



Ecologists, Educators, and Schools:
Partners in GK-12 Education

No Child Left Indoors!



ECOS is a partnership program for enhancing science education in K-12 schools in western Montana and adjacent open areas as outdoor laboratories for learning about their environment

Objectives

Develop scientific ways of thinking and understanding in K-12 students through authentic research experiences in their schoolyards and adjacent habitats.

Promote teaching practices focused on "learning by doing" and inquiry instruction for both teachers and future science faculty.

Develop and model linkages between educators in the K-16 continuum.

Identify project indicators to make the program sustainable at UM, and facilitate transfer to other sites in Montana and around the country.

Share our model of how authentic research can be introduced into the K-16 curriculum to enhance the teaching and learning of science.



ECOS Mission

Ecology graduate and undergraduate students from the University of Montana are showing K-12 students and their teachers how to use an ecological lens for viewing their schoolyard.



Beyond the playground, they learn to see an ecological laboratory filled with organisms that

have interesting adaptations and interactions. The ECOS teams model what ecologists do by immersing themselves and Montana students in ecological investigations in their schoolyard and classroom laboratories.



Accomplishments and Products

More than a thousand rural K-12 students, thirty fellows, dozens of teachers, fifteen UM professors and many community businesses have participated in and/or supported ECOS partnerships



ECOS has produced:

- A unique online *Guide to the Ecology of the Northern Rockies*. The plant guide, an invaluable resource for schools and fellows, is now complete.
<http://www.bioed.org/nhguideweb>
- Nearly 50 inquiry-based lesson plans are available at
<http://www.bioed.org/ECOS/inquiries.aspx>
- A nature art calendar highlighting local phenology and nature information
- PhD dissertation chapters
- 5 new schoolyard ecology laboratories, and 4 more nearing completion!
<http://www.bioed.org/ECOS/demo.htm>
- Slides and posters from presentations made at local and national conferences
<http://www.bioed.org/ECOS/pubs.htm>

ECOS Teams

Hellgate Elementary School

Jo Fix (3rd) & Mike Plautz (7th)

Alison Perkins *

John MacLean *

Hannah Elliott +

Andrew Hoyer +

Florence Carlton K-12 School

Brent Heist (8th) & Byron Weber (1st)

T.J. Fontaine *

Sam Stier *

Melissa Maggio +

Lewis and Clark Elementary School

Julie Greil (1st & 2nd) & Carol Reeves (5th)

Katie Hailer *

Bruce Threlkeld *

Corissa Crowder +

Target Range K-8 School

Debbie Caron (4th) & Peggy Purdy (4th)

Brooke McBride *

Michael Machura *

Allison Greene +

At-Large Fellows

Rachel Loehman *

Carl Rosier *

Special Projects Fellow

Jeff Piotrowski *



* PhD Fellows

+ Undergrad Fellows

ECOS Staff

Carol A. Brewer PhD, Director

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