REVIEW PAPER EXERCISE

This exercise is designed to help increase your skills in reading and comprehending peer reviewed, scientific papers. You are required to extract information from at least 5 of these types of articles for your Laboratory Report, so let's practice on an example article.

Instructions:
Carefully read the example article. While you are reading the article, answer the following questions. Afterwards, collaborate in groups of four to answer those questions as completely and correctly as possible. Use the information about peer review articles at the end of this handout to help you with some of the questions. Use your text to help you define any terminology you may yet not be familiar with. Be prepared to discuss the article and the following questions in a class discussion.

1. In which journal was this article published?

   _____

2. Which volume? _____
3. Which issue? _____
4. When was it published? _____
5. What page number does the article start on? _____
6. Who is/are the authors(s) of the article? _____
7. What is the title of the Article? _____

   _____

   _____

8. Into what major sections is the article arranged? _____

   _____

   _____

9. How many references did the author(s) reference in the article? _____
10. In 3 sentences or less, describe the purpose of the study.

    _____

    _____

    _____

    _____

    _____

    _____

11. You are not required to understand the equipment/technology of the methods used in the study, but you should generally know what was done to produce results in the study. Describe them in terms that you understand.

12. What were the major findings of this study?

13. List 3 facts about taste that were presented in the INTRODUCTION of this article:

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

14. List 3 facts about taste that were presented in the CONCLUSION of this article:

a. _____

_____

_____

b. _____

_____

_____

c. _____

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15. What animal was used in the study? _____

16. If the study was not performed on humans, why should we care what the outcome of the study was?

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17. If the experimental subject (organism) was a reptile, would the outcome of the study be valid when applied to mammals? Why or why not?

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_____

18. Give a proper reference for this article.

_____

_____

_____

19. How would you cite this article in the text of your review paper if you were to use information from it? _____

A peer reviewed, scientific article is an article written by a scientists or a collaboration of scientists that have performed experiments and are reporting their findings to the scientific community. The articles are published in scientific journals, such as: *Journal of Physiology, Journal of Endocrinology, Journal of Nutrition*, and MANY others. To be published in a journal, the author(s) submit the article for review, meaning that other scientists in the same and related scientific fields read, edit and comment on the article. Only when all of the reviewers approve the article is it published. This means that several other scientists agree with the data collection methods, statistical analyses, interpretation of the data and correct representation of the results in the article. So, these articles are generally accepted as valid experiments and results by the scientific community and represent decades of careful research in an attempt to explain the world around you. This method does not only pertain to Biology, but all areas of science, such as Geology, Physics, Chemistry, etc. Much of the research in the general field of Biology has been an integral part of the advancement of medicine and understanding of the human body and its functions!

How would you find a peer reviewed, scientific article? There are many ways to search for an article. One way to search is to use PubMed, an online (government database) site in which you can search by keyword(s). The search results will contain articles from many journals rather than trying to search just one particular journal. The drawback to PubMed is that there are few articles that are displayed in full. PubMed mainly contains article abstracts and you must be a subscriber to the actual journal to get the full text. In these cases you can write down the reference then search for it at the library. Medline is another article database that may be searched electronically, but you'll need to search from somewhere that subscribes, like a library at a college/University. You can also search the journal's website directly.

At the Victor Valley Library you may search their journal collection. These are journals that they may carry on the shelf and you may photocopy, or you can search their electronic journal subscriptions. They may have access to full text articles that you may have found on InfoTrac or PubMed and weren't able to access from home. The librarians there are very helpful and will be eager to help you in your search process.

Medscape is a useful site to find additional references for your paper. This is a site that contains many articles written by doctors/physicians that are just informational articles and NOT peer reviewed scientific articles, as well as some true scientific review articles.

Finally, you can simply "Google" your topic and some peer review articles from journals will come up.

When you search your subject try all manner of key works and combinations of key words for your search. If you just search "taste" you will get very limited results and have a hard time gathering information for your project. But if you search "taste transduction" or "sweet and gustation" much more focused and applicable results will come up.

THE PEER REVIEWED, SCIENTIFIC ARTICLE

There are a few ways to easily recognize a peer review, scientific article.

- The article will be from a JOURNAL, and will be sited as such. For example: *Journal of Physiology* 32 (1): 345-355. This means that the article is published in the *Journal of Physiology*, in volume 32, issue #1 and on pages 324-255.
- The article will contain the following components (some variation may be found): Abstract, Introduction/Background, Materials and Methods, Results, Conclusions/ Discussion and References. Notice that this is VERY similar to the Scientific Method that you should have learned in a general Biology course.
- There may be one or many authors, and they will be from Universities, Colleges or Major Medical/Pharmaceutical companies.
- It will NOT be an opinionated article or use quotes or dialogue

Most peer reviewed, scientific articles are presented in the above format, however you may come across a REVIEW article on specific topics. These articles are written to compile information from several primary articles to present the latest known information to the field. The authors do not present data collected from an experiment they conducted, but rather try to make a composite of many results from experiments conducted by many research labs on a given topic. You will actually be writing a review, a composite of all of the articles and data within that you have researched, so if you come across one of these papers it may serve as a good example of format for your review, but take caution not to plagiarize!