



Guide

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>

