Homework assignment #3
Due: February 6.

I. Choose one of the following two questions:

1. How does hydrostatic pressure change during the descent to and ascent from a deep water dive? What are some of the consequences of these changes and how do some marine mammals deal with these consequences? Add a conceptual figure which includes the pressure distribution as function of depth.

2. How do some marine organisms use variation in pressure (within the fluid) to feed or ventilate their burrows? Give at least one example and discuss it. What physical principle is utilized? Explain the principle in your own words. Add a conceptual figure which includes the pressure distribution around the organism.

II. Choose one of the activities we did in lab this week (or create a new activity if you wish) and discuss how you would use it (or modify it) to address the question you chose from part I above.

Please address the following questions in your answer:

Why did you choose this specific activity?
What are the key science concepts it addresses?
Which pedagogic tools/concepts does this activity address? (Choose from the ones we have discussed so far in class)
How would you modify/improve it to better fit your audience? (Define your audience and make some assumptions about their background knowledge)
Discuss some potential limitations or problems you may face when using the activity.