

## Discussion Section Cheat Sheet

### Vocal

- Modulate your voice: Use a more dynamic range of: soft, excited, curious, et cetera... to avoid a "monotone" sound.
- Be enthusiastic. If you don't want to be there, why should they?

### Physical

- Make use of the space instead of standing in just one location.
- Try to do most of your speaking while facing the students. Sometimes it's necessary to talk while writing, but for the most part you should be facing/engaging the students.

### Board

- Plan how you will use whiteboard space before you begin writing.
  - Make full use of the board instead of one part of it. We recommend a linear fashion (left to right or right to left).
  - Check that your writing can be seen and read from back of room.
- Don't erase until you have to (including intermediate work) – students may lag your writing (or come in late, or need to "tune back in")
- Avoid long awkward silences while writing on the board. If you have a lot of things to put on the board, try to get to class early and write them before the students arrive (or prepare a copy for them, or use an overhead projector and pens).
- Make sure to write out any abbreviations the first MANY times you use them.

### Timing/Interaction

- Ask questions to see how the students are grasping the material. Wait for a while to hear an answer instead of answering it yourself a few seconds later.
- Always encourage discussion and student involvement. Be sensitive to student's feelings.
- When you're running out of time, don't try to cram everything in (or at least have some sensible game plan for when you're out of time...)
- Conclusions and wrap up explanations of an example are key. Don't skip over one to "get to" another problem.
- It's good to have notes prepared but make sure you are not slavishly tied to the notes at the exclusion of interacting with the students.

## Consider your Audience

- Be clear on what knowledge you are assuming. Ask the first time you use a term.
- Use real world analogies and examples to tie into new concepts. (This not only helps the students understand faster, it helps them retain the information and tie it to other similar concepts – forming neural connections.)
  - But make sure all your students understand them, be clear about any part where the analogy doesn't hold.
- Use concrete examples (not abstract ones). For example if you're explaining stacks, show how to put a couple elements in and how to take them out again.
  - Show steps on the board, rather than hand-waving.
- Be careful of slang in the English language.
- Formatting the concepts into easily rememberable steps (parallel parking) or categories (FIFO) helps with student understanding
- Try to avoid introducing new terminology that isn't used in textbooks or lecture. If you do, make sure you clearly draw a parallel between existing terminology and the new.

## Managing Tough Spots

- If you make a mistake - take time to correct it. (Be okay with making mistakes - we all know our brains are at half speed when talking in front of others.) And heck, finding and fixing mistakes is an integral part of computing.
  - Take the opportunity to model the process you use to think about mistakes out loud.
- When you're running out of time, don't try to cram everything in (or at least have some sensible game plan for when you're out of time...)
- If a student gives an answer that is way off or asks a question that is way off topic, it is often best to politely but firmly dismiss the response (rather than risk confusing the rest of the class).