Guide

CAE Think/Pair/Share

Indicates a research-demonstrated benefit

Overview

Engage students in lecture classes by asking cognitively engaging multiple-choice questions to challenge their thinking and foster deep discussion.

Type of Method	Instructional strategy
Level	**Designed for:** Intro College Conceptual **Can be adapted for:** Teacher Prep Course, Teacher Professional Development, Middle School, High School, Intro College Calculus-based, Intro College Algebra-based, Intermediate, Upper-level Undergraduate
Setting	**Designed for:** Lecture - Large (30+ students) **Can be adapted for:** Lecture - Small (<30 students) , Studio
Coverage	Many topics with less depth
Topics	Astronomy
Instructor Effort	Low
Skills	**Designed for:** Conceptual understanding , Using multiple representations **Can be adapted for:** Problem-solving skills, 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 **Studied using:** research at multiple institutions
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, 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, Clickers

Similar Methods	Peer Instruction, ILDs, Workbook for Introductory Physics, TEFA, PI QM, Clickers
Developer(s)	Center for Astronomy Education
Website	http://astronomy101.jpl.nasa.gov/teachingstrategies/teachingdetails/?StrategyID=23

Teaching materials

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