Minds-On Physics

Indicates a research-demonstrated benefit

Overview

Activity-based curriculum for high school physics. Helps students to explore, hone, and link concepts, and to develop analysis and reasoning skills.

Type of Method	Full curriculum
Level	**Designed for:** High School **Can be adapted for:** Teacher Prep Course, Teacher Professional Development, Middle School, Intro College Calculus-based, Intro College Algebra-based, Intro College Conceptual
Setting	**Designed for:** Lecture - Small (<30 students) **Can be adapted for:** Lecture - Large (30+ students), Recitation/Discussion Session, Lab
Coverage	Few topics with great depth
Topics	Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical
Instructor Effort	Medium
Resource Needs	Simple lab equipment, Tables for group work
Skills	**Designed for:** Conceptual understanding , Problem-solving skills , Using multiple representations , Metacognition **Can be adapted for:** Lab skills, Making real-world connections, Designing experiments
Research Validation	**Based on research into:** theories of how students learn , student ideas about specific topics , research on expert-novice thinking **Demonstrated to improve:** conceptual understanding **Studied using:** student interviews , classroom observations , analysis of written work , research at multiple institutions , research by multiple groups
Compatible Methods	Peer Instruction, PhET, JiTT, CGPS, Physlets, SCALE-UP, Modeling, OSP, TEFA, Clickers

Similar Method	None
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