

**Colorado State University**

[cns-eoc.colostate.edu](http://cns-eoc.colostate.edu)

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### **Above**

We are working to level the playing field by helping populations traditionally underrepresented in the sciences, including girls, ethnic minorities, and students from rural communities.

### **On the Cover**

Our new STEM Friday program brings classes of 4<sup>th</sup> through 12<sup>th</sup> grade students to campus each Friday morning to conduct experiments while being mentored by CSU students studying to become teachers. Every experiment promotes the use of Science Notebooks.

## Mission

The College of Natural Sciences Education & Outreach Center is an incubator for innovation in STEM education. We serve both CSU and K-12 students and faculty through a wide variety of programs. A common thread that weaves through all of our programs is increasing the quality, quantity, and diversity of students in STEM disciplines. Particular emphasis is on finding new ways to promote scientific creativity and innovation, attributes essential for global competitiveness in the 21st century. Many of our programs focus on providing authentic scientific research experiences for both students and teachers.



The EOC staff is supported by the College of Natural Sciences and constitutes 0.5% of the college's annual resident instruction budget. Additional funds are derived from participation in grants led primarily by CSU faculty at large (see page 14) and self-funded programs such as Annenberg graduate courses for K-12 teachers.

## Message from the Director

Our new practicum experience for CSU pre-service teachers called **STEM Fridays** is up and running and gaining momentum. Every week, we invite a 4<sup>th</sup> – 12<sup>th</sup> grade teacher to bring their class to the EOC all expenses paid. CSU students, studying to become science or mathematics teachers, facilitate the field trips. The content is derived from the **Broader Impacts** of CSU faculty research projects. We see this as a win-win for all involved: CSU faculty get an easy way to showcase their cutting edge research, CSU students learn the latest teaching strategies, teachers learn more about the educational resources CSU has to offer, and 4<sup>th</sup> – 12<sup>th</sup> grade students get their first taste of college in a state-of-the-art laboratory. Each semester has been booked up within hours of our announcements illustrating the need for and popularity of this program. Schools include: McGraw, Bauder, Harris, Putnam, Tavelli, Leshar, and Poudre Community Academy in Fort Collins; Cache La Poudre Elementary and Middle in Laporte, Wellington Middle in Wellington, Windsor Middle in Windsor, Severance Middle in Severance; Brentwood Middle in Greeley; Roosevelt High in Johnstown; and a Mesa State class of high school students from Grand Junction.



Our collaboration with the National Park Service on **Water Science Education** is going strong. We developed new curriculum materials and taught a weeklong professional development institute in June for ten teachers and a park ranger from Hawai'i. This was followed by distance education using the Habitable Planet course by Annenberg Learner. In November, Courtney Butler and I traveled to Hawai'i to visit schools, introduce more curriculum materials in a teacher workshop, meet with park staff, and consult on their annual Children's Cultural Festival which had a significant science component. We are currently working with Kaloko-Honokohau National Historical Park and Project Wet on developing two books on water science. Last summer we also collaborated with Mike Viney from Blevins Middle School and the rangers at Florissant Fossil Beds National Monument on new ways to engage school science field trips to the park.

Thanks to the youthful energy of our **2013 Early Career Summer Teacher-in-Residence** (Ms. Jess Quig) and our **EOC STEM Assistant** (Ms. Jessie Mader) we have made major progress in developing more hands-on science kits. These kits are designed to teach important big ideas in an engaging way. The scientific materials are high quality and require only a minor amount of annual maintenance. We received an enthusiastic response to them as we showed

them off in a large corner exhibit hall booth at the Regional National Science Teachers Association (NSTA) Convention in Denver.



