**Successful Science Writing**

Science requires a deep enough understanding so that you can clearly explain a concept, an experiment, or data to someone who is not familiar with the topic. Since you are still learning concepts and skills, you will need to practice how to successfully write for science; you will do this through constructed response answers.

***What is constructed response?***

*Constructed response questions are essay or short-answer questions that require students to provide their own answer to a question or prompt. These are not 2-3 word answers! It is extremely important to include details (evidence) in your answer the constructed response question.*

In order to receive full credit for a constructed response, you must show full and complete understanding of the question through your writing. Full and complete understanding is demonstrated by implementing the four following criteria:

1. Providing complete scientific evidence
2. Demonstrating a full integration of scientific concepts, principles, and/or skills
3. Writing reflects a complete synthesis of information, such as data, cause and effect relationships, or other collected evidence
4. Accurate use of scientific terminology

Tips for Constructed Responses

***Understand what you are looking for!***

*Some passages are very lengthy and the reader can get caught up in the text. This can be avoided by using just a couple strategies.*

* Read the question before you read the passage.
  + By reading the question before reading the passage, your mind is focused on that material that is important and you will better be able to filter out needless information.
* Make note of the main points that you read
  + If you are able to, make a note of the main points while you are reading. These notes will be useful when it is time to organize your thoughts into your constructed response.

Structuring Constructed Responses

* Topic Sentence = Rewrite the question  in your own words, and turn it into a topic sentence
* Supporting Sentences = Go back to your “main points” notes and collect scientific terms, data and evidence
* Organize the details into a logical order to show proper reflection on subject matter
* Re-read the question and also read your answer in order to make sure you have covered all components needed

**Lab Report Conclusions**

****

**Treat a laboratory conclusion like a constructed response.**

**Conclusions**:  The conclusion should be a succinct (brief but complete) summary of the laboratory activity.

1. Re-state the purpose of doing the lab.  Why did we do this lab?  What were we trying to determine?
2. Re-state the procedure briefly.  How did we do the lab?  (Don’t go into much detail…just quickly state how you collected the data)
3. State your results as they related to the purpose.  Include any numerical values produced.

***Sample Conclusion***:

The purpose of this lab was to determine the density of four different unknown solutions.  We determined the mass of 10 mL of an unknown solution using an electronic balance (for mass) and a graduated cylinder (for volume).  We calculated the density by dividing the mass by the volume.  We determined the densities to be

            Solution A:      .987 g/mL

            Solution B:      .999 g/mL

            Solution C:      1.11 g/mL

            Solution D:      .979 g/mL