2016 Gonder Report Checklist "The Usual Way"

The hope is that by practicing organizing information in a clear way, you will gain the skill to do so in your job and be successful. The standard scientific report format is a universally accepted method of presenting findings, and it's mastery is important to your evolution as a professional.

Precision, attention to detail, clarity of thought and presentation are essential to writing, and the practice of them will give you those skills to use in all arenas of your career.

It is true that there is a preponderance of schlock and cruft in information put forward in government and industry. This is why you can stand out, and why there's room for you in your field.

You will not generate schlock or cruft, but clarity - and in doing so, you will be like the sharply honed edge cutting cleanly through, providing a finely finished surface upon which to gaze and apprehend the meaning of your reports.

Name: _____

Word Count: _____

Done properly: _____ yes/no

Title: _____

Describes the specific job in question concisely but with enough detail to get the main idea across.

Done properly: _____ yes/no

Abstract:

Written last, it summarizes the gist of each section of the report in a single sentence (or two for an especially complex section).

Arranges the sentences in the order the sections are presented in the report.
Follows the Goldilocks Principle; not too short, not too long, just right.
(typically one paragraph)

Done properly: _____ yes/no

Introduction:

Starts out by stating, concisely, the basic concept or question of the lab.
Sets down the main objective(s), states any hypothesis, and describes relevant information that is important in understanding and performing the lab.
(typically one or two paragraphs)

Done properly: _____ yes/no

Methods:

Provides a concise, yet complete, and easy-to-follow description of what was done.
Gives sufficient, but not excessive, detail of both the materials and procedures used so that the experiment could be repeated using this information.
A list format is generally used.
If written in paragraph style, it must be easy to reference later, not wordy, conversational, or obscured.
Does /not/ contain results or discussion.
May use a /good/ picture to better illustrate the method used
Follows the Goldilocks Principle; not too short, not too long, just right.

Done properly: _____ yes/no

Results:

Begins with a sentence or two describing the overall findings of the lab.
Contains just the results that relate to the original question, and are needed for the discussion section, no more, no less.

Follows the Goldilocks Principle; not too short, not too long, just right.

Contains visuals (tables or graphs or other figures) that are appropriate to the data and are arranged in an order that best tells the "story" of the data.

Consists of a clearly understandable label and description for each visual, and structures them by
(1) summarizing in a sentence the point of the visual; what it shows and means
(2) supporting that summary by including specific details from that visual that are important for understanding the results; why is this here - what's the important data

Visuals are sized, cropped, formatted, labeled, titled, and separated, so as to maximize the ease of visual apprehension and understanding by the reader, and easy reference to the information later.

Simply reports the important results and avoids any explanation or conclusion about the data.

Done properly: _____ yes/no

Discussion:

Begins with a statement of whether or not the overall results answer, do not answer, or answer to some extent, the original question/goal as stated in the Introduction.
Demonstrates this by pointing to specific data in the results section as evidence for this viewpoint.
Uses what was learned about the concepts through performance of the lab to explain why, or why not, the data answer the question/goal.

Addresses other issues that may be appropriate, such as
(1) any problems that occurred or sources of uncertainty in the lab procedure or the data;
(2) how the findings compare to the findings of other students or experiments, and an explanation for any differences;
(3) suggestions for additional experiments that may further extend our understanding, especially if the data were not conclusive.

Follows the Goldilocks Principle; not too short, not too long, just right.

Done properly: _____ yes/no

Citations: (if needed)

Includes all the sources used in writing, and reference books or articles quoted or cited. Uses an appropriate, consistent, documentation style for citations and references (CBE, ACS, like CitationMachine, or other easily understood formatting)

Done properly: _____ yes/no

Appendix: (if needed)

Additional information, useful to the reader, that is too large or complex to fit in results, and not essential to the discussion, but considered important to append.

Done properly: _____ yes/no

Overall details needed for completion:

Has been read aloud.

Done: _____ yes/no

Contains all necessary, and no superfluous, information or description.

Done properly: _____ yes/no

Is written in a scientific style, most often using past tense, third person, objective tone, clean, clear, crisp, and to the point.

Done properly: _____ yes/no

Is written without unnecessary jargon, convoluted phrasing, complex wording, complicated explanation or obtuse language.

Done properly: _____ yes/no

Avoids complicated formatting, uses carriage returns or other means to visually separate sections and information, and facilitate ease of reading, and later reference to the report.

Done properly: _____ yes/no

Has no spelling or grammar errors.

Done: _____ yes/no

Includes only, and all, the assigned and needed headings.

Done properly: _____ yes/no

Follows the Goldilocks Principle; not too short, not too long, just right.

Done properly: _____ yes/no

Remember:

The appropriate length and detail of the sections is in large part determined by the total desired length of the report; e.g. 600 vs 1200 words. A longer report will incorporate more results, and more lengthy discussion. A shorter one, fewer and less. However the features of each section are the same, regardless of their length; e.g. the methods section may be edited more in a short report, but still should be detailed enough to duplicate the experiment.

More is not better, better is better.
Fancier is not better, clearer is better.
Clear, clean, crisp, concise, easy to read out loud, simple to peruse with the eye and find a desired piece of information.

Does this look or read like a text message, or an explosion in a dictionary factory?

Yes _____ No _____

If you just now saw this for the first time, could you easily navigate, understand, and use it?

Yes _____ No _____

Would you write a check for this?

Yes _____ No _____

All Done properly _____ yes/no

Adapted from: LabChecklist SelfGuide http://www.ncsu.edu/labwrite/lc/lc-selfguide.htm