Museum of Nature & Science
- Nasco
- San Luis Valley CSU Research Center
- Texas Instruments
- The Wildlife Experience
- United States Geological Survey

### CSEF Tours and Presentations

Many educational experiences are available to participants of CSEF, including tours of Colorado State University and local corporate research facilities. This series of tours and presentations gives students, their sponsors and families an opportunity to see research in action.

If you pre-registered for tour tickets, you **MUST** pick them up and pay for them in Room 213/215 of the Lory Student Center by 11 AM on Thursday, April 10<sup>th</sup>. Extra and unclaimed tickets will be available for sale at the CSEF Headquarters booth from 12 Noon to 5 PM on Thursday, April 10<sup>th</sup>.

Thursday, April 10<sup>th</sup>



Judging



# Guest Speaker



William Johns

Chief Engineer - Orion Crew Exploration



William (Bill) Johns is Chief Engineer of the Orion Crew Exploration Vehicle for Lockheed Martin. In this role, he is responsible for all of the technical products and processes for the Orion contractor team. Prior to being selected to lead the technical effort on CEV, Bill served as Director of Development for the Atlas V/Evolved Expendable Launch Vehicle (EELV). He has worked on the development, integration, and launch of new or modified upper stage systems since he started with Martin Marietta in 1980. He has spent much of his career working on the Centaur cryogenic upper stage, beginning with the Shuttle/Centaur development activity, and including the Titan/Centaur and evolved versions of the Atlas/Centaur. He moved to San Diego in 1983 and back to Denver in 1994 when General Dynamics Space Systems joined Lockheed Martin.

Bill obtained his Bachelors of Science degree in Chemical Engineering from Stanford University in 1978 and his Masters of Science degree from the University of Pennsylvania in 1979. Bill is a Colorado native and enjoys mountaineering, skiing and tennis.

# 2008 Colorado Science and Engineering Fair Tours

## Friday, April 11, 2008

### Morning Tours Cost Limit

1A	<b>CSU Anatomy/Physiology Lab</b> (Senior Division Student Tour ONLY!) Leaves at 10:15 AM from Room 203 LSC Tour is from ~ 10:30 AM – 11:30 AM	\$1.00	30
2A	<b>NCGRP</b> Leaves at 10:15 AM from Room 228 LSC Tour is from ~ 10:30 AM – 11:30 AM	\$1.00	15
3	<b>CSU College of Engineering</b> Leaves at 10:45 AM from Room 226 LSC Tour is from ~ 11:00 AM – 12:00 PM	\$1.00	40
4A	<b>CSU Department of Physics</b> Leaves at 10:15 AM from Room 220 LSC Tour is from ~ 10:30 AM – 11:30 PM	\$1.00	10
5	<b>Forensic Sciences</b> Presentation starts at 11:00 AM in Room 230 LSC	\$1.00	30
8A	<b>CSU Scanning Electron Microscopy &amp; Thermal Analysis Lab</b> Leaves at 10:15 AM from Room 230 LSC Tour is from ~ 10:30 AM – 11:30 AM	\$1.00	12
10A	<b>Energy and the Environment</b> Leaves at 10:45 AM from Room 220 LSC Tour is from ~ 11:00 AM – 2:00 PM	\$1.00	25
12	<b>CSU Greenhouse</b> Leaves at 10:15 AM from Room 224 LSC Tour is from ~ 10:30 AM – 11:30 PM	\$1.00	25
13A	<b>National Renewable Energy Laboratory</b> Leaves at 10:15 AM from Room 226 LSC Tour is from ~ 10:30 AM – 12:00 PM	\$1.00	25
14A	<b>CSU Department of Chemistry</b> (Junior Division Student Tour ONLY!) Leaves at 10:45 AM from Room 220 LSC Tour is from ~ 11:00 AM – 12:00 PM	\$1.00	24
14B	<b>CSU Department of Chemistry</b> (Senior Division Student Tour ONLY!) Leaves at 10:45 AM from Room 220 LSC Tour is from ~ 11:00 AM – 12:00 PM	\$1.00	24
16A	<b>Rhizosphere Biology</b> Leaves at 10:45 AM from Room 203 LSC Tour is from ~ 11:00 AM – 12:00 Noon	\$1.00	15
17A	<b>Intro to Veterinary Medicine</b> Leaves at 10:15 AM from Room 205 LSC Tour is from ~ 10:30 AM – 11:30 AM	\$1.00	35

### Afternoon Tours Cost Limit

1B	<b>CSU Anatomy/Physiology Lab</b> (Junior Division Student Tour ONLY!) Leaves at 2:00 PM from Room 203 LSC Tour is from ~ 2:15 PM – 3:15 PM	\$1.00	30
2B	<b>NCGRP</b> Leaves at 12:45 PM from Room 228 LSC Tour is from ~ 1:00 PM – 2:00 PM	\$1.00	15
2C	<b>NCGRP</b> Leaves at 1:45 PM from Room 228 LSC Tour is from ~ 2:00 PM – 3:00 PM	\$1.00	15
4B	<b>CSU Department of Physics</b> Leaves at 12:45 PM from Room 220 LSC Tour is from ~ 1:00 PM – 2:00 PM	\$1.00	10
7	<b>Geologic History of the Front Range</b> Leaves at 1:15 PM from Room 230 LSC Tour is from ~ 1:30 PM – 2:30 PM	\$1.00	20
8B	<b>CSU Scanning Electron Microscopy &amp; Thermal Analysis Lab</b> Leaves at 1:45 PM from Room 230 LSC Tour is from ~ 2:00 PM – 3:00 PM	\$1.00	12
10B	<b>Energy and the Environment</b> Leaves at 12:45 PM from Room 220 LSC Tour is from ~ 1:00 PM – 2:00 PM	\$1.00	25
10C	<b>Energy and the Environment</b> Leaves at 2:15 PM from Room 220 LSC Tour is from ~ 2:30 PM – 3:30 PM	\$1.00	25
11	<b>CSU Entomology</b> Leaves at 1:15 PM from Room 220 LSC Tour is from ~ 1:30 PM – 2:30 PM	\$1.00	30
13B	<b>National Renewable Energy Laboratory</b> Leaves at 1:45 PM from Room 226 LSC Tour is from ~ 2:00 PM – 3:30 PM	\$1.00	25
15	<b>CSU Department of Civil Engineering</b> (Senior Division Student Tour ONLY!) Leaves at 1:05 PM from Room 226 LSC Tour is from ~ 1:05 PM – 2:05 PM	\$1.00	15
16B	<b>Rhizosphere Biology</b> Leaves at 1:15 PM from Room 203 LSC Tour is from ~ 1:30 PM – 2:30 PM	\$1.00	15
17B	<b>Intro to Veterinary Medicine</b> Leaves at 1:15 PM from Room 205 LSC Tour is from ~ 1:30 PM – 2:30 PM	\$1.00	35
18	<b>Science and Engineering in Medical Device Technology</b> Presentation starts at 2:00 PM in Room 228 LSC	\$1.00	30
19A	<b>Medical Mysteries</b> (Senior Division Student Tour ONLY!) Leaves at 12:45 PM from Room 224 LSC Presentation is from ~ 1:00 PM – 2:00 PM	\$1.00	18
19B	<b>Medical Mysteries</b> (Junior Division Student Tour ONLY!) Leaves at 12:45 PM from Room 220/222 LSC Presentation is from ~ 1:00 PM – 2:00 PM	\$1.00	18





# 2008 CSEF Advisory Council

The CSEF Advisory Council includes all Regional Fair Directors, the CSSF, Inc. Board of Directors and many volunteers.

## Colorado State Science Fair, Inc. Executive Committee

President	Mr. Michael Bemski
Vice President	Dr. Keith Kasunic
Treasurer	Mr. Samuel Bartlett
Secretary	Dr. Carol Morrow
Past President	Dr. David Holm
Recording Secretary	Ms. Lucy Adams
CSEF Director	Ms. Courtney Butler

## Board of Directors – Regular Members

<b>Canberra Industries</b> Mike Bemski Paul Wojtaszek	<b>NREL – Midwest Research Institute</b> Linda Lung Doug Hooker
<b>Colorado Dental Association</b> Carol Morrow Robert Morrow	<b>John Edward Parker Trust</b> Amanda Parker John Parker
<b>Colorado Engineering Council</b> Samuel Bartlett Gina Holland	<b>SLV Regional Science Fair</b> David Holm Larry Sveum
<b>Colorado Medical Society</b> A. Bill Kieger Dean Holzkamp	<b>University of Colorado at Boulder</b> John Bennett Ryan Patterson
<b>Colorado State University</b> Stephen Thompson Jan Nerger	<b>US Dept. of Commerce/NIST</b> Stephanie Hooker
<b>ICAT Managers</b> Brian Scriber	<b>US Dept. of Commerce/NTIA</b> Amy Weich
<b>IEEE Lasers and Electro-Optics Society</b> Keith Kasunic	<b>US Dept. of Commerce/NOAA</b> Al Bedard Dan Kowal
<b>Lockheed Martin</b> William Meersman	<b>Xcel Energy</b> Dave Canedella
	<b>Associate Members</b> Elemer Bernath

## Past CSEF Directors

Charles Bragaw*	1956-1967	Lloyd Walker	1986-1988
Calvin Fisher*	1968-1974	Connie Vader-Lindholm	1989-1990
Sam Shushan*	1975-1977	Lynn Butler	1991-1992
Gordon Moore	1978-1979	Kate Taylor	1993-1994
Russell B. Stoner*	1979-1981	Christal McDougall	1995-1996
Virgil A. Sandborn	1982-1983	Kate Taylor	1997-1998
James R. Sites	1984-1985	Lucy Adams	1999
	Courtney Butler		2000-present

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

## At Large Advisory Council Members

Judy Cara	Linda Carlson	David Clark
Doug Everett	Nancy Gettman	Joel Gray
Dan Hurlbut	Steve Iona	Charles Johnson
John McConnell	Beverly Meier	Kim Melville-Smith
Candus Muir	David Pfuhl	Judy Prester
Rod Simpson	Jim Sites	Doug Steward
Laura Ussery	Dan Van Gorp	Amber Wolf

## Participating Regional Science Fairs

### Arkansas Valley Regional Science Fair

Aaron Reyes  
Charles Jacob

### Boulder Valley Regional Science Fair

Jennifer Barr

### Denver Metro Regional Science Fair

Jim Stevens  
Kristina Wenzel

### East Central Colorado Regional Science Fair

William Mallory  
Marguerite Yowell

### Longs Peak Regional Science Fair

Lori Ball

### Morgan/Washington Bi-County Regional Science Fair

Elemer Bernath  
David Miner

### Northeastern Colorado Regional Science Fair

Kari Kilmer  
Penny Propst

### Pikes Peak Regional Science Fair

Georgia Matteson

### San Juan Basin Regional Science Fair

Jeff Hatfield

### San Luis Valley Regional Science Fair

Lucy Adams

### Southeast Colorado Regional Science Fair

Terri Lira  
Robin Staker

### Southern Colorado Regional Science Fair

Carol Crossley  
Glenda Macklin

### Western Colorado Regional Science Fair

Sandy Cruz  
Rob Robison

## Colorado Science and Engineering Fair Volunteers

The following list of people deserve our most sincere thanks for volunteering their time to do a variety of jobs during the fair. When you see a person wearing a green “Volunteer” name badge, please take a moment to thank them for their efforts. The Colorado Science and Engineering Fair would not be possible without their dedication.

Lucy Adams	Jennifer Gray	Carol Morrow*
Ray Alvarado	Joel Gray	Robert Morrow*
Dayakar Badri	Linda Hinshaw	Candus Muir
Lori Ball	Daryl Holcomb	Dirk Oden
Sam Bartlett	Gina Holland	Amanda Parker*
Al Bedard	David Holm	John Parker
Elemer Bernath	Doug Hooker	Marissa Patterson
Eric Burt	Kevin Hoskin	Ryan Patterson*
Lisa Burt	Katie Houchin	Judy Prester
Andrea Buxton*	William Johns	Katie Propst*
Cara Campbell	Charles Johnson	Penny Propst
Cindy Campbell	Michaela Kaiser*	Bradley Reichel
Barry Carroll	Keith Kasunic	Amanda Reiff
Dave Cendella	Tyler Keck*	Aaron Reyes
Chem Club	Boris Kondratieff	Jinx Richards
Monica Christ	Dan Kowal	Mary Robinson
Erin Comstock	Dan Larson	Rob Robison
Pat Conine	Robert Lee	Delaine Schlager
Amanda Constant	John Lestina	Nissa Schmidt*
Joann Cornell	Margaret Lestina	Jim Sites
John Crowfoot	Terri Lira	Kerri South
Sandy Cruz	Kenn Lonquist	Bob Stears
Donna Cubbage	Linda Lung	Jim Stevens
Kim Davidson	Jennifer Matsuura	Doug Steward
Miles Eddy	Jeff McClain	Erica Suchman
Chriselda Engel	Pat McCurdy	Keely Sudhoff
Frank Ethridge	Samantha McDonnel*	Larry Sveum
Doug Everett	Mac McNeill	Eric Swanson
John Forman	Bill Meersman	Stephen Thompson
Mark Frasier	Bev Meier	Laura Ussery
Nancy Gettman	Kim Melville-Smith	Dan Van Gorp
Ashlie Giddings	Chris Messick*	Andrew Warnock
Donald Gooding	Heather Messick*	Lyn Warrick
Eileene Gooding	Julie Messick	Amy Weich
Fern Gooding	Katie Montgomery	Alex West*

\*Indicates CSEF Alumni Volunteers

## 2008 CSEF Grand Awards Judges

More than 100 professional scientists and engineers volunteer to judge Finalists for the CSEF Grand Awards. Judging teams are made up of these volunteers to judge each of the categories in both divisions. The captains of each judging team form the Best Individual Project award team which determines the Top of Fair individual project winners in each division. The assistant captains of each judging team form the Best Team Project award team which determines the Top of Fair team project winners in each division. In addition, a Grand Awards judging team determines the winner of the Ralph Desch Memorial Technical Writing Award. Grand Awards judging team lists are available at the CSEF headquarters on Friday.

---

**Richard Anderson**

Microbiology

**Dawn Arkin, BS**

Chemistry

Boulder Scientific Company

**Rendi Bacon, MS**

Biology

Center for Disease Control

**Don Barnes, BS**

Agricultural Engineering

Colorado Department of Corrections

**Brittany Barnett**

Microbiology

**Michael Barth, BS, MEPM**

Environmental Policy & Management

Lockheed Martin

**Michael Bemski, BA, PMP**

Geology

AREVA Federal Services, LLC

**Carl Benvenga, MS, PE**

Electrical Engineering

Agilent Technologies

**Stephen Bernard, MEAM, PMP**

Environmental Health & Safety

AT & T

**James Boaz, BS**

Geology

Metropolitan Surveyors, LLC.

