



PER User's Guide

Physics Education Research

Evidence-based resources for teaching physics



Learning Physical Science

 Indicates a research-demonstrated benefit

Overview

A guided-inquiry, conceptual physical science course intended for teaching in a lecture-style environment, e.g. classes with large enrollment.



Type of Method

Full curriculum




Level

Designed for: Teacher Prep Course  , Intro College Conceptual 



Setting

Designed for: Lecture - Large (30+ students) 

Can be adapted for: Lecture - Small (<30 students) 



Coverage

Many topics with less depth



Topics

Mechanics, Electricity / Magnetism, Thermal / Statistical



Instructor Effort

Low



Resource Needs

Clickers / polling method, Projector, Computers for students, Cost for students





Skills



Designed for: Conceptual understanding 

Can be adapted for: Making real-world connections



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](#), [Clickers](#)



Similar Methods

[PET](#), [PSET](#)



Developer(s)

Fred Goldberg, Stephen Robinson, Edward Price, Rebecca Kruse, Danielle Boyd Harlow and Michael McKean



Website

<http://cpucips.sdsu.edu/leps/>

