




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>