**Wesley Boucher, MD**

Medicine

**Don Boyle, BS**

Electrical Engineering

**Paul Bradley, BS, PE**

Civil Engineering

Northrop Grumman Mission Systems

**Donald Brandborg, BA, DMNS**

Anthropology; Paleontology; History

Union Pacific Railroad (retired)

**Elizabeth Brooks, BS**

Microbiology

Colorado State University

**Christian Brown, BS**

Computer Sciences

University of Colorado Denver

**Amanda Broz, MS**

Plant Biochemistry

Colorado State University

**Charles Calisher, PhD**

Microbiology

Colorado State University

**DeWayne Campbell, PhD, PE**

Civil Engineering

US Bureau of Reclamation

**Pat Campbell, BA**

Computer Science, Geography

Sanitas Technologies

**Maggie Cason, PhD**

Science Education

Colorado State University

**Russell Chadwick, PhD**

Electrical Engineering

US Department of Commerce/NOAA

**Brad Charles, BS**

Microbiology

Colorado State University

**Bruce Connally, DVM**

Veterinary Medicine

Colorado State University

**Scott Cravens, BS**

Electrical Engineering

Avago Technologies

**Mark Crowder, PhD**

Biophysics

Ball Aerospace & Technologies

**John Delk, BS**

Electrical & Computer Engineering

Lockheed Martin

**F M "Med" Durel, MS**

Chemistry

**Carl Edstrom, MS, PE**

Industrial Mgmt. & Metallurgical Eng.

**Dean Ehn, MS, MCIS**

Chemical Engineering

IBM (retired)

**Barry Eppler, BS**

Mechanical Engineering

Agilent Technologies, Inc.

**Karl Fleischer, MS, PE**

Eng. Systems; & Mechanical Eng.

Stolle Machinery

**Karl Ford, PhD**

Environmental Health

US Bureau of Land Management

**Randy Francl, MS, MBA**

Information Systems

Northrop Grumman Mission Systems

**Charles Fraser, MD**

Medicine

**Mary Fuka, PhD**

Physics

Terralliance

**Stefan Gessler, BS**

Computer Systems Engineering

Hach Company

**Joann Ginal, PhD**

Endocrinology

Bristol Myers Squibb

**Claire Goodwin, BS**

Environmental Health

Ron Grob Company

**Kristin Grazier, BS**

Business Administration

JKG Consulting, Inc.

**Rebecca Greben, BS**

Psychology; Geology

CO Dept. of Labor and Employment

**Melinda Gross, BA**

Chemical Engineering

Comcast

**Robert Hamilton, PhD**

Electrical Engineering; Geology

**Scott Heath, MS, PE**

Electrical Engineering

Hewlett Packard Company

**Mark Hennesy, BS, MBA**

Mechanical Engineering

Xcel Energy

**Lisa Herickhoff, PhD, MBA**

Cytogenetics

Membrane Protective Technologies

**Dave Hicks, AS**

General Science

**Steve Hiebert, BS**

Fisheries Biology

US Bureau of Reclamation

**Gina Holland, BS, PE**

Electrical Engineering

The Shaw Group – Fossil Power

**Rodney Howe, MS**

GIS Remote Sensing

US Department of Agriculture

**Carly Howet, PhD**

Space Science

SouthWest Research Institute

## 2008 CSEF Grand Awards Judges

- Gabriel Intano**, PhD, MT  
Molecular Biology; Genetics  
Colorado State University
- Alison Jane**, BS  
Biological Sciences  
Center for Disease Control
- Lauren Jobin**, BS  
Microbiology
- Mike Kearney**, BS  
Mechanical Engineering  
CH2M Hill
- Chrystine Kelley**, BS  
Environmental Health & Toxicology  
Colorado Department of Health
- Neil Kelley**, MS  
Meteorology  
National Renewable Energy Lab
- Beth Kelsic**, MS, PE  
Mechanical Engineering  
Ball Aerospace & Technologies
- David Krenek**, MS, PE  
Computer Sciences  
City of Fountain
- Tim Kurt**, BS  
Biology  
Colorado State University
- James Ling**, PhD  
Nuclear & Industrial Engineering  
White House Science Office (retired)
- Travis McGee**, MS  
Aerospace Engineering  
United Launch Alliance
- Trevor McQuain**, MA, LPC  
Counseling Psychology  
North Range Behavioral Health
- Bill Moninger**, PhD  
Physics  
US Department of Commerce/NOAA
- Keith Motyl**, PhD, PMP  
Chemistry  
Boulder Scientific Company
- John Mummery**, BS  
Petroleum Engineering  
BP America
- Heidi Munnely**, PhD  
Chemistry  
Eastman Kodak Company
- Prabakaran Narayanasamy**, PhD  
Chemistry  
Colorado State University
- James Neely**, MS, PE  
Mechanical Engineering  
NPC, Inc.
- Tom Nelson**, BS  
Computer Information Systems  
Lockheed Martin
- Stephen Osborn**, BS, MBA  
Electrical Engineering & Technology  
Zrak Systems, LLC
- Don Ostwald**, DVM  
Veterinary Medicine  
Wheat Ridge Animal Hospital
- Christian Puttlitz**, PhD  
Biomedical Engineering  
Colorado State University
- F. Andrew Ray**, PhD  
Cell & Molecular Biology  
Colorado State University
- Mike Rider**, MS  
Civil & Mechanical Engineering  
Artisan Integrated Systems
- Amber Roberts**  
Microbiology
- Christine Roberts**, BS  
Biology  
University of Colorado Boulder
- Tom Roberts**, MS  
Range Science; Range Ecology
- Dan Robinson**, MS, PE  
Civil Engineering  
Northrop Grumman Mission Systems
- Barbara Rose**, BS, ASCP  
Microbiology  
Colorado State University
- James Schatzman**, PhD  
Physics  
Northrop Grumman Mission Systems
- Michel Schuh**, BS, PE  
Electrical Engineering  
US Bureau of Reclamation
- Neil Sherrod**, MS  
Geology  
Terracon (retired)
- Rodney Simpson**, MS  
Soil Science  
Colorado State University
- Kevin Sokoloski**, BS  
Microbiology  
Colorado State University
- John Spencer**, PhD  
Microbiology  
Colorado State University
- Rebecca Stark**, MS  
Biomedical Science  
Denver Health & Hospital Authority
- Megan Steinweg**, MS  
Ecology  
Colorado State University
- Amelia Striegel**, MS  
Biomedical Science  
Colorado State University
- Erica Suchman**, PhD  
Biochemistry  
Colorado State University
- Shoou-yu Tang**, PhD  
Physics  
Ophir Corporation
- Jennifer Taylor**, PhD  
Immunology; Microbiology  
Colorado State University
- William Thomas**, MS  
Education  
Highland, Indiana Schools (retired)
- Jesse Thompson**, BS  
Microbiology  
Colorado State University
- Henry Throop**, PhD  
Physics; Astronomy  
SouthWest Research Institute
- Scott Toro-Allen**, BS  
Electrical Engineering  
Lockheed Martin
- Hana Van Campen**, PhD, DVM  
Veterinary Medicine  
Colorado State University
- Sean Van Gorder**, MS, CHMM  
Environmental Health & Safety Mgmt.  
Lockheed Martin
- Julia Veir**, PhD, DVM  
Veterinary Medicine  
Colorado State University
- Maxine Verbit**, AAS  
Electronics & Computer Technology  
Staples
- Dona Wallace**, MA  
Physics  
The Boeing Company
- David Warren**, BS  
Business  
Coldwell Banker Res. Brokerage
- William Weist, Jr.**, MS, CPG  
Geology
- Bill Williams**, MS  
Forest Managerial Science
- Victor Wisdom**, BS  
Manufacturing Engineering  
Wisdom Industries, LTD
- Luke Wittenburg**, DVM  
Veterinary Medicine  
Colorado State University
- Amber Wolf**, BS  
Biological Science  
Colorado State University
- Lisa Woodward**, BS, Rph, PE  
Chemical Engineering  
Colorado Department of Health
- Guanxiong Xiao**, BS  
Biochemistry  
Colorado State University
- Mr. York**, BS  
Computer Science; Mathematics  
LP Broadband
- Don Zimmerman**, PhD  
Tech. Journalism & Communication  
Colorado State University

## 2008 CSEF Special Awards Organizations

The following organizations and companies have sent representatives to interview finalists and bestow special awards based on criteria that fits with the mission of the organization or company.

---

<b>Adams State College</b>	<b>Colorado River Watch</b>	<b>Rocky Mountain Association of Geologists</b>
<b>Air &amp; Waste Management Association</b>	<b>Colorado School of Mines</b>	<b>Rocky Mountain Goats Foundation</b>
<b>American Association of University Women</b>	<b>Colorado Scientific Society</b>	<b>Rocky Mountain Inventor's Association</b>
<b>American Chemical Society</b>	<b>Colorado State University Department of Biochemistry &amp; Molecular Biology</b>	<b>Society for Advancement of Chicanos &amp; Native Americans in Science</b>
<b>American Institute of Chemical Engineers</b>	<b>Colorado State University Department of Chemistry</b>	<b>Society for Mining, Metallurgy &amp; Exploration</b>
<b>American Statistical Association</b>	<b>Colorado State University Department of Horticulture &amp; Landscape Architecture</b>	<b>Society of Manufacturing Engineers</b>
<b>American Vacuum Society</b>	<b>Colorado State University - Pueblo</b>	<b>Society of Women Engineers</b>
<b>American Water Works Association &amp; Rocky Mountain Water Environment Association</b>	<b>Colorado Veterinary Medical Association</b>	<b>Soil and Water Conservation Society</b>
<b>Armbruster Associates</b>	<b>Colorado-Wyoming Society of American Foresters</b>	<b>SPIE – The International Society for Optics and Photonics</b>
<b>ASM International</b>	<b>Eastman Kodak Company</b>	<b>The Inventor's Roundtable</b>
<b>Association for Women Geoscientists</b>	<b>Eppler Family</b>	<b>United States Air Force</b>
<b>BP</b>	<b>Fort Collins Conservation District</b>	<b>United States Army</b>
<b>Colorado Association of Meat Processors</b>	<b>Human Factors &amp; Ergonomics Society</b>	<b>United States Department of Commerce</b>
<b>Colorado Association of Science Teachers</b>	<b>IEEE</b>	<b>United States Geological Survey</b>
<b>Colorado Biology Teacher's Association</b>	<b>Little Shop of Physics</b>	<b>United States Navy &amp; Marine Corps</b>
<b>Colorado Dental Association</b>	<b>Lockheed Martin</b>	<b>University of Colorado Boulder</b>
<b>Colorado Division of Wildlife</b>	<b>MAST Hotline</b>	<b>University of Colorado Health Sciences Center</b>
<b>Colorado Environmental Health Association</b>	<b>MWH Americas, Inc.</b>	<b>Xcel Energy</b>
<b>Colorado Foundation for Agriculture</b>	<b>National Geophysical Data Center</b>	<b>Yale University Science &amp; Engineering Association</b>
<b>Colorado Geological Survey</b>	<b>National Renewable Energy Laboratory</b>	<b>Zahourek Systems, Inc.</b>
<b>Colorado Medical Society</b>	<b>Optical Society of America</b>	<b>Zonta Club of Boulder Colorado</b>
<b>Colorado Mineral Society</b>	<b>Rio Tinto Minerals, Inc.</b>	
<b>Colorado Mycological Society</b>		

## 2008 Adult Sponsor Honor Roll

Schools and Teachers Supporting the 2008 Finalists!

<b>Antonito High School</b> Diego Martinez	<b>Genoa-Hugo School</b> Will Mallory	<b>Plainview School</b> Brenda Fickenschner
<b>Arickaree School</b> Don Myers	Marguerite Yowell	<b>Pueblo School for Arts &amp; Sciences</b> Lori Leyh
<b>Arriba-Flagler School</b> Allen Bell	<b>Goodnight Elementary School</b> George Guddendorf	<b>Rick's Center for Gifted &amp; Talented</b> Alison Kapsalis
Brandon Borich	<b>Grand Junction High School</b> Doug Fledderjohn	<b>Russell Middle School</b> Walter Pollack
<b>Basalt High School</b> Mark Duff	<b>Harrison Elementary School</b> Terri Wrona	<b>Sabin Middle School</b> Christopher Cruz
<b>Boltz Junior High School</b> Kathleen Morris	<b>Hill Campus of Arts &amp; Sciences</b> Lee Jackson	<b>Sargent Jr/Sr High School</b> Terri Paulson
<b>Branson School</b> Diane Brown	Elizabeth Seligman	Ronna Cochran
Mike Daugherty	<b>Hi-Plains Jr/Sr High School</b> Ashley Pollard	<b>South High School</b> Laurice Lopez-Cepero
<b>Bromley East Charter School</b> Aaron Tate	<b>Holly Jr/Sr High School</b> Debbie Bland	<b>St. Joseph Catholic School</b> Marianne Aiken
<b>Broomfield High School</b> Karen Edgerly	<b>Hotchkiss K-8 School</b> Kathy Gates	<b>St. Mary's High School</b> Sandra Frander
<b>Brush High School</b> David Miner	<b>Kim School</b> Kay Lynn Johnson	<b>Stanley British Primary School</b> Heather Graesser
<b>Buchanan Middle School</b> Eric Oestman	<b>La Veta Elementary School</b> Patricia Keeling	Sara Stern
<b>Campus Middle School</b> Natalie Peitsmeyer	<b>Lamar Middle School</b> Robin Staker	<b>Summit Middle Charter School</b> Haydee Phelps
<b>Canon City High School</b> Linda Bennett	<b>Lone Star School</b> Dena Palser	<b>The Classical Academy</b> Phil Eaton
Carrie Trimble	<b>Mackintosh Academy</b> Sharon Muench	Candus Muir
<b>Canon City Middle School</b> Glenda Macklin	<b>Merino Jr/Sr High School</b> Carlye Armstrong	<b>Timberview Middle School</b> Amy Murrell
<b>Cherry Creek Challenge School</b> John Wiley	<b>Miller Middle School</b> Greg Janus	<b>Union Colony Preparatory School</b> Cathy Hoyt
<b>Cherry Creek High School</b> TJ Donahue	Barbara Wynne	<b>Walsh Jr/Sr High School</b> Robert Lancaster
Jessica Olsen	<b>Monte Vista High School</b> Gary Wilkinson	<b>Ward Middle School</b> Jennifer Gray
Rae Lynn Platt	<b>Mountain Ridge Middle School</b> Regina Miller	<b>Weld Central Junior High School</b> Kendra Brewster
Stephen Smith	<b>North Middle School</b> Greg Busby	Robin Johnson
<b>Cortez Middle School</b> Elise Walck	Caitlin Holt	<b>Weldon Valley School</b> Brian Rosenbrock
<b>Dolores Middle School</b> David Hopcia	<b>Otis Jr/Sr High School</b> Karl Donnelson	<b>West Grand High School</b> Lori Haack
Katherine Ott	<b>Our Lady of Fatima School</b> Susan Gilbride	<b>West Jefferson Middle School</b> Mary Pond
<b>Durango High School</b> Damian Nash	<b>Palisade High School</b> Patrick Steele	<b>Wiggins Jr/Sr High School</b> Jordan Sonnenberg
<b>Eads Middle School</b> Justin McLoud	<b>Palmer High School</b> Martha Alvarez	<b>Woodlin School</b> Jodie Romzek
<b>East Middle School</b> Michael Warner	Carol Bach	<b>Wray Jr/Sr High School</b> James DePue
<b>Fairview High School</b> Erin Hinkle	Nancy Hampson	<b>Yuma Middle School</b> Kimberly Hielscher
<b>Fleming High School</b> Linda Niccoli	<b>Paonia Jr/Sr High School</b> William Gladbach	
<b>Fowler Jr/Sr High School</b> Pam Carothers	Mary Groome	
<b>Frontier Academy</b> Annie Cline	<b>Peak to Peak Charter School</b> Adam DiGiacomo	



# Colorado Science and Engineering Fair

## We Invite You to Help Make a Difference

There are several different ways to contribute to the Colorado Science and Engineering Fair.

