

Chapter 3: The Big Picture: Systems of Change

Review Questions

1. Describe the sequence of events that is causing deforestation in Amboseli National Reserve.
2. Contrast **open systems** with **closed systems** give an example of each. In your example be sure to demonstrate that you understand why the example fits.
3. Contrast **positive feedback** with **negative feedback** and give an example of each. In your example be sure to demonstrate that you understand why the example fits.
4. Explain the relationship between **doubling time** and **exponential growth**?
5. If a population is growing at a constant rate of 3.5% per year, how long would that population take to double? Show your work.
6. Describe how urbanization and trees falling across streams are examples of **environmental unity**.
7. What is meant by the phrase “The present is the key to the past” in describing the principle of **uniformitarianism**?
8. Use your own words to describe what is shown by Figure 3.12 on page 47.
9. What is **average residence time**? Study “Working it out 3.2” on pages 48 and 49 and be prepared to do similar calculations on the test.
10. Give an example of how humans may increase or decrease some natural earth processes.
11. What features are common to all **ecosystems**?
12. Briefly describe each of the three factors that can make environmental problems difficult to solve. Include a description of Figure 3.14 in your response.
13. Please be sure you have mastered the meanings of each of the bold words in the chapter (not just the ones included in these questions).