



Ranking Tasks for Introductory Astronomy

Indicates a research-demonstrated benefit

Overview

Conceptual exercises that present learners with a series of pictures or diagrams that describe several slightly different variations of a basic physical situation. Students are then asked to make a comparative judgment and to identify the order or ranking of the various situations based on some physical outcome or result. The multiple scenarios engage students' minds and force them to think more deeply about the critical features that distinguish one situation from another.



Type of Method Curriculum supplement



Level **Designed for:** Astronomy , Intro College Conceptual



Setting **Designed for:** Lecture - Large (30+ students) , Lecture - Small (<30 students)

Can be adapted for: Recitation/Discussion Session, Homework, Studio



Coverage Many topics with less depth



Topics Astronomy



Instructor Effort Low



Skills **Designed for:** Conceptual understanding of physics content , Connecting

conceptual and mathematical understanding

Can be adapted for: Enjoyment of physics

Based on research into: how students learn , student ideas about specific topics



Research Validation **Demonstrated to improve:** scores on multiple choice conceptual tests , scores on written conceptual tests , attitudes about physics

Studied using: conceptual pre/post exams , analysis of written work , research conducted at multiple institutions



Compatible Methods [Peer Instruction](#), [PhET](#), [JiTT](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [SCALE-UP](#), [OSP](#), [LA Program](#), [CAE TPS](#), [Lecture-Tutorials](#), [CPU](#), [TEFA](#), [Tutorials](#), [Clickers](#)



Similar Methods [Ranking Tasks](#), [TIPERs](#), [Lecture-Tutorials](#)



Developer(s)

David Hudgins, Kevin Lee, and Edward Prather



Website

<http://astro.unl.edu/interactives/>