**Financial Sponsorship:** The Colorado Science and Engineering Fair is a nonprofit organization. Because of this, the Fair is totally dependent on the sponsorship and contributions from businesses, organizations, and individuals in Colorado to cover fair expenses, to provide prize money, and to fund the trip to the Intel International Science and Engineering Fair for the top state winners. Checks may be made payable to the Colorado State Science Fair, Inc. For the IRS 501-C-3 tax exempt status number or for more information on financial sponsorship please contact:

Mike Bemski, Finance Committee Chair  
AREVA Federal Services, LLC  
Phone: (303) 303-705-9250; FAX: (303) 303-705-9260; e-mail: [mike.bemski@areva.com](mailto:mike.bemski@areva.com)

**Special Awards:** Sponsored Special Awards supplement the Regular Fair Awards given in each category and division. Your organization may choose to provide representatives to judge exhibits and present awards based on your own criteria. Awards may include cash, savings bonds, calculators, computers and other prizes, summer job opportunities, and college scholarships (see below). To join this prestigious group of Special Awards Presenters contact:

Sam Bartlett, Special Awards Coordinator  
Colorado Engineering Council  
Phone: (303) 988-2426; e-mail: [samuelbartlett@aol.com](mailto:samuelbartlett@aol.com)

**Special Sponsorships:** Special Sponsorships constitute a new category of support that supplements the Financial Sponsorships to cover the full range of support needed to put on the CSEF. These special sponsorships allow for support of specific activities that are a part of the CSEF and as such, present opportunities for sponsors to advertise their involvement with the CSEF. Areas that have been identified for the 2007 CSEF include: Teacher of the Year Award, pizza party, awards ceremony, awards, ISEF trips, printing, T-shirts and registration packets. To join this prestigious group of Special Sponsors, please contact:

John Parker, Outreach Coordinator  
Lockheed Martin Space Systems Company (retired)  
Phone: (303) 796-7904; e-mail: [johnedwardparker@msn.com](mailto:johnedwardparker@msn.com)

**Scholarships:** If your organization would like to award a scholarship please contact:

David Holm, Scholarship Committee Chair  
SLV Research Center - CSU  
Phone: (719) 754-3594 ext. 114; FAX: (719) 754-2619; e-mail: [spudmkr@lamar.colostate.edu](mailto:spudmkr@lamar.colostate.edu)

**Judging:** Judging is done by professional scientists and engineers who visit each exhibit, review the research, and interview the student exhibitors. To volunteer to become a Colorado Science and Engineering Fair judge please contact:

Gina Holland, Grand Awards Judging Coordinator  
Colorado Engineering Council  
Phone: (303) 987-0377; e-mail: [iabritton@netzero.net](mailto:iabritton@netzero.net) or [gina.holland@shawgrp.com](mailto:gina.holland@shawgrp.com)

**For other questions about the Colorado Science and Engineering Fair please contact:**

Courtney Butler, CSEF Director, P O Box 1465, Fort Collins, CO 80522-1465  
Phone: (970) 491-7716; FAX: (970) 491-2005; e-mail: [courtney@csmate.colostate.edu](mailto:courtney@csmate.colostate.edu)

# CSEF Exhibit Hall

## Senior Exhibits

2-06-001	2-06-002	2-06-003	2-06-004	2-06-005	2-06-006	2-06-007	2-06-008	2-06-009	2-06-010	2-06-011	2-06-012	2-06-301	2-06-302
<b>Senior Engineering</b>													
<b>Senior Chemistry</b>								<b>Senior Microbiology</b>					
2-03-001	2-03-002	2-03-003	2-03-004	2-03-005	2-03-006	2-03-007	2-03-008	2-10-001	2-10-002	2-10-003	2-10-004	2-10-301	
2-07-001	2-07-002	2-07-003	2-07-004	2-07-005	2-07-006	2-07-007	2-07-008	2-07-009	2-01-301	2-01-003	2-01-002	2-01-001	
<b>Senior Environmental Sciences</b>									<b>Senior Animal Sciences</b>				
									<b>Senior Earth &amp; Space Sciences</b>				
2-07-304	2-07-303	2-07-302	2-07-301	2-07-014	2-07-013	2-07-012	2-07-011	2-07-010	2-04-004	2-04-003	2-04-002	2-04-001	
2-09-001	2-09-002	2-09-003	2-09-004	2-09-005	2-09-006	2-09-007	2-09-008	2-02-005	2-02-006	2-02-007	2-02-008	2-02-301	
<b>Senior Medicine &amp; Health</b>								<b>Senior Behavioral &amp; Social Sciences</b>					
2-09-304	2-09-303	2-09-302	2-09-301	2-09-012	2-09-011	2-09-010	2-09-009	2-02-004	2-02-003	2-02-002	2-02-001		
2-05-007	2-05-006	2-05-005	2-05-004	2-05-003	2-05-002	2-05-001	2-08-005	2-08-004	2-08-003	2-08-002	2-08-001		
<b>Senior Energy &amp; Transportation</b>								<b>Senior Mathematics &amp; Computer Sciences</b>					
				<b>Senior Physics</b>									
2-12-301				2-11-001	2-11-002	2-11-003	2-11-301	2-08-006	2-08-007	2-08-008	2-08-301		
2-12-012	2-12-011	2-12-010	2-12-009	2-12-008	2-12-007	2-12-006	2-12-005	2-12-004	2-12-003	2-12-002	2-12-001		
<b>Senior Plant Sciences</b>													



Main Ballrooms  
Lory Student Center





## 2008 CSEF Finalist Statistics

321 Finalist Participants with 286 Exhibits from 13 Regional Science Fairs  
 132 Senior Division Finalists with 111 Exhibits  
 189 Junior Division Finalists with 175 Exhibits

Category	-Overall-	-----Division-----		-----Grade-----						
	Projects	Junior	Senior	6	7	8	9	10	11	12
Animal Sciences	17	13	4	4	4	5	1	1	2	0
Behavioral & Social Sciences	24	15	9	5	3	7	4	2	1	2
Chemistry	33	25	8	4	12	9	3	1	2	2
Earth & Space Science	11	7	4	3	3	1	1	1	2	0
Energy & Transportation	17	10	7	3	4	3	0	3	0	4
Engineering	28	14	14	3	5	6	1	4	4	5
Environmental Sciences	33	15	18	1	6	8	5	3	5	5
Mathematics & Computer Sciences	15	6	9	1	3	2	1	2	2	4
Medicine & Health	35	19	16	3	10	6	3	6	3	4
Microbiology	17	12	5	1	5	6	0	3	0	2
Physics	23	19	4	6	6	7	0	2	1	1
Plant Sciences	33	20	13	5	9	6	3	3	4	3
<b>TOTAL Exhibits</b>	<b>286</b>	<b>175</b>	<b>111</b>	<b>39</b>	<b>70</b>	<b>66</b>	<b>22</b>	<b>31</b>	<b>26</b>	<b>32</b>
<b>TOTAL Finalists</b>	<b>321</b>	<b>189</b>	<b>132</b>	<b>41</b>	<b>77</b>	<b>71</b>	<b>26</b>	<b>33</b>	<b>31</b>	<b>42</b>

### Schools/Teachers-

71 schools from throughout the state were represented, and 159 teachers and adults sponsored the students' projects. There were 28 high schools represented.

### Judges-

More than 100 professional scientists and engineers volunteered to judge the Finalists for the Grand Awards.

### Special Awards-

At least 60 organizations offered Special Awards to the finalists, judged by more than 150 professionals from those organizations.

### Sponsorship-

The 2008 Colorado Science and Engineering Fair had 24 sponsors. Sponsors include 13 Platinum Sponsors (providing over \$2500 of support), 5 Gold Sponsors (\$1000 or more of support each), 1 Silver Sponsor (\$750 or more of support), and 11 Regular Sponsors (\$500 or more of support each). In addition, there were 15 Financial Contributors (less than \$500 each). Also, several individuals donated through the Denver Combined Federal Campaign.

---

**Upcoming Intel International Science and Engineering Fair: Atlanta, GA May 11 – 16, 2008**  
**NEXT YEAR'S COLORADO SCIENCE AND ENGINEERING FAIR: April 9 – 11, 2009.**

Dates are subject to change.

# CSEF Junior Division Finalists

## Animal Sciences

1-01-001	<i>What's Up With MSG And How Does It Affect The Cockroach And Me? The Effect Of MSG On G. portentosa</i> - <b>Cody Burkey</b> - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong	1-01-008	<i>Canine Diabetes Mellitus</i> - <b>Laci Pennington</b> - 8th grade - Lamar Middle School -- Lamar - Ms. Robin Staker
1-01-002	<i>Musical Rats: Effects Of Music On Learning</i> - <b>Mia Davis</b> - 6th grade - North Middle School - Colorado Springs - Mr. Greg Busby	1-01-009	<i>Supersize Me! The Effect Of Junk Food On Mice</i> - <b>Sarah Reed</b> - 8th grade - Summit Middle School - Boulder - Ms. Haydee Phelps
1-01-003	<i>Red vs Black</i> - <b>Tiana Garcia</b> - 7th grade - Cheraw Middle School - Cheraw - Mrs. Teresa Garcia	1-01-010	<i>Are Crawfish That Fish Eat Contributing To High Mercury Levels In Large Fish In The Colorado River Basin?</i> - <b>Rebecca Roskowski</b> - 8th grade - East Middle School - Grand Junction - Mr. Michael Warner
1-01-004	<i>Ants In Action</i> - <b>Brianna Honebein</b> - 7th grade - Ward Middle School - Ordway - Ms. Jennifer Gray	1-01-011	<i>What Size Of Sand Does The Aquatic Worm T. tubifex Prefer?</i> - <b>Rennie Winkelman</b> - 8th grade - Blevins Junior High School - Fort Collins - Dr. Dana Winkelman
1-01-005	<i>Biological Control Of Canada Thistle Phase 2 Analyzing The Spread Of Three Natural Insect Enemies</i> - <b>Nakayla Lestina</b> - 8th grade - Dove Creek Middle School - Dove Creek - Mr. John Lestina	1-01-012	<i>To Buy Or Not To Buy A Rat</i> - <b>Summer Wooden</b> - 6th grade - Hill Middle School Campus of Arts and Sciences - Denver - Mr. Lee Jackson
1-01-006	<i>Penguins - Tropic vs. Artic</i> - <b>Stephen Ortega</b> - 6th grade - Branson School - Branson - Mrs. - Li Ann Richardson	1-01-013	<i>Pieris rapae: Pest Or Pollinator</i> - <b>Grant Yowell</b> - 6th grade - Genoa-Hugo School - Hugo - Mr. Will Mallory
1-01-007	<i>Attack Of The Killer Worms!!!</i> - <b>Wyatt Palser</b> - 7th grade - Otis Jr/Sr High School - Otis - Mr. Karl Donnelson		

## Behavioral & Social Sciences

1-02-001	<i>Wake Up! A Comparative Study Between Sleep And Mood</i> - <b>Alexandra Kirschbaum</b> - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong	1-02-008	<i>Memory Matters</i> - <b>Brooke Perrin</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson
1-02-002	<i>Is It Easier To Always Be Right?</i> - <b>Garret Cerny</b> - 6th grade - Eagle County Carter Academy -- Wolcott - Ms. Laura Cerny	1-02-009	<i>Which Way</i> - <b>Brandon Rogers</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson
1-02-003	<i>Texting Trouble: True Or False ?</i> - <b>Jason Francis</b> - 8th grade - Lamar Middle School - Lamar - Ms. Robin Staker	1-02-010	<i>Monkey See, Monkey Do: Literary Imagery And The Mirror Neuron System</i> - <b>Diane Schulze</b> - 8th grade - Cherry Creek Challenge School -- Denver - Mr. John Wiley
1-02-004	<i>Remember This!</i> - <b>Rachel Gonzales</b> - 6th grade - Miller Middle School - Durango - Ms. Barbara Wynne	1-02-011	<i>Rock, Paper, Scissors: A Game Of Chance?</i> - <b>Zachary Tanner</b> - 8th grade - Summit Middle School -- Boulder - Ms. Haydee Phelps
1-02-005	<i>Is Seeing Really Believing</i> - <b>Johanna Hayes</b> - 6th grade - Eagle Country Charter Academy -- Edwards - Mr. Michael Hayes	1-02-012	<i>Can You Taste The Difference?</i> - <b>Kathryn Wied</b> - 7th grade - Canon City Middle School - Canon City - Mrs. Glenda Macklin
1-02-006	<i>Does Music Affect Test Scores?</i> - <b>Dante Carter</b> - 6th grade - North Middle School - Colorado Springs - Ms. Caitlin Holt	1-02-013	<i>Making Cents Of H2O</i> - <b>Codi Inloes-Williams</b> - 6th grade - Timberview Middle School - Colorado Springs - Mrs. Amy Murrell
1-02-007	<i>The Eyes Have It: Do Your Eyes Show Your Personality?</i> - <b>Dirk Marshall</b> - 7th grade - Cherry Creek Challenge School -- Denver - Mr. John Wiley	1-02-014	<i>Reading In Colors</i> - <b>Lizette van Zyl</b> - 8th grade - Boltz Junior High School - Fort Collins - Mrs. Kathleen Morris
		1-02-301	<i>Test Your Speed</i> - <b>Stephanie Lucero &amp; Kayla Aragon</b> - 8th grade - Goodnight Elementary School -- Pueblo - Mr. George Guddendorf

