Ways to improve your scientific writing skills

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1. Do not plagiarize! You will not receive any points for your assignment if you plagiarize.
2. Only present information that you understand. The instructors of this course will be able to tell if you do not understand the material. The sentences should be in your own words (do not use quotations) but should also be scientifically accurate.
3. Divide your work into several paragraphs, including a brief introductory section, the main body, and conclusion(s). Try to make exciting conclusions and include your thoughts about the paper, do not just copy ideas from the summary article. Remember that first and last impressions count – work on your compelling introductory paragraph and conclusions so you can accomplish that.
4. Develop a strong topic/theme sentence for each paragraph. Make sure that each topic/theme sentence is supported by scientific evidence in the sentences that follow. Start general and then get specific. Use a logical progression of sentences to guide the reader to the main points you are trying to make in each paragraph.
5. Be direct and clear in the scientific information that you are conveying to the reader. Keep the sentences simple. Do not use sentences that stretch for more than three lines. "Things should be as simple as possible, but no simpler" (Albert Einstein)
6. If you are going to use pronouns, do make sure that the pronouns are fully defined. To avoid the use of undefined pronouns, do not start sentences as follows, for instance: It is, There are, This is. It makes your work unclear to the reader as it allows for more interpretations of what the subject is.
7. Avoid the unnecessary repetition of terms (particularly in the same sentence).
8. Use proper grammar. Make sure that each sentence has a noun and a verb that agree (e.g., “protein is” – not “protein are,” but “data are,” not “data is”).
9. Do not use colloquialisms/jargon or “conversational” style of the writing.
10. Italicize all species and gene names – *Haloferax volcanii ubaA* gene
11. Define all abbreviations upon first use – *Haloferax volcanii* first followed by *H. volcanii* in later sections of the paper
12. If you write numbers – spell out the numbers if they are below 10 and are not accompanied by units.
13. Use proper upper/lowercase lettering. For bacterial and archaeal protein names, capitalize the first and fourth letter – *e.g.,* UbaA protein. For gene names, capitalize only the fourth letter (e.g., *ubaA* gene). For other examples read the literature, e.g., pH, acetyl-CoA, nickel, iron, NADH, ATP, cAMP. Do not randomly capitalize a term mid-sentence just because it sounds scientific (*e.g.,* “The active site of the enzyme had a Nickel ion”; nickel should not be capitalized).
14. Be sure to include page numbers at the bottom of each page of your project paper.
15. Do not overgeneralize the information to the point of becoming scientifically inaccurate.
16. At the end of your work check your spelling by “spell check” tool included in Word or use more advanced software such as Grammarly.

In addition, for summary papers in which you need to incorporate multiple sources of literature:

17. Make sure that your literature search is thorough. Be sure to READ and synthesize the literature that you have carefully gathered. Do not get overly focused on only a few studies that you happened to read.
18. Be sure to cite all figures and tables properly. State if the figure or table is original. If not, be sure to include a statement that the figure or table is from a publication and add the proper citation of that source.