

Extra Credit Assignment (20 points) – Due Wed, May 1st

If you have any questions about the homework, feel free to email me: sawtelle@umd.edu

In this assignment I'd like you to put on your "teacher hat." You are welcome to use any resources available to you, including our class notes and posted discussions on ELMS, textbooks you may have access to, or the internet.

I told you all that I felt bad about how the exam went because I felt that we shouldn't have gone to different liquids in the last week of class. My intentions were good – I wanted you to see that your ideas about density were well-founded – but it didn't work out well because this led many of you to abandon your (very good) ideas about pressure and water displacement in favor of talking about density. It happens when we are teachers that the goals we have for our classes don't always work out, but it's important that we reflect on those goals and make changes. So, in this assignment what I'd like you to do is to reflect on the Floating & Sinking Unit. Then I would like you to do three things:

- 1) Identify what the "big ideas" were that we got out of the unit. Explain why you think those are the big ideas. Do you think they were individually important? Could any of them have been left out? Did we miss any that you think we should have addressed?**
- 2) Reflect on the kinds of experiments/tests we used to explore those big ideas – do you think they were helpful? Confusing? Can you think of any ways that you would modify these big ideas?**

If you complete the first two elements of this task, then you'll have done 12 points worth of the assignment. This last task is for those of you who want to go the distance, and get the full 20 points.

- 3) Imagine yourself as a teacher in this unit (at whatever grade-level you imagine yourself teaching, just let me know!). Pick one of the experiments (it may have been 1 or 2 days long), and consider yourself talking to students in this experiment. Then identify (a) the kinds ideas the students might have about what they're seeing in that experiment, (b) the kinds of questions you might ask them to help them go deeper into the ideas, and (c) where you would go next with your imagined group of students. In this discussion be sure to tell me what your goals are for the students, and how your choices align with your goals.**