



## Responsive Teaching in Science

 Indicates a research-demonstrated benefit

### Overview

A practice of attending and responding to the substance of students' thinking. The instructor's next moves are based on students' emerging ideas.



Type of Method

Instructional strategy




Level

**Designed for:** Middle School, Elementary School

**Can be adapted for:** Any



Setting

**Designed for:** Lecture - Small (<30 students) 

**Can be adapted for:** Recitation/Discussion Session, Lab, Studio



Coverage

Few topics with great depth



Topics

Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical, Modern / Quantum, Mathematical, Astronomy, Other Science, Pedagogy



Instructor Effort

High



Resource Needs

Simple lab equipment



Skills

**Designed for:**

**Can be adapted for:** Designing experiments, Metacognition



Research Validation

**Based on research into:** theories of how students learn  , teaching of science

**Demonstrated to improve:** beliefs and attitudes  , classroom discourse

**Studied using:** classroom observations  , analysis of written work 



Compatible Methods

[Peer Instruction](#), [PhET](#), [JiTT](#), [Ranking Tasks](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [Workshop Physics](#), [TIPERs](#), [SCALE-UP](#), [Modeling](#), [SDI Labs](#), [ISLE](#), [Thinking Problems](#), [LA Program](#), [MBL](#), [CPU](#), [SCL](#), [TEFA](#), [Energy Project](#), [SGSI](#), [Paradigms](#), [Clickers](#)



Similar Methods

[Energy Project](#), [SGSI](#)

 **Developer(s)** Fred Goldberg, Sharon Bendall, Mike McKean, and Jennifer Radoff

 **Website** <http://cipstrends.sdsu.edu/responsiveteaching>