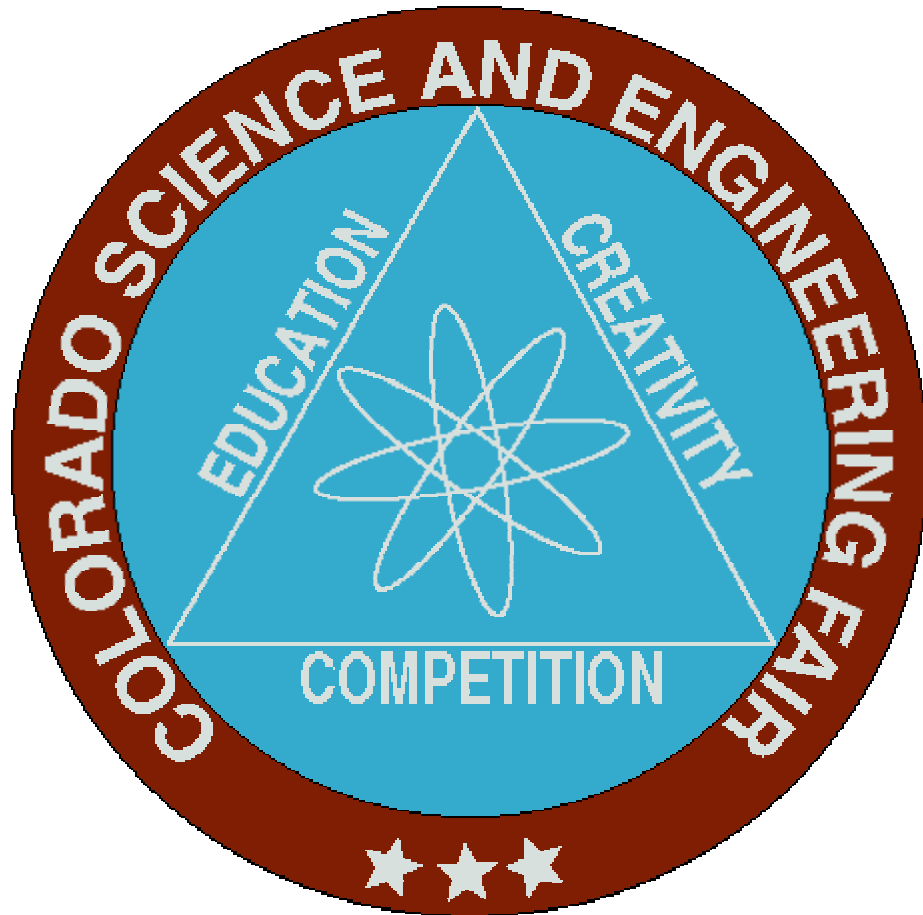


1994 Annual Report



1994 Annual Report

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

Annually, for over thirty-nine years, the Colorado Science and Engineering Fair (previously the Colorado State Science Fair) has been held to encourage and display the talents of Colorado's top science students, grades 7 – 12. Each year, over 220 scientifically talented youths from thirteen regions around our state display their exhibits. Professional scientists for the Colorado scientific community judge the presentation of each student's exhibit, review the student's research notebook, and interview each participant. Each student is sponsored by a teacher or other mentor.

The exhibits compete for state fair awards in one of seven categories: Botany, Earth & Environmental Sciences, Engineering, Health & Behavioral Sciences, Mathematics & Computer Sciences, Physical Sciences, and Zoology. Recognition is given to the students with outstanding exhibits in each of the categories as well as one in technical writing. Special awards are also given by professional organizations, government agencies, and industries for exhibits that best represent their particular emphases or philosophies. The top two senior division winners are awarded a trip to the International Science and Engineering Fair. This year, it was held in Birmingham, Alabama where they competed with other winners from across the United States and several foreign countries.

Many educational experiences are available to participants of the CSEF. Tours of university and local corporate research facilities give the students and their families an opportunity to see research in action. The judges' interviewing process and the Food, Fun and Friendship Mixer after judging allows the students to interact with professional scientists. The opportunity the students have to interact with other students who share their interest in science may be the most beneficial aspect of the CSEF.

