Physical Science and Everyday Thinking

Indicates a research-demonstrated benefit

Overview

PSET is a one semester, guided-inquiry physical science course that incorporates extensive small group and whole class discussion and Laboratory work to help students develop a deep conceptual understanding of big ideas in physical science (including Newton's Second Law, the Law of Conservation of Energy and Atomic-Molecular Theory). PSET also incorporates specific activities that focus on the nature of science and the nature of learning.

Type of Method	Full curriculum
Level	**Designed for:** Teacher Preparation **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 of physics content , Reflecting on one's own learning **Can be adapted for:** Think like a scientist , Understanding how physics relates to the real world, Enjoyment of physics, Representing knowledge in multiple ways
Research Validation	**Based on research into:** how students learn , student ideas about specific topics **Demonstrated to improve:** scores on multiple choice conceptual tests , beliefs about physics **Studied using:** conceptual pre/post exams , beliefs pre/post exams , video of students

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/

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