

Generalizations about what *expert learners* do

- **Monitor their own thinking** You need to think about and understand when you get it and when you are confused.
 - **Actively seek connections** Rather than reading or working a problem in isolation, you should ask 'how do we know,' 'would this always work,' 'what are the limits,' 'how does this compare to what we did earlier'
 - **Articulate their thinking** Talking out ideas through discussions with others, trying to explain/justify a solution to someone, imagining you will be teaching this to someone
 - **Integrate new ideas into their current understanding** Not just 'taking in' or 'acquiring' new ideas, but actively thinking through how those ideas are related to what you already know
 - **Seek consistency** Test ideas, guesses, and assumptions by seeing if they are consistent with other ideas you are confident of
 - **Embrace confusion** Learning something new means stretching from your comfort zone; accept the discombobulating transition period as necessary for intellectual growth.
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What have *you* done for *you* lately?

A checklist to improve your performance in intro physics

If you'd like to do better in the course, do these things:

- ☐ I am actively* reading the text before class
- ☐ I am doing the homework problems on time
- ☐ I am coming to class (on time and prepared)
- ☐ I am actively participating in class
- ☐ I am seeking help (office hours, Tutoring Center, etc.)
- ☐ I am emulating expert learners
- ☐ I am spending 6-10 hrs/wk on this class, in addition to class time.

Unfortunately, learning physics is like learning to play the piano or shoot a free throw: it takes practice, feedback, and time. There are no effective shortcuts.

* Actively reading means trying to make sense, organize, and connect the ideas in the readings. Passive reading means the words go through your brain, but you don't really make an effort to process them.