1994 Colorado Science and Engineering Fair

The 39th Colorado Science and Engineering Fair was held at the Lory Student Center on the Colorado State University campus on April 13 – 15, 1994. Two hundred twenty-six students participated in this three day event and competed for honors in their respective categories. Rajan Sheth from Cherry Creek High School in Denver, took first place this year in the All Fair competition. His project was *Designing and analyzing an air shield to optimize the aerodynamic benefits of automated vehicles: Year Three*. He received an expense paid trip to the International Science and Engineering Fair. Runner-up in the All Fair competition was Steve Gipstein of Cherry Creek High School in Denver for the exhibit *Fractals: The mathematics of biology – Year Two*. He also received a trip to the International Science and Engineering Fair. Third place in the Senior Division was Kate Campbell of Boulder High School in Boulder for the exhibit *Boulder Creek Ecology – A holistic approach*.

The top winner of the Junior Division was Robi Goswami of Cherry Creek High School for the exhibit *Investigating Chaos in a Double Pendulum*. The runner-up in the Junior Division was Daniel Prentice of Wray High School in Wray for the exhibit *Geritol, for iron poor mud?*. Third best in the Junior Division was Rian Skye Good Lewin of Smiley Middle School in Durango for the exhibit *Flying Magic: Determination of Aircraft Functionality*.

1994 International Science and Engineering Fair

The 45th International Science and Engineering Fair was held May 8 – 14th at the Birmingham Civic Center in Birmingham, Alabama. This year 913 finalists represented 24 countries from around the globe. There were 13 disciplinary categories and a new 14th Team Projects interdisciplinary category. Colorado sent 14 delegates who participated in 7 of the categories.

Colorado's top CSEF finalist, Rajen Sheth from Englewood, Colorado won fourth place in the ISEF Grand Awards Engineering category and a first place special award from the US Department of Energy. The Intel Foundation awarded him an Intel 486 DX2-66MHZ personal computer for his fourth place grand award and ISEF presented him with \$100. DOE's prize was a certificate and an expense paid trip to an "Energy Research Orientation Week" at a DEO national laboratory for him and his teacher.

The state's second place winner, Steve Gipstein, was unable to attend the ISEF, so the third place winner, Kate Campbell, attended. Kate won a special award of \$250 from the North American Botanical Society plus a one-year student membership in the society. Nicole Hurt from the Longs Peak Region won a 3rd place ISEF award of \$200 for her Botany project. Jason Oraker from the Pikes Peak Region was awarded a 1st place award of \$250 and a plaque from the American Psychological Association. Ken Hamner from the Western Region won a 2nd place special award of \$150 and a plaque from the FAA. In all, Colorado students won 6 awards.

Organization

The Colorado Science and Engineering Fair would not be possible without the dedication and tremendous efforts of many organizations including school districts, universities, government agencies, corporations, professional associations, and individuals. These groups sustain the CSEF through financial and resource support, special awards and most importantly, dedicated volunteers.

The CSEF volunteers make the fair possible by serving on the Advisory Council and its various committees. They, and others, also serve as CSEF judges. Thirteen regional and many local school fairs are conducted throughout the state prior to this fair by hardworking and dedicated educators. Before the exhibits ever get to fairs, it takes the teachers, sponsors, and parents who have helped to support and encourage the students from the project's inception. The Colorado Science and Engineering Fair is a product of all these people.

The success of each year's fair is directly dependent upon the support of public and private organizations, government agencies, school districts, universities, and the efforts and coordination of more than three hundred dedicated volunteers. To organize and stage the fair each year requires a very large effort with many challenges and personal rewards. The level of achievement, pride and excitement of these bright young people in their scientific endeavors is a good indication that the level of science aptitude in Colorado schools is very high.

Sponsors

American Cancer Society
Anheuser-Busch, Inc.
Blackfox Technology Group
CH2M Hill, Inc. Engineering
Colorado Engineering Council
Colorado Medical Society
Colorado Memory Systems
Colorado State University
Colorado State University
Division of Continuing Education
Eastman Kodak Company
EG&G Rocky Flats Plant
H. Calvin Fisher

A Foundation for Basics
Gates Corporation
Hach Company
Hewlett-Packard Company
Manville Corporation
Martin Marietta Astronautics
National Renewable Energy Lab
Public Service Company of Colorado
US Department of Commerce
NTIA, NOAA, NIST
StorageTek Corporation
US West Technologies

Colorado Science and Engineering Fair Sponsors provide the majority of the financial and resource support. In addition, each sponsor also provides two volunteers to serve on the CSSF, Inc. Board of Directors.