# CSEF Junior Division Finalists

## Chemistry

1-03-001	<i>The Effects Of Heat On Fabrics</i> - <b>Samantha O'Leary</b> - 7th grade - Ward Middle School - Ordway - Ms. Jennifer Gray	1-03-014	<i>Got 'Acidity' Milk?</i> - <b>Melissa Poet</b> - 7th grade - Arriba-Flagler Public School - Flagler - Mr. Allen Bell
1-03-002	<i>Is Your Kindergartener's Classroom Safe?</i> - <b>Nikki Buhrdorf</b> - 8th grade - Hotchkiss K-8 School - Hotchkiss - Ms. Kathy Gates	1-03-015	<i>Oil Inferno</i> - <b>Juliann Richardson</b> - 8th grade - Good Shepherd Catholic School - Denver - Mr. John Richardson
1-03-003	<i>Digestion</i> - <b>Amity Dover</b> - 8th grade - Pueblo School for Arts and Sciences - Pueblo - Ms. Lori Leyh	1-03-016	<i>Oucker Up To Poison</i> - <b>Tess Ringlein</b> - 6th grade - Yuma Middle School - Yuma - Mrs. Kimberly Hielscher
1-03-004	<i>Up In Flames</i> - <b>Tanner Dunivan</b> - 7th grade - Walsh Jr/Sr High School - Walsh - Mr. Vic Dunivan	1-03-017	<i>Hence: It's Dense!</i> - <b>Derek Taylor</b> - 6th grade - Canon City Middle School - Canon City - Mrs. Glenda Macklin
1-03-005	<i>Soap Wars: Soft Water vs Hard Water</i> - <b>Shea Johnson</b> - 8th grade - Kim School - Kim - Mrs. Kay Lynn Johnson	1-03-018	<i>Difference In Diesel</i> - <b>Kole Van Treese</b> - 7th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson
1-03-006	<i>Effects Of Acid Rain On Structural Materials</i> - <b>Kassidy Knutson</b> - 7th grade - Wiggins Jr/Sr High School - Wiggins - Mr. Jordan Sonnenberg	1-03-019	<i>E85 At Home</i> - <b>Logan Willbanks</b> - 7th grade - Dolores Middle School - Dolores - Mr. David Hopcia
1-03-007	<i>Homegrown Biodiesel The Way To Go?</i> - <b>Justin Lewton</b> - 8th grade - Weld Central Junior High School - Keenesburg - Mrs. Robin Johnson	1-03-020	<i>pH Of H<sub>2</sub>O</i> - <b>Maya Freismuth</b> - 7th grade - Orchard Mesa Middle School - Grand Junction - Mr. Jinx Richards
1-03-008	<i>Is Clean Really Clean?</i> - <b>Serenity Masterson</b> - 7th grade - Arriba-Flagler Public School - Flagler - Mr. Allen Bell	1-03-301	<i>Fruity Lotion</i> - <b>Erica Blocker &amp; Sabrina Beckner</b> - 7th grade - Pueblo School for Arts and Sciences - Pueblo - Ms. Lori Leyh
1-03-009	<i>Which Apple A Day Keeps The Doctor Away?</i> - <b>Lynde McCaleb</b> - 6th grade - Arickaree School - Anton - Mr. Don Myers	1-03-302	<i>Fruit Power</i> - <b>Domonica Cruz &amp; Nicole Osmundson</b> - 6th grade - Canon City Middle School - Canon City - Mrs. Glenda Macklin
1-03-010	<i>New and More Energy Efficient Ways to Cure Polymer Clay</i> - <b>Iris Belensky</b> - 8th grade - Summit Middle School - Boulder - Ms. Haydee Phelps	1-03-303	<i>Which Temperature Do Glow Sticks Work Best?</i> - <b>Sara Cabbage, Brittany Haugen &amp; Tori Carnahan</b> - 8th grade - Canon City Middle School - Canon City - Mrs. Glenda Macklin
1-03-011	<i>Dissolution Rate of Ibuprofen Pills</i> - <b>Kaylean Orlowski</b> - 7th grade - Springfield Jr/Sr High School - Springfield - Ms. Kimberly Eskew	1-03-304	<i>Rust Removing Remedies</i> - <b>Zachary Wagner &amp; Drake Brandon</b> - 8th grade - Otis Jr/Sr High School - Otis - Mr. Karl Donnelson
1-03-012	<i>Oxidation Of Metals</i> - <b>Weston Patton</b> - 7th grade - Genoa-Hugo School - Hugo - Mr. Will Mallory	1-03-305	<i>Fill Up Not Freeze Up</i> - <b>Claire Derr &amp; Allison Gudvangen</b> - 7th grade - North Middle School - Colorado Springs - Mr. Lee Derr
1-03-013	<i>Going Bananas: Does The Vitamin C Concentration Of A Banana Vary With Ripeness?</i> - <b>Kelsey Piper</b> - 8th grade - Summit Middle School - Boulder - Ms. Haydee Phelps		

## Earth & Space Science

1-04-001	<i>ARCHES: Solid Rock To Windows In Time</i> - <b>Isaac Beverlin</b> - 6th grade - Dolores Middle School - Dolores - Mrs. Katherine Ott	1-04-005	<i>Potato Pedology: A Soil Study Of Two Different San Luis Valley Growing Horizons</i> - <b>Brisha Wakasugi</b> - 7th grade - Sierra Grande Jr/Sr High School - Blanca - Mrs. Judy Lopez
1-04-002	<i>Crystals</i> - <b>Sara Cunningham</b> - 6th grade - Our Lady of Fatima School - Lakewood - Mr. Scott Cunningham	1-04-006	<i>Effectiveness Of Various Ground Covers On Soil Erosion On A 32.5% Grade</i> - <b>Carl Scheevel</b> - 7th grade - East Middle School - Grand Junction - Mrs. Mary Scheevel
1-04-003	<i>Craters &amp; Meteors: How A Meteor's Weight Affects The Crater</i> - <b>Antonio Huizar</b> - 6th grade - Quest Academy - Dacono - Ms. Irma Huizar	1-04-301	<i>Do Your Rocks Need Sunscreen?</i> - <b>Jennifer Bushnell &amp; Kelsey Rohlfing</b> - 7th grade - Irving - Middle School - Colorado Springs - Mr. Jim Bushnell
1-04-004	<i>Humidity vs Hair</i> - <b>Courtney Meredith</b> - 8th grade - Buchanan Middle School - Wray - Mr. Eric Oestman		

# CSEF Junior Division Finalists

## Energy & Transportation

- |          |  |          |   |
|----------|--|----------|---|
| 1-05-001 | <i>Energy With A Spin - Alexandria Farnsworth - 8th grade - Paonia Jr/Sr High School - Paonia - Mr. William Gladbach</i>   | 1-05-006 | <i>The Green Voltage Generator - Eric Hampton - 6th grade - Bromley East Charter School – Brighton - Mr. Michael Hampton</i>                                      |
| 1-05-002 | <i>Are Biodiesel Emissions Safer Than Commercial Diesel Emissions? - Sara Volz - 7th grade - Cheyenne Mountain Charter Academy - Colorado Springs - Mr. David Volz</i>                 | 1-05-007 | <i>Wind Energy Or Coal Energy: Which Is Better For Lamar? - Ratna Malkan - 8th grade - Lamar Middle School – Lamar - Ms. Robin Staker</i>                         |
| 1-05-003 | <i>Lend Me Your Ears! - Jessika Gill - 7th grade - Merino Jr/Sr High School – Merino - Mrs. Carlye Armstrong</i>   | 1-05-008 | <i>Sunny Blow! A Comparative Research Between Wind And Solar Energies - Paxton Becker - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong</i> |
| 1-05-004 | <i>It's All How You Spin It: Wind Generator Efficiency Based On Propeller Size And Shape - Kyle Harlow - 7th grade - Mountain View Core Knowledge - Canon City - Dr. Valerie Green</i> | 1-05-009 | <i>The Effect Of Fermentation On Fruit - Katie Weiss - 8th grade - The Ricks Center for Gifted and Talented – Denver - Ms. Alison Kapsalis</i>                    |
| 1-05-005 | <i>Blowin'Æ In The Wind - Laura Mummery - 6th grade - St Columba Catholic School – Durango - Mrs. Mary Mummery</i>   | 1-05-010 | <i>Burn It Up - Measuring Fuel Efficiency In Manure - Kayla Boren - 6th grade - St. Columba School – Durango - Mr. Victor Boren</i>                               |

## Engineering

- |          |   |          |  |
|----------|---|----------|--|
| 1-06-001 | <i>Water Purification Off The Grid - Zane Willburn - 7th grade - Mancos Middle School – Mancos - Mr. Joe Willburn</i>                   | 1-06-008 | <i>Optimal Lift: Testing Sailplane Wing Designs - Colin Mummery - 8th grade - St Columba Catholic School – Durango - Mr. John Mummery</i>                |
| 1-06-002 | <i>Insulation Situation - Michelle Hoffmann - 7th grade - Weld Central Junior High School - Keenesburg - Ms. Kendra Brewster</i>        | 1-06-009 | <i>Determing Position By Interfacing A GPS To The Web - Garrett Glissmann - 8th grade - Peak to Peak Charter School – Lafayette - Mr. Adam DiGiacomo</i> |
| 1-06-003 | <i>Fruits And Vegetables: Electric Conductivity - Nadeen Ibrahim - 7th grade - Weldon Valley School – Weldon - Mr. Brian Rosenbrock</i> | 1-06-010 | <i>Fling, Flang, Flung - Michael Shelinbarger - 8th grade - Pueblo School for Arts and Sciences - Pueblo - Ms. Lori Leyh</i>                             |
| 1-06-004 | <i>Wow! Look At Those Rockets Fly! - Cole Johnson - 6th grade - Timberview Middle School - Colorado Springs - Mrs. Amy Murrell</i>      | 1-06-011 | <i>Magnetic Levitation - Joshua Steklac - 8th grade - Mackintosh Academy – Littleton - Mrs. Sharon Muench</i>  |
| 1-06-005 | <i>The Aerodynamics Of Paper Airplanes - Cade Carlson - 6th grade - Wiggins Jr/Sr High School – Wiggins - Mr. Jordan Sonnenberg</i>     | 1-06-012 | <i>Defeating Passive Infrared Sensors - Hannah Wardell - 7th grade - Irving Middle School - Colorado Springs - Mr. Earl Wardell</i>                      |
| 1-06-006 | <i>Flight Of The Arrow - Kyle Mann - 8th grade - Otis Jr/Sr High School - Otis - Mr. Karl Donnelson</i>                                 | 1-06-013 | <i>Wing Designs: Who's At The Top? - Jeffrey King - 6th grade - Timberview Middle School - Colorado Springs - Mrs. Amy Murrell</i>                       |
| 1-06-007 | <i>The Exploration Of Hovercraft - Victoria Moore - 7th grade - Timberview Middle School - Colorado Springs - Mrs. Amy Murrell</i>      | 1-06-014 | <i>Investigating The Magnus Effect Phenomenon - Ken Garcia - 8th grade - Brush Middle School - Brush - Mr. David Miner</i>                               |

## Environmental Sciences

- |          |  |          |  |
|----------|--|----------|--|
| 1-07-001 | <i>GEYSER SPRING: A Further Characterization Of Colorado's Only Geyser - Rachel Beverlin - 8th grade - Dolores Middle School - Dolores - Mr. David Hopcia</i>      | 1-07-004 | <i>Directing The Wind - Jana Elrick - 8th grade - Arriba-Flagler Public School - Flagler - Mr. Brandon Borich</i>  |
| 1-07-002 | <i>The Effects Of Coal Bed Methane Produced Water - Casey Campbell - 7th grade - La Veta Jr/Sr High School - La Veta - Mrs. Patricia Keeling</i>                   | 1-07-005 | <i>Bio Of A Bio - Keagan Gonzales - 8th grade - Eads Middle School - Eads - Mr. Justin McCloud</i>   |
| 1-07-003 | <i>Using Evapotranspiration Covers To Reduce Groundwater Pollution - Courtlyn Carpenter - 7th grade - East Middle School - Grand Junction - Mr. Clay Carpenter</i> | 1-07-006 | <i>Grey Water To Great Water: The Scientific Study Of Filtration Type And Water Cleanliness - Kathryn Harhai - 6th grade - Stanley British Primary School - Denver - Mrs. Sara Stern</i> |

# CSEF Junior Division Finalists

## Environmental Sciences cont.

1-07-007	<i>Snowy Situation</i> - <b>Lindsey Harrison</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson	1-07-011	<i>A Light Delusion: The Effects Of Light Pollution On Algae</i> - <b>Liam Jasperse-Sjolander</b> - 8th grade - North Middle School - Colorado Springs - Mr. Greg Busby
1-07-008	<i>A Century In The Life Of Trees</i> - <b>Heather Hilson</b> - 8th grade - Summit Middle School - Boulder - Ms. Haydee Phelps	1-07-012	<i>Worms, Worms, Worms</i> - <b>Joel Lopez</b> - 7th grade - Woodlin School - Woodrow - Mrs. Jodie Romzek
1-07-009	<i>Is Your Water Glowing? Water Analysis Of Colorado</i> - <b>Chayenne Jackson</b> - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong	1-07-013	<i>Is AgriBlend The Answer?</i> - <b>Alexa Major</b> - 8th grade - Fowler Jr/Sr High School - Fowler - Dr. Pam Carothers
1-07-010	<i>Where Is The Pollution?</i> - <b>Emily Jacomet</b> - 8th grade - Blevins Junior High School - Fort Collins - Mrs. Barbara Jacomet	1-07-014	<i>Washing Water To Ta'nagiz</i> - <b>Emily Walck</b> - 7th grade - Cortez Middle School - Cortez - Ms. Elise Walck
		1-07-301	<i>The Healthiest Spirogyra</i> - <b>Matthew Mandelski &amp; Zofie Mandelski</b> - 7th grade - St. Columba School - Durango - Mr. Keith Mandelski

