

Intermountain Climate Education Network December 2011 Newsletter

Welcome to the first ICE-Net newsletter! The purpose of this publication is to keep all stakeholders in the loop of the exciting activities progressing with this project.

Adventure Learning Update

Adventure Learning (AL) is a conceptual framework that the ICE-Net project is considering to connect project efforts to schools as well as schools to each other. Two key tasks for fall 2011 are to develop approaches to the nine AL principles and develop capacity to deliver content in the spring 2012.

Justin and Brant have been involved in piloting AL expeditions this fall. In October they combined the elements of technology, education, and adventure in an AL multi-day expedition on the Main Salmon River with students and scientists. Expeditions have also been reported at the McCall Outdoor Science School.

Education Team Update

Building on the collaborative efforts made during the summer workshops, monthly follow-up meetings are being held throughout the fall and spring. In addition, grad students Bree Reynolds and Frank Finley have continued to support our aim for cultural congruency within ICE-Net activities.

The ICE-Net team hopes to continue support for project teachers for the duration of the grant. We will hold at least one more summer workshop, anticipating to occur in late June at the UI-Moscow campus.

In the spring of 2012, we will begin making "site visits" to our partner schools. Ultimately, we aim to use these visits to assist teachers in conducting climate change activities, collect the much needed data and observations to inform progress of the project, and provide support for implementation of the Adventure Learning framework.



Upcoming ICE-Net Activities

•Tuesday, January 31, 3-4pm PST: Teacher check-in

Teachers, stay tuned to your email for more details about this meeting!

Dissemination Update

Five conference proposals on the initial phase of this work have been accepted: National Science Teacher Association (March 2012), National Association for Research in Science Teaching (March 2012: two accepted), Association for Science Teacher Educators (January 2012: two accepted). Congratulations to all!

Science Team Update

Besides working on the Climate Science Matrix (usually referred to as 'The Matrix', see page 2), graduate students Stephen Gillis and Vincent Jansen have been working hard this fall on developing activity modules specific to the state of Idaho. Stephen, an avid fly-fisherman, is developing an activity that helps students make the link between climate change, creek conditions and temperatures, and cutthroat trout populations in Northern Idaho. He has recently developed a partnership with an undergraduate research assistant on our Moscow campus to focus on Benewah Creek and the Coeur d'Alene tribe efforts to restore camas plants around the creek.

Vincent is developing an activity module that links climate and plant phenology. If you have ever noticed that there is variability to when trees bud out in the spring and lose their leaves in the fall, you will understand how plant phenology, and the timing of those events in a plant's life, tell us a lot about both climate variability and climate change. Students can easily monitor these events and the change in plants over a growing season with a 'Plant Cam', an automated camera (on a timer) that he will demonstrate for interested teachers in a webinar during Spring semester.



Unraveling the Climate Matrix

Our graduate students Stephen and Vincent have been working hard to fill the Matrix with information resources and NASA activities and products for the classroom. But once it's complete, how exactly will the Matrix be used?

Step One: Choose a climate concept box Example: "Climate is naturally variable over space and time" is one of the 8 main concepts, with "Paleorecords and proxy data are records of past climate variability" as a concept that helps explain the main idea.

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Step Two: View tools associated with that box
Each box contains the concept summary with highlighted keywords, a concept narrative, and a list of associated resources. The resources, which come from online sources such as NOAA and NASA lesson plans, activities, information, and data sets, are flushed out with a summary, hyperlinks, cross-references to other matrix boxes, and cross-references to Idaho Science Standards and NOAA climate change standards. In addition, concept boxes will include place-based examples and lesson plans created by teachers.

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Introduction to Dendrochronology	Http://www.elso.edu/planting/staff/musethy/lending/	Warks assisted through a dendrosformings lab exercise	Amer							
Build a Tree	Mig.//www.sindowc/universe.org/sarti///imate/tendructronal org/,build_inse.html	Allows students to order climate conditions to build a simulated line-ring.	Activity							

In the Field Spotlight: American Falls High School

Three AFHS teachers are busy exploring climate change with their students. The collaborative team, consisting of Mary Roundy (school librarian), Tom Diffenbach (award-winning science teacher), and Todd Winters (computer instructor), is bringing AFHS students up to speed on how the climate is changing on our planet and the ramifications it may have for people living in our region of the U.S.

By combining Native American history, technology, and hands-on experimentation, students are exploring just what climate change can mean for human communities and the ecosystem. The students meet once a week for a

climate lab in which they have learned about ice caps, the scientific method, ocean currents, computer modeling, and sea levels. They have been constructing and installing a weather station, with funding provided by NASA, to collect data that will be studied relative to historical data.

Future labs will include testing and measurement, guest speakers, data collection and graphing, statistical analysis, online films, and activities in the library exploring electronic resources, and planetary trends.



Teacher Web Corner

Adventure Learning at UI (AL@UI):

http://alatuimainsalmon. wordpress.com

Teachers, have you seen the cute **climate dogs**? This website explains 4 factors that influence climate in Victoria, Australia by using animated dog cartoons! http://alturl.com/p5pze

John Abotzoglou's blog post on "Rain gauge calisthenics" includes info on how your students can help collect data for a precipitation network. http://climateinw. wordpress.com