Board of Directors

President: John Lehman
Vice President: John Jacobi
Secretary: Sue Refner
Treasurer: Jim Sites
CSEF Coordinator: Kate Taylor

A Foundation for Basics – Ruth Taylor, Don Taylor
American Cancer Society – Richard Shipman, Jennifer Scott-Nazaryk
Anheuser-Busch, Inc. – Skip Beck
Blackfox Technology Group - vacant
CH2M Hill, Inc. Engineering – vacant
Colorado Engineering Council – Gina Holland, Isan Fan
Colorado Medical Society – W. Gerald Rainer
Colorado Memory Systems – Kristin Howerton
Colorado State University – Tom Gorell, Jim Sites
Colorado State University, Division of Continuing Education – Ken Yoder
Eastman Kodak Company – Charles Herrick, Sue Refner
EG&G, Rocky Flats Plant – Kay Bentzen
H. Calvin Fisher – H. Calvin Fisher
Gates Corporation – Martha Hoff, Mark Newberry
Hach Company - vacant
Hewlett-Packard Company – John Jacobi
Martin Marietta Astronautics Group – Sharon Linhardt
National Renewable Energy Lab – Dan Blake, Robert McConnell
US Department of Commerce/NIST – John Lehman, Fred McGehan
US Department of Commerce/NOAA – Joe Allen, Dave Clark
US Department of Commerce/NTIA – Elizabeth Pol, Evelyn Yohe
US West Technologies – Marilyn Woosley-Fenn, Tony Cox

In addition, generous financial support has been provided by these firms, organizations, and individuals.

Financial Contributors

American Society of Civil Engineers Auxiliary
Barber-Nichols, Inc.
American Welding Society, Colorado Section
COBE Laboratories
Colorado State University, College of Natural Sciences
Colorado Biomedical
Colorado Dental Association
Coors Brewing Company
Denver Federal Center Professional Engineering Group
King Soopers
Loral Command and Control Systems
Monfort, Inc.
Rocky Mountain Chapter ASM International
Science Applications International Corporation
Teledyne Water Pik

Working Committees

CSEF Coordinator – Kate Taylor

Awards Ceremony – Lynn Butler, Ken Yoder, John Jacobi, Tom Gorell, Gina Holland

Display & Safety – Elemer Bernath, Sam Shushan, Joe Allen, Orville Boge, Steve Iona, Dan Van Gorp, Elizabeth Pol, Owen Smith, Leo Armstrong, Doug Steward, Connie Vader, Don Gabriel

Finance – Dan Blake, Carl Edstrom, John Jacobi, Don Taylor, Kristin Howerton, Tom Gorell, Larry Anderson

Host Families – Lynn Butler

Photography – Ray Alvarado, Larry Jakel, Frank Sander, Lynn Butler, Evelyn Yohe

Publicity – Dave Clark

Registration – Kate Taylor, Ruth Taylor, Carl Edstrom, Jan Sorenson, Lucy Adams, Sue Refner

Regular Judging – Gina Holland, Carl Edstrom, Elizabeth Ralph, Isan Fan, Robert Aguire

Room Set-Up – Jim Sites, Virgil Sandborn, Tom Gorell, John Lehman, Skip Beck, Elemer Bernath

Scientific Review – Elemer Bernath, Charles Johnson, Sam Shushan, Steve Iona

Special Awards Judging – Fred McGehan, Mary Brunner

Tours/Speaker – Lynn Butler, Rich Shipman, Skip Beck, Kristin Howerton

Volunteers – Lynn Butler, Tom Gorell, Jack McGrew, Johannes Gessler, Ruth Taylor

Past Colorado Science and Engineering Fair Directors

Charles Bragaw	1956-1967
Calvin Fisher	1968-1974
Sam Shushan	1975-1977
Gordon Moore	1978
Russell B. Stoner	1979-1981
Virgil Sandborn	1981-1983
James Sites	1984-1985
Llyod Walker	1986-1988
Connie Vader-Lindholm	1989-1990
Lynn Butler	1991
Kate Taylor	1992-1994