The Colorado Science and Engineering Fair is coping with the mayhem created by the renovation of the Lory Student Center. This year the fair will be held at the Hilton. Needless to say, we are looking forward to the completion of the new conference facilities at Lory. In recent years, there has been a decline in high school participation in the fair. This may be a result of increasing science class sizes which are now up to ~46-48 students! Teachers have adopted university style lecturing depending heavily on PowerPoint, Blackboard, computer simulations, and classroom demonstrations. As university professors know, large class sizes limit what you can accomplish with discussions, research projects, hands-on labs, and field trips. There is a strong tendency to teach the way we learned. Research shows that lecture-based delivery is effective for only a portion of the population. We strive to break this cycle by creating experiences that encourage students to exercise their natural curiosity. These are the experiences that will form the foundation of our next generation of scientists, technologists, engineers, and mathematicians.

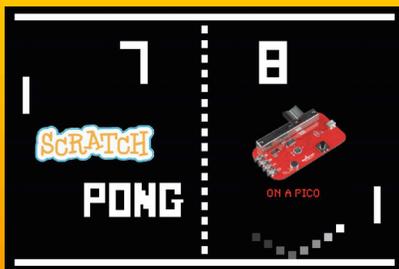
In the following pages, we highlight our portfolio of programs. If you see anything that interests you or you have a new idea and want to get involved, please stop by for a visit!



Sigma Xi was founded in 1886 to honor excellence in scientific investigation and encourage a sense of companionship and co-operation among researchers in all fields of science and engineering. The Greek letters "sigma" and "xi" form the acronym of the Society's motto, "Spoudon Xynones," which translates as "Companions in Zealous Research."



Mike Whatley shared his insights on using interpretive techniques to more effectively achieve desired educational results.



Dr. Jaime Ruiz will introduce our latest hands-on science kit that introduces students to computer science and sensors.

## Programs: CSU Faculty

### Services for Faculty

The CNS EOC provides consulting services to CSU faculty. Here are some of the things we can help you with:

- Writing the **Broader Impacts** section of federal grant proposals;
- Designing effective outreach programs;
- Suggesting ways of leveraging existing programs;
- Assisting with science and math teacher professional development programs;
- Offering CSU graduate continuing education credit;
- Design of inquiry and standards-based classroom kits;
- Recruitment of math and science teachers for **Research Experiences for Teachers (RET)** programs;
- Access to local, state, and national STEM education networks; and/or
- Use of our **cutting-edge STEM Education facility**.

### Sigma Xi Chapter Office

In collaboration with Dr. Shing Ho, the EOC is working to revitalize the CSU Sigma Xi Chapter. In order to bring together the more than 170 active Sigma Xi members on campus, we have begun Sigma Xi keynotes each semester focused on current issues in STEM fields.

### EOC/Sigma Xi Keynote Presentations

*Fall 2013:*

Mike Whatley

"Interpretive Solutions"

September 24, 3:30-5:00 pm, B302 NESB

*Spring 2014:*

Dr. Jaime Ruiz

"Scratch Pong on a Pico"

April 21, 4:00 - 5:30 pm, B302, NESB

## RamCT Course Support

The EOC is home to the CNS RamCT coordinator, Ms. Barry Carroll, who is available to assist faculty in their use of CSU's online learning management system. This system has many useful tools to facilitate cooperative learning, non-linear inquiry-based learning, self-assessment, and use of web resources.

## Mentoring Opportunities

There are numerous opportunities for faculty to mentor in the area of STEM education. Here are a few ideas:

- Mentor a student doing a science fair research project;
- Be a judge at a regional science fair or the Colorado Science and Engineering Fair;
- Mentor Science Olympiad students and teams;
- Present a session at Math-Science-Tech Day; and/or
- Be a content expert at a teacher professional development workshop.

***\*\*For a complete list of current and pending grants in collaboration with CSU Faculty, please see page 14.***





One of over 100 future science teachers receiving expert guidance.



STEM Friday pre-service teachers sharing their college experiences over pizza.



The Noyce Scholars do a team building exercise.

## Programs: CSU Students

### **Bachelors of Science in the Natural Sciences Advising**

If you are interested in teaching science at the middle and/or high school levels, this major is right for you. The BSNS degree program combines the CSU Core Curriculum with strong scientific content, strong educational pedagogy, and real classroom experience to meet the increasing demand for licensed science teachers nationwide.

