**APES Chapter 5: Species Interactions and Population Control**

**Note Taking Focus Questions**

**Directions:** Use the Cornell Method of note taking as you answer the questions below. Your notes must be **hand written** to receive credit for them. Within your notes, use the title for each subsection of notes which is *in italics and underlined.*

**Core Case Study: The Southern Sea Otter: A Species in Recovery**

1. What has happened to the sea otter population off of California, and why has it happened?

2. Describe the reasons why we should be concerned about populations of sea otters.

**Section 5-1**

This section is a review from biology. Read over the section and write down any definitions for terms that you do not remember. You will be responsible for the following terms for the chapter test: interspecific competition, predation (predator and prey relationships), coevolution, parasitism, mutualism, commensalism.

**Threats to Kelp Forest: Science Focus 5.1**

1. What types of ecosystem services do the kelp forests provide?

2. Describe the two threats to the kelp forests.

**Section 5-2**

*How Ecosystems Respond to Changing Environmental Conditions*

1. Define ecological succession, and list the two main types.

2. Why is succession an important ecological service?

\*Leave 2 or 3 lines to copy some additional notes.

*Primary Succession*

1. Define primary succession and where it takes place.

\*Leave 2 or 3 lines to copy some additional notes.

*Secondary Succession*

1. Define secondary succession and where it takes place.

*Factors that Affect the Rate of Succession*

1. List and explain the three factors that affect the rate of succession. Give an example of each.

**Section 5-3**

*Most Organisms Live in Groups*

1. List the reasons why animals tend to live in groups or “clumps”.

\*Leave 2 lines for some additional reasons.

*Populations can grow, shrink or remain stable*

1. What 4 variables influence population size?

2. What is a population age structure, and why is it important to know?

*Factors that Limit Population Size*

1. What is meant by a range of tolerance?

2. Give some example of conditions/factors that organisms would have a range of tolerance for.

3. Define a limiting factor, and explain the limiting factor principle.

4. What is population density, and how can it limit population size?

*Environmental Resistance*

1. Define environmental resistance.

2. Why can no population grow indefinitely?

3. Define carrying capacity.

 (over)

*Case Study: Exploding White –Tailed Deer Populations in the United States*

1. Describe some of the factors that have resulted in the significant increase in the white tailed deer population since the 1930’s.

2. What impact are the deer having in suburban neighborhoods?

*Science Focus 5.2: Southern Sea Otters Face an Uncertain Future*

1. Describe the factors that make it difficult for the southern sea otter’s population to recover.