

Name: _____ Date: