



## Physics and Everyday Thinking

Indicates a research-demonstrated benefit

### Overview

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



#### Type of Method

Full curriculum



#### Level

**Designed for:** Teacher Prep Course

**Can be adapted for:** Teacher Professional Development, High School, Intro College Conceptual



#### Setting

**Designed for:** Studio

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



#### Coverage

Few topics with great depth



#### Topics

Mechanics, Electricity / Magnetism, Waves / Optics



#### Instructor Effort

Medium



#### Resource Needs

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



#### Skills

**Designed for:** Conceptual understanding , Metacognition , Using multiple representations

**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

**Studied using:** research at multiple institutions



#### Compatible Methods

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



#### Similar Methods

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



#### Developer(s)

Fred Goldberg, Valerie Otero and Steve Robinson



#### Website

<http://petproject.sdsu.edu/>

