



We invite high school science/STEM teachers to participate in our workshop
“Using STEAM to Investigate the Invisible World: Implementing two Climate Science Modules”

Earn 24 STEM clock hours

Learn to use engaging activities with your students in a distance learning format. The free online supplementary units feature NGSS 3-Dimensions, project-based learning (PBL), and more.

Talk with STEM professionals to explore passions and pathways in school and career, for a variety of STEM fields.

Team up to participate -- We encourage you to take this course as a team, for example:

- a whole grade level across a district
- a whole science department from one school
- a PLC group
- a couple of teachers and a principal
- etc.

Registration link: <https://www.pdenroller.org/psed/catalog/event/107796>



Questions? Reach out to us at education@isbscience.org

Workshop Overview

High School science/STEM teachers from multiple disciplines are invited to attend this workshop series to learn about and implement two [Systems Education Experience \(SEE\) modules](#) from the [Institute for Systems Biology](#).



Systems are Everywhere! = remote-learning version of "Intro to Systems"

This introductory module provides a strong foundation for all of our systems science modules. Students develop applicable systems thinking skills and learn about unique, in-demand STEM careers.



Our Invisible Forest: What's in a Drop of Seawater?

In this PBL module, students in marine science, environmental science, physics, chemistry, biology, integrated science, biotechnology or STEAM courses use real-world, big data to investigate how our "invisible forest" influences ocean and Earth systems. Students build an art project to represent their new understanding and share this with the broader community.

While participants will focus on learning about and implementing the *Invisible Forest* module, the workshops will also support developing knowledge and skills around the practice of modeling and the **cross-cutting concept scale, proportion, and quantity** as they apply across the science disciplines.

This workshop series provides the opportunity to

- Learn two SEE modules for use during the first semester (with an option to learn a third module for second semester)
- Launch your school year with engaging phenomena and 3-dimensional science learning
- Connect with scientists during the series and invite them to engage with students
- Extend your professional network across the region, by participating in professional learning communities (PLC) during the implementation of the unit
- Participate in a research project on the effectiveness of shifting teaching practices around 3-dimensional climate science learning
- Receive an implementation and research stipend of \$700
- Purchase 24 STEM clock hours

Format

24 hour series -- 6 weekly sessions during Fall Quarter 2020

Thursdays from 3:30 PM - 5:30 PM

Each session a planned mix of:

- **2 hr synchronous workshop** for module initial-use PD and Professional Learning
Community support for reflection on student learning
- **2 hr asynchronous time on own** for implementation in class