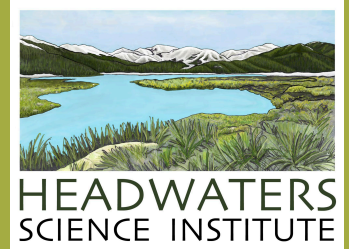


Your School 2026 Program **PROPOSAL**



January 1, 2026

Baylee Goodwin, Program Coordinator
530-448-2150
www.headwatersscienceinstitute.org

Educator's Name
School Name
Address

Ecology Program Description

Immerse your students in the world of ecology with our week-long research program. Curiosity drives student understanding of abiotic and biotic factors that affect environments. Students create research projects that provide evidence for the effects of resource availability on populations or communities of organisms. Students do this by:

- Using natural gradients, like distance from water, to observe potential changes in biodiversity
- Measuring the effect of nutrient availability on biodiversity and species presence
- Assessing energy flow between habitats or ecosystems
- Quantifying differences in energy flow in healthy and unhealthy habitats
- Measuring density or occurrence of invasive species or host/parasite presence in relation to environmental variables

All Headwaters programs are customized to align with selected Next Generation Science Standards and Science and Engineering Practices.

MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS1-6: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS2-3: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem

www.headwatersscienceinstitute.org



Sample Student Research Projects

While we customize each group's experience based on their learning objectives and what is biologically compelling during the program, here are the most common systems of study students create projects around during our ecology programs.

- What is the correlation between water quality and populations of aquatic organisms?
- How does riparian morphology affect living organisms and water quality in the riparian corridor?
- How have human-driven abiotic and biotic disturbances influenced habitats in urban areas?
- Do trees that are closer together have more mistletoe (host/parasite interactions)?

Program Goals

- Students improve their ability to apply the scientific method.
- Students gain experience with field study techniques.
- Students learn how to analyze data and present their findings.
- Students learn targeted content through the process.
- Students gain exposure to professional scientists who mentor them through the research process. Our student-to-instructor ratio is 13:1.

Program Outcomes

What we have found in our pre- and post-program student surveys:

- 90% of the students agree that after participation they have learned something they would not have in the traditional science classroom
- The percentage of students interested in a science related career increased by 23.4% to 63% after participating in our program.
- 66% of students who participated in our program reported overcoming challenges in their project.
- After participation, 87% of students report being familiar with scientific research.
- 93% of students are confident in their ability to apply the scientific method.
- 90% of students indicate that they like science more after participating in the program, 16% of those students saying "a lot more than before".

Program Schedule

Pre-Program Investigation You will begin your program with a *Lunch With A Scientist* video. Our *Lunch With A Scientist* program engages students by introducing them to a professional working in the field. Students are challenged to apply the information from the video in a new way using our student investigation companion activity.



In-Class Schedule

Each of the following activities take place during science class.

Day 1 Question Asking Students are split into collaborative groups and are guided through writing a testable research question and hypothesis. Students use peer-reviewed scientific papers as evidence to support their claims. All groups will leave the session with a refined version of their research question and hypothesis.

SEPs Asking questions and defining problems. Planning and carrying out investigations. Obtaining, evaluating, and communicating information.

Day 2 Methods Development Students develop a research proposal. The proposal guides students through method development. Students will construct a well thought out investigation for utilization in the field.

SEPs Developing and using models. Planning and carrying out investigations. Constructing explanations and designing solutions.

Field Schedule

This can be either all day or half-day activity.

Day 3 Field Day Students collect data at a field site near your school or on location in the Tahoe area. Students are guided through field techniques and data collection. They will implement their research proposals to collect and analyze unique data sets.

Students bring their own lunch, snacks, and water.

SEPs Planning and carrying out investigations. Obtaining, evaluating, and communicating information. Analyzing and interpreting data.

In-Class Schedule

Day 4 Analyzing and Interpreting Data Students analyze and graph their data. A facilitated student discussion reviews the implications of their findings and construction of their scientific presentations begins. A digital office hour is provided after school hours as additional support for this process.

SEPs Analyzing and interpreting data. Using mathematics and computational thinking. Obtaining, evaluating, and communicating information.

Day 5 Student Presentation Day We livestream and record the presentations to be posted on YouTube (public or private) to share with the school and parents. Each presentation will be followed by a short Q-&A session from their classmates. Students take the Headwaters post-program survey (about 10 minutes).

SEPs Engaging in argument from evidence. Obtaining, evaluating, and communicating information.



Post Program Educator professional development (PD) opportunities are available to enable educators to lead a research program at their school.

Program Customizations

Our programs are tailored to your specific content needs. We can help design curriculum, and work with you to select a length for the program that meets your NGSS content goals. [Learn more about our programs and program topics.](#)



Contract

Description	Price	Quantity	Total
1 Field Day (Data Collection) <i>Includes research instrumentation and research materials</i>	\$100.00	30	\$3,000.00
4 In-Class Day (Question Asking, Methods Development, Data Analysis, Presentations) <i>Includes Data Classroom and instruction</i>	\$100.00	30	\$3,000.00

Make Checks Payable to

Headwaters Science Institute
PO Box 913
Soda Springs, CA 95728
Headwaters Science Institute Tax ID/EIN 47-1714438

Subtotal

\$6,000.00

Grants

TBD

Total

\$6,000.00

Invoice Contact Details

Please list the contact details for the invoice.

Name: _____

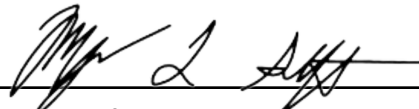
Email: _____

Phone Number: _____

Payment Schedule

Due With Contract	\$3,000.00
Due 6 Weeks Prior to Program	\$3,000.00

Teacher
School


Meg Seifert, Executive Director
Headwaters Science Institute

Cancellation Policy

Cancellations made up to 2 month prior receive 100% refund

Cancellations made 4 weeks prior receive 50% refund or 100% credit toward rescheduling.

Cancellations made within 4 weeks don't receive a refund but can have a 75% credit towards rescheduling.