## Mathematics & Computer Sciences

1-08-001	<i>Yours, Mine, And Ours: A Basic Model Of The Spread Of Air Pollutants</i> - <b>Jessica Constant</b> - 7th grade - Saint Joseph Catholic School - Fort Collins - Mrs. Marianne Aiken	1-08-004	<i>The Power Within: Conventional vs Non-Conventional Cancer Treatment</i> - <b>Carlos Nunez</b> - 6th grade - La Veta Elementary School - La Veta - Mrs. Patricia Keeling
1-08-002	<i>Tic Tac Text</i> - <b>Matthew Persons</b> - 8th grade - Boltz Junior High School - Fort Collins - Mrs. Kathleen Morris	1-08-005	<i>The Statistics On Statistics</i> - <b>Shannon Craig</b> - 7th grade - West Jefferson Middle School - Conifer - Mrs. Mary Pond
1-08-003	<i>Co-operating Robots: Behavior-Based Robots Using Subsumption Architecture</i> - <b>Rahul Shankar</b> - 8th grade - Mountain Ridge Middle School - Colorado Springs - Mrs. Regina Miller	1-08-006	<i>Golden Music: Phi And The Musical Arts</i> - <b>Tucker Leavitt</b> - 7th grade - Miller Middle School - Durango - Mr. Greg Janus

## Medicine & Health

1-09-001	<i>The Oatmeal Effect</i> - <b>Anne Bennett</b> - 7th grade - Pueblo School for Arts and Sciences - Pueblo - Ms. Lori Leyh	1-09-008	<i>The Effects Of Exercise On Memory</i> - <b>Corissa Kiepke</b> - 6th grade - North Middle School - Greg Busby
1-09-002	<i>Can You Hear Me, Now?</i> - <b>Katie Braun</b> - 8th grade - Boltz Junior High School - Fort Collins - Mrs. Kathleen Morris	1-09-009	<i>Using Artificial Cells To Solve Lactose Intolerance: A Theoretical Approach</i> - <b>Tae Kim</b> - 8th grade - Campus Middle School - Greenwood Village - Ms. Natalie Peitsmeyer
1-09-003	<i>Chewing Gum For Brain Activity</i> - <b>Bruno Mediate</b> - The Classical Academy - Colorado Springs - Mr. Phil Eaton	1-09-010	<i>Got Protein?</i> - <b>Kaley Kukus</b> - 7th grade - Woodlin School - Woodrow - Mrs. Jodie Romzek
1-09-004	<i>Got Germs?</i> - <b>Tanner Elliott</b> - 8th grade - Cortez Middle School - Cortez - Mrs. Patti Elliott	1-09-011	<i>The Effects of Over the Counter Medication on Fruit Flies</i> - <b>Amanda Coopersmith</b> - 7th grade - Cherry Creek Challenge School - Denver - Mr. John Wiley
1-09-005	<i>How High Can She Go? An Assessment Of Vertical Jumping Ability</i> - <b>Claire Felix</b> - 7th grade - The Classical Academy - Colorado Springs - Mr. Phil Eaton	1-09-012	<i>Diabetes The Sweet Disease</i> - <b>Devon Montague</b> - 7th grade - Centauri Middle School - La Jara - Mrs. Mindy Montague
1-09-006	<i>The Effects Of Bovine Colostrum On Breast Cancer</i> - <b>Molly Graber</b> - 8th grade - North Middle School - Colorado Springs - Mr. Greg Busby	1-09-013	<i>Starch In Steak</i> - <b>Clay Patton</b> - 7th grade - Genoa-Hugo School - Hugo - Mr. Will Mallory
1-09-007	<i>A Wormy Situation: The Effect Of Diet Pills On Caenorhabditis elegans</i> - <b>Sydney Hooton</b> - 7th - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong	1-09-014	<i>Do Household Soaps And Hand Sanitizers Really Work?</i> - <b>Cora Ravenkamp</b> - 6th grade - Genoa-Hugo School - Hugo - Mr. Will Mallory

# CSEF Junior Division Finalists

## Medicine & Health cont.

- |  |   |
|--|---|
| <p>1-09-015 <i>Music To Your Ears: A Study Of Headphone Types, dB Levels, And The Risk Of Potential Hearing Loss</i> - <b>Adam Warren</b> - 8th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir</p> <p>1-09-016 <i>Mudworms On Dex: The Effect Of Dexamethasone On The Healing Process Of Lumbriculus variegatus</i> - <b>J D Wegele</b> - 7th grade - Merino Jr/Sr High School – Merino - Mrs. Carlye Armstrong</p> <p>1-09-017 <i>Are Your Teeth In Danger?</i> - <b>Amber Wilson</b> - 8th grade - Lamar Middle School – Lamar - Ms. Robin Staker</p> | <p>1-09-018 <i>The Nose Knows: The Incidence And Susceptibility Of MRSA</i> - <b>Tanner Zimmerman</b> - 7th grade - St. John Middle School – Parachute - Dr. Lance Barker</p> <p>1-09-301 <i>Tooth Trouble</i> - <b>Megan Kavalec &amp; Amy Solis</b> - 6th grade - Canon City Middle School - Canon City - Mrs. Glenda Macklin</p> |
|--|---|

## Microbiology

- |  |   |
|--|---|
| <p>1-10-001 <i>Effectiveness Of Sanitizing Wipes</i> - <b>Maggie Bachrodt</b> - 8th grade - West Jefferson Middle School - Conifer - Mrs. Mary Pond</p> <p>1-10-002 <i>Does Temperature Effect The Growth Of Mold On Bread?</i> - <b>Trent Capraro</b> - 8th grade - Genoa-Hugo School – Hugo - Mr. Will Mallory</p> <p>1-10-003 <i>Caution Spice At Work</i> – <b>Ellery Goeltzenleuchter</b> - 8th grade - Blevins Junior High School - Fort Collins - Ms. Kerri South</p> <p>1-10-004 <i>The Effect Of Temperature On Bacteria Growth</i> - <b>Dakota Jackson</b> - 7th grade - Russell Middle School - Colorado Springs - Mr. Walter Pollack</p> <p>1-10-005 <i>What's In Your Wallet?</i> - <b>Kelli Lynch</b> - 8th grade - Blevins Junior High School - Ft. Collins - Mr. Peter Justice</p> <p>1-10-006 <i>Purell, Does It Really Kill 99.99% Bacteria?</i> - <b>Layne McCaleb</b> - 6th grade - Arickaree School – Anton - Mr. Don Myers</p> | <p>1-10-007 <i>Microbes Make Electricity</i> - <b>Stephen O'Connor-Seville</b> - 8th grade - Dolores Middle School – Dolores - Mr. David Hopcia</p> <p>1-10-008 <i>Colloidal Silver - Nature's Cure Or Fool's Gold?</i> - <b>Sarah Oldach</b> - 7th grade - The Classical Academy - Colorado Springs - Mr. Phil Eaton</p> <p>1-10-009 <i>Bacteria Is It What's For Dinner? Bacterial Growth On Grocery Store Produce</i> – <b>Alexis Shinn</b> - 7th grade - Merino Jr/Sr High School – Merino - Mrs. Carlye Armstrong</p> <p>1-10-010 <i>What Are The Effects of Certain Cleaners On Bacteria?</i> - <b>Austin Titus</b> - 8th grade - Buchanan Middle School – Wray - Mr. Eric Oestman</p> <p>1-10-301 <i>Cash, Credit, Coins</i> - <b>Kendra Gomez &amp; Alixx Vigil</b> - 7th grade - Pueblo School for Arts and Sciences – Pueblo - Ms. Lori Leyh</p> <p>1-10-302 <i>Who Would You Rather Kiss?</i> - <b>Loren Koszowski &amp; Anna Mellman</b> - 7th grade - Stanley British Primary School – Denver - Mrs. Heather Grasser</p> |
|--|---|

## Physics

- |   |  |
|---|--|
| <p>1-11-001 <i>Twist But Don't Shout</i> - <b>Layne Barrett</b> – 8th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir</p> <p>1-11-002 <i>The Perfect Turn</i> - <b>Erin Biringen</b> - 8th grade - Summit Middle School - Boulder - Ms. Haydee Phelps</p> <p>1-11-003 <i>Citrus Batteries</i> - <b>Ian Clark</b> - 7th grade - Frontier Academy – Greeley - Ms. Annie Cline</p> <p>1-11-004 <i>Photon's Affect On Space Time Curvature</i> - <b>Jesse Eads</b> - 7th grade - Dolores Middle School - Dolores - Mr. David Hopcia</p> <p>1-11-005 <i>Vary The Viscosities Of Crude Oil</i> - <b>Dayton Fisher</b> - 6th grade - Yuma Middle School - Yuma - Mrs. Kimberly Hielscher</p> <p>1-11-006 <i>The Science Behind CSI: Blood Drop Patterns And Angle Of Impact</i> - <b>Rachael Gessert</b> - 6th grade - West Jefferson Middle School – Conifer - Mrs. Mary Pond</p> | <p>1-11-007 <i>Can You Hear Me Now? The Effect Of Perimeter Boards On Sound</i> - <b>Ellie Gossage</b> - 7th grade - East Middle School - Grand Junction - Mrs. Michelle Gossage</p> <p>1-11-008 <i>Materials That Can Shield Sound</i> - <b>Andrew Haines</b> - 6th grade - North Middle School - Colorado Springs - Ms. Caitlin Holt</p> <p>1-11-009 <i>Measuring The Speed Of Light Through Jell-O</i> - <b>Rex Kennedy</b> - 8th grade - Weld Central Junior High School - Keenesburg - Mrs. Robin Johnson</p> <p>1-11-010 <i>How Well "Suited" Are You For Space?: A Comparison Of Materials For Insulation</i> - <b>Julianna Manfredo</b> - 6th grade - Harrison Elementary School - Canon City - Ms. Terri Wrona</p> <p>1-11-011 <i>Electro-Flow</i> - <b>Aidan Mike</b> - 6th grade - North Middle School - Colorado Springs - Ms. Caitlin Holt</p> <p>1-11-012 <i>How Heat Transfers</i> - <b>Ashley Motley</b> - 6th grade - Wiggins Jr/Sr High School - Wiggins - Mr. Jordan Sonnenberg</p> |
|---|--|

## CSEF Junior Division Finalists

### Physics cont.

1-11-013	<i>Hail! No!</i> - <b>Lorne Muir II</b> - 8th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir	1-11-017	<i>Electromagnets</i> - <b>Kayleigh Santala</b> - 7th grade - Arriba-Flagler Public School - Flagler - Mr. Allen Bell
1-11-014	<i>Get The Point?</i> - <b>Clay Mullins</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson	1-11-018	<i>Reflection Of Road Signs</i> - <b>Makayla Brouwer</b> - 8th grade - Arriba-Flagler Public School - Flagler - Mr. Marion Brouwer
1-11-015	<i>Heat Wave</i> - <b>Jayce Negley</b> - 8th grade - Eads Middle School - Eads - Mr. Justin McLoud	1-11-301	<i>Need For Speed</i> - <b>Drew Auburger &amp; Collin Lofflin</b> - 7th grade - Springfield Jr/Sr High School - Springfield - Ms. Debbie Auburger
1-11-016	<i>Wingin' It Density Altitude's Effect On Lift</i> - <b>Emily Sandner</b> - 7th grade - St. Columba Middle School - Durango - Mr. Steven Sandner		

### Plant Sciences

1-12-001	<i>Magnetized Plants</i> - <b>Nolan Anderson</b> - 8th grade - Lamar Middle School - Lamar - Ms. Robin Staker	1-12-012	<i>How To Stop Potatoes From Greening</i> - <b>Ryan Mix</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson
1-12-002	<i>How Do Oil Densities Differ Between The Seeds Of Native Plants? Phase II</i> - <b>Jordyn Bannon</b> - 7th grade - Branson School - Branson - Mrs. Diane Brown	1-12-013	<i>More CO2 Means What For Plant Growth?</i> - <b>Jeanette Murnane</b> - 8th grade - Sabin Middle School - Colorado Springs - Mr. Christopher Cruz
1-12-003	<i>Plants On Roids</i> - <b>Falk Boyle</b> - 8th grade - Good Shepherd School - Denver - Dr. Adrienne Stewart	1-12-014	<i>Is The "Grass Greener" On The Other Side</i> - <b>Collin Nordhus</b> - 7th grade - Bromley East Charter School - Brighton - Mr. Aaron Tate
1-12-004	<i>Lettuce Taste The Difference</i> - <b>Madison Dewey</b> - 6th grade - North Middle School - Colorado Springs - Ms. Caitlin Holt	1-12-015	<i>Hydroponics: The Effect Of Different Minerals On <i>Tagetes minima</i> When Grown Hydroponically</i> - <b>Trevor Rinaldo</b> - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong
1-12-005	<i>Fungus Or Fertilizer?</i> - <b>Devon Enke</b> - 6th grade - La Veta Elementary School - La Veta - Mrs. Patricia Keeling	1-12-016	<i>The Best Way To Grow Tomato And Pepper Plants: Hydroponics With River Water Or Tap Water</i> - <b>Elliott Saslow</b> - 7th grade - Colorado Virtual Academy (Home School) - Durango - Dr. Jesse Hutt
1-12-006	<i>Possible Harms Of pH</i> - <b>Ryan Ernst</b> - 7th grade - Wiggins Jr/Sr High School - Wiggins - Mr. Jordan Sonnenberg	1-12-017	<i>Got Minerals?</i> - <b>Kent Schaller</b> - 7th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir
1-12-007	<i>A Cup Of Tea Please Brewing The Perfect Tea For Your Plant</i> - <b>Haley Hervert</b> - 6th grade - Eagle County Charter Academy - Edwards - Mrs. Susie Hervert	1-12-018	<i>Affect Of Salinity On Plant Germination</i> - <b>Shelby Teague</b> - 6th grade - Wiggins Jr/Sr High School - Wiggins - Mr. Jordan Sonnenberg
1-12-009	<i>Size Matters: A Statistical Look At Tuber Grade Change And Its Effects</i> - <b>Jacob Kunugi</b> - 7th grade - Sierra Grande Jr/Sr High School - Blanca - Mrs. Judy Lopez	1-12-019	<i>To Rot Or Not Potato Susceptibility To Pink Rot, <i>Phytophthora erythroseptica</i></i> <b>K C Zinn</b> - 8th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Terri Paulson
1-12-010	<i>Goodness Gracious Great Balls Of Manure</i> - <b>Theo Kurtzer</b> - 7th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong	1-12-301	<i>The Effects On Plants When Treated With Positive And Negative Attention</i> - <b>Daniel Wiener &amp; Neil Roper</b> - 8th grade - Hill Campus of Arts and Sciences - Denver - Ms. Elizabeth Seligman
1-12-011	<i>Too Hot Or Not- The Effects Of Global Warming On Germination &amp; Growth Of Flower, Vegetable, Weed Seeds</i> - <b>Haley Matteson</b> - 6th grade - North Middle School - Colorado Springs - Mr. Charles Matteson		



