

Objectives

To directly address what students expect in the class, to engage in a collaborative discussion about classroom practices and norms and to generate class community.

Activities

Jon Gaffney (Physics and Astronomy, Eastern Kentucky University) shares this progression of activities:

First, he does a group active-learning activity. This can be any activity that works within the context of a particular course, but he uses the “Game of Science” (see “Nature of Science” Activity, elsewhere in this collection.) Next, he does a “Rumors” activity, (see SCALE-UP Introduction activities), where students report on what they have heard about this class (and maybe even the instructor), both positive and negative.

Then, he says, “OK, enough background. Now it’s time to get down to work.” He presents the slide on “Traxoline”, which is a parody of traditional instruction aimed at memorization without understanding (see below, or see http://solar.physics.montana.edu/tslater/montillation_of_traxoline.html). Students tend to dutifully take notes and write down the lesson. After a few minutes, he admonishes them. “This is ridiculous! I don’t want the class to be like this; I want us to be an authentic class where we can learn stuff. Otherwise, it will turn out like this...”

He then shows a YouTube video, “Professor Dancealot,” <http://www.youtube.com/watch?v=1k8aeDUC9XQ>, which depicts a dance class in which the instructor lectures students about dance steps, with a final exam consisting of their ability to dance. He then asks students, “What can I do to prevent the class from becoming like this?” “What can you do to prevent the class from becoming like this?” Students work in groups on whiteboards, which are then displayed during a group discussion.

Effectiveness

Jon Gaffney says that he has played with the progression of these activities multiple times, and found that students showed more buy-in when this particular progression was followed. He conjectures that this progression leads students through a progression of strong emotions when they realize that the course structure violates their expectations: Denial (“every teacher says their class will be different”), Anger (“Tell me what negative stuff you’ve already heard about this class,” Bargaining (“let’s discuss how we will behave in class”), and finally Acceptance (see D. U. Silverthorne, Teaching and learning in the Interactive Classroom, *Advances in Physiology Education*, 30, 135-140 (2006)).

Author

Jon Gaffney, Eastern Kentucky University, and Various. You may contact Jon with questions at jon.teaches.physics@gmail.com

Materials & Resources

Faculty Focus, January 9, 2013: <http://bit.ly/ZUBVfO>

Montillation of Traxoline, in Slides-Intro or at <http://bit.ly/z3T9G>

Professor Dancealot video: <http://bit.ly/ut13S6>

Classroom Context

Introductory physics course (for preservice teachers)

Time Requirement

30 minutes

About this Project

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

Compiled by Stephanie Chasteen (University of Colorado Boulder Science Education Initiative): Stephanie.Chasteen@Colorado.EDU

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

In recent years, Jon has noticed more students actually expecting an active-learning approach and visibly demonstrated *relief* upon completion of the Traxoline activity. Two things are particularly powerful: 1. He tell students that he will never show another powerpoint slide in class after Day One, and 2. He gives students the right to call “Traxoline” out any time they feel that jargon is being used without understanding. Students tend to appreciate the language and the agency to call the instructor out (although they rarely use it).

One student comment on course evaluations is suggestive of the impact of these activities:

“I have learned the most about science in this class than in any other science class I have taken. We learn about things that I can easily apply to the world around me and understand how it works. I like that I can explain how a light bulb and a compass work. It’s just stuff that makes me feel smarter for knowing. It’s also things I will remember. This class helped me by using hands on approaches. I loved it. Learning for yourself is much more interesting than learning from a power point slide. **As soon as we watched that ‘dancealot’ video the first day, I was excited for the class.**”

Slide for traxoline activity (uses animations to reveal questions)

Traxoline

It is very important that you learn about traxoline. Traxoline is a new form of zionter. It is monotilled in Ceristanna. The Ceristannians gristerlate large amounts of fervon and then bracter it to quasel traxoline. Traxoline may well be one of our most lukised protofoms in the future because of our zionter lescelidge.

**Don't fool
yourself about
when you really
understand**

1. What is traxoline?
2. Where is traxoline monotilled?
3. How is traxoline quaselled?
4. Why is it important to know about traxoline?
5. How is traxoline similar/different from table salt?

Attributed to Judy Lanier