Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date of my Ecology Final: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**STUDY GUIDE for 1st Semester ecology Final Exam**

By answering the following questions, you are BEGINNING to study for your final exam. You must go back over your answers MULTIPLE TIMES, though, to ensure you actually understand the material. Knowing this information will get you somewhere around a 4. You need to go above and beyond (provide examples, apply the information) to get a full 5!

***Add 0.2 to your final test grade if you COMPLETE and turn this in on your test day!***

**This is when you benefit from a neat and complete interactive notebook.** All of the following information can be found in your INB. If you are missing anything, you can go to my website [www.sciencewithburdick.weebly.com](http://www.sciencewithburdick.weebly.com) to download and print.

**Biology Review:**

1. Be able to identify one aspect of biology that relates to ecology and describe HOW this topic relates to ecology. Topics could include:
   1. Taxonomy of living things
   2. Properties of Water
   3. Cell Biology
   4. Cellular Energetics (Photosynthesis/ Cell Respiration)
   5. Plant Structure and Function
   6. Natural Selection
   7. Genetics
   8. Animal Anatomy
   9. Cycles (water, carbon, nitrogen)

**Introduction to Ecology**:

1. What are the 7 levels of organization and what are the differences? Similarities?
2. What is the difference between abiotic and biotic factors?
3. What is the difference between a habitat and niche?
4. What are the differences between autotrophs and heterotrophs?
5. What are the different types of heterotrophs and what are their food preferences?
6. Where does the main source of energy that powers all life on Earth come from?
7. What is the equation for photosynthesis?
8. Draw an example of a food web.
9. Draw an example of a food chain.
10. What are trophic levels and what are they?
11. What is an energy pyramid?
12. How much energy is transferred between levels of the energy pyramid?

**Fire Ecology:**

1. What is the definition of wildfire?
2. What is the Fire Triangle?
3. What is the Fire Behavior Triangle?
4. What are the 4 types of fuel and what are examples of each?
5. What are the 3 ways fire spreads via heat transference?
6. What happened in 1910?
7. Who was introduced in 1944 to help spread the message of fire safety?
8. What are the ecological roles of fire in Forest Ecosystems?
9. What are some leading causes of fires in Oregon?
10. How does topography and weather affect fire behavior?

**Intertidal Zone Ecology:**

1. What is the definition of adaptation?
2. What are the types of tidal habitats?
3. What are the tidal zones and what characteristics define each zone?
4. What are examples of organisms that live in each tidal zone?
5. What adaptations do various intertidal organisms have to survive in their habitat?

**Marine (Ocean) Ecology:**

1. What are the 5 oceans?
2. What is the definition of marine ecology?
3. What are the 8 features of marine ecology?
4. What does biota mean? What are examples of biota?
5. What are the 3 zones of the ocean?
6. What are the horizontal and vertical zones of the ocean and what are the characteristics of each zone?
7. What defines vertical oceanic zones?
8. Be able to draw a picture of the zones of the ocean.
9. What are the 6 types of ecological relationships and what are their definitions?
10. What are some examples of each ecological relationship?
11. What is ocean acidification and how are humans contributing to it?