2021 Earth Educators’ Rendezvous Online
Afternoon Workshop Leader Webinar

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Webinar Outline

Introduction
Workshop Design Best Practices
Utilizing the Web Tools
Evaluation Instruments
Code of Conduct
Role of afternoon workshops at EER

- Address **more detailed topics of high interest** and build skills or an information base that is beneficial to the group and community.

- Workshops are **interactive**: participants learn from experts and from one another in formats that build on research-based pedagogies.

- Support the morning workshops with **focused activities**.

- See the full program at

  [https://serc.carleton.edu/earth_rendezvous/2021/program/index.html](https://serc.carleton.edu/earth_rendezvous/2021/program/index.html)
Let’s get acquainted with Zoom’s participant controls
Before we begin – What are YOU thinking about your workshop?

What do you want participants to accomplish at your workshop?

• Write into the chat at least one goal.

• If you’ve thought this far, also write one thing you have thought about doing at the workshop to help participants meet that goal.
Workshop Design and Best Practices

Think of it as a well-designed lesson

• What are your goals for the participants in your workshop?
• How will you assess if the participants successfully met your goals?
• What activities will allow you to achieve your goals for the workshop?
Workshop Best Practices

Engage: Try to engage your participants from the very start. Throughout the webinar maximize potential participant activities.

What were some strategies this presenter used to engage participants? Use the Zoom Chat Box to answer.

Presenter Matt Krehbiel
Workshop Best Practices

Learn:
Provide participants with relevant materials and explanation based on the stated objective of the webinar.

Reflect/Apply:
Provide time for participants to reflect on the presented material and potentially apply it to their own goals for attending.

Presenters: Karen Kortz (Community College of Rhode Island) and Beth Pratt-Sitaula (UNAVCO)

Example from October 22, 2019: Using GPS Data to Teach about the Earth in Introductory Undergraduate Courses: Plate Tectonics, Earthquakes, Water Cycle, and Ice Mass Change

Unit 1: Collecting GPS Data
Pick a GPS station (SEAT, PKRD, MAIR). In what direction is the ground moving?

Northeast
Northwest
Southeast
Southwest
Not moving

Figure 1. Graphs from UNAVCO’s PBO Network Monitoring. The top graph shows north, the middle graph shows east, and the bottom graph shows height. The bottom (x) axis shows time from 2006 to 2018 for all graphs. Left (SEAT): Data from a GPS station in Seattle, Washington. Middle (PKRD): Data from a GPS station in Los Angeles, California. Right (MAIR): Data from a GPS station in Mississippi. Graphs from https://www.unavco.org/instrumentation/networks/status/pbo
Engage: Try to engage your participants from the very start. Throughout the webinar maximize potential participant activities.

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Workshop Best Practices

- **Active engagement of participants during the workshop**: Nothing is deadlier or less effective than a workshop where participants do not participate. Give people an opportunity to participate actively in every session using a variety of techniques.

- **Model effective pedagogy**: The most successful workshops are those taught with good active pedagogy in mind and the least successful sessions are those where a presenter simply talks or reads from the slide.

- **Emphasize practical applications**: An emphasis on practical applications and strategies is an important aspect of effecting change in teaching practice.

- **Give participants time to interact and share experience/knowledge**: Participants bring valuable experience and ideas to webinars. Structured mechanisms for sharing experiences and expertise must be an integral part of every workshop program.
Workshop Best Practices

- **Provide materials and examples**: Examples of how the webinar topics can be applied in the classroom and field are particularly valuable resources for participants.

- **Give participants time to make progress on a specific task that connects the workshop topic to their teaching**: Time to work individually during the workshop allows participants to reflect and to make progress on adapting webinar content to their own needs.

- **Make sure that participants leave the workshop with specific plans for future action**: Workshops can produce a wide variety of results ranging from changes in teaching practice and development of new learning resources to department-level planning and community-wide action. In all cases, workshop time devoted to planning next steps and feedback from peers is critical.
Use your workshop webpage for participant resources

Participants will not be able to click on your presentation.

If you have online resources you want participants to explore have those links available to you or your co-presenter to paste into the chat.

Work with staff to have links or files available from the program website.

Other Web Resources

Poll Everywhere
Google Docs
Kahoot

Catherine Riihimaki’s workshop from 2017:

Be careful using other web resources. Online tools don’t easily scale and can introduce confusion/frustration into your program.
Developing and Publishing the Workshop Program

• Drawing an Audience
• Creating a Successful Workshop
• Preparing a Lasting Record

Cathy Manduca and Sharon Mosher’s workshop from 2015:

What does it mean to be a geoscientist? Is there a core curriculum?
Tuesday | 1:30pm–4:00pm | CIRES Fellows Room

Conveners

Cathy Manduca, Carleton College
Sharon Mosher, University of Texas at Austin, The

Geoscientists work in a very wide range of jobs from exploration geologist, to consulting hydrologist, to environmental regulator, to Earth science teacher and beyond. This workshop will explore what we mean when we say we are preparing geoscientists in our programs. What expertise is core to being a geoscientist? What are the learning outcomes that are common across geoscience programs? Is there a core curriculum that underpins geology and geoscience majors?

Goals

• Understand the current range of program level learning outcomes across workshop participants
• Learn about and discuss guidance on the central aspects of a geoscience degree coming from discussions among geoscience educators and with employers
• Reflect on the opportunities and challenges this guidance provides for geoscience programs of different types based on the experiences of the workshop participants
• Craft a summary of what we have learned as a foundation for future discussions
Cathy Manduca and Sharon Mosher’s workshop from 2015

Program

1:30 Welcome and introductions

1:45–2:15 Core learning outcomes: what is your experience?

