

Laboratory and Demonstration Techniques
(Physics/Astronomy 335/535)

Mid Term Assignment

Review a research-based activity guide for teaching physics (15%)

This assignment explores the link between physics education research and classroom teaching. Your assignment is to

- (1) Identify one research-based activity guide (e.g. *Preconceptions in Mechanics Workshop Physics*, *Physics by Inquiry*, and *Minds-on Physics*) to study. Guides can be checked out from HS 363 for 3 days.
- (2) Report your findings/reflections in 3-5 pages (double-spaced, 1" margins)
- (3) Provide evidence from the literature that the activity guide is “research based” using two or three references. Include a reference list.

Construct a laboratory and/or demonstration apparatus (15%)

This assignment provides an experience construction of a laboratory and/or demonstration apparatus. The requirements for this project are flexible—don't feel you need a saw and a hammer! However, your apparatus should be constructed from scratch. Be prepared to

- share your finish product with the entire class
- explain what scientific principle your apparatus demonstrates
- provide data that checks the performance of your apparatus

Mid-term assignments are due Monday, March 26 at the beginning of class.