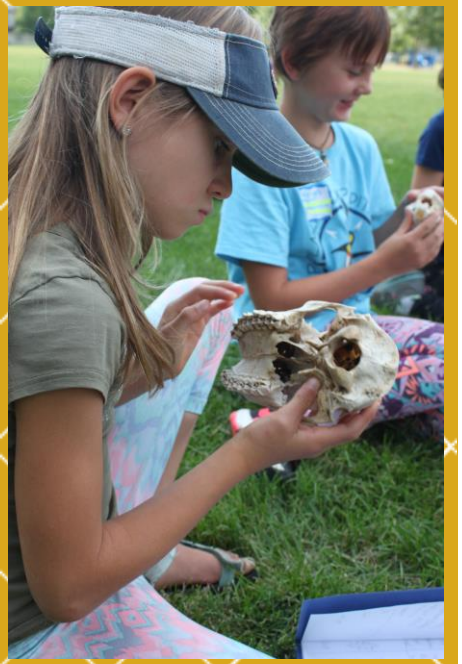
CSU Environmental Learning Center

Our mission at the Colorado State University Environmental Learning Center is to…

"*inspire and educate people to connect with and become stewards of our natural world.*"

We accomplish our mission by -

- Facilitating high quality, positive, educational experiences in and about the environment.
- Educating and mentoring future leaders in the fields of environmental education and communication.
- Bringing the knowledge, skills, and talent within the college to the outside community.
- Maintaining access to and the health of our land.

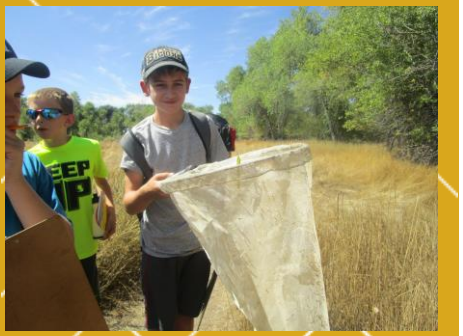


GASP! Program

- Girls Advancing Scientific Progress
- 6-week after school program
- All girls
  - Increase 3rd through 5th grade girls' efficacy and confidence in environmental sciences
- 4 schools per year, focus on lower income
- Research based

Research on girls & women in STEM

- Women comprise 47% of workforce in 2019 (US Dept. of Labor), but only 28% of STEM workforce
- Though percentages are better than other STEM fields, women are underrepresented in many environmental science fields (e.g., forestry, conservation, geology, natural resource management)
- Girls' self-concept of ability in science starts to decrease in middle school
- Girls value altruism in careers
- Textbooks and curriculum do not represent women equally
- Girls have fewer opportunities than boys to use science tools and equipment in class
- Boys receive more teacher attention and more instruction than girls
- Parents' involvement in out-of-school science related activities linked to girls' interest in science as long as 6 years later
- Role models play a significant role in STEM career awareness and interest for girls



Other research

- People who identify as Hispanic, Black, or American Indian/Alaskan Natives make up a smaller portion of STEM workforce than their proportion in general population
- By second grade negative perceptions of scientists (‘angry’, ‘mean’, ‘nerdy’) begin to show up
- Boys and girls perceive scientists as white and male
- Students in high-poverty schools less likely than peers to get hands-on science (47% vs. 61% doing hands-on activities once per week)
- Students from higher poverty schools have fewer STEM tools and resources at home (e.g., computer) and in school (e.g., computers, lab equipment)

Equitable practices

- Identify and work on your implicit biases
- Redefine science as a culturally mediated way of thinking and knowing
- Make diversity visible (e.g., highlight scientists that look like students and come from a variety of backgrounds)
- Focus on everyday contexts that are important in children's lives
- Connect to students' cultural experiences and native languages
- Make learning student-centered (e.g., small group work instead of lecture)
- Value multiple ways of expressing science understanding
- Focus on students identifying as scientists (i.e., using scientific tools, discourse, sharing newfound knowledge)

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