Once you discover that you love teaching, you can be assured that your BSNS degree will provide a firm foundation for continued graduate work in science education leading to a Masters in Education and/or Ph.D. degree. Concentrations in the Natural Sciences major include Biology education; Chemistry education; Geology education; and Physics education.

The BSNS degree also has a concentration in Physical Sciences, where a student completes the CSU Core Curriculum along with the requirements for two minors chosen from Biochemistry, Chemistry, Computer Sciences, Geology, Mathematics or Physics. Students choosing this major can meet requirements for professional schools (e.g., medicine or law) or graduate programs in the basic or applied sciences.

There are currently over 100 undergraduate BSNS majors in the 5 concentrations. We have opened our learning studio to BSNS majors for use as a Study Hall.

### **STEM Friday Practicum**

Our new STEM Friday program is an ideal way to gain experience teaching a variety of grades between 4<sup>th</sup> and 12<sup>th</sup>.

### **Noyce Scholar Cohort Support**

The National Science Foundation's Robert Noyce scholarship is for STEM undergraduate majors interested in pursuing a teaching career in a high-needs school. This scholarship is administered by the CSU School of Teacher Education and Principal Preparation (STEPP) and the CSU STEM Center. The CNS EOC supports the teacher cohorts through mentoring programs and access to professional development. Scholarship recipients will receive a conditional \$10,000 award per year for up to two years, as well as continuous professional support once placed in a high-needs school.

### ***In-service Outreach Opportunities***

There are numerous opportunities for CSU Students to volunteer in the area of STEM education. Here are a few:

- Tutor elementary school children from local schools in our Triunfo/Triumph Tutoring Program;
- Participate in Math-Science-Tech Day;
- Help facilitate STEM Fridays;
- Help with field trips and summer camps; and/or
- Join our staff as a work-study or student hourly assistant.

### ***Student Clubs and Organizations***

The EOC assists student clubs and organizations that focus on the natural sciences with establishing an ongoing web presence and providing a place to meet, study, or hang out.

- STEM Teacher Club
- Graduate Student Outreach Group





Teachers measure the quantity of groundwater and make map of its distribution at the GetWET facility.



Students quantify the signs of spring and fall by observing bud-burst in the spring and color change in the fall.

## Programs: K-12 Faculty

### **Masters of Natural Science Education**

This online masters program is for in-service teachers wishing to hone their science skills. Courses feature a series of hands-on labs that are developed in partnership with CSU faculty and, assembled and shipped by the EOC.

### **Annenberg Learner Distance Courses**

The CNS EOC is the only center in the United States that offers graduate-level semester credit for teacher professional development courses developed by Annenberg Learner. These rigorous courses are cutting-edge and are produced by widely respected faculty from leading universities.



### **Teacher Professional Development**

We regularly offer workshops for in-service teachers. Recent topics include: Evolution, TI Calculators, Scientific Illustration, eTextiles, Computer Programming, Phenology, Energy, Water, and Earth Science.

### **Science Kit Lending Library**

Many local and regional science teachers borrow classroom sets of STEM materials from the EOC. One of our ongoing efforts is to add breadth to our library of science kits.

### **Questions**

We regularly field questions from the Colorado science education community. These are generally related to lab or field equipment, science fair research issues, or questions about a specific scientific topic.

### **Water Science Education**

The EOC has a strong emphasis in the area of water education. Our latest effort is working with the National Park Service on implementing a new Water Budget Activity at schools surrounding national parks. The activity is an adaptation of the work we did for the Pathways to Environmental Science Literacy project, recently published in the Green Teacher journal.



The GetWET Observatory is the only outdoor hands-on groundwater education facility in the Rocky Mountain Region and is located on CSU property along Spring Creek. The EOC hosts approximately 20 field trips per year for the Poudre School

District, Front Range Community College, and Weld County Schools. Students study water quality and quantity issues and how they relate to use, conservation, and flooding. Pre and post field trip laboratory activities include the use of an innovative physical groundwater model. GetWET is a partnership between the department of Geosciences and the EOC.

Lastly, we sponsor the student group, Society of Global Health Researchers (SoGHR) to present World Water Day presentations in local elementary and middle schools.

