

Jigsaw

*Advancing
Student-Active Learning in
Ecology Education*



ECOLOGICAL SOCIETY OF AMERICA
esa

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Photo Credit from EcoEdDL: [An Arctic fox captures a Least Auklet in the Aleutian Islands](#) by Anthony DeGange, U.S. Geological Survey

Special Feature: Applied Ecology – Ecological Food Webs

What's new in EcoEdDL

Order Up! Ecological Succession at Table Rock State Park in Pickens, South Carolina By Janet Bouknight Bargar, Santa Fe College

This activity provides students with photos of different phases of ecological succession from Table Rock State Park in Pickens, South Carolina. Using their own knowledge of ecological succession, students arrange the photos in chronological order of the phases of succession.

Announcements

Call for Proposals for Resources for Ecology Education Fair and Share (REEFS) Special Session at ESA Annual Meeting, Sacramento, CA

Attending the 2014 ESA Annual Meeting? Whether you have a tried and tested lab, field or classroom activity or a brand new teaching idea, we invite you to present your ideas to engage undergraduate students using student-active methods. We will provide information on digital publishing options during the session. [Sign up](#) to share your ecology education resource by **April 30, 2014**. Questions? Contact: Carolyn Thomas, Education Section Chair, cthomas@ferrum.edu.

Reports

Upcoming Events:

Register for CUR Conference 2014

June 28- July 1, 2014 CUR, the Council on Undergraduate Research, is hosting its 16th National Conference, "Creating the Citizens of Tomorrow: Undergraduate Research for All," in Washington DC.

BioQUEST Summer Workshop

Join BioQUEST at the University of Delaware for a week of exploring effective pedagogies to engage undergraduates. The workshops are ideal for faculty interested in exploring improved methods for STEM subjects. Deadline to register is May 9.

Science Speakers Network

University Corporation for Atmospheric research and the United Nations foundation are seeking volunteers for their new initiative, *Climate Voices – Science Speakers Network*

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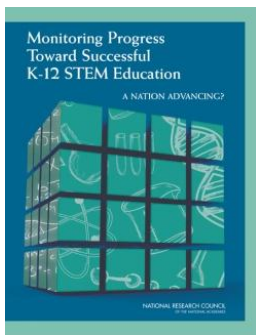
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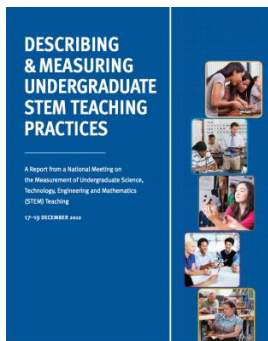
Life Discovery Partners

Botanical Society of America



Monitoring Progress Toward Successful K-12 STEM Education

A study by the National Research Council that addresses the need for research and data that can be used to monitor progress in K-12 Science, Technology, Engineering and Mathematics (STEM) education and make informed decisions about improving it. The recommended indicators provide a framework to create and implement a national-level monitoring and reporting system.



Describing and Measuring Undergraduate STEM Teaching Practices

The publication by AAAS discusses the strengths and weaknesses of various approaches to measuring undergraduate teaching practices, including faculty and student surveys, faculty interviews, classroom observations, portfolios, and other artifacts.

Resources



Special Feature: Applied Ecology – Food Webs

Using a Cascading Food Web Case Study to Assess the Ecological and Economic Impacts of Management Decisions

By Kevin Wyatt, Michigan State University

In this exercise, students will use a case study to introduce themselves to complex ecological interactions, the value of ecosystem services, and how management decisions can affect them. The case study provides students with a real-world example which enables them to apply their knowledge of basic ecological concepts, build an appreciation for the complexity of ecosystems, and deal with ecosystem services in a concrete context.



Using Stream Leaf Pack to Explore Community Assembly

By Jennifer Doherty, Michigan State University; Cornelia Harris, Cary Institute of Ecosystem Studies; Laurel Hartley, University of Colorado
In this experiment, students will explore

Society for the Study of Evolution
Society for Economic Botany

Committee on Diversity and Education (CDE)

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functional and taxonomic diversity in a stream ecosystem, learn about food web relationships, and learn about the ways in which abiotic and biotic factors determine what organisms are present in a community. Students will make and install artificial leaf packs in a stream, wait for the leaf packs to be colonized by stream organisms, measure abiotic variables that could influence leaf pack colonization, retrieve the leaf packs and classify the organisms they find in both taxonomic and functional ways, and participate in a class discussion of how the leaf pack community is situated within a larger ecosystem.

An In-Class Role-Playing Activity to Foster Discussions and Deeper Understanding of Biodiversity and Ecological Food Webs

By Loren Byrne, Roger Williams University

To help students learn about biodiversity and complex ecological webs, a role-playing activity was developed in which students “become” a different species (or resource) that they investigated for homework. In class, students work in small groups to “meet” other species in their community and, as appropriate for their roles, “consume” or “interact” with each other. As they make intraspecific connections, students collectively create an ecological web diagram to reveal the structure of their community’s relationships.

Want to learn more about ecological food webs? [Click here!](#)

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