Guide

Teaching with Clickers

Indicates a research-demonstrated benefit

Overview

Students use electronic devices to answer questions and instructors collect and display responses, facilitating student engagement and collaboration.

Level	**Designed for:** High School, Intro College Calculus-based, Intro College Algebra-based, Intro College Conceptual **Can be adapted for:** Any
Setting	**Designed for:** Lecture - Large (30+ students) **Can be adapted for:** Lecture - Small (<30 students), Recitation/Discussion Session, Lab, Studio
Coverage	Few topics with great depth, Many topics with less depth
Topics	Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical, Modern / Quantum, Mathematical, Astronomy, Other Science, Pedagogy
Instructor Effort	Medium
Resource Needs	Clickers / polling method, Cost for students
Skills	**Designed for:** Conceptual understanding **Can be adapted for:** Problem-solving skills, Making real-world connections, Using multiple representations, Metacognition
Research Validation	**Based on research into:** theories of how students learn **Demonstrated to improve:** attendance **Studied using:** research at multiple institutions , research by multiple groups , peer-reviewed publication
Compatible Methods	Peer Instruction, PhET, UW Tutorials, JiTT, Ranking Tasks, ILDs, CGPS, Physlets, Context-Rich Problems, RealTime Physics, TIPERs, ABP Tutorials, SCALE-UP, Modeling, OSP, SDI Labs, OST Tutorials, ISLE, Thinking Problems, Workbook for Introductory Physics, LA Program, LEPS, 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, PI QM, M&I, Tutorials, MOP, Responsive Teaching

Similar Methods	Peer Instruction, CAE TPS, TEFA, PI QM
Website	http://stemclickers.colorado.edu
Intro Article	9085
Intro Article	Research-based Practices For Effective Clicker Use

Teaching materials

See our Expert Recommendation on finding good questions to use with clickers or Peer Instruction for an extensive list of databases of clicker questions, as well as suggestions for writing your own questions.