### Energy Science Education

Like water, energy is a basic necessity. Our focus is on helping students to discover basic principles that govern sources of renewable energy. We currently offer several energy-related science kits. The Get Energized! kit covers rechargeable batteries and solar cells. The Regenerate! kit explores how regenerative braking works in hybrid electric vehicles. Our KidWind set of model turbines allows students to explore the blade size, shape, configuration, and load. An important objective with these efforts is to inspire students in Colorado to consider beginning their clean energy career at CSU.



### Climate Science Education

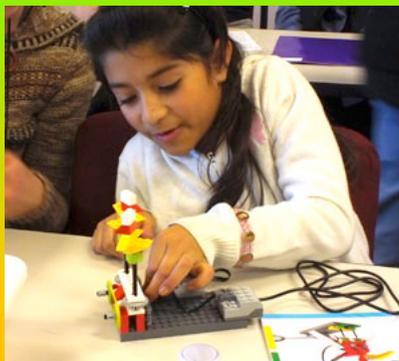
The mission of the Phunky Phenology program is to introduce people of all ages to the science of climate change through the study of phenology. Phenological observations are highly intuitive to analyze and interpret, giving students real experience with climate data. Budburst in the spring and Green Down (fall colors) in the fall provide the ideal launching pad for creative student explorations in the field of climate change.

Students begin the project by planting a native Three Leaf Sumac shrub in their yard. They use a GPS unit to determine their shrub's location and begin observing and measuring various parameters on a daily basis. They graph their own data and see how their data relates to other Three Leaf Sumacs in north to south, east to west, and high to low elevation transects in northern Colorado. We are working with Dr. Ashok Prasad to develop a computer model that allows students to use real data in simulations. Phenological observations are ideally suited to the academic school year and correlate extremely well with state and national STEM education standards. The best part is that it is phun!

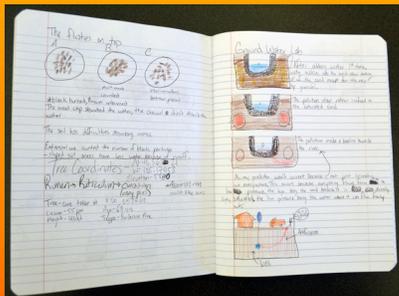




Students practice being interviewed at the EOC by CSEF alumni who are now STEM majors at CSU and also receive feedback on how they can improve their display.



Triunfo students have one on one help with Lego WeDo sets that integrate sensors and motors with a very powerful, yet kid friendly computer programming interface.



We integrate Science Notebooks into all of our programs.

## Programs: K-12 Students

### Colorado Science & Engineering Fair

Colorado has an extensive network of local and regional science fairs that feed into a state-level science fair that is hosted by CSU and directed by Courtney Butler. The Colorado Science and Engineering Fair also affiliates with the Intel International Science and Engineering Fair and Courtney takes approximately 25 projects to this competition each year.

Science fair research projects are the ideal science, math and engineering educational activity. Students work individually or within small groups to develop a research question, formulate hypothesis or create an engineering goal, design an experiment, collect and interpret data, and then communicate their conclusions both verbally and in writing. Science fair competitions also allow students to use multiple visual and physical representations.

Students who participate in a science fair competition interact with teachers, mentors, family members, judges and the public. Awards, scholarships and internships are available to students and are great incentives to continue studying in the STEM fields.

CNS EOC is interested in increasing diversity and participation in Science Fair. To this end, the EOC is actively encouraging schools to integrate research projects into the curriculum rather than just supporting self-motivated students after school.

### Triunfo/Triumph Tutoring Program

The Triunfo/Triumph Tutoring Program is a partnership with CSU's El Centro office that aims to inspire students and close the achievement gap by offering weekly one-on-one tutoring in all academic areas to local elementary school students.

