

Prep for “Engaging Students Through Interactive Lessons”

Prior to the session, 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

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.)

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