

# Teaching Tips/Notes



## Outside of class reading of scientific journal articles is invaluable, and helps the instructor just as much as the student

I expect all of the students in my classes [AS 345 Animal Growth and Development; AS 346 Skeletal Muscle Physiology] to be capable of integrating numerous physiological concepts at the same time. I dread each semester, as I know that 3-6 students (out of 25) will likely drop each class, even though my grade standard is such that there (in reality) is no grade pressure on students [A will be given to those within 10% of high individual; B to 20 % of high individual, so on; F < 55 % of total score possible]. Moreover, I allow students (individually or in groups) to correct missed answers for 1/2 point each. I also place extra credit questions on each quiz and exam, but do not give any credit unless the entire answer is correct. Even with these items in place, I have been told on student evaluations that my classes are quite hard, and that taking my class is an exercise in learning how to take a physiology exam.

Over the years, I have tried a variety of alternative methods to get the students to absorb physiological concepts in the classroom. Some worked well, and others have not. Providing the reference to (very) current scientific papers during lecture, then making it a requirement that each student must review one such paper per semester has worked well. The process is this: I lecture on (say) growth hormone being a catabolic repartitioning agent. During the lecture, I provide students with 2-3 current references to survey papers on the specific topic. The students read, analyze and reduce the content of the paper. Then they begin writing their report to me, which they must address the following: Based upon what I have said on this topic (in class), what have you learned while reading and analyzing this paper? I do not ask about the content, but examples from the paper may be used in their write-up. The students may choose the paper at any time throughout the semester. So, if a topic is more of an interest to a student, then the student has an investment in doing it. After they have their first draft, they are allowed to turn-in the paper for a pre-grade review (by me). Moreover, if they have finished their paper requirement, then any (additional) paper that they might desire to read, they may do so and turn in a similar report (without pre-review) for a few points of extra credit. This process has allowed students that may not do so well on a quiz or an exam to gain points outside of class. In addition, it has allowed students to "bank" points in case their in-class performance may not be as good as they thought.

I (personally) like doing this for an additional reason. For students that do papers over the course of the entire semester, it is neat to see how much their confidence increases. The first paper that they might attempt is usually something like a "Bart Simpson" book report. However, by the end of the semester, most students that do more than one paper firm up their reading/writing and it is easy to see that they have grasped the physiological idea that I wanted them to get. Considering the multitude of pathways, regulation, and concepts that are involved in these two classes....anything that helps the student also helps me be successful in my teaching efforts. Moreover, it should not be about learning how to take an exam.

### Submitted by:

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