Triunfo/Triumph is open to all students without restrictions, but only provides free transportation to the highest needs students from the



Sara Volz (top right) and Easton LaChappelle, both CSEF alumni were invited to the third annual White House Science Fair



Sara Volz won first place at the 2013 Intel Talent Search

highest needs schools. The program takes place every Thursday from 4-5:30 p.m. from September through May in the experiential learning studio at CNS EOC where students have access to STEM reading books, computers, 3-D printers, Lego robotics, construction sets, scientific lab materials, and educational expertise. Special presentations and lab tours take place throughout the year. This program is funded primarily by the Bohemian Foundation's Pharos Fund.

### Math-Science-Tech Day

Math-Science-Tech Day brings hundreds of local underserved 4<sup>th</sup> grade students from Poudre School District to CSU for a fun-filled day to show them that college is something worth pursuing. The day includes exciting STEM content in four to five sessions, admissions information, CSU student mentoring, and cultural programming.



### Summer Camps

The EOC summer camps are one week long and attract junior and senior high school students from across the nation. They are highly popular and fill up within days after registration opens in early January. The majority of students enroll in both the morning SciTrek camp and the afternoon Summer Vet Camp and stay on campus in one of the residence halls to give them the full college life experience.

While these programs are self-funded from student registration fees, CNS EOC in collaboration with the College of Veterinary Medicine & Biomedical Sciences offers fee waiver scholarships to deserving students using funds earned the previous summer. This year, scholarships totaling \$2,100 went to three students from Colorado, Illinois, and Ohio.



#### **SciTrek**

Students participating in this program learn how scientists do real research. We spend a significant amount of time in the field at Lory State Park developing a systems approach to scientific reasoning, using scientific models to help reveal natural processes and phenomena, assessing the health of a pine forest being invaded by pine beetles, testing the surrounding soil, and mapping the distribution of affected trees.



#### **Summer Vet**

The Summer Vet program is for students who are serious about becoming a veterinarian and is a great opportunity to look into the real and sometimes gritty field of veterinary medicine. Through presentations, demonstrations, laboratory visits, and in-depth, hands-on activities, students discover what modern veterinary medicine is about.

# Budget Summary

FY12/13

General EOC Funding	DA/RSP Funding	DCE Funding
CNS Dean's Office \$138,300	Indirect Cost Recovery \$974	Annenberg \$17,180 Summer Vet/SciTrek \$25,960 Other \$5,567

FY13/14

General EOC Funding	DA/RSP Funding	DCE Funding
CNS Dean's Office \$143,028	Indirect Cost Recovery \$3,243	Annenberg \$17,265 Summer Vet/SciTrek \$25,596 Other \$4,020

## Recent Collaborations with CSU Faculty and External Organizations

Collaborator	Project	Funding	EOC Share
<b>Current</b>			
National Park Service	Water Science Education & Outreach	NPS Task Agreement	\$97,133
Ashok Prasad	Understanding the mesenchymal stem cell response to the topography and geometry of their environment	NSF CAREER (\$423k)	\$5,000
Francesca Cotrufo	The Role of Black Carbon in the Carbon Cycle of Fire-Prone Systems	NSF-GEO (\$448k)	\$19,000.
None	Energy and Earth Systems Summer Session	Bohemian Foundation Discretionary Grant (\$20,000)	\$20,000.
Don Mykles	Signaling Mechanisms in the Crustacean Molting Gland	NSF (\$982k)	\$8,000
SUNY-Oneonta	Climate Change Education	NASA	\$25k/year for 3 years
STEM Center, SOE, CE, and CNS	Noyce Scholarships	NSF (\$1,200,000)	\$10,000/year for 5 years
El Centro	Triunfo Tutoring (2013-2014)	Bohemian Foundation (\$15,000)	\$15,000
LSOP & UV Program	Hands-on STEM Workshops	Xcel Foundation (\$21,000)	\$7,000
Continuing Education	Annenberg Media Teacher Center	Course Credit Tuition & Fees (~\$60k/year)	~\$28,000/year
<b>Pending</b>			
El Centro	Triunfo Tutoring (2014-2015)	Bohemian Foundation (\$15,000)	\$15,000
LSOP & UV Program	Hands-on STEM Workshops	Xcel Foundation (\$21,000)	\$7,000
Derek Schutt	Magma Input and Crustal Response along the Snake River Plain-Yellowstone Hotspot Track	NSF Geophysics (\$123k)	\$7,000
Francesca Cotrufo	Towards an Advanced Understanding of Stable Soil Organic Matter Formation	NSF Geobiology & Low-T Geochemistry (\$450k)	\$5,000
Rachel Mueller	Speciation Box	NSF	\$7,000