Advisory Council

Ken Allen	Carl Edstrom
Paul Josephson	Sam Shushan
Ray Alvarado	Owen Smith
Jack McGrew	Don Gabriel
Beverly Meier	Doug Steward
Leo Armstrong	Johannes Gessler
Linda Preston	Larry Jakel
Don Boyle	Connie Vader
Herbert Brauer	Gregg Janus
Lynn Butler	Dan Van Gorp
Virgil Sandborn	Charles Johnson
Frank Sander	

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

Regional Science Fairs

Arkansas Valley

Kathleen Close, Director

Boulder Valley

Jan Sorenson, Director

Denver Metro

Herschel Neumann and Steve Iona, Co-Directors

East Central

Harry Wolf, Director

Longs Peak

Terry Scott and Jerry Bauer, Co-Directors

Morgan/Washington Bi-County

Elemer Bernath & Nancy Gettman, Co-Directors

Northeast Colorado

Sari Prall, Director

Pikes Peak

Georgia Matteson, Director

San Juan Valley

Jim Kossin, Director

San Luis Valley

Lucy Adams, Director

Southeast Colorado

Robert Williams, Director

Spanish Peaks

Usha Herbert, Director

Western Colorado

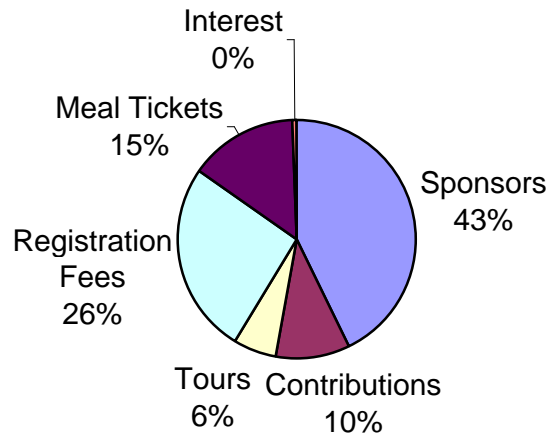
Orville Boge and Rob Robison, Co-Directors

Colorado State Science Fair, Inc.

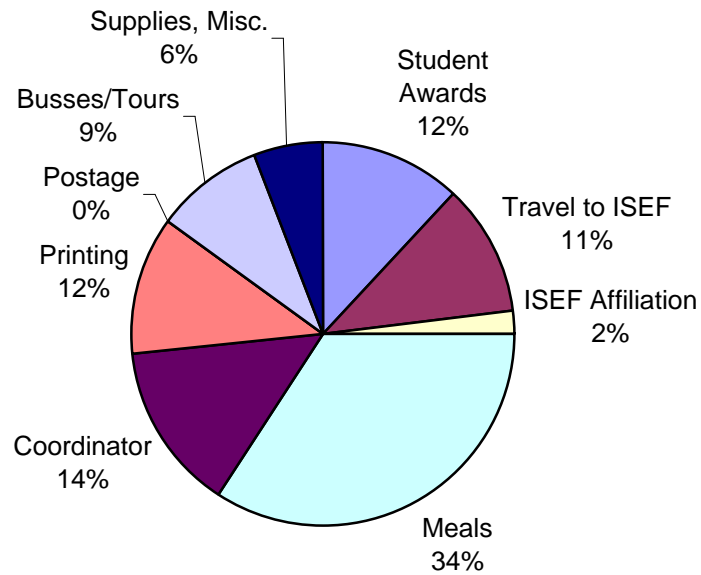
INCOME	1990	1991	1992	1993	1994
Sponsors	\$6,000	\$5,000	\$8,000	\$7,850	\$9,500
Contributions	\$2,420	\$1,745	\$1,530	\$2,250	\$2,200
Tours	\$160	\$185	\$196	\$107	\$1,302
Registration Fees	\$4,000	\$4,260	\$4,334	\$4,928	\$5,800
Meal Tickets	\$3,381	\$3,123	\$3,456	\$3,423	\$3,266
Interest	<u>\$155</u>	<u>\$197</u>	<u>\$154</u>	<u>\$134</u>	<u>\$104</u>
	\$16,111	\$14,510	\$17,670	\$18,692	\$23,172
EXPENSES					
Student Awards	\$2,209	\$2,061	\$2,791	\$2,946	\$3,044
Travel to ISEF	\$2,542	\$3,656	\$3,182	\$2,708	\$2,761
ISEF Affiliation	\$400	\$500	\$500	\$500	\$500
Meals	\$5,607	\$6,241	\$6,274	\$8,110	\$8,656
Coordinator	\$1,000	\$0	\$1,250	\$1,750	\$3,600
Printing	\$1,987	\$1,932	\$1,463	\$1,646	\$2,930
Postage	\$159	\$172	\$200	\$291	\$0
Busses/Tours	\$200	\$50	\$0	\$0	\$2,300
Supplies, Misc.	<u>\$549</u>	<u>\$728</u>	<u>\$1,255</u>	<u>\$1,129</u>	<u>\$1,506</u>
	\$14,653	\$15,340	\$16,915	\$19,080	\$25,297
ASSETS					
Checking	\$552	\$178	\$848	\$324	\$1,152
Savings	<u>\$3,232</u>	<u>\$2,779</u>	<u>\$2,934</u>	<u>\$3,068</u>	<u>\$124</u>
	\$3,784	\$2,957	\$3,782	\$3,392	\$1,276
PARTICIPANTS	200	213	197	224	228