## CSEF Senior Division Finalists

### Animal Sciences

- |   |  |
|---|--|
| <p>2-01-001 <i>The Onion Thrip Trick</i> - <b>Lindsey Denison</b> - 11th grade - Paonia Jr/Sr High School - Paonia - Ms. Mary Groome</p>  | <p>2-01-003 <i>Classification And Evolutionary Biology Of Solifugids By Rostrum</i> - <b>Connie Liu</b> - 9th grade - Cherry Creek High School - Greenwood Village - Ms. Rae Lynn Platt</p>  |
| <p>2-01-002 <i>Comparison Of Mountain Pine Beetle In Colorado And Surrounding States</i> - <b>Brandy Haller</b> - 10<sup>th</sup> grade - Woodlin School - Woodrow - Dr. William Black IV</p> | <p>2-01-301 <i>Mudslide Effect On Macroinvertebrate Diversity</i> - <b>Tyler Wilson</b> - 11th grade, <b>Nuala Del Piccolo</b> - 12th grade &amp; <b>Chiara Del Piccolo</b> - 10th grade - Basalt High School - Basalt - Mr. Mark Duff</p> |

### Behavioral & Social Sciences

- |  |   |
|--|---|
| <p>2-02-001 <i>Is It Safe To Dish And Drive? The Effect Of Cell Phone Usage On Reaction Time</i> - <b>Amelia Eads</b> - 9th grade - Blevins Junior High School - Fort Collins - Mrs. Susan Eads</p>  | <p>2-02-005 <i>Brainwave Coherence: Developing The Full Potential Of The Brain</i> - <b>Leela Khanna</b> - 10th grade- Palmer High School - Colorado Springs - Mrs. Nancy Hampson</p> |
| <p>2-02-002 <i>Familial Predetermination</i> - <b>Samantha Ensz</b> - 9th grade - Hi-Plains High School - Siebert - Ms. Ashley Pollard</p>   | <p>2-02-006 <i>The Task At Hand: Is Multitasking Affecting Our Health And Productivity?</i> - <b>Allie Martin</b> - 9th grade - Woodlin School - Woodrow - Dr. Marie Legare</p>       |
| <p>2-02-003 <i>Hemispheric Lateralization In Auditory Cortex For Words Versus Partial Speech Sounds</i> - <b>Samuel Galler</b> - 12th grade - Boulder High School – Boulder - Dr. Phillip Gilley</p> | <p>2-02-007 <i>Insight In Sight, This Art Is All Right</i> – <b>Sarah Oden</b> - 9th grade - Monte Vista High School - Monte Vista - Mr. Gary Wilkinson</p>                           |
| <p>2-02-004 <i>Characteristics Common To Homeless Youth Pursuing The GED Certification</i> - <b>Rachel Kelley</b> - 12th grade - Cherry Creek High School - Greenwood Village - Dr. T J Donahue</p>  | <p>2-02-008 <i>Reading: Beyond Black &amp; White</i> - <b>Kenzie Witt</b> - 10th grade - Arriba-Flagler Public School - Flagler - Mr. Brandon Borich</p>                              |
|  | <p>2-02-301 <i>Brainwashed</i> - <b>Kelsey Burns &amp; Rachel Strauch</b> - 11th grade - Arriba-Flagler Public School - Flagler - Mr. Brandon Borich</p>                              |

### Chemistry

- |   |   |
|---|---|
| <p>2-03-001 <i>Chemical Comparison Of The Relative Efficiency Of The 2-Hydroxymethylphenol Synthesis Of Aspirin</i> - <b>Bradley Falk</b> - 12th grade - Cherry Creek High School - Greenwood Village - Ms. Jessica Olsen</p> | <p>2-03-005 <i>Color To Dye For</i> - <b>Shelby Messer</b> - 10th grade - Genoa-Hugo School - Hugo - Mrs. Marguerite Yowell</p>   |
| <p>2-03-002 <i>Synthetic vs. Natural Vitamin E: Optical Isomerism, Synergy And Antioxidant Testing Problems</i> - <b>Lisa Grossman</b> - 12th grade - Palmer High School - Colorado Springs - Mrs. Martha Alvarez</p>         | <p>2-03-006 <i>A Well Spun Yarn</i> - <b>Alana Wilbee</b> - 9th grade - Palmer High School - Colorado Springs - Mr. Warren Wilbee</p>   |
| <p>2-03-003 <i>The Mechanisms And Actions Of Parthenolide On Platelet 5-HT Secretion In Vitro</i> - <b>Sarah Guthrie</b> - 11th grade - Boulder High School - Boulder - Mr. Andrew Evans</p>                                  | <p>2-03-007 <i>Charcoal And Methanol Production By The Destructive Distillation Of Cellulosic Waste</i> - <b>David Wu</b> - 11th grade - Cherry Creek High School - Greenwood Village - Ms. Jessica Olsen</p> |
| <p>2-03-004 <i>Thermite... Might Not</i> - <b>Jake McHargue</b> - 9th grade - Lake County High School - Leadville - Mrs. Laurel McHargue</p>  | <p>2-03-008 <i>The Wonder Drug (A Chemical Analysis Of Analgesics To Detect Aspirin)</i> - <b>Travis Zuniga</b> - 9th grade - South High School - Pueblo - Mrs. Laurice Lopez-Cepero</p>                      |

### Earth Science

- |   |   |
|---|---|
| <p>2-04-001 <i>S.O.S. 2 - Save Our Soil, Phase Two</i> – <b>Tawney Bleak</b> - 9th grade - Otis Jr/Sr High School – Otis - Mr. Karl Donnelson</p>   | <p>2-04-003 <i>Caution: Urbanization May Be Hot!</i> - <b>Christopher Krause</b> - 10th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir</p> |
| <p>2-04-002 <i>Analyzing Arctic Solar Flux and Ice Extent Loss Projections</i> - <b>Gwyneth Glissmann</b> - 11th grade - Peak to Peak Charter School – Lafayette - Mr. Adam DiGiacomo</p> | <p>2-04-004 <i>Just Passing Through</i> - <b>Bryant Elrick</b> - 11th grade - Arriba-Flagler Public School - Flagler - Mr. Brandon Borich</p>                   |

# CSEF Senior Division Finalists

## Energy & Transportation

- |          |  |          |  |
|----------|--|----------|--|
| 2-05-001 | <i>What To Use When Fossil Fuels Are Gone</i> - <b>Kurtis Ashmore</b> - 10th grade - Genoa-Hugo School – Hugo - Mrs. Marguerite Yowell   | 2-05-005 | <i>Regenerative Diesel Fuel Production Utilizing Vegetable Oil And Catalytic Hydrocracking</i> - <b>Andrew West</b> - 12th grade - Conifer High School - Conifer - Mr. Ronald West |
| 2-05-002 | <i>Hydrogen Production, Could It Be Cheap?</i> - <b>Tucker Dunivan</b> - 12th grade - Walsh Jr/Sr High School – Walsh - Mr. Vic Dunivan  | 2-05-006 | <i>Hydrogen: It's All Down Hill</i> - <b>Christy Farnsworth</b> - 10th grade - Paonia Jr/Sr High School - Paonia - Mr. William Gladbach  |
| 2-05-003 | <i>Energy Content In Different Biodiesel</i> - <b>Darla Rosenbrock</b> - 10th grade - Brush High School – Brush - Mr. Brian Rosenbrock   | 2-05-007 | <i>Solar Powered Sand Beds And Other Heat Transfer Sources</i> - <b>Joline Lobato</b> - 12th grade - Antonito High School – Antonito - Mr. Diego Martinez                          |
| 2-05-004 | <i>Testing The Effects Of Gasoline, E-85 Gasoline Mix, And 2,5-Dimethylfuran On Saccharomyces cerevisia</i> - <b>Max Krakauer</b> - 12th grade - Palmer High School - Colorado Springs - Mrs. Martha Alvarez |          |  |

## Engineering

- |          |   |          |   |
|----------|---|----------|---|
| 2-06-001 | <i>Modeling Salamander Mechanics</i> - <b>Cole Bostrom</b> - 12th grade - Brush High School - Brush - Mr. David Miner   | 2-06-008 | <i>Creating A Quantum Optical Source Using Laser Pointers And Parametric Down Conversion</i> - <b>Karthik Kumar-Rao</b> - 12th grade - Fairview High School – Boulder - Dr. Alan Mickelson  |
| 2-06-002 | <i>Weather Or Knot: The Effects Of Environment And Exposure On High Strength Safety Textile, Phase 2</i> - <b>J. Raleigh Burt</b> - 10th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Ronna Cochran | 2-06-009 | <i>Wireless Powercord</i> - <b>Nina Popovic-Basta</b> - 11th grade - Fairview High School - Boulder - Dr. Zorana Popovic  |
| 2-06-003 | <i>Plasma Propulsion</i> - <b>Jesse Ellison</b> - 10th grade - Bayfield High School – Bayfield - Mr. Carl Ellison   | 2-06-010 | <i>Catching Air With Hovercrafts</i> - <b>Kirbi Stum</b> - 10th grade - Plainview School - Sheridan Lake - Mrs. Brenda Fickenscher  |
| 2-06-004 | <i>Design And Construction Of A Flexible Robotic Device</i> - <b>Adam Goss</b> - 12th grade - Brush High School – Brush - Mr. David Miner   | 2-06-011 | <i>Constructing A Nanowire: Metallization Of Silver Onto DNA</i> - <b>Shannon Tsai</b> - 12th grade - Fairview High School - Boulder - Dr. Thomas Magneva   |
| 2-06-005 | <i>Rocketry: Does Size Matter</i> - <b>Cahl Johnson</b> - 9th grade - Kim School – Kim - Mrs. Kay Lynn Johnson  | 2-06-012 | <i>Electroquake</i> - <b>Terry Williams</b> - 10th grade - Palisade High School - Palisade - Mr. Patrick Steele   |
| 2-06-006 | <i>Piezo Generator</i> - <b>Dong-Kou Kim</b> - 11th grade - Fountain Valley School of Colorado - Colorado Springs - Mr. Jung-Young Park   | 2-06-301 | <i>Floating Shoes</i> - <b>Charlie Severance-Medaris, Jeremy Carlson &amp; Lindsey Pruett</b> - 11th grade - Canon City High School - Canon City - Mrs. - Carrie Trimble  |
| 2-06-007 | <i>The Dirt On Baseball: Engineering a Path Toward Standardizing The Baseball Mudding Process</i> - <b>Cameron Kruse</b> - 12th grade - Home School - Colorado Springs - Mr. Gary Kruse                       | 2-06-302 | <i>Imagineering With Audio Animatronics Puts Musical Note In Mannequins</i> - <b>Dylan Proietti</b> - 11 <sup>th</sup> grade & <b>Alexandra Proietti</b> - 9th grade - Grand Junction High School - Grand Junction - Mr. Doug Fledderjohn |

## Environmental Sciences

- |          |   |          |   |
|----------|---|----------|---|
| 2-07-001 | <i>Enemies Of The Environment : Estrogen Mimics</i> - <b>Ben Armstrong</b> - 10th grade - Monte Vista High School - Monte Vista - Mr. Gary Wilkinson                      | 2-07-006 | <i>Qualitative Assay Of Radionuclide Species In Ash From Coal Combustion</i> - <b>Jeffrey Hibbert</b> - 9 <sup>th</sup> grade - Lone Star School - Otis - Mrs. Dena Palser                  |
| 2-07-002 | <i>Grassland Regeneration After Juniper Tree Removal. Phase II</i> - <b>Jared Bannon</b> - 10th grade - Branson School - Branson - Mrs. Diane Brown                       | 2-07-007 | <i>Does The Color Of Sand Affect The Rate At Which Ice Melts?</i> - <b>Andrew Jones</b> - 11th grade - Canon City High School - Canon City - Mrs. Carrie Trimble                            |
| 2-07-003 | <i>Republican River Research Analyzing Aquatic Health</i> - <b>Brady Buck</b> - 11th grade - Wray Jr/Sr High School – Wray - Mr. James DePue                              | 2-07-008 | <i>C The Difference II: The Effect Of Ascorbic Acid On Zooxanthellal Density During Coral Bleaching</i> - <b>Caleb Kruse</b> - 10th grade - Home School - Colorado Springs - Mr. Gary Kruse |
| 2-07-004 | <i>Waste Antibiotics: Waste What?</i> - <b>Kalli Davis</b> - 9th grade - Blevins Junior High School - Fort Collins - Mr. Drew Davis                                       | 2-07-009 | <i>pH Levels Of Soil: A Study Of How pH Levels Affect Vegetation</i> - <b>Michael Lingus</b> - 9th grade - Branson School – Branson - Mrs. Diane Brown                                      |
| 2-07-005 | <i>The Effects Of Light Pollution On Observational Astronomy</i> - <b>Allison Ashburn</b> - 11th grade - Cherry Creek High School - Greenwood Village - Mr. Stephen Smith | 2-07-010 | <i>Killed By Campers: The Effect Of Dish Soap On Plants</i> - <b>Nicole Mayer</b> - 9th grade - Blevins Junior High School - Fort Collins - Mrs. Denise Mayer                               |

