



PER User's Guide

Physics Education Research

Evidence-based resources for teaching physics



Energy Project

 Indicates a research-demonstrated benefit

Overview

A professional development program for K-12 teachers on the learning of energy. Teachers construct an understanding about energy and about learning.



Type of Method

Instructional strategy



Level

Designed for: Teacher Professional Development 

Can be adapted for: Teacher Prep Course, Intro College Conceptual



Setting

Designed for: Lecture - Small (<30 students) 



Coverage

Few topics with great depth



Topics

Mechanics, Thermal / Statistical



Instructor Effort

High




Resource Needs

Tables for group work





Skills

Designed for: Using multiple representations , Conceptual understanding, Making real-world connections, Metacognition, To pay attention to their students' thinking, To experience science as an area where they and their students are empowered to figure things out



Research Validation

Based on research into: theories of how students learn , student ideas about specific topics 

Studied using: classroom observations 



Compatible Methods

[PhET](#), [Physlets](#), [SCALE-UP](#), [OSP](#), [CPU](#), [SGSI](#), [Responsive Teaching](#)



Similar Methods

[SGSI](#), [Responsive Teaching](#)



Developer(s)

Hunter Close, Eleanor Close, Lezlie DeWater, Stamatis Vokos, Lane Seeley, Rachel Scherr, and Sam McKagan

**Website**

<http://www.energyprojectresources.org/>

**Intro Article**

10368

**Intro Article**

[Using the Algebra Project Method to Regiment Discourse in an Energy Course for Teachers](#)

