




Tutorials

 Indicates a research-demonstrated benefit

Overview

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](#).