## CSEF Senior Division Finalists

### Environmental Sciences cont.

- |          |   |          |   |
|----------|---|----------|---|
| 2-07-011 | <i>Firewood Fiends: What's Lurking In Your Lumber?</i> - <b>Rachel Saccardi</b> - 12th grade - Broomfield High School - Broomfield - Ms. Karen Edgerly                              | 2-07-301 | <i>Algae Growth In River Water In Relation To 18-6-6 Fertilizer</i> - <b>Melodie Linville, Bryan Jacobson &amp; Kathryn Trask</b> - 11th grade - Palisade High School - Palisade - Mr. Patrick Steele |
| 2-07-012 | <i>The Effects Of Limestone On The Productivity Of Aquatic Invertebrates</i> - <b>Alex Schnaderbeck</b> - 12th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Ronna Cochran | 2-07-302 | <i>The Effects Of Elevated CO2 Levels On Plants In Different Environments</i> - <b>Molly Nelson &amp; Jason Carwin</b> - 9th grade - Fleming High School - Fleming - Mrs. Linda Niccoli               |
| 2-07-013 | <i>Effects Of Soil Type On Groundwater Contamination, Phase II</i> - <b>Grant Slinger</b> - 11th grade - Stratton High School - Stratton - Mrs. Linda Slinger                       | 2-07-303 | <i>The Removal Of Ferric Ions Utilizing Mollusk Shells</i> - <b>Olivia Pecukonis &amp; Laura Garcia</b> - 12th grade - Brush High School - Brush - Mr. David Miner                                    |
| 2-07-014 | <i>Bringing The Greenhouse Effect Down To Earth</i> - <b>Amber Neal</b> - 12th grade - Holly Jr/Sr High School - Holly - Mrs. Debbie Bland  | 2-07-304 | <i>Didymosphenia geminata: The Core Question</i> - <b>Danielle Pite, Kelly Lane &amp; Anna Hermann</b> - 12th grade - Boulder High School - Boulder - Dr. Sarah Spaulding                             |

### Mathematics & Computer Sciences

- |          |  |          |  |
|----------|--|----------|--|
| 2-08-001 | <i>Where'd That Fake Blood Come From?</i> - <b>Rhiannon Campbell</b> - 9th grade - Holly Jr/Sr High School - Holly - Mrs. Debbie Bland         | 2-08-006 | <i>The Probability Of Me</i> - <b>Chelsea Oden</b> - 12th grade - Monte Vista High School - Monte Vista - Mr. Gary Wilkinson                       |
| 2-08-002 | <i>Predicting Rockies Home Attendance</i> - <b>Alex Przedpelski</b> - 12th grade - Monarch High School - Louisville - Dr. Gary Andrew          | 2-08-007 | <i>Water Quality Based On Aquatic Animals</i> - <b>Anthony Cisneros</b> - 10th grade - Union Colony Preparatory School - Greeley - Mrs. Cathy Hoyt |
| 2-08-003 | <i>A Disease Model Of XDR-TB</i> - <b>Michael Crane</b> - 11th grade - Cherry Creek High School - Greenwood Village - Mr. Stephen Smith        | 2-08-008 | <i>Will Your Vote Count?</i> - <b>Tim Schneider</b> - 12th grade - Durango High School - Durango - Mr. Damian Nash                                 |
| 2-08-004 | <i>The Golden Ratio In Natural Adaptations</i> - <b>Bethany Dilda</b> - 10th grade - Branson School - Branson - Mrs. Diane Brown               | 2-08-301 | <i>Paycheck Performance</i> - <b>Nicole Reeves &amp; Ethan Merritt</b> - 11th grade - Wray Jr/Sr High School - Wray - Mr. James DePue              |
| 2-08-005 | <i>Mathematical Relations In The Formation Of An Icicle</i> - <b>Steven Mertens</b> - 12th grade - Brush High School - Brush - Mr. David Miner |          |  |

### Medicine & Health

- |          |   |          |  |
|----------|---|----------|--|
| 2-09-001 | <i>The Effects Of Bisphenol A From Polycarbonate Plastics On Lumbriculus variegatus</i> - <b>Chace Carver</b> - 11th grade - Merino Jr/Sr High School - Merino - Mrs. Carlye Armstrong                              | 2-09-007 | <i>Music Under Pressure: How Music Affects Blood Pressure</i> - <b>Jennifer Manfredo</b> - 10th grade - Canon City High School - Canon City - Mrs. Carrie Trimble                                |
| 2-09-002 | <i>Can Being A Health Nut Make You A Happy Nutt?</i> - <b>Steven Chastain</b> - 12th grade - Canon City High School - Canon City - Mrs. Carrie Trimble  | 2-09-008 | <i>BONE BACK: Statins Inhibit Osteosarcoma Cells' Growth And Metastasis</i> - <b>Kelsey Martin</b> - 10th grade - Woodlin School - Woodrow - Ms. Cathleen Martin                                 |
| 2-09-003 | <i>The Relationship Between Muscle Girth And Strength Gain: A Study On The Supraspinatus</i> - <b>David Gillis</b> - 11th grade - Cherry Creek High School - Greenwood Village - Mr. Stephen Smith                  | 2-09-009 | <i>Differential Expression Of BCL-2 Proteins In U2OS: A Look At What Really Kills Cancer</i> - <b>Rishi Rawat</b> - 12th grade - Boulder High School - Boulder - Dr. Joaquin Espinosa            |
| 2-09-004 | <i>What's The Pus? Preventing Staphylococcus Epidermidis Growth In Surgical Procedures</i> - <b>Jessie Haugen</b> - 11th grade - Sargent Jr/Sr High School - Monte Vista - Mrs. Ronna Cochran                       | 2-09-010 | <i>The Effect Of Chloroquine On Glioblastoma Multiforme</i> - <b>Susannah Rogers</b> - 9th grade - St. Mary's High School - Colorado Springs - Ms. Sandra Frander                                |
| 2-09-005 | <i>Bag It!</i> - <b>Alex Hetrick</b> - 10th grade - Walsh Jr/Sr High School - Walsh - Ms. Tammy Hetrick   | 2-09-011 | <i>Proteomic Characterization Of Extracellular Matrix Using Sonication-Assisted Digestion</i> - <b>Aarthi Shankar</b> - 10th grade - Rampart High School - Colorado Springs - Mrs. Regina Miller |
| 2-09-006 | <i>Brain Buster: The Tested Difference Between Male And Female Human Brains And Their Dominant Hemisphere</i> - <b>Dallas Jordan</b> - 10th grade - Springfield Jr/Sr High School - Springfield - Mrs. Kathy Jordan | 2-09-012 | <i>The Effects Of Anthocyanins On Planaria Regeneration</i> - <b>Katelyn Yowell</b> - 9th grade - Genoa-Hugo School - Hugo - Mrs. Marguerite Yowell  |

# CSEF Senior Division Finalists

## Medicine & Health cont.

- |          |   |          |   |
|----------|---|----------|---|
| 2-09-301 | <i>Comparing Heart Rates Of Athletes, Non-Athletes, And Smokers - <b>Nicole Dille &amp; Alicia Hayhurst</b> - 12th grade - Canon City High School – CanonCity - Ms. Linda Bennett</i> | 2-09-303 | <i>Determining A Non-Contact Method For Testing Skin Elasticity And Density - <b>Julia Buzan &amp; Joseph Smith</b> - 12th grade - Cherry Creek High School - Greenwood Village - Ms. Jessica Olsen</i> |
| 2-09-302 | <i>The Superbug: How It Spreads - <b>Tonya Pavlekno &amp; Laura Gudvangen</b> - 9th grade - Palmer High School - Colorado Springs - Dr. Carol Bach</i>                                | 2-09-304 | <i>Running Against The Temperature - <b>Meg Rudy &amp; Kylee Firlit</b> - 10th grade - Palmer High School - Colorado Springs - Mrs. Nancy Hampson</i>   |

## Microbiology

- |          |   |          |  |
|----------|---|----------|--|
| 2-10-001 | <i>Eye Can't See Clearly Now! A Comparison Study Of Contact Types With E. coli And S. epidermidis - <b>Erika Baker</b> - 10th grade - Merino Jr/Sr High School – Merino - Mrs. Carlye Armstrong</i>         | 2-10-004 | <i>HIV-1 And Endothelial Progenitor Cell Dysfunction - <b>Kelsey Moore</b> - 12th grade - Monarch High School - Louisville - Dr. Christopher DeSovza</i>                   |
| 2-10-002 | <i>Elimination Of E. coli Bacteria From The Standard Cotton Dishrag By Exposure To Microwaves - <b>Adwai Eswaran</b> - 10th grade - Cherry Creek High School - Greenwood Village - Ms. Rae Lynn Platt</i>   | 2-10-301 | <i>The Effects Of Cleaners On Bacteria - <b>Devon Cacy, Nathan Smith &amp; Manuel Crespin</b> - 12th grade - Canon City High School - Canon City - Mrs. Carrie Trimble</i> |
| 2-10-003 | <i>Ring Ring Bacteria Calling! How Much Bacteria Do You Think Is On Your Phone? Do You Dare Find Out? - <b>Krista Kinkel</b> - 10th grade - Arriba-Flagler Public School - Flagler - Mrs. Glenda Kinkel</i> |          |  |

## Physics

- |          |   |          |  |
|----------|---|----------|--|
| 2-11-001 | <i>Do You See What I Hear? - <b>Collin Dutro</b> - 11th grade - Genoa-Hugo School - Hugo - Mrs. Marguerite Yowell</i> | 2-11-003 | <i>Junkyard Multispectral Imaging - <b>Marlena Widman</b> - 10th grade - The Classical Academy - Colorado Springs - Mrs. Candus Muir</i>   |
| 2-11-002 | <i>Pig-In-A-Blanket - <b>Antonia Lira</b> - 10th grade - Lamar High School - Lamar - Ms. Robin Staker</i>             | 2-11-301 | <i>Polarimetry With Laser-Illuminated Digital Holography - <b>Sarah Rumbley &amp; Devyn Shafer</b> - 12th grade - Peak to Peak Charter School - Lafayette - Mr. Adam DiGiacomo</i> |

## Plant Sciences

- |          |   |          |   |
|----------|---|----------|---|
| 2-12-001 | <i>Bringing The Forest Back Into Balance: The Mountain Pine Beetle Infestation - <b>Sean Buck</b> - 11th grade - Cherry Creek High School - Greenwood Village - Dr. T J Donahue</i> | 2-12-008 | <i>Biodiesel From Sunflower Oil - An Analysis Of Soil Fertility And Sunflower Oil Content - <b>Jordan Lestina</b> - 9th grade - Dove Creek High School - Dove Creek - Mr. John Lestina</i>                                    |
| 2-12-002 | <i>A Biotechnology Revolution: An Analysis Of Genetically Modified DNA - <b>Suzanna Cure</b> - 12th grade - Wray Jr/Sr High School - Wray - Mr. James DePue</i>                     | 2-12-009 | <i>Power Of A Biological Control Agent: Compensation Suppression Of Convolvulus arvensis Implementing Host-Specific Aceria malherbae - <b>Kaitlyn Lingus</b> - 12th grade - Branson School – Branson - Mr. Mike Daugherty</i> |
| 2-12-003 | <i>The Role Of Insects As A Biological Control Of Locoweed - <b>Daniel Cade Daugherty</b> - 9th grade - Branson School - Branson - Mr. Mike Daugherty</i>                           | 2-12-010 | <i>Monarch Mitigation: What Soil Does Milkweed Germinate In The Best? - <b>Delani Miller</b> - 9th grade - Blevins Junior High School - Fort Collins - Mr. Michael Miller</i>   |
| 2-12-004 | <i>Mendelian Study Of Incomplete Dominance In Cosmos bipinnatus - <b>Andy Delany</b> - 11th grade - Basalt High School - Basalt - Mr. Mark Duff</i>                                 | 2-12-011 | <i>Healthy Potatoes: Searching For A-Amylase Inhibitor And RS In Cultivars To Lower The Glycemic Index - <b>Nataara Tamada</b> - 11th grade - Sierra Grande Jr/Sr High School - Blanca - Mrs. Judy Lopez</i>                  |
| 2-12-005 | <i>Growing Green - <b>Ryan Gregory</b> - 10th grade - Springfield Jr/Sr High School - Springfield - Mrs. Leigh Gregory</i>  | 2-12-012 | <i>Finding A Biomarker Of Physiological Ageing In Potato Seed Tubers - <b>Kirk Wilkinson</b> - 12th grade - Monte Vista High School - Monte Vista - Mr. Gary Wilkinson</i>  |
| 2-12-006 | <i>Stage Specific Expression Of Peroxidase Enzymes In Wound Healing Potato Tubers - <b>Royce Hoffner</b> - 10th grade - Home School - Center - Mrs. Karen Hoffner</i>               | 2-12-301 | <i>Pine Beetle Outbreaks: Spatial Analysis And Pheromone Population - <b>Anika Petach &amp; Tanya Petach</b> - 9th grade - Fairview High School - Boulder - Mrs. Erin Hinkle</i>  |
| 2-12-007 | <i>Alliaceae Protein Structures - <b>Melissa Kraker</b> - 10th grade - West Grand High School - Kremmling - Ms. Lori Haack</i>  |          |   |

