Explorations in Physics

Indicates a research-demonstrated benefit

Overview

The Explorations in Physics Project is a major effort to increase the effectiveness of science education for future elementary school teachers, parents, and citizens by developing a sequence of introductory, activity-based, laboratory courses. We seek to integrate the use of guided-inquiry techniques with self-directed projects in order to help students acquire a more fundamental understanding of the nature of science.

Type of Method	Full curriculum
Level	**Designed for:** Intro College Conceptual
Setting	**Designed for:** Studio
Coverage	Few topics with great depth
Topics	Mechanics, Waves / Optics, Thermal / Statistical
Instructor Effort	Medium
Resource Needs	Teaching Assistants / Learning Assistants, Computers for student use in class, Lab equipment for student use - professional, Tables arranged for group work, Studio classroom
Skills	**Designed for:** Conceptual understanding of physics content , Think like a scientist , Coherent framework for physics, Understanding how physics relates to the real world, Self-confidence around physics, Laboratory skills, Designing experiments, Creativity
Research Validation	**Based on research into:** how students learn , student ideas about specific topics **Demonstrated to improve:** scores on multiple choice conceptual tests , scores on written conceptual tests , beliefs about physics **Studied using:** conceptual pre/post exams , beliefs pre/post exams , student interviews

Compatible Methods	PhET, Physlets, SCALE-UP, OSP, LA Program, MBL, CPU
Similar Methods	Workshop Physics, SCALE-UP, MBL,
Developer(s)	David P. Jackson, Priscilla W. Laws, and Scott V. Franklin
Website	http://physics.dickinson.edu/~eip_web/eip_homepage.html