## EOC Donors

*(Cumulative since 2010)*

**\$20,000**

**Bohemian Foundation Discretionary Grant**

**\$9,000**

**Dean Tsao – CSEF**

**\$5,000**

**Anonymous CSU Faculty**

**\$1,000**

**Linda Hamilton – SciTrek**

**Mortar Board Society – Books for Triunfo**

**\$50**

**Jean Carpenter**



### Other EOC Support

**Chuck Andre** – Videography and SciTrek Assistance

**Meena Balgopal** – STEM library book donations

**Dan Bihn** – Videographic consulting and misc. electronic equipment

**Peter Brown** – Dendrochronology Supplies

**Dave Dahms** – Electronics Assistance

**Ann Randall** – 4-H Materials

**Mary Richmond and Paul Meyers** – Loan of GPS units

**Nature Active Publishing** – Science booklets

**Ann Seitzinger** – Lego MindStorm Robotics Invention System and Remote Control Helium Blimp. ~\$400.

**Cynthia Smeraski** – Science books for STEM Library

**Ralph Towers** – Makerbot assistance and STEM library book donations

**Dee and Mark Wanger** – Lego Dacta, Lego Mindstorms, and K'nex donations, ~\$1950.

**Thank You!**



The EOC hosted an Evolution Workshop for science teachers.



Hawaiian 4<sup>th</sup> graders opted to skip recess to do more hands-on water science.



We ran an air pollution lab in a high school without walls in Hawai'i.



Science Notebooks help students construct knowledge more effectively than worksheets.

## Accomplishments and Contributions

### June 2014

- SciTrek Summer Camp, Jun 23-27
- SummerVet Summer Camp, Jun 23-27

### May 2014

- Intel ISEF, Los Angeles, May 11-16.
- GetWET: Roosevelt High School, May 6.
- STEM Friday: Energy Science & Policy Students from Grand Junction, May 2.
- Triunfo Celebration, May 1.

### April 2014

- STEM Friday: McGraw Elementary School, Apr 25.
- STEM Friday: Windsor Middle School, Apr 18.
- STEM Friday: Colorado Science and Engineering Fair students, Apr 11.
- Colorado Science and Engineering Fair, Hilton Fort Collins, April 10-13.
- STEM Friday: Cache La Poudre Elementary, Apr 4.

### March 2014

- EDUC 460 Science Methods Class Presentation, Mar 31.
- Evolution Workshop, Mar 29.
- STEM Friday: Severance Middle School, Mar 28.
- Every Drop Counts 3, Professional Development Workshop, Kaloko-Honokohau National Historical Park, Hawai'i, Mar 22.
- STEM Friday: Bauder Elementary School, Mar 7.

### February 2014

- STEM Friday: Roosevelt High School, Feb 28.
- STEM Friday: Putnam Elementary School, Feb 21.
- CSEN meeting, Greeley, Feb 20.
- Science Fair: Mock Interviews, Feb 17.
- STEM Friday: Leshar Middle School, Feb 14.

### January 2014

- Triunfo Tutor Orientation, Jan 23.
- CSEF Board Meeting, Dinosaur Ridge, Jan 11.

### December 2013

- NSTA, Denver, Dec 12-14.
- EOC Holiday Potluck, Dec 11.
- FRCC NRE Advisory Committee meeting, Dec 10.
- STEM Friday: Tavelli Elementary School, Dec 6.

## November 2013

- Every Drop Counts Workshop Follow-up, Kaloko-Honokohau National Historical Park, Hawai'i, Nov 18-23.
- STEM Friday: Brentwood Middle School, Nov 15.
- STEM Friday: Wellington Middle School, Nov. 8.
- CSEF Board meeting, EOC, Nov. 2.
- STEM Friday: McGraw Elementary School, Nov 1.

