How I grade your Research Articles*

*much of this is also relevant for the Results/Discussion grading

The first thing I do when I grade your paper is I ask:

1. Are all the required sections there (Title&Authors, Abstract, Intro, M&M, Results, Discussion, References)?
2. Does the Results section have both text and figures?
3. Do the figures all have titles and legends and are the axes on all graphs labeled with units?
4. Is there a list of appropriate references, and is that list properly formatted?

If the answer to these questions is "no" then your paper is unlikely to get a grade above a "C" (something in the 70s). If several elements are missing, your paper will likely get a "D" or lower—I can't grade what's not there.

The next thing I do is read the Abstract and the M&M sections for the entire class. No matter what the article is about, I'll be asking:

5. Is the abstract a short summary of the question, method, result(s) and conclusion(s)?
6. Is the M&M section a complete description of the experiment, written in past tense and complete sentences, in a logical order and with a consistent voice (either passive or active)?

I grade these two sections for the entire class before reading any of the other sections. If the answer to these two questions is "yes," then your paper is assured some kind of "C" or higher.

And finally, I read every word of your introduction, results and discussion sections. As I read, I ask:

7. Does the introduction provide adequate background for the question your experiment tests? Is it an accurate description of the needed information? Does it establish a "gap" in understanding that you will address? Does it anticipate the data you'll present in the Results section? None of the introduction should closely reproduce the materials presented on the wiki – remember that I wrote much of that material and so I know what's there.
8. Does the results section tell the story of your experiment and present the data in a visually pleasing, organized and instruction way? There should be no conclusions stated in this section unless the conclusion is necessary before the next bit of data can be presented.
9. Does the discussion correctly analyze the data and do you draw reasonable conclusions? In other words, how well do you seem to "get it"? What next experiments would you like to do?

Papers that do a good job with questions 7 through 9 are assured at least a "B." Papers that do a great job with questions 7 through 9 and are also written in an intelligent, concise way will get some kind of "A."

So style and grammar do count. They are often the difference between a "B" and an "A." I try hard not to over-correct your paper but will fix language errors the first time I see them. Some of the most common errors I see are:

- effect vs affect
- it's vs its
- pronouns that do not refer to a particular noun *("transformations were plated and this was used to…")*
- introductory phrases that incorrectly modify the subject of a sentence *("after mutating the plasmid encoding Cph8, the cells were electroporated…")*
- informal language *("the sequence we were dealing with…")*
- typos *("the signaling process or the expression park the cell does")*

These are examples from papers I've graded in recent years.

As for "style" two of the most helpful tips I can give you are:

- make sure there's a sensible arc to the entire argument
- check for clarity in how each piece of information is presented

Realize that you can help the reader! Section headings can help with structural clarity. At the sentence level, try presenting unknown information after telling the reader something known (see first example below). Finally, try to give key information early and not keep the reader in suspense too long (see second example below).

EXAMPLE 1: FROM KNOWN TO UNKNOWN INFORMATION (from "Engaging Ideas")

Which is the more helpful dorm room directory?

Version A (unknown to known)

Extension	Name
9591	Cat, Milkshake
7234	Dog, Butterstick
6345	Hamster, Mr. B
8333	Snake, Slitherin

Version B (known to unknown)

Name	Extension
Cat, Milkshake	9591
Dog, Butterstick	9591
Hamster, Mr. B	6345
Snake, Slitherin	8333

EXAMPLE 2: HELD IN SUSPENSE (from "The Allyn and Bacon Guide to Writing")

If you were flying from Chicago to Atlanta, which of the following formats would be more helpful?

Version A (kept in suspense)

Gate 10: for flight 16 to Memphis
Gate 25: for flight 35 to Dallas
Gate 12: for flight 29 to Atlanta

Version B (relevant info 1st)

To Memphis on flight 16: Gate 20
To Dallas on flight 32: Gate 25
To Atlanta on flight 29: Gate 12