# Ask me Anything

## Objectives

To set the tone for interactive learning during the semester.

## Activities

My first day, I ask for questions and get none. I wait 25 to 35 seconds and maybe get an older student to pose a lukewarm question. I then require each student to turn in a question on a quarter sheet of paper that had always wanted to ask, but never did. I collect the questions and start answering them, even the craziest of questions. They learn quickly that I am serious about asking their questions and should have no fear of asking questions in class. Within four weeks, I have no problem getting questions from students during my classes.

I continue to give activities in each class day, requiring groups to report out on one sheet of paper with their names on it. The activities might be a 25 words or less description of what I have been talking about, a solution to a problem on the physics of the day, an answer to a question about a video clip or demonstration just done, etc.

#### Effectiveness

I started this in college courses in 1995 and never had any reason to change. I have presented these techniques at various conferences, and teachers are always surprised at how well it works. Admittedly, one has to be a bit of a ham, but it is easy to become one as you build up a repertoire of answers and a few jokes.

Jon Gaffney (The Physics Teacher, Vol. 53, March 2015) notes that such an activity is likely to be effective because it takes risk on the part of the instructor, and by being willing to put him/herself in that situation, the instructor gains credibility and students learn that they will be taken seriously.

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## Materials & Resources

Find other Fermi Questions here:

U. Maryland: http://bit.ly/3E5890

The Physics Teacher: http://bit.ly/13QFqnu

Math Forum: <u>http://bit.ly/5A3ktw</u>

Prof. Meade Brooks (with annotated solns) <u>http://bit.ly/W0TxFT</u>

### Classroom Context

Various

#### Time Requirement

Varies

## About this Project

This is one of a set of materials compiled for instructors to draw upon in order to frame nontraditional modes of classroom teaching for their students. Our hope is that these materials can help reduce any student resistance to such techniques.

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Other materials available online at www.colorado.edu/sei/fac-resources