

## Prep for “Engaging Students Through Interactive Lessons”

Prior to the 3:45 session on Tuesday, January 10, please do all required reading and viewing.

### Required Reading

The Torch or the Firehose: A Guide for Teaching Assistants

**Section 1:** The Glass Wall: Encouraging Interaction

**Section 2:** Questions: Theirs and Yours

**Section 3:** Before You Walk In...

**Section 4:** A Word About Pedagogy

**Section 5:** In the Classroom

**Section 6:** Getting Off to a Good Start

**Section 7:** Basic Communication Skills

**Section 8:** Seeing is Understanding: Using the Blackboard

Review the summary sheet called “The Basics of Giving a Good Lesson.”

### Required Viewing (about 20 minutes)

**In this lesson on the chain rule, the instructor asks a lot of different questions and a lot of different types of questions.**

View segment 6:53 to 13:11.

<https://www.youtube.com/watch?v=8dr1dZjfhmc>

**This biology instructor starts the first class of the semester with three specific questions to check students’ pre-knowledge of the subject matter. (And she’s engaging, too!)**

View segment 0:01 to 4:26.

<https://www.youtube.com/watch?v=S9WtBRNyds0>

**This programming instructor positively reinforces students when they ask questions. (And he uses humor really well!)**

View segment 0:01 to 10:12.

<https://www.youtube.com/watch?v=C5HeRliZ0Ns>

### Optional Reading

Interactive Teaching Methods Double Learning in Undergraduate Physics Class

*ScienceDaily* (May 12, 2011)

<http://www.sciencedaily.com/releases/2011/05/110512150817.htm>

Undergraduate Science and Engineering Teaching Needs Improvement

*ScienceDaily* (May 21, 2012)

<http://www.sciencedaily.com/releases/2012/05/120521115702.htm>

This article provides a good example of an interactive biochemistry classroom. While as TAs you will not be able to determine how a class runs, this piece might help to give you a sense of some things that you do to make your work with students more interactive:

[http://seattletimes.com/html/seattleuniversity/2016784402\\_seattleu17m.html](http://seattletimes.com/html/seattleuniversity/2016784402_seattleu17m.html)

Engaging students in conducting Socratic dialogues: Suggestions for science teachers

*Journal of Physics Teacher Education Online*, 4(1) Autumn 2006

[http://www2.phy.ilstu.edu/~wenning/jpteo/issues/jpteo4\(1\)aut06.pdf](http://www2.phy.ilstu.edu/~wenning/jpteo/issues/jpteo4(1)aut06.pdf) (Scroll to p. 10 to get to the article.

Link does not work consistently, but typing address into browser does work consistently.)

**Questions?** Contact Paula Quinn: 508-831-6836 or [pquinn@wpi.edu](mailto:pquinn@wpi.edu)