

Things to think about when reading primary literature

The first time you sit down to read a primary research article, you will probably find it to be quite a challenge. Primary literature is filled with field-specific terminology (jargon, abbreviations and acronyms) and assumptions of background knowledge (both in the field of research and with the methodology used). You may need to spend some time researching background information and methodology in order to understand the paper. You may need to re-read the paper once... or twice... or even three times to fully appreciate it! Reading up on the background and then coming back to the paper for a second look is often helpful. As you begin this endeavor, the most important thing to remember is that it **WILL** get easier!

You may find it easier to read the primary literature if you approach it with a series of questions designed to help you distill out the important information. Below is listed a series of questions to help you get started. You don't necessarily have to answer every question, but you may find it helpful to use the questions as a guide.

1. What information did you learn from the Abstract? Does the abstract convey the main question and conclusion? If so, what are they?
2. What background information is presented in the Introduction? Do the authors explain the field of research? Do the authors convey their experimental goals, and their rationale for pursuing this line of investigation?
3. What did the authors do, and how do they present their data in the Results? Does the data presented in the figures match the description of the data in the text and figure legend?
4. What conclusions do the authors draw from their data? Do they discuss the significance and/or impact of their findings in the Discussion? Do their data resolve any questions in the field? Do they agree (or disagree) with the findings of other research groups?
5. Critique the paper. Do you agree or disagree with their data interpretations? Were there other experiments they could have or should have done? Did they perform appropriate controls? Did they perform appropriate statistical analysis?

We will use these questions to direct our discussions in class, so you should get accustomed to writing down a few answers and sharing these in class!