

Jigsaw

*Advancing
Student-Active Learning in
Ecology Education*



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Photo from EcoEdDL: [Image for the Kuparuk river, an arctic stream ecosystem on the North Slope of Alaska](#), Jonathan Benstead, University of Alabama

Special Feature: Biogeochemical Cycling

Announcements

Early Bird Registration for ESA Centennial Meeting ends June 18

7th Resources for Ecology Education – Fair and Share (REEFS)

ESA Centennial Meeting, Baltimore

Sunday August 9, 2015 12:00 pm – 5:00 pm

Now a half-day workshop by popular request, plan to join us for the 7th REEFS education! Intended for faculty of undergraduate students to engage students with active learning methods. The workshop will feature a series of lesson activities; time for you to work on your own teaching through a facilitated process; and digital publishing options for your educational resources. Organized by the Education Section and the ESA Office of Education and Diversity Programs. For more information, please contact Carolyn Thomas, cthomas@ferrum.edu.

Be a SEEDS Mentor at ESA Centennial Meeting

The ESA award-winning *Strategies for Ecology Education, Diversity and Sustainability* (SEEDS) program invites you to consider being a mentor to a SEEDS student in Baltimore! This is a great opportunity to touch the lives of bright and exceptional students with your expertise and wisdom! Deadline for sign-up is May 30, 2015.

Upcoming Events

Biology by Number:

Bringing Math to the High School Classroom

July 20-22, 2015

NIMBioS at the University of Tennessee, Knoxville

Financial support for travel available.

[Apply by June 9](#)

Want To Use Real Data In Your Classroom?

DRYAD Faculty Mentoring Network

August 9, 2015

ESA Annual Meeting in Baltimore

Travel support available

[Apply by June 5](#)

NSF-UBE REIL-Biology

August 8, 2015 at ESA meeting. Develop intro biology class modules.

[Apply for travel support.](#)

Mark Your Calendars

3rd Life Discovery – Doing Science Education Conference

March 18-19, 2016

Conference Center at the Maritime Institute (CCMIT)

Baltimore (Linthicum Heights), MD

Theme: Creating Connections – Biology in Action

The Call for Presentations will be released in June.



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Diversity

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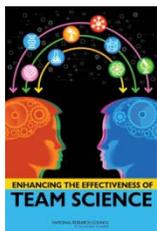
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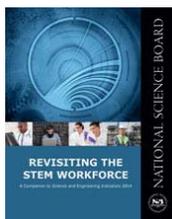
Reports



Enhancing the Effectiveness of Team Science

The growing scale of science has been accompanied by a shift toward collaborative research. This report synthesizes and integrates the available research to provide guidance on assembling the science team; leadership, education and professional development for science teams and groups.

Revisiting the STEM Workforce



In this report, the Board offers a more inclusive vision of a STEM-capable U.S workforce by highlighting that STEM knowledge and skills play an indisputable role in fostering individual opportunity and national competitiveness. Creating a strong STEM-capable workforce requires full commitment of governments, educational institutions, and businesses sectors.

Resources



Special Feature: Biogeochemical Cycling

Resources are free but an account is required. This is to help us understand our users better. Login to EcoEdDL to download the resource

Forest Ecosystem Responses to Chronic Nitrogen Additions

Serita Frey, *Department of Natural Resources, University of New Hampshire*

This activity can be used to teach students about the effects of long-term nitrogen deposition on forest ecosystems. It provides background information on nitrogen deposition and the research project that generated the data. There are complete instructions that guide students through the data analysis as well as guidelines for teachers on how the activity can be used and adapted.

Rainforest carbon cycling and biodiversity: A simulation model learning tool

Ann Elizabeth Russell, *Iowa State University*

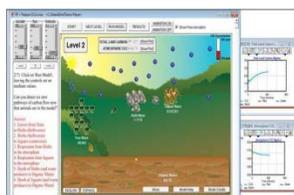


Fig. 1 Rainforest carbon cycling model.

This modeling activity simulates how atmospheric CO₂ concentrations, which influence global climate, increase with deforestation and decrease during reforestation. Students can engage actively in the scientific method by posing questions and formulating hypotheses. They can gather data from running the model at different experimental levels of the state variables to test hypotheses, evaluate the data collected, and present results in essays, posters, or Powerpoints.



The Cadillac and Dorr Mountains as viewed from the summit of Gorham Ridge, Acadia National Park, Maine.

Amanda Elliot, *Institute of Behavioral Science, University of Colorado*

A recent study that included Acadia National Park found that atmospheric deposition varies greatly over complex terrain and is controlled primarily by elevation and vegetation type. Atmospheric deposition is an important source of nutrients and pollutants to ecosystems yet current estimates of total deposition have large uncertainties, particularly across heterogeneous landscapes such as mountains. There is a need for reliable, spatially explicit estimates of the atmospheric deposition of pollutants and nutrients for use in policy decisions and the calculations of nutrient budgets.

Want more Biogeochemical cycling? Click [here!](#)

Have a resource to share? [Submit here!](#)

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