



Science Department

Summer Homework 2014

8<sup>th</sup> Grade, Living Environment Regents

Dear 8<sup>th</sup> graders,

The Living Environment Regents curriculum is very challenging. It demands hours of preparation, memorization of multitude of vocabulary words and through understanding of concepts. It is a high school level class and therefore will be tougher than any science class you have ever taken so far. The class is also very rewarding for you get to learn about the living world around you and in particular about the workings of a human body.

This summer packet has been prepared for you in order to introduce you to the living environment and give you a head start. Most of the assignments are very interactive and were designed to pick your curiosity.

I. Cells

Cells are the building blocks of all living things, simply because all living things are made up of cells.

To learn about cells do the assignments below.

1. Play cell craft until you reach the final level. <http://www.carolina.com/teacher-resources/Interactive/online-game-cell-structure-cellcraft-biology/tr11062.tr>
2. Explore the cell at <http://learn.genetics.utah.edu/content/cells/>
  - a. Inside the cell
  - b. Cell size and Scale
  - c. Evolution of the Cell
  - d. Real Cell Videos
3. **Memorize the functions of cellular organelles from the list provided. In September you will be quizzed on labeling of cell parts and knowledge of functions of each cell part listed in this handout. Use the practice form to test your knowledge.**

II. Body System

1. Circulatory system
  - a. The heart animation “Map the Human Heart”  
<http://www.pbs.org/wgbh/nova/body/map-human-heart.html>
  - b. Animated heart with a corresponding EKG  
[http://library.med.utah.edu/kw/pharm/hyper\\_heart1.html](http://library.med.utah.edu/kw/pharm/hyper_heart1.html)
  - c. Do the blood flow sequence activity.

2. Nervous system
    - a. Do the science of addiction activities. Use the website below to help you do the assignments on “science of addiction” in your packet.  
<http://learn.genetics.utah.edu/content/addiction/>
  3. Memorize the functions of each of the body systems listed in the handout. You will be quizzed on functions of the body systems in September.
- III. Genetics
- a. Do all the activities in “Tour the basics of Genetics” to answer the questions in your packet.  
  
<http://learn.genetics.utah.edu/content/basics/>
  - b. Do the activities on the following website to answer questions in “Cloning in Focus.”  
  
<http://learn.genetics.utah.edu/content/cloning/>

I really hope you enjoy doing this assignment and have an amazing adventurous summer.

Sincerely,

Elina Nazarov