## Alphabetical Listing of Finalists

Nolan Anderson	1-12-001	Manuel Crespin	2-10-301	Molly Graber	1-09-006
Kayla Aragon	1-02-301	Domonica Cruz	1-03-302	Ryan Gregory	2-12-005
Ben Armstrong	2-07-001	Sara Cabbage	1-03-303	Lisa Grossman	2-03-002
Allison Ashburn	2-07-005	Sara Cunningham	1-04-002	Allison Gudvangen	1-03-305
Kurtis Ashmore	2-05-001	Suzanna Cure	2-12-002	Laura Gudvangen	2-09-302
Drew Auburger	1-11-301	Daniel Cade Daugherty	2-12-003	Sarah Guthrie	2-03-003
Maggie Bachrodt	1-10-001	Kalli Davis	2-07-004	Andrew Haines	1-11-008
Erika Baker	2-10-001	Mia Davis	1-01-002	Brandy Haller	2-01-002
Jared Bannon	2-07-002	Chiara Del Piccolo	2-01-301	Eric Hampton	1-05-006
Jordyn Bannon	1-12-002	Nuala Del Piccolo	2-01-301	Kathryn Harhai	1-07-006
Layne Barrett	1-11-001	Andy Delany	2-12-004	Kyle Harlow	1-05-004
Paxton Becker	1-05-008	Lindsey Denison	2-01-001	Lindsey Harrison	1-07-007
Sabrina Beckner	1-03-301	Claire Derr	1-03-305	Brittany Haugen	1-03-303
Iris Belensky	1-03-010	Madison Dewey	1-12-004	Jessie Haugen	2-09-004
Anne Bennett	1-09-001	Bethany Dilda	2-08-004	Johanna Hayes	1-02-005
Isaac Beverlin	1-04-001	Nicole Dille	2-09-301	Alicia Hayhurst	2-09-301
Rachel Beverlin	1-07-001	Amity Dover	1-03-003	Anna Hermann	2-07-304
Erin Biringen	1-11-002	Tanner Dunivan	1-03-004	Haley Hervert	1-12-007
Tawney Bleak	2-04-001	Tucker Dunivan	2-05-002	Alex Hetrick	2-09-005
Erica Blocker	1-03-301	Collin Dutro	2-11-001	Jeffrey Hibbert	2-07-006
Kayla Boren	1-05-010	Amelia Eads	2-02-001	Heather Hilson	1-07-008
Cole Bostrom	2-06-001	Jesse Eads	1-11-004	Michelle Hoffmann	1-06-002
Falk Boyle	1-12-003	Tanner Elliott	1-09-004	Royce Hoffner	2-12-006
Drake Brandon	1-03-304	Jesse Ellison	2-06-003	Brianna Honebein	1-01-004
Katie Braun	1-09-002	Bryant Elrick	2-04-004	Sydney Hooton	1-09-007
Makayla Brouwer	1-11-018	Jana Elrick	1-07-004	Antonio Huizar	1-04-003
Brady Buck	2-07-003	Devon Enke	1-12-005	Nadeen Ibrahim	1-06-003
Sean Buck	2-12-001	Samantha Ensz	2-02-002	Codi Inloes-Williams	1-02-013
Nikki Buhrdorf	1-03-002	Ryan Ernst	1-12-006	Chayenne Jackson	1-07-009
Cody Burkey	1-01-001	Adwai Eswaran	2-10-002	Dakota Jackson	1-10-004
Kelsey Burns	2-02-301	Bradley Falk	2-03-001	Bryan Jacobson	2-07-301
J. Raleigh Burt	2-06-002	Alexandria Farnsworth	1-05-001	Emily Jacomet	1-07-010
Jennifer Bushnell	1-04-301	Christy Farnsworth	2-05-006	Liam Jasperse-Sjolander	1-07-011
Julia Buzan	2-09-303	Claire Felix	1-09-005	Cahl Johnson	2-06-005
Devon Cacy	2-10-301	Kylee Firlit	2-09-304	Cole Johnson	1-06-004
Casey Campbell	1-07-002	Dayton Fisher	1-11-005	Shea Johnson	1-03-005
Rhiannon Campbell	2-08-001	Jason Francis	1-02-003	Andrew Jones	2-07-007
Trent Capraro	1-10-002	Maya Freismuth	1-03-020	Dallas Jordan	2-09-006
Cade Carlson	1-06-005	Samuel Galler	2-02-003	Megan Kavalec	1-09-301
Jeremy Carlson	2-06-301	Ken Garcia	1-06-014	Rachel Kelley	2-02-004
Tori Carnahan	1-03-303	Laura Garcia	2-07-303	Rex Kennedy	1-11-009
Courtlyn Carpenter	1-07-003	Tiana Garcia	1-01-003	Leela Khanna	2-02-005
Dante Carter	1-02-006	Rachael Gessert	1-11-006	Corissa Kiepke	1-09-008
Chace Carver	2-09-001	Jessika Gill	1-05-003	Dong-Kou Kim	2-06-006
Jason Carwin	2-07-302	David Gillis	2-09-003	Tae Kim	1-09-009
Garret Cerny	1-02-002	Garrett Glissmann	1-06-009	Jeffrey King	1-06-013
Steven Chastain	2-09-002	Gwyneth Glissmann	2-04-002	Krista Kinkel	2-10-003
Anthony Cisneros	2-08-007	Ellery Goeltzenleuchter	1-10-003	Alexandra Kirschbaum	1-02-001
Ian Clark	1-11-003	Kendra Gomez	1-10-301	Joel Knepper	1-12-008
Jessica Constant	1-08-001	Keagan Gonzales	1-07-005	Kassidy Knutson	1-03-006
Amanda Coopersmith	1-09-011	Rachel Gonzales	1-02-004	Loren Koszowski	1-10-302
Shannon Craig	1-08-005	Adam Goss	2-06-004	Max Krakauer	2-05-004
Michael Crane	2-08-003	Ellie Gossage	1-11-007	Melissa Kraker	2-12-007

## Alphabetical Listing of Finalists

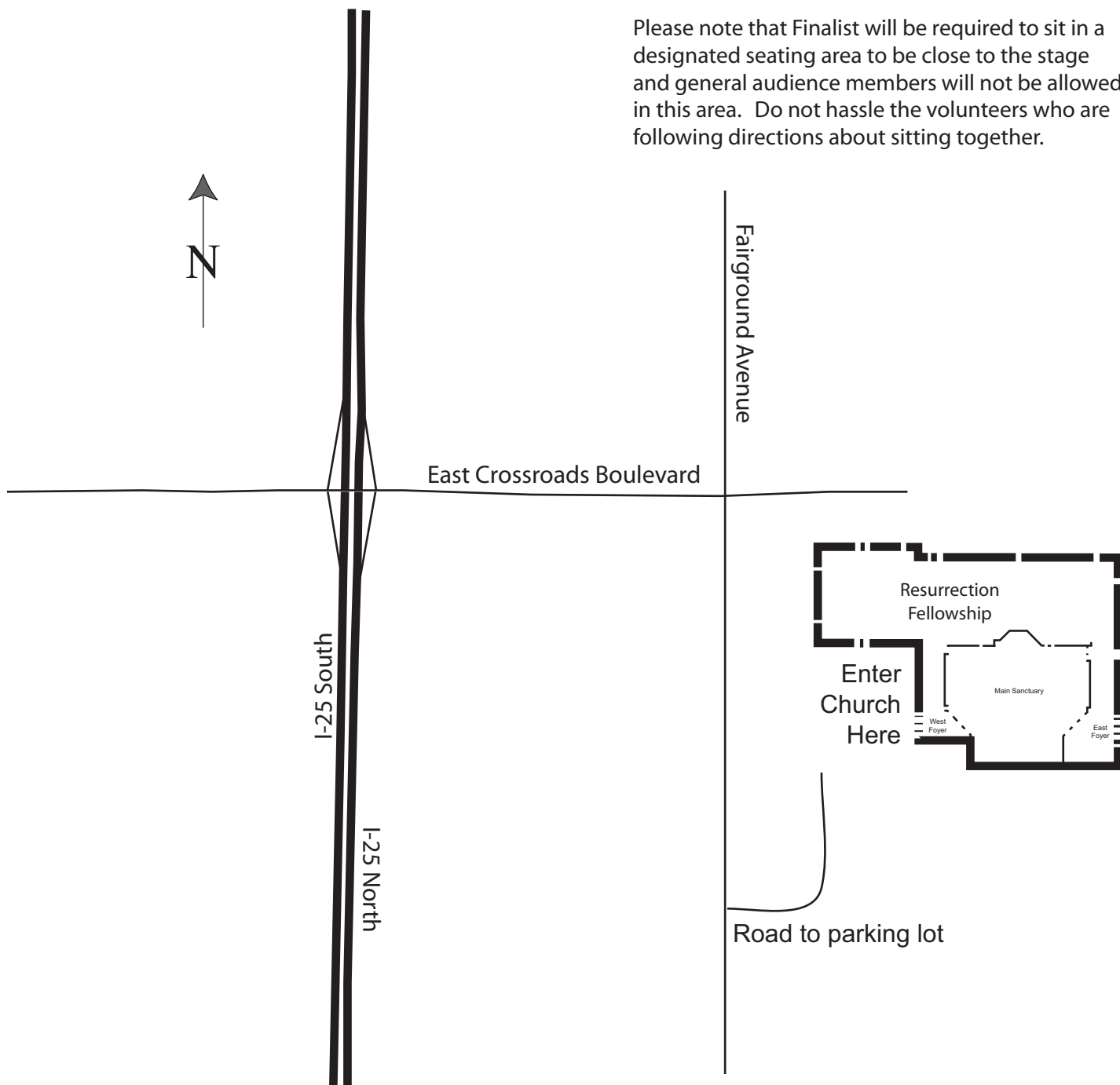
Christopher Krause	2-04-003	Jeanette Murnane	1-12-013	Diane Schulze	1-02-010
Caleb Kruse	2-07-008	Amber Neal	2-07-014	Charlie Severance-Medaris	2-06-301
Cameron Kruse	2-06-007	Jayce Negley	1-11-015	Devyn Shafer	2-11-301
Kaley Kukus	1-09-010	Molly Nelson	2-07-302	Aarthi Shankar	2-09-011
Karthik Kumar-Rao	2-06-008	Collin Nordhus	1-12-014	Rahul Shankar	1-08-003
Jacob Kunugi	1-12-009	Carlos Nunez	1-08-004	Michael Shelinbarger	1-06-010
Theo Kurtzer	1-12-010	Stephen O'Connor-Seville	1-10-007	Alexis Shinn	1-10-009
Kelly Lane	2-07-304	Chelsea Oden	2-08-006	Grant Slinger	2-07-013
Tucker Leavitt	1-08-006	Sarah Oden	2-02-007	Joseph Smith	2-09-303
Jordan Lestina	2-12-008	Sarah Oldach	1-10-008	Nathan Smith	2-10-301
Nakayla Lestina	1-01-005	Samantha O'Leary	1-03-001	Amy Solis	1-09-301
Justin Lewton	1-03-007	Kaylean Orłowski	1-03-011	Joshua Steklac	1-06-011
Kaitlyn Lingus	2-12-009	Stephen Ortega	1-01-006	Rachel Strauch	2-02-301
Michael Lingus	2-07-009	Nicole Osmundson	1-03-302	Kirbi Stum	2-06-010
Melodie Linville	2-07-301	Wyatt Palser	1-01-007	Nataara Tamada	2-12-011
Antonia Lira	2-11-002	Clay Patton	1-09-013	Zachary Tanner	1-02-011
Connie Liu	2-01-003	Weston Patton	1-03-012	Derek Taylor	1-03-017
Joline Lobato	2-05-007	Tonya Pavlekno	2-09-302	Shelby Teague	1-12-018
Collin Loflin	1-11-301	Olivia Pecukonis	2-07-303	Austin Titus	1-10-010
Joel Lopez	1-07-012	Laci Pennington	1-01-008	Kathryn Trask	2-07-301
Stephanie Lucero	1-02-301	Brooke Perrin	1-02-008	Shannon Tsai	2-06-011
Kelli Lynch	1-10-005	Matthew Persons	1-08-002	Kole Van Treese	1-03-018
Alexa Major	1-07-013	Anika Petach	2-12-301	Lizette van Zyl	1-02-014
Ratna Malkan	1-05-007	Tanya Petach	2-12-301	Alix Vigil	1-10-301
Matthew Mandelski	1-07-301	Kelsey Piper	1-03-013	Sara Volz	1-05-002
Zofie Mandelski	1-07-301	Danielle Pite	2-07-304	Zachary Wagner	1-03-304
Jennifer Manfredo	2-09-007	Melissa Poet	1-03-014	Brisha Wakasugi	1-04-005
Julianna Manfredo	1-11-010	Nina Popovic-Basta	2-06-009	Emily Walck	1-07-014
Kyle Mann	1-06-006	Dylan Proietti	2-06-302	Hannah Wardell	1-06-012
Dirk Marshall	1-02-007	Alexandra Proietti	2-06-302	Adam Warren	1-09-015
Allie Martin	2-02-006	Lindsey Pruett	2-06-301	J D Wegele	1-09-016
Kelsey Martin	2-09-008	Alex Przedpelski	2-08-002	Katie Weiss	1-05-009
Serenity Masterson	1-03-008	Cora Ravenkamp	1-09-014	Andrew West	2-05-005
Haley Matteson	1-12-011	Rishi Rawat	2-09-009	Marlena Widman	2-11-003
Nicole Mayer	2-07-010	Sarah Reed	1-01-009	Kathryn Wied	1-02-012
Layne McCaleb	1-10-006	Nicole Reeves	2-08-301	Daniel Wiener	1-12-301
Lynde McCaleb	1-03-009	Juliann Richardson	1-03-015	Alana Wilbee	2-03-006
Jake McHargue	2-03-004	Trevor Rinaldo	1-12-015	Kirk Wilkinson	2-12-012
Bruno Mediate	1-09-003	Tess Ringlein	1-03-016	Logan Willbanks	1-03-019
Anna Mellman	1-10-302	Brandon Rogers	1-02-009	Zane Willburn	1-06-001
Courtney Meredith	1-04-004	Susannah Rogers	2-09-010	Terry Williams	2-06-012
Ethan Merritt	2-08-301	Kelsey Rohlfing	1-04-301	Amber Wilson	1-09-017
Steven Mertens	2-08-005	Neil Roper	1-12-301	Tyler Wilson	2-01-301
Shelby Messer	2-03-005	Darla Rosenbrock	2-05-003	Rennie Winkelman	1-01-011
Aidan Mike	1-11-011	Rebecca Roskowski	1-01-010	Kenzie Witt	2-02-008
Delani Miller	2-12-010	Meg Rudy	2-09-304	Summer Wooden	1-01-012
Ryan Mix	1-12-012	Sarah Rumbley	2-11-301	David Wu	2-03-007
Devon Montague	1-09-012	Rachel Saccardi	2-07-011	Grant Yowell	1-01-013
Kelsey Moore	2-10-004	Emily Sandner	1-11-016	Katelyn Yowell	2-09-012
Victoria Moore	1-06-007	Kayleigh Santala	1-11-017	Tanner Zimmerman	1-09-018
Ashley Motley	1-11-012	Elliott Saslow	1-12-016	K C Zinn	1-12-019
Lorne Muir II	1-11-013	Kent Schaller	1-12-017	Travis Zuniga	2-03-008
Clay Mullins	1-11-014	Carl Scheevel	1-04-006		
Colin Mummery	1-06-008	Alex Schnaderbeck	2-07-012		
Laura Mummery	1-05-005	Tim Schneider	2-08-008		

# Directions to Resurrection Fellowship - Loveland, CO

Map & Drawings Are Not To Scale

Resurrection Fellowship is located at 6502 East Crossroads Boulevard in Loveland, CO. Directions to the facility are simple, take I-25 (either North or South) to the Crossroads exit, turning east off of the freeway. Resurrection Fellowship will be approximately 1/2 mile east of I-25, towards the south. Turn south onto Fairgrounds Avenue. The entrance to the church is now south of the building itself as the city has put up a median that extends a few hundred feet from the intersection of Crossroads Boulevard & Fairgrounds Avenue Use the west entrance to the facility (look for signs). The Awards Ceremony will be held in the Main Sanctuary.

Please note that Finalist will be required to sit in a designated seating area to be close to the stage and general audience members will not be allowed in this area. Do not hassle the volunteers who are following directions about sitting together.



**No Food or Drink (bottled water ok) will be allowed in the Main Sanctuary.**

# Lory Student Center

## UPPER LEVEL