## October 2013

- STEM Friday: Poudre Community Academy, Oct 25.
- CMMAP Climate Conference, Oct 19.
- CSU Homecoming, Oct 11.
- GetWET: Rocky Mountain H.S., Oct 10.
- Math-Science-Tech Day, Oct 9.
- INTELAC Day, Oct 5.
- STEM Friday: Roosevelt HS, Oct 4.
- GetWET: Rocky Mountain H.S., Oct 3.
- GetWET: Rocky Mountain H.S., Oct 1.

## September 2013

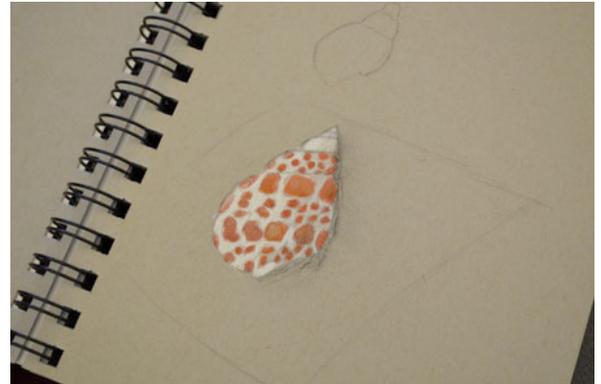
- Fall EOC/SigmaXi Keynote, Sep 24.
- Triunfo Tutor Orientation, Sep 12.
- CSEF Board meeting, Colorado School of Mines, Sep 7.
- Colorado Science Educator Network Meeting, Boulder, Sep 6
- Triunfo Tutor Orientation, Sep 5.
- ISTEc Steering Committee meeting, Sep 4.
- Triunfo Principal meeting, Sep 3.

## August 2013

- RamWelcome, Aug 23.
- Boettcher Scholar Event, Denver Botanical Gardens, Aug 9.
- Roosevelt H.S. STEM meeting, Aug 8.
- World Window shows at Soaring Eagle Environmental Center, Aug 3.

## July 2013

- GetWET field trip for Fort Collins Utilities Planet One group, Jul 31.
- Florissant Fossil Beds Consulting trip, Jul 9-11.



## Future Plans

In the next two years, we plan to:

- Continue our current programs and services;
- Increase the number of CSU faculty involved in STEM education and outreach;
- Develop and lend more inquiry-based STEM instructional kits;
- Promote our new STEM Friday Expedition program;
- Create a new STEM Teacher Club; and
- Continue to hone our student mentoring programs.



# Staff



**Andrew Warnock**  
*Director*

Dr. Warnock's interests are in developing new, low-cost ways to inspire teachers and their students to love the natural sciences. He also serves as the Education & Outreach Director for the CSU Energy Institute and is a Research Scientist III.

andrew.warnock@colostate.edu  
(970) 491-2845 | NESB B301a/B305



**Lynne Judish**  
*Laboratory Coordinator*

Ms. Judish manages all of the educational materials and resources that the center houses. She also coordinates the after-school Triunfo/Triumph Tutoring Program.

lynne.judish@colostate.edu  
(970) 491-1539 | NESB B319

**Bi-Monthly Staff Meetings**  
Minutes available on request



**Courtney Butler**  
*Assistant Director*

Ms. Butler is interested in encouraging more students to enter into local, regional, state, and international science fairs. She advises prospective science teachers who are enrolled in the BSNS program. She also serves at the Director for the Colorado Science and Engineering Fair.

courtney.butler@colostate.edu  
(970) 491-7716 | NESB B311



**Barry Carroll**  
*Program Coordinator*

Ms. Carroll coordinates distance learning courses produced by Annenberg Learner. She also serves as the RamCT coordinator for the College of Natural Sciences.

