

## Questions for students re: written work

1. Who is your reading audience?
2. What is the main research question?
3. Why is this question interesting and worth pursuing? What is the connection of this work to the larger field?
4. What is already known related to this research question? Specifically, how does this work relate to prior work in the field?
5. (Possibly not relevant for lab reports: ) What is the hypothesis of the present work? Or, if there is no explicit hypothesis, how does this work address an outstanding question in the field?
6. (Possibly not relevant for lab reports: ) Does the abstract convey the essential information that a reader should know to determine whether this paper is worth their time?
7. What is the general outline of the experimental or theoretical process that is needed to establish the main point?
8. Does the paper reflect the logical flow as defined in answer to the previous question?
  - **Students frequently organize their information chronologically. “First we did this. Then we collected these data.”** Research, particularly lab-based research, rarely proceeds linearly.
  - Chronological organization might be reasonable for a first draft. Get all the ideas on the page, initially. On the re-visioning process, though, students must be encouraged to view **the information as a factual narrative constructed to increase the reader’s understanding.** This is a big shift in mindset, when many students view their science writing assignments as essay tests in which they try to convince the instructor of their understanding/recall.
9. **Do the graphics tell the story to the paper as if they read like a Cliff’s Notes guide to the study?**
  - A reader in the field should be able to grasp the main points of the paper purely from the graphics and associated labels/captions.
  - Every graphic should be clearly discussed in the text, without relying on the reader to interpret the graphic on the fly. Not every reader will approach the paper with the background knowledge that makes figure interpretation obvious. **The paper can’t rely on the figures to do the work of explaining data interpretation.**
10. **Is this written to inform and educate your reader, or is it written to display your knowledge?**

## Questions for students re: figures/plots/graphics/schemes

1. Why is this figure significant?
2. What does this figure explain?
3. Where is the figure explicitly referenced in the text, and is this done so in a meaningful way?
4. How does the figure represent the larger discussion in the text?
5. Does the caption provide sufficient explanation to allow for interpretation of the figure without getting lost in details?
6. Do the scales in the figure accurately convey the significance, or perhaps lack thereof, of the measurement or the result?
7. Does the figure efficiently use the space given to it? Is there unnecessary white space? Can you use the space more efficiently?