DIG Into Data

TIEE
TEACHING ISSUES AND EXPERIMENTS IN ECOLOGY

Visit the DIG Into Data QUBES page:
https://qubeshub.org/community/groups/data_incubator

Resource Collections Include:

- New Teaching Data Sets published in a special issue of Teaching Issues and Experiments in Ecology (TIEE) and modules in progress hosted by QUBES
- Materials from workshops presented at the Life Discovery and BioQuest conferences
- Presentations from an ESA Organized Oral Session on Bringing Research Data to Ecology Classrooms

DIG into Data resources in Teaching Issues and Experiments in Ecology

Browse the special issue at http://tiee.esa.org/vol/v13/toc.html and modules in progress at https://qubeshub.org/community/groups/data_incubator/tiee

Bhaskar, M.S.B, J. A. Rosenzweig, and S. Shishodia. 2018. **Investigating Sexually Transmitted Disease (STD) Ecologies Using Geographic Information Systems (GIS)**. Teaching Issues and Experiments in Ecology, Vol. 13: #6.

Bonner, K.M. and G. B. Cunningham. 2018. **The nose knows: How tri-trophic interactions and natural history shape bird foraging behavior.** Teaching Issues and Experiments in Ecology, Vol. 13: #8.

Carter, A.L. 2017. **Painting turtles: an introduction to species distribution modeling in R**. Teaching Issues and Experiments in Ecology, Vol. 13: #1.

Janmaat, A.F. 2018. **Investigating Leaf Litter Decomposition and Invertebrate Communities in Streams**. Teaching Issues and Experiments in Ecology, Vol. 13: #4.

Linton, D. A. Monfils, M. Phillips, and E. R. Ellwood. 2018. **The Effect of Climate Change on Butterfly Phenology**. Teaching Issues and Experiments in Ecology, Vol. 13: #7.

Little, A.M.. 2018. **Environment-Richness Relationships in Ephemeral and Permanent Wetlands: Guided Inquiry with Graph Interpretation**. Teaching Issues and Experiments in Ecology, Vol. 13: #5.

McNeil, J. and M. A. Jones. 2018. **Data Management using National Ecological Observatory Network's (NEON) Small Mammal Data with Accompanying Lesson on Mark Recapture Analysis**. Teaching Issues and Experiments in Ecology, Vol. 13: #9.

Orlofske, S.A. 2018. **Parasites – They're what's for dinner: Investigating the role of parasites in aquatic food webs**. Teaching Issues and Experiments in Ecology, Vol. 13: #3.

Wu, C. and A. Ellwein. 2017. **The Biology of Climate Change: The effects of a changing climate on migrating and over-wintering species at a high-elevation field station**. Teaching Issues and Experiments in Ecology, Vol. 13: #2.

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Presentation Collection available from last year's Organized Oral Session (**ESA 2017**, Portland OR): Bringing Research Data to the Ecology Classroom: Opportunities, Barriers, and Next Steps

https://qubeshub.org/community/groups/data_incubator/esa2017

Undergraduate data science: Biological connections and assessing impacts
Louis J. Gross, University of Tennessee; Suzanne Lenhart, University of Tennessee; Robin Taylor, University of Tennessee; Pamela Bishop, University of Tennessee; Kelly Sturner, University of Tennessee

NEON data in undergraduate ecology courses: Data skills and learning opportunities
Wendy Gram, Battelle – NEON; Megan A. Jones, Battelle – NEON

Exploring global environmental change issues: Using an online spatial data sharing platform in the classroom
Kai Foster, The Conservation Biology Institute

Using authentic scientific data to improve quantitative reasoning in ecology and evolutionary biology
Louise Mead, Michigan State University; Elizabeth H. Schultheis, Michigan State University; Melissa K. Kjelvik, Michigan State University; Molly Stuhlsatz, BSCS; Alexa Warwick, Michigan State University

Student-led evaluation of air quality issues using the US EPA AirData website
Katherine Barry, University of Minnesota College of Biological Sciences; Mary A. Williams, University of Minnesota; Deena Wassenberg, University of Minnesota College of Biological Sciences

Using primary literature to teach data literacy
Bridget Conneely, HHMI BioInteractive

Natural history collections data and Biodiversity Literacy in Undergraduate Education (BLUE)
Elizabeth R. Ellwood, Florida State University; Anna K. Monfils, Central Michigan University; Debra Linton, Central Michigan University; Molly Phillips, iDigBio

Analyzing interesting images motivates mathematics and statistics learning
Jeremy M. Wojdak, Radford University

Enabling authentic ecological inquiries using research data and imageries in large classrooms
X. Ben Wu, Texas A&M University; Stephanie Knight, Pennsylvania State University; Xavier Jaime, Texas A&M University; Jane F. Schielack, Texas A&M University

Asking and answering questions: Using a flexible querying tool to support data exploration in a variety of courses
Tanya Dewey, Animal Diversity Web and Colorado State University