

### Chapter 3 Homework Objectives: "Critical Thinking: Science, Models, and Systems"

1. Define *environmental science*

Assess its strengths and weaknesses.

2. Define *model* and *system*.

3. Distinguish between and give examples of each: positive feedback loops and negative feedback loops.

4. Explain how negative feedback loops and positive feedback loops can be coupled to maintain stability.

Define *homeostasis*.

Describe a tragedy of the commons in terms of feedback loops.

5. Define the concept of *synergy*.

Describe how this concept can be applied to human interactions with the environment.

6. Describe the impact of *chaos* on a system.

7. Given that the environment is a complex system, effects of changes in the system are often delayed.

Describe how these *time delays* create difficulties for human policy makers.