



## 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>

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### **Teaching materials**

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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.