Guide

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.