

Jigsaw

*Advancing
Student-Active Learning in
Ecology Education*



ECOLOGICAL SOCIETY OF AMERICA
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Photo Credit from EcoEdDL: Effects of frost on wildflowers: an unexpected consequence of climate change – image 02 of 22 by David Inouye.

Special Feature: Climate Change

What's new in EcoEdDL

Leaves as Thermometers

By Aaron B. Berdanier

Plant morphology reflects evolutionary solutions to environmental constraints. In this experiment, students use this principle to predict the climate at their site. The experiment emphasizes quantitative analysis, data synthesis, and ecological responses to climate.



Image Source:
http://pl.wikipedia.org/wiki/Plik:Lisc_lipy.jpg and licensed under the "GNU" Free Documentation

Talking Turkey: Using a Short Story to Facilitate Learning and Appreciation of Energy Flows Through Ecosystems

By David R. Bowne

This exercise uses the universality of storytelling to engage undergraduate students in ecological science. Students read a fictional narrative that connects scientific principles of ecology to their daily life and become more personally engaged in the scientific material and more interested in analyzing and evaluating the role of science in society.

Announcements

Biology Scholars Residency Program

The American Society of Microbiology is offering a trio of residencies in the Biology Scholars Program: Assessment, Research and Transitions. Each residency will be held in the summer of 2014. The deadline to apply is **February 1, 2014**.

LifeDiscoveryEd Digital Library Call for Resources

You are invited to submit resources to EcoEdDL, PlantEdDL, EvoEdDL – three portals in LifeDiscoveryEd Digital Library. We are especially interested in resources

Upcoming Events

National Association of Biology Teachers 2013 Professional Development Conference

November 20-23, 2013 | Atlanta, GA

Beginning a Research Program in the Natural Sciences at a Predominantly Undergraduate Institution Institute

November 22-24, 2013 | San Diego, CA

2014 National Conference on Undergraduate Research (NCUR) Abstract Submission Deadline

December 6, 2013

AAC&U Scientific Thinking and Integrative Reasoning Skills (STIRS) Application Deadline

January 6, 2014

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Botanical Society of America
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Society for Economic Botany
Science Pipes, Cornell University

related to Vision and Change concepts and competencies. Please submit these resources by **January 31, 2014** to be featured in workshops at partner Society annual meetings next summer!

Society for Economic Botany call for Resources

The Society for Economic Botany (SEB) is excited to invite submissions of proposals for active learning teaching resources to be presented at workshops to be conducted at the Joint Society for Economic Botany & Society of Ethnobiology Conference on Sunday, May 11, 2014 in Cherokee, North Carolina. Please [visit their website](#) for more details.

PlantingScience – New Online Resources

The site features resources for investigating plants and science careers with links to 14 partner organizations including LDDL partners. The downloadable "[Plant Investigation Toolkit](#)" has helps on topics ranging from "Using Math" to "Plant Care" to "Imaging Technology." Students, teachers, and mentors now each have a new extensive "Roadmap through an Investigation."

Resources



Special Feature: Climate Change

Roots as Foragers – a PlantEdDL Activity

By Stanley A. Rice

In this project, students can experience plants as responsive rather than passive organisms. Roots forage through heterogeneous media and proliferate in portions of the soil that have abundant nutrients. Students can see and measure this growth. Students also get to address issues of experimental design such as the sequence effect.



NCEP Exercise – Climate Change and the Future of the Mink Frog in New York State

By J. P. Gibbs

The objective of this exercise is to combine sophisticated computer projections of climate change in New York with data on species distributional patterns recently accumulated via the New York Amphibian and Reptile Atlas project of the New York Department of Environmental Conservation. The exercise will subsequently examine how New York's climate is projected to change and determine whether the mink frog will be left with any habitat.

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Climate Change, Food, and 'Sharing' Among the Iñupiat of Wainwright, Alaska

By Kassam Research Group

This 14-minute video and accompanying case study illustrate the socio-cultural and ecological connectivity when considering the impact of climate change.

Specifically, this activity focuses on the implications of climate change for the Iñupiat community of Wainwright, Alaska and on the concept of food sovereignty.

What NOT to Read: a Lesson in Reviewing and Critiquing Scientific Literature Using a Junk Science Article on Climate Change

By Mary Ann Vinton and Jon Kenning

This exercise functions well as an initial assignment in a research article-based course because it gives students motivation and tools to critically judge published research articles. It also introduces major concepts involving ecological effects of increased atmospheric carbon dioxide and exposes students to the political and scientific debates surrounding global warming.

For more resources related to Climate Change in EcoEd Digital Library, click here

The EcoEd Digital Library currently has a number of resources that focus on climate change. This includes:

- 16 assignments/non-lab activities
- 2 dataset exercises
- 8 graphs or charts, powerpoints and videos
- 24 photographs
- 5 teaching strategies and reports
- 1 simulation

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To learn more about **EcoEd Digital Library** go to: <http://ecoed.esa.org/>

If you have any questions, e-mail ecoeddl@esa.org