**APES- Chapter #3- Guided Reading Assignment**

***The Big Picture: Systems of Change***

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period: \_\_\_\_\_\_\_ Due Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

How does the *Amboseli National Park* case history exemplify the ***principle of environmental unity?***

 ***Define*** the following and ***give examples of each***:

* System:
* *Open System*
* *Closed System*
* *Feedback*
* *Negative Feedback*
* *Positive Feedback*

*What is the difference between positive and negative feedback systems?*

* *Exponential Growth (show an example problem)*

*What is the main point concerning exponential growth? Is exponential growth good or bad? Explain.*

* *Doubling Time (show an example problem)*
* *Environmental Unity*

*Why is the idea of equilibrium in systems somewhat misleading in regard to environmental questions? Is the establishment of a balance of nature ever possible?*

* *Uniformitarianism*

*How might you use the principle of uniformitarianism to help evaluate environmental problems? Is it possible to use this principle to help evaluate the potential consequences of too many people on Earth?*

* *Steady State*
* *Average Residence Time*
* *Biota*
* *Biosphere*
* *Ecosystem*

*Why is the concept of the ecosystem so important in the study of environmental science? Should we be worried about disturbing ecosystems? Under what circumstances should we worry or not worry?*

* *Gaia Hypothesis*

*Is the Gaia Hypothesis a true statement of how nature works, or is it simply a metaphor? Explain.*

* *Lag Time (draw and label the graph)*
* *Overshoot and Collapse (draw and label the graph)*

*Why does overshoot occur, and what could be done to anticipate and avoid it?*