barry.carroll@colostate.edu  
(970) 491-1124 | NESB B321



**Briana Wilkins, CSEF Assistant**



**Alfred Castillo, Triunfo Assistant**

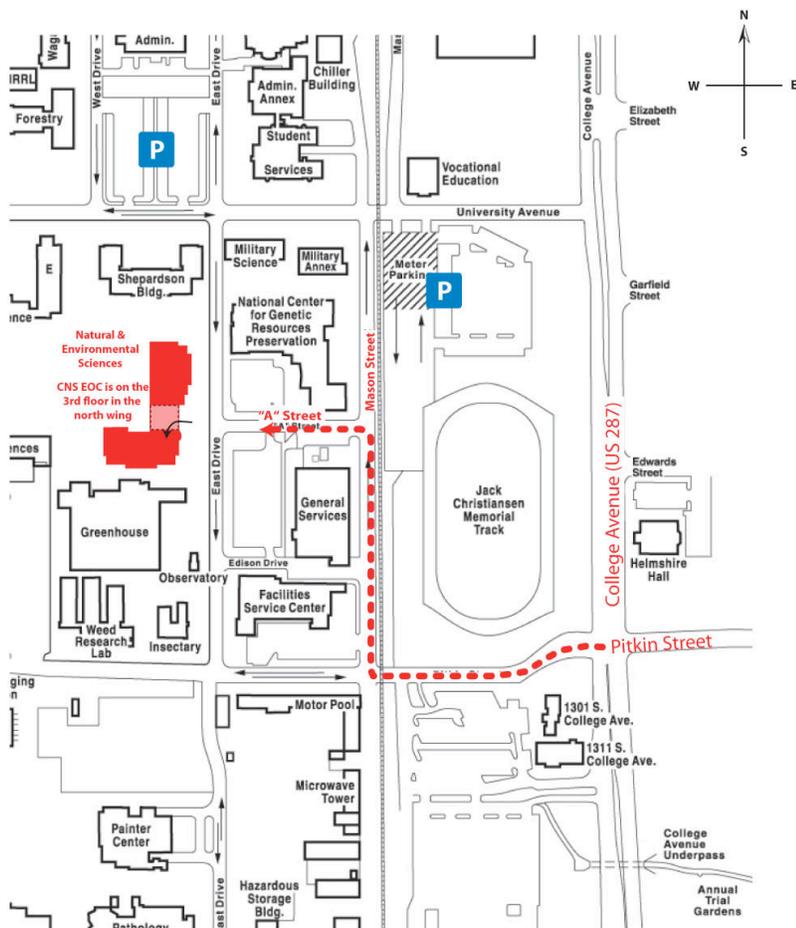


**Jessie Mader, EOC Assistant**



**Santos Gonzales, Annenberg Assistant**

# Directions to EOC



**College of Natural Sciences  
Education & Outreach Center**

## Directions to CNS EOC

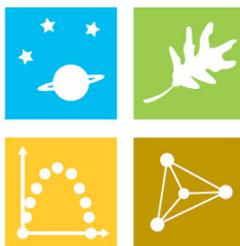
- From South College Avenue, take Pitkin Street West
- Immediately after the RR tracks, take Mason Street North (right)
- Take the second left onto 'A' Street, which dead ends at East Drive and at the NESB Building.
- Park at a meter before 4 pm.
- Parking is free after 4:00 p.m. weekdays and free all day on weekends.
- Enter the building through the main doors of the south wing.
- Go up to the 3rd floor and make a left.

~

- De la Avenida College, tome Pitkin str. al rumbo oeste.
- Emmediatamente despues de cruzar los riales de tren, tome la calle Mason al rumbo norte o doble derecha a la calle "A"
- La calle "A" se termina en la calle "East Drive"
- Alli en frente esta situado el edeficio donde tendremos el programa Triunfo.

**B307 Natural & Environmental Sciences  
Campus Delivery 1802  
1231 East Drive  
Colorado State University  
Fort Collins, CO 80523-1802**

phone: (970) 491-1700  
fax: (970) 491-2005  
[www.cns-eoc.colostate.edu](http://www.cns-eoc.colostate.edu)



**College of Natural Sciences  
Education & Outreach Center**