



## Context-Rich Problems

Indicates a research-demonstrated benefit

### Overview

Students work in small groups on short, realistic scenarios, giving them a plausible motivation to solve problems.



Type of Method

Curriculum supplement



Level

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

**Can be adapted for:** High School, Intro College Algebra-based, Intro College Conceptual



Setting

**Designed for:** Recitation/Discussion Session

**Can be adapted for:** Lecture - Small (<30 students), Studio



Coverage

Many topics with less depth



Topics

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



Instructor Effort

Medium



Resource Needs

Tables for group work



Skills

**Designed for:** Conceptual understanding , Problem-solving skills

**Can be adapted for:** Making real-world connections



Research Validation

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

**Demonstrated to improve:** conceptual understanding , problem-solving skills

**Studied using:** classroom observations



Compatible Methods

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

 **Similar Method**      [CGPS](#)

 **Developer(s)**      University of Minnesota Physics Education Research Group

 **Website**      <http://groups.physics.umn.edu/physed/Research/CRP/crintro.html>

---

### **Teaching materials**

---

The University of Minnesota has created an [online archive of context-rich problems](#), where you can find problems for many topics in introductory mechanics and electromagnetism.