

## 2020 Donna Sterling Institute

We are pleased to announce the 2020 Donna Sterling Institute will be held virtually Oct 10-17, 2020. Donna Sterling was instrumental in her vision of problem-based learning (PBL) as a means of teaching and integrating science with math, engineering, technology, and language arts. PBL prepares students for academic, personal, and career success and readies young people to rise to the challenges of their lives and the world they will inherit.

Here is your chance to learn how to implement this powerful teaching strategy!

### **The Path Forward-Finding Smart Solutions in Energy and Climate Science**

K-12 students need a fundamental understanding of energy to develop a thorough, comprehensive understanding of climate science and the path forward to climate and energy resiliency. However, decisions about climate and energy policy are seldom made from a foundation of science. Toolkit for teaching Energy and Climate;  
<https://www.climate.gov/teaching/toolbox-teaching-climate-energy>

The 2020 Sterling Institute in collaboration with NEED Energy will engage participants in a PBL unit using topic of climate and alternative energy, which is adaptable for elementary through high school students. Participants will learn about climate and alternative energy from Dr. Don Haas in a virtual presentation and engage in NEED lead activities to help understanding of climate and alternative energy. Teachers learn the key components of a PBL unit including designing an authentic scenario and essential question, question map development, and creating culminating activities., Teachers will consider how to modify what they learn to meet the Standards they teach and the needs of students in their own classroom context.

### **Sterling Institute Part 1 (Fall, 2020; 10 hrs Professional Development)**

The goal of Part 1 of the Sterling Institute is to provide support for teachers to develop and enact problem-based learning units in their classroom. In the fall of 2020, the Institute will take place over 3 weeks and use a combination of asynchronous and synchronous instruction.

#### **Week 1 (asynchronous, combination of videos, readings, and reflections): ~3 hrs**

Introduction to Sterling Institute

Introduction to PBL - Read Navy et al., (2019) and Edmondson et al. (2019)

Introducing the Scenario, Overarching Question, Culminating Activity

Climate Science (Don Haas)

Possible Reflection/Discussion board questions: How could you integrate what you've learned so far into your instruction? What barriers do you perceive to this type of science instruction? What questions do you have about PBL at this point?

#### **October 10 (synchronous): ~2 hrs**

Introduction to question mapping

“Hands on” inquiry activity  
Introduce PBL planning template

**Week 2 (asynchronous): ~ 3 hrs**

Post several example PBL unit plans for participants to use as templates/guides

PBL Planning: Develop a unit plan, question map, and culminating activity

Reflection: What questions do you have about PBL at this point? What supports do you need to enact this in your classroom?

**October 17 (synchronous): ~ 2 hrs**

Small breakout groups (4-6 people) by content area/grade level with a Sterling facilitator, each participant prepares a 2-3 slide overview of their unit (plan, question map, culminating activity) to share and get feedback on. (Provide participants with questions to discuss about each unit.)

Instructors include: Dr. Jennifer Maeng, Dr. Anne Mannarino, Dr. Juanita Jo Matkins, Elizabeth Edmunson, Elizabeth Kirk, Sue Kirk, LoriAnn Pawlik, and Jaclyn Claytor.

Registration fee: \$25 for Donna Sterling Institute only.

Register online at <https://vast.wildapricot.org/Registration-Information>

2020 Online Registration Form and Fees for PDI attendees, exhibitors, and Donna Sterling Institute.

Online registration is open from March 17 to October 3.