**READING GUIDE:**

**Textbook:**

The textbook can be accessed electronically for free either by reading online or downloading a pdf by going to the website: [www.openstaxcollege.org](http://www.openstaxcollege.org). Make sure you are reading the textbook Titled: “Concepts of Biology” NOT the one that is only titled: “Biology”

**General Notes:**

I may not be able to provide a reading guide for all chapters and quizzes, but when I do you should still make sure to read the ENTIRE chapter first including any associated videos before using this guide. If you did a careful reading you should be able to answer most if not all of the questions and topics of the guide without having to refer to the book. This guide is intending to point you to particular topics I want you to know, understand and remember prior to starting lecture. Obviously working through the guides is completely optional but I highly encourage you to work through them since the pre-lecture quiz tends to focus on the topics in the relevant guides.

**Reading:**

Chapter 1: Read from the beginning through the end of section 1.1. Don’t try to memorize everything. Pay attention to the headings and subheadings and how the chapter is structured. The structure of chapter serves as an important clues for how concepts are related to each other. The more you understand the relationship between concepts, the easier it will be to learn related concepts and related knowledge.

**Chapter 1: Introduction to Biology**

**1.1 Themes and Concepts of biology**

1. You should be able to name and explain at least 4 of the 8 properties of life that are listed in the book (see the headings under “Properties of Life”)
2. Know that **homeostasis** is a PROCESS. What does the process of homeostasis do in general? Name one example of homeostasis from the book and one not mentioned in the book that makes sense to you (use google to find other examples of homeostasis)
3. You don’t need to know all 12 levels of organization of life, but be able to list the following in order from simplest to most complex: **populations, cells, ecosystem, tissues, organs, atoms, organism**
4. Pay attention to how the book differentiates between prokaryotes and eukaryotes in this chapter.
   1. A biological **membrane** is a thin oily film that separates watery compartments
5. You should know the highest level of the biological classification/categorification (taxonomy) is **Domain**. Domains are then broken up into 1 or more **Kingdoms**.
   1. All living organisms fall into 1 of the 3 domains. Be able to list and/or identify the 3 domains
   2. There are 6 Kingdoms, you should be able to list at least 4 of the 6 different Kingdoms.
      1. Two domains have only one kingdom (the kingdom names for these are the same as the domain name), the last domain is divided into 4 different kingdoms.
6. At the lowest level you should know that all organisms are given a two part name with the **genus** and **species**, where the genus is the higher category and the species it the most specific.
   1. The points below are just for illustration, you do not need to remember any of them
   2. For example, dogs, wolves and coyotes are part of the genus Canis,
   3. Dogs and wolves are the same species *Canis lupus* but a coyote is a different species.
   4. All dogs, mammals, insects are part of the Kingdom Animalia
   5. Which Domain contains the Kingdom Animalia?
   6. The following question will not be on the quiz but you should look up/google it if you don’t know: What is the two part latin name for the human species? What genus do we belong to? What Kingdom do we belong to? What domain?
7. A **species** can be defined as a group of organisms that can reproduce together to produce more of the same kind of organism.