1993 Financial Profile

Income for 1994



Expenses for 1994



39th ANNUAL COLORADO SCIENCE AND ENGINEERING FAIR

Lory Student Center

Fair Headquarters: Room 224/226

Colorado State University

THURSDAY, April 14, 1994

- 9:00 – 11:00 AM Exhibit Area Open for Set-Up
*Exhibitor **MUST** stay with exhibit until Exhibit Check-Off Sheet is signed by Photo and Rules Committee Members.*
- 9:00 – 9:30 AM SRC and Display 7 Safety Committee Meeting: Headquarters
- 10:30 - 11:00 AM Grand Awards Judge Captain's Briefing: Middle Ballroom
- 11:00 - 11:30 AM Grand Awards Judge's Briefing: Middle Ballroom
- 11:30 AM - 12:30 PM Grand Awards Judge's Luncheon: East Ballroom
- 12:30 - 1:00 PM Special Awards Judge's Briefing: Middle Ballroom
- 12:00 - 5:00 PM JUDGING

12:00 - 1:00 PM	<u>Grand Awards Judges</u> only in exhibit areas.
1:00 - 2:00 PM	Special Awards Judges may enter exhibit areas. <u>Judges only</u> in exhibit areas.
2:00 - 5:00 PM	<u>Students must be at their exhibits for interviews.</u>

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

- 1:45 - 2:00 PM **Finalist Orientation Meeting:** Middle Ballroom
- 2:00 - 5:00 PM Parent/Teacher/Sponsor's Lounge: Cookies and Punch in Room 220
- 5:00 – 8:00 PM Opening Night Pizza Party: Main Ballroom
-

FRIDAY, April 15, 1994

- 9:00 AM - 5:00 PM **CSEF Open to the Public**
- 9:00 - 9:50 AM Guest Speaker: Dr. Marty Fettman, Astronaut – Payload Specialist, NASA's Spacelab Life Sciences – 2 Flight, Pathology Professor, CSU.
“Experimenting in Space”: Middle Ballroom
- 10:00 AM 4:00 PM **Tours:** Students, their sponsors, family, and judges are invited to participate in the tours by pre-registering on Thursday morning.
- 10:30 AM – 12:00 Noon Regional Fair Director's Meeting: Headquarters
- 12:00 Noon – 1:00 PM Planning Meeting for ISEF: Representatives from ALL Delegations Statewide meet in Headquarters.
-

SATURDAY, APRIL 16, 1994

- 8:00 – 9:00 AM Advisory Council Breakfast: Longs Peak Dining Room
- 9:00 AM - 12:00 Noon **CSEF Open to the Public**
- 9:00 – 10:30 AM Advisory Council Meeting: Headquarters
- 11:30 AM – 2:00 PM **Awards Luncheon:** Main Ballroom
- 2:30 – 3:00 PM Exhibit Dismantling: **Everything must be removed by 3:00 PM.**
-

**Upcoming Intel/International Science and Engineering Fair, Alabama, May 8 – 14, 1994.
NEXT YEAR'S COLORADO SCIENCE AND ENGINEERING FAIR: APRIL 13 – 15, 1995.**