



ECOLOGY PROJECT  
INTERNATIONAL

# MONTANA SCIENCE TEACHING INSTITUTE

The **Montana Science Teaching Institute**, brought to you by Ecology Project International (EPI), aims to positively impact science education in Montana. In an effort to deliver increased online learning opportunities for Montana students and teachers, EPI has launched an initiative to provide free, online, classroom-ready resources and online-training. Teachers will find EPI resources are easy to access, well-supported, and based within the Montana Science Education Standards. Students will benefit from unique, engaging lessons that help them connect with the natural world and inspire them to create positive change.

The target audiences for this program are middle school and high school teachers in STEM-related fields. Collaboration with teachers in language arts fields is also encouraged. Cohorts of 30-50 teachers will be formed from schools and districts representing the diversity of communities in Montana. Cohorts comprising teams of multiple teachers from selected schools and districts are ideal for supporting collaboration within schools and across districts and are encouraged to enroll together. **EPI is actively recruiting for the Winter and Spring 2023 cohorts.**

The Montana Science Teaching Institute is supported by the Governor's Emergency Education Relief Grant (GEER) and participation is free for selected teachers.



## MODULE CONTENT & FOCUS

- Module 1** **Patterns & Predictions for a Hotter Planet Part 1** – Temperature Change (Featuring HHMI BioInteractive's *EarthViewer*)
- Module 2** **Patterns & Predictions for a Hotter Planet Part 2** - Atmospheric Carbon Change (Featuring HHMI BioInteractive's *EarthViewer*)
- Module 3** **Populations and Pressures in Yellowstone** – Analyzing and interpreting data explaining human impacts on populations in Yellowstone.
- Module 4** **Changing Conditions and Trophic Cascades** – Modeling impacts of change in Yellowstone food webs.



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The **Montana Science Teaching Institute** is designed to support Montana teachers as they strive to deliver engaging content in dynamic conditions. Professional development opportunities will include live, synchronous workshops filled with opportunities to explore new, classroom-ready resources that provoke inquiry, build knowledge, and strengthen data and computational analysis skills. Synchronous sessions will include time for teacher collaboration and discussion, and post-workshop recordings of the workshops will allow teachers to revisit topics and review at their own pace. Teachers will come away with new tools and approaches for exploring the science behind anthropogenic impacts on the environment and changes in climate.

EPI curriculum highlights natural phenomena and student inquiry driven methods, and uses technology to enhance opportunities for students to interact with the natural world. Teachers in the **Montana Science Teaching Institute** will use novel technology tools to dive into the science of global temperature and atmospheric changes, and model how human influences can impact ecosystems in Montana. Classroom-ready materials that reinforce student application of data analysis, building and using knowledge, and computational analysis will be provided and modeled during each session.

Cohorts of enrolled teachers will have the opportunity to engage with four 90-minute modules delivered weekly starting February 1. Participants will build upon each week's learning, and have opportunities to ask questions and discuss ideas with other Montana educators. Teacher learning and collaboration networks initiated through the **Montana Science Teaching Institute** will continue to impact science education into the future as EPI extends outreach by hosting periodic special events throughout the year. Special events, on-going support, and access to materials and resources will be available to all participants, connecting teachers across cohorts and extending learning opportunities.

**Winter 2023 Cohort Module Schedule:**  
Modules hosted from 4:30 – 6:00 PM each  
Wednesday afternoon from February 1 >  
February 22.

## Special Event Topics

**Fall 2022**  
**November 30**

HHMI's BioInteractive's  
*The Science of Climate Change* – Video and discussion

**Winter 2022**  
**March 1**

HHMI BioInteractive's  
*From Ants to Grizzlies: A General Rule for Saving Biodiversity* – Video and discussion

**Spring 2023**  
**Date TBD**

EPI presents: *Creating the Bridge to Experiential Learning in Nature*

Upon completion of the program's four modules, participants will receive a certificate of continuing education, authorized through the Office of Public Instruction for 6 credit hours.