Details of writing assignment for CHEM 1004 – Buckley – Fall 2010

The question you are to address with this writing assignment is:

**Why is the periodic table arranged the way it is?**

This assignment will be evaluated by the department for aspects related to general education. In addition, I will assign a score which will account for 5% of your overall grade according to the course policy. *The due date for the paper is October 18, 2010, at class time.*

The departmental guidelines for writing a paper are given below. Please be sure to pay attention to them and include the indicated number of references appropriately cited.

Following are some of comments related to what I will be looking for in assigning your class grade for the assignment.

1. You write complete sentences, spell well, and punctuate properly. I am not particularly concerned about a standard writing format – APA and all of those others. I just want it to make sense.
2. I would ask you do your references slightly different than indicated in the departmental guidelines. Specifically, instead of using letters such as a, b, and c to indicate the references, use the numbers 1, 2, and 3.
3. As you write your paper you will be using those references to gather and organize information. Statements of accepted fact (boron has atomic number 5, etc.) do not need to have a reference. Viewpoints from others, even if paraphrased, do need to be referenced. The format for referencing is to put the reference number as a superscript next to the statement. If you take entire quotations from someone else’s work (including websites) the quotation should be in quotation marks and the source cited with a superscript number at the end. Minimize the length of quotes from others and the number of direct quotes you use. The papers will be checked electronically for plagiarism issues.
4. Though there is a minimum of three references (two books, an internet site) as indicated in the departmental guidelines feel free to use more if necessary. Just keep numbering them after 3. Also, you are not required to have an internet site—you are allowed to have one of the three as an internet site. They could all be books or articles.
5. A good place to find references is the Library. Go to the Cameron home page and select Library above the picture. You can browse the Library catalog or do a database search using something such as Academic Search Premier or others. If you run across a reference in the *Journal of Chemical Education* but cannot retrieve it, please let me know. I have access back to 1924 when I first subscribed to the Journal.
6. Have fun with this. I learned a lot when we first did this assignment in the spring. I need to keep learning so dig up something new for me.
Guidelines on Writing a Chemistry Paper

1. Scientific writing may be different from other types of writing you may have been asked to do for other courses. The strategies described below will hopefully serve you well when writing your paper. Your paper must offer support for the question or topic presented. It can't consist as a mere report of opinions, yours or others; but rather you need to defend the claims or arguments made. Offer reasons to support your ideas. You might say something like:

   My view is that ----. I believe this because...

   or:

   I find that the following considerations...provide a convincing argument for...

2. For this assignment, a good paper is modest and makes a small point; but it makes that point clearly and straightforwardly, and it offers good reasons in support of it. Do not try to accomplish too much in your paper. The usual result of this is a paper that's hard to read, and which is full of inadequately defended and poorly explained claims. So don't be over-ambitious. Don't try to establish any earth-shattering conclusions in your 2-3 page paper.

   Your paper needs to address the topic. Use Times New Roman, double-space, and 12-point font. Type your paper (no hand-written assignments accepted) and your paper must be spell and grammar checked and at least 500 words. Your paper may be longer but must be at least 500 words.

   The aim of this paper is for you to show that you understand the material and that you're able to think critically about it. To do this, your paper does have to show some independent thinking. That doesn't mean you have to come up with your own theory, or that you have to make a completely original contribution to human thought.

   We tell you to be concise because we don't want you to ramble on about everything you know about a given topic. Each assignment will describe a specific problem or question, and you should make sure you deal with that particular problem. Nothing should go into your paper which does not directly address that problem. Prune out everything else. It is always better to concentrate on one or two points and develop them in depth than to try to cram in too much. One or two well-mapped paths are better than an impenetrable jungle.

   Formulate the central problem or question you wish to address at the beginning of your paper, and keep it in mind at all times. Make it clear what the problem is, and why it is a problem. Be sure that everything you write is relevant to that central problem. In addition, be sure to say in the paper how it is relevant. Don't make your reader guess.

   Consider the following:

   Abbreviations - You should avoid abbreviations by writing out the full word (minimum, October, Virginia, first, temperature, with...). Exceptions include common scientific terms like units of measure (m, g, cm, °C), and mathematical or chemical formulas. Sentences should never begin with an abbreviation or an acronym.

   Acronyms - You may wish to introduce an acronym for a term that is repeated often: if your paper deals with gas laws and you use a reference to standard temperature and pressure, STP, you
may use the full term once and substituted with STP thereafter. If you are writing a paper about tidal freshwater marshes, the first time the terms appear, you can introduce an acronym: "Tidal freshwater marshes (TFM) are important transitional zones in the landscape." Throughout the rest of your paper, you would refer to TFM.

Chemical elements are not proper nouns, so do not capitalize them. Only the first letter of the symbol is a capital letter: nitrogen (N), carbon (C), calcium (Ca).

Contractions - In formal writing, you should never use contractions (didn't, can't, haven't...).

Data - The word "data" is plural, as in "the data were collected on January 21, 2010."

Direct quotes should be avoided, unless you are presenting another author's specific definition or original label. You can usually paraphrase the writing effectively and more concisely, taking care to properly attribute the sources of your statements.

Pluff - It is obvious when students do not understand what they are writing about, and their grades suffer as a result. Read and re-read your references. Consult a textbook or another reference to help you resolve any aspects of the paper you do not understand before you start writing.

Footnotes - should not be used.

Run-on sentences - You should review your writing to make sure that each sentence presents one or two clear ideas. This will also help you organize sentences within paragraphs in a logical order.

Slang - Do not use slang. Try to use precise, scientific terms where possible (without unnecessary jargon) and avoid colloquialisms and figures of speech: "somewhat" rather than "sort of," "many" or "a great deal" instead of "a lot."

Spelling - Your word processor's spell-check and/or grammar-check function is not error-free. It cannot tell you when to use "it's" and "its," and it cannot tell you that a particular sentence does not make sense. Give yourself enough time to proofread and correct your paper.

Tenses - When describing methods and results, you should use the past tense. The present tense is appropriate for accepted facts, such as the background information presented in the Introduction. In addition, you may use the present tense when you discuss your results and conclusions. Looking over other scientific papers may help you answer questions you might have on this topic.

Units - All units of measure must be metric or SI (International System).

3. For this assignment, three references are required. You may use more than 3 references but at least 3 references are required. One reference can be the current chemistry textbook. A second reference can be from the Internet (e.g. Google search) but do not use Wikipedia or some form of an encyclopedia. The third reference can be another text or book (a secondary reference) or a journal article (primary reference). Additional references are welcome.

Citation format is described below:

a) Journal Article:

b) Book or Text


c) Internet source