



PRISMS PLUS

Indicates a research-demonstrated benefit

Overview

A high school physics curriculum and professional development program that uses a learning cycle pedagogy, inexpensive materials, and technology.



Type of Method

Instructional strategy, Full curriculum



Level

Designed for: High School , Teacher Professional Development
Can be adapted for: Teacher Prep Course, Middle School, Intro College Algebra-based, Intro College Conceptual



Setting

Designed for: Lecture - Small (<30 students) , Studio
Can be adapted for: Lecture - Large (30+ students), Recitation/Discussion Session, Lab



Coverage

Few topics with great depth, Teachers can select from many topics, but only cover a few in depth.



Topics

Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical, Modern / Quantum



Instructor Effort

Medium



Resource Needs

Computers for students, Simple lab equipment, Advanced lab equipment



Skills

Designed for: Conceptual understanding , Problem-solving skills , Making real-world connections , Using multiple representations, Designing experiments

Can be adapted for: Lab skills, Metacognition



Research Validation


Based on research into: theories of how students learn , student ideas about specific topics , research into instructional practice


Demonstrated to improve: conceptual understanding , problem-solving skills , beliefs and attitudes

Studied using: classroom observations , analysis of written work

 **Compatible Methods** [Modeling, CPU](#)

 **Similar Method** None

 **Developer(s)** Lawrence Escalada, Roy Unruh, Timothy Cooney, and master high school physics teachers

 **Website** <http://www.physics.uni.edu/prisms/prisms-plus>