



Diagnoser Tools

 Indicates a research-demonstrated benefit

Overview

Diagnoser.com is a set of instruction and assessment tools. It includes learning goals and tools for eliciting students' initial ideas, facets of learners' thinking with respect to learning goals and common misconceptions (problematic ideas), lessons to engage students' ideas with respect to learning goals and problematic ideas, sets of assessment items for students, reporting structures for students and teachers, and prescriptive activities targeted to specific problematic ideas.



Type of Method

Instructional strategy, Curriculum supplement




Level

Designed for: Teacher Professional Development  , Middle School  , Teacher Preparation, High School, Other Science

Can be adapted for: Intro College Calculus-based, Intro College Algebra-based, Intro College Conceptual, Intermediate Undergraduate, Advanced Undergraduate



Setting

Designed for: Lecture - Small (<30 students) 

Can be adapted for: Lecture - Large (30+ students), Recitation/Discussion Session, Lab, Homework, Studio



Coverage

Few topics with great depth



Topics

Mechanics, Waves / Optics, Other Science, Pedagogy



Instructor Effort

Medium




Resource Needs

Computers for student use in class, internet access









Skills






Designed for: Conceptual understanding of physics content 

Can be adapted for: Problem-solving skills, Connecting conceptual and mathematical understanding, Coherent framework for physics, Understanding how physics relates to the real world, Think like a scientist, Reflecting on one's own learning, Representing knowledge in multiple ways, Designing experiments

 **Research Validation**


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

Demonstrated to improve: scores on multiple choice conceptual tests  , scores on written conceptual tests  , beliefs about physics  , retention of students 

Studied using: conceptual pre/post exams  , classroom observations  , analysis of written work  , research conducted at multiple institutions  , research conducted by someone other than developers 

 **Compatible Method**

[PBI](#)

 **Similar Method**

None

 **Developer(s)**

FACET Innovations

 **Website**

<http://www.Diagnoser.com>

 **Intro Article**

4322

 **Intro Article**

[Designing Diagnostic Assessments](#)