Interactive Lecture Demonstrations, Active Learning in Introductory Physics
David R. Sokoloff, Ronald K. Thornton

DESCRIPTION

Interactive Lecture Demonstrations (ILDs) are designed to enhance conceptual learning in large (and small) physics lectures through active engagement of students in the learning process. Real physics demonstrations are shown to students, who then make predictions about the outcomes on a prediction sheet, and collaborate with fellow students by discussing their predictions in small groups. Students then observe the results of the live demonstration (often displayed as real-time graphs using computer data acquisition tools), compare these results with their predictions, and attempt to explain the observed phenomena. ILDs have been demonstrated through physics education research to enhance student learning of physics concepts.

ILDs can be used within the traditional structure of an introductory physics course. All of the printed materials needed to implement them are included in this book.

Intended Courses:
- Department: Physics
- Course Name: Algebra Based or Calculus Based Introductory Physics
- Course Level: Freshman/Sophomore
David R. Sokoloff is the author of Interactive Lecture Demonstrations, Active Learning in Introductory Physics, published by Wiley. Ronald K. Thornton is the author of Interactive Lecture Demonstrations, Active Learning in Introductory Physics, published by Wiley.

FEATURES

- Are available for all of the major topics in the introductory physics course.

- Engage students to probe their understandings of basic physics concepts.

- Use a learning cycle based on physics education research including prediction, observation, and comparison with the results of real physics experiments.

- Includes student prediction and results sheets that can be copied and distributed to your students, teachers guides with equipment and setup details, and teacher presentation notes to guide your classroom presentations.

- Is compatible with most computer data acquisition hardware and software.

To purchase this product, please visit https://www.wiley.com/en-us/9780471487746