How to Read a Scientific Journal Article:

The ***WORST*** way to go through a research article is to dive right in and read it word for word, from title to lit cited, as if it were a textbook or a short story. This can be a monumental waste of time, for many of the articles you find are not going to be what you're really looking for. There's a smarter way to tackle them…

Free Advice: Use a highlighter, underline and circle essential words and passages, and pencil comments and questions in the margin …in short, learn to "dialogue" with the paper that you're reading. Reading should be a conversation!

Step #1 – An Initial Sniff…

Begin by reading the Title (duh!) and the Abstract. The latter is a tight summary of the scientists' research and results. Do your best to understand it. You may have to read it several times. If the paper obviously doesn't have what you're looking for, move on to the next paper.

Step #2 – Figures & Graphs

After reading the Abstract, if you still think the paper warrants a more careful scrutiny, then **DO NOT** start reading Introduction! Instead, flip through and examine the figures …if a picture's worth a 1000 words, then a graph is worth a million. Read captions. Read captions. ***Read captions!!!***

A careful, patient analysis of a scientific paper's graph(s) will usually reward you with much info about how the study was done and what the empirical results were. *But resist the urge to focus your eyes on the data points or bars or best-fit lines first.* Instead, look first at the **axes**. Start with the y-axis (usually a **response** variable), then move on to the x-axis as well as the legend (if any). ***And read the caption!*** Finally, once you've got your brain around the lay of the graph(s), consider the patterns and trends in the actual data itself.

Step #3 – Data Tables

The graphs told you plenty! Next stop: the data tables (and their captions!).

Step #4 – At Last, the Text Itself…

So far you've probably learned quite a bit without even reading word one of the text! But now it's time to fill in the gaps and get the big picture by reading the text itself. Take your time and do your best. You won't understand every word, but fight your way through and you'll get main ideas. As follows:

a) Introduction – Skim this. It will cast the study's context and research questions.

b) Methods – This will spell out experimental details that were unclear in the graphs.

c) Results – This summarizes the empirical findings without delving into matters of interpretation (the latter go in the Discussion section).

d) Discussion – This is the most important part of the paper, for this is where the scientists interpret and make sense of the cold data. ***Read carefully!***