




## Tutorials

 Indicates a research-demonstrated benefit

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### Overview

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Guided-inquiry worksheets for use in small groups, typically in a recitation section. Instructors engage students in Socratic dialogue.



**Type of Method**

Curriculum supplement, Tutorials



**Level**

**Designed for:** Intro College Calculus-based, Intro College Algebra-based, Intro College Conceptual, Intermediate, Upper-level Undergraduate, Any  
**Can be adapted for:** High School



**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, Modern / Quantum, Astronomy, Other Science



**Instructor Effort**

Medium



**Resource Needs**

TAs / LAs, Tables for group work










**Skills**

**Designed for:** Conceptual understanding  
**Can be adapted for:** Problem-solving skills, Lab skills, Making real-world connections, Using multiple representations, Designing experiments, Metacognition



**Research Validation**

**Based on research into:** theories of how students learn , student ideas about specific topics   
**Demonstrated to improve:** conceptual understanding   
**Studied using:** student interviews , classroom observations , research at multiple institutions , research by multiple groups 

 **Compatible Methods**

[Peer Instruction](#), [PhET](#), [UW Tutorials](#), [JiTT](#), [Ranking Tasks](#), [ILDs](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [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](#), [New Model Course](#), [CPU](#), [SCL](#), [TEFA](#), [CU Modern](#), [CU E&M](#), [CU QM](#), [QuILTs](#), [IQP](#), [Thermal Tutorials](#), [Mechanics Tutorials](#), [Paradigms](#), [Tools for Scientific Thinking](#), [Clickers](#)

 **Similar Methods**

[UW Tutorials](#), [ABP Tutorials](#), [OST Tutorials](#), [Lecture-Tutorials](#), [QuILTs](#), [Thermal Tutorials](#), [Mechanics Tutorials](#)

 **Resources**

To find out more about specific sets of tutorials, follow the links under **Similar Methods** above.

For more information about tutorials in general, see the [University of Maryland page on facilitating tutorials](#).