



## Scientific Community Laboratories

 Indicates a research-demonstrated benefit

### Overview

Design labs in which students work in groups to design an experiment, carry it out, analyze it, and present their results to other groups.



#### Type of Method

Instructional strategy, Curriculum supplement



#### Level

**Designed for:** Intro College Algebra-based 

**Can be adapted for:** Teacher Prep Course, Teacher Professional Development, High School, Intro College Calculus-based, Intro College Conceptual, Intermediate, Upper-level Undergraduate



#### Setting

**Designed for:** Lab 



#### Coverage

Few topics with great depth, Many topics with less depth



#### Topics

Mechanics, Electricity / Magnetism, Waves / Optics



#### Instructor Effort

High






#### Resource Needs

Advanced lab equipment, Tables for group work



#### Skills

**Designed for:** Lab skills  , Designing experiments  , Metacognition  , Conceptual understanding, engage in sensemaking

**Can be adapted for:** Problem-solving skills, Making real-world connections, Using multiple representations



#### Research Validation

**Based on research into:** theories of how students learn 

**Demonstrated to improve:** lab skills 

**Studied using:** classroom observations 



#### Compatible Methods

[Peer Instruction](#), [PhET](#), [UW Tutorials](#), [JiTT](#), [Ranking Tasks](#), [ILDs](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [TIPERs](#), [ABP Tutorials](#), [SCALE-UP](#), [OSP](#), [OST Tutorials](#), [Thinking Problems](#), [Workbook for Introductory Physics](#), [LA Program](#), [CAE TPS](#), [MBL](#), [CPU](#), [TEFA](#), [M&I](#), [Tutorials](#), [Clickers](#), [Responsive Teaching](#)

 **Similar  
Methods**

[RealTime Physics](#), [Tools for Scientific Thinking](#)

 **Developer(s)**

Rebecca Lippmann Kung, Paul Gresser, and Joe Redish

 **Website**

<http://umdperg.pbworks.com/w/page/10511229/Scientific-Community-Labs>

