



Socratic Dialog Inducing Laboratories

 Indicates a research-demonstrated benefit

Overview

Guided-inquiry, introductory mechanics labs designed to promote students' mental construction of concepts.






Type of Method

Curriculum supplement



Level

Designed for: High School  , Intro College Calculus-based  , Intro College Algebra-based  , Teacher Prep Course, Teacher Professional Development, Intro College Conceptual

Can be adapted for: Intermediate, Upper-level Undergraduate



Setting

Designed for: Lab  , Studio

Can be adapted for: Lecture - Small (<30 students)



Coverage

Few topics with great depth



Topics

Mechanics



Instructor Effort

High




Resource Needs

TAs / LAs, Advanced lab equipment, Tables for group work





Skills


Designed for: Conceptual understanding  , Lab skills, Making real-world connections, Using multiple representations

Can be adapted for: Problem-solving skills, Metacognition



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](#), [OST Tutorials](#), [Thinking Problems](#), [Workbook for Introductory Physics](#), [LA Program](#), [CAE TPS](#), [MBL](#), [CPU](#), [TEFA](#), [Tools for Scientific Thinking](#), [Tutorials](#), [Clickers](#), [Responsive Teaching](#)

 **Similar Methods** [RealTime Physics, Tools for Scientific Thinking](#)

 **Developer(s)** Richard Hake

 **Website** <http://www.physics.indiana.edu/~sdi/>

 **Intro Article** 11763,2733

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