**Format for a scientific research report**

**1. Abstract** (should be about one half page double spaced; use past tense of all verbs)

* what you did,
* why you did it,
* how you did it, and
* your significant results

**2. Introduction** (relevant background information; cite your sources!)

* Outline the life cycle of WNV, including the vectors & reservoir hosts
* *What are the environmental variables that could affect the incidence of WNV?*
* Discuss when WNV entered the country, and how long it took to spread to the West Coast. *Why was it able to spread so fast?*
* Discuss the importance of WNV compared to other kinds of infectious disease, especially kinds of encephalitis vectored by mosquitoes. Include the symptoms and mortality rate for WNV infections. *What is the age group of people most at risk for WNV neuroinvasive disease?*
* List your objectives for this research project.
* [*Note that you will only include those aspects of the ecology of WNV that are relevant to your objective(s).]*

**3. Materials and Methods:**

* Describe how you conducted this research project. Use past tense of all verbs.
* Telling which web sites you used is appropriate, but be sure to tell which information came from each. (*Use sentences, not a list*.)
* Tell which data you used from each site and how you used that data, for example, *I graphed average monthly precipitation (from the US HCN) against prevalence of human WNV (from the CDC) in [my home area] from 1999 through 2011.*

**4. Results:**

* Include maps, graphs (both maps and graphs are named Figures), and tables (which are named Tables) comparing relevant environmental conditions for your local area (or the area of the supplied data sets) to the incidence or of WNV infection in the area.
* Each figure or table must be cited in the text of this section. That is, you must have text *outlining, but not explaining*, your results. For example, “The higher the number of months with temperatures over 25 degrees Celsius, the more human cases of WNV” belongs in the Discussion, but “Figure 1 shows the prevalence of human WNV infection graphed against monthly average temperature” belongs in the Results.
* Any statistical analyses indicated in the Structured Exercises or by your instructor, formulas and calculations for species diversity belong here.

**5. Discussion** (cite your sources!):

* Explain what your results mean and compare them to previous studies in the literature.
* *Are the environmental conditions conducive to WNV in your home area or the area in the data set?* Discuss environmental conditions relating to mosquitoes, birds, etc., that influence the life cycle you outlined in the Introduction.
* *What is the “dilution effect” relating to bird diversity and mosquito-vectored disease incidence?*
* *[Only those aspects of WNV ecology relating to your objectives should be discussed. For example, if you researched only the dilution effect, do not discuss temperature.]*

**6. Acknowledgements:**

* Mandatory if research is funded by a source other than the author(s.)
* It is also customary to thank any persons who helped with the research that are not authors (e.g., lab or field assistants, persons who read the paper and gave suggestions).

**7. Literature Cited**:

* If you used additional sources in your Discussion that weren’t already listed in your Proposal, you must add them in alphabetical or numerical order, depending on which format you used for your in-text citations.
* *NOTE*: In-text citations and the Literature Cited section are both required in scientific writing*. Every source used must be both cited in the appropriate place in the text of your paper and listed in this section. Do not list any sources that are not cited.*
* List every web site that you used (in the format given by your instructor).
* For any other sources, emphasize peer-reviewed print or online papers.
* List every source in complete, correct format as specified by your instructor (CBE/CSE or other).