



PER User's Guide

Physics Education Research

Evidence-based resources for teaching physics



Physical Science and Everyday Thinking

 Indicates a research-demonstrated benefit

Overview

A guided-inquiry conceptual physical science course designed to help students develop a deep conceptual understanding of big ideas.



Type of Method

Full curriculum



Level

Designed for: Teacher Prep Course 

Can be adapted for: Teacher Professional Development



Setting

Designed for: Studio , Lecture - Small (<30 students)

Can be adapted for: Lab



Coverage

Few topics with great depth



Topics

Mechanics, Electricity / Magnetism, Thermal / Statistical



Instructor Effort

Medium



Resource Needs

Projector, Computers for students, Advanced lab equipment, Cost for students, Tables for group work





Skills



Designed for: Conceptual understanding , Metacognition 

Can be adapted for: Making real-world connections, Using multiple representations



Research Validation

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

Demonstrated to improve: conceptual understanding , beliefs and attitudes 



Compatible Methods

[PhET](#), [JiTT](#), [Physlets](#), [SCALE-UP](#), [OSP](#), [LA Program](#), [CPU](#)



Similar Methods

[PBI](#), [PET](#), [LEPS](#)



Developer(s)

Fred Goldberg, Rebecca Kruse, Steve Robinson, Valerie Otero and Nephi Thompson



Website

<http://cpucips.sdsu.edu/web/pset/>