This activity will allow participants to share the learning outcomes they expect their graduates to achieve in their own program and compare them with those of other programs. We will leave the activity with an understanding of what is common or ubiquitous as well as ideas for unique new innovations, customizations for local situations, and potential gaps.

- put each of your program’s learning outcomes on a sticky note; - 5 minutes
- work in groups of five to organize into common themes - 10 minutes
- round robin report out and discussion - 15 minutes

Outcomes mapping (PowerPoint 2007 (.pptx) 4.6MB Jul13 15)

2:15– 2:30 The nature of geoscience expertise: presentation and questions

This presentation by Cathy Manduca will present a view of what it means to be a geoscientist- what are the essential perspectives or habits of mind that cause one to be recognized as a geoscientist. Geoscience Expertise (PowerPoint 2007 (.pptx) 104KB Jul13 15)

2:30–2:50 Small group discussion of geoscience expertise, how it is encoded in our program level learning outcomes, and the opportunities and challenges afforded by this perspective

2:50–3:00 Round robin reporting and synthesis

3:00–3:15 break

3:15–3:30 Workforce needs: presentation and questions

This presentation by Sharon Mosher will present a summary of discussions of workforce needs including characterizations of the overall competencies needed by STEM graduates and the results of discussions with geoscience employers. Workforce needs (PowerPoint 2007 (.pptx) 104KB Jul13 15)

3:30–3:50 Small group discussion of workforce needs, how they are encoded in program level learning outcomes, and the opportunities and challenges afforded by this perspective

3:50–4:15 Round robin reporting followed by whole group discussion:What have we learned?

Workshop evaluation

4:15 Adjourn
Utilizing the Web Tools

Make use of the workshop website

• Use the program page to organize documents that you would like the participants to access either prior to or during the workshop. Note: we cannot host copyrighted documents on the public program page; work with your support person for work-arounds.

• The website will be a resource that your participants can return to when they want to make use of what they learned.

• Together with your Workshop Summary, the Program is the record of what happened.
SERC Support Team

Make use of our expertise.

*SERC staff have experience supporting, and in many cases leading, online workshops and other professional development activities.*

If you know what you would do in a face-to-face setting and are not sure how to translate it to the online environment, ask your SERC support person what tools and strategies we recommend.
Preparatory Website Support*

Monday Mini-Workshops
- Science News - **Allison**
- Affective Domain - **Bradlee**
- Model-Based Inquiry - **John**
- IDEAS - **Monica**
- Atmospheric Dynamics - **Mitchell**
- Planetary Science - **Allison**
- Examining Student Work - **Bradlee**

Thursday Mini-Workshops
- Geoscience is Elementary - **John**
- Geophysics - **Carol**
- Math and Computation - **Mitchell**
- Curiosity to Question - **Allison**
- Assessment Research - **Bradlee**
- OOI Data Labs - **John**
- Climate Interactive - **Monica**
- Teaching Anthropocene - **Mitchell**

*These assignments may change for day-of support, but you can contact the person listed here for preparatory support for your mini-workshop. They are also posted on the Convener Info web page.
Attendance and Email List

• The SERC support person will check attendance in your workshop via Zoom at about the 15 minute mark.

• That attendance will be used to make an email list that will be ready by the end of your workshop.

• Participants will be able to continue discussions via the email list after the workshop.
Evaluation Instruments

End of Workshop Evaluation
• Standard form will be provided
• Rate the design
  • Did the workshop meet its goals
  • Overall satisfaction
• Participants will receive a link to the form via the email list during the workshop
• Please set aside the last 10-15 minutes of your program for participants to complete the evaluation.

Data from the End of Workshop Evaluation will be screened by the Evaluation Team to anonymize it.
Workshop Summary

• We ask that each team of conveners write a short Workshop Summary documenting the major activities and outcomes of the workshop to be posted on the website.
  • What are the big takeaways that other people should know about?
  • What did the participants gain from the workshop?
• Make use of experiences from the group discussions and notes.
• This report will be added to the workshop website and, along with the Program page, serve as a permanent record of what happened at the workshop.
Workshop Support

• Get the contact information for your support person including email address and cell phone. They may not be in the session at all times.

• Your support person will generate the email list and send out the email to participants containing the link to the evaluation form.

• Your support person will also be able to help you post materials on your Program page if you need assistance. Please contact them early to make sure there is time for them to help you.
Technical Details

Each afternoon workshop will have its own Zoom meeting

Workshop leaders will be the meeting hosts

All typical Zoom features will be enabled (screensharing, breakout rooms, chat, whiteboards, polling, etc.)

Meetings will be password protected, and connection information will only be visible to registered Rendezvous participants

Using Zoom to support engaged pedagogies: https://serc.carleton.edu/241721
What is the most challenging thing you need to do to get ready for the workshop?

Maybe challenge #1 is “find the time” – so what’s your challenge #2?

Type your answer in the chat and we will discuss the priorities from the group.
Some of the most common challenges

• You don’t know who is coming in advance
• This is a really short amount of time (2 ½ hours!)
• Balancing learning and applying
• Creating a record of what happened
• Making time for reflecting
NAGT Events Code of Conduct

In fulfilling its vision and mission, NAGT promotes, provides, expects and endorses a professional and respectful atmosphere and values a diversity of views and opinions at NAGT supported events and programs. All NAGT meetings and events participants are expected to abide by the NAGT Code of Conduct, which applies in all venues, events, and on-line forums associated with NAGT. This Code of Conduct is intended to align with the American Geosciences Institute's *Statement on Harassment in the Geosciences*. Please read the full [NAGT Code of Conduct Policy](https://nagt.org/nagt/about/code_of_conduct.html) for details.
Questions?