

Physics 151

Studying and Learning to Learn

Carefully view the 6 videos in the video series [How to Get the Most out of Studying](#).

Carefully study the article [Learn How to Learn](#) from the [American Psychological Society](#).

1. In the videos, Dr. Chew talks about counterproductive misconceptions or beliefs that are related to poor classroom performance. Tell me, in your own words, about those beliefs – what are they, how are they counterproductive, your reaction to them, do you have any of them, etc.
2. A key difference between strong and weak students is the quality of their metacognition. What is meant by metacognition, and how is poor metacognition manifested in a student.
3. Dr. Chew talks about “Orienting Tasks” and how they can elicit shallow processing or deep processing. He gives an example of each in an exercise of recalling 24 different words – looking for a particular letter (shallow) or making a personal connection (deep). Think of a time you were studying or doing homework for a particular class – math, chemistry, history, etc. For your specific case, what orienting task could you have done to induce shallow processing, and what orienting task could you have done to induce deep processing?
4. Of all the things Dr. Chew talked about in the 6 videos, what one or two concepts, ideas, or misconceptions surprised you or caught your attention the most, and why?
5. In order to keep the videos reasonably short, Dr. Chew had to leave a number of studying and learning concepts out (schema development, cognitive load, etc.). In the article *Learn How to Learn*, Dr. Bjork’s graduate students give terrific tips. Broadly speaking (*i.e.*, not a list), summarize ones that relate to concepts from Dr. Chew’s videos, and ones that aren’t covered in Dr. Chew’s videos.
6. Identify at least three ways in which you have modified or might modify your study habits and strategies in order to improve your performance in all your courses, including this one.
7. The faculty members of your major have you take physics because they view it as being important for you to be successful in your career. Why do you think that is? What do you think your faculty members hope you get from taking physics?

Carefully view the video [Words](#).

8. The video, which has over 60 symbiotic snapshots, is a terrific example of weaving together a story using wordplay to show rather than tell just what we mean. You may have to watch the video more than once, but there are 9 common words that the *Words* video evokes. Please do the best you can to determine what they are, and list them.
9. Each of the 9 words from the *Words* video has a different meaning depending on the context. Consider some of the many terms/words that we will use in this course: speed, velocity, acceleration, force, momentum, work, energy, etc. Ponder for a bit – *in physics*, do each of these terms/words have a single meaning, or do they have a different meaning depending on the context in which they are used?

Carefully read sections 1 and 2 from chapter 1 of [Matter and Interactions](#), and answer “Checkpoint 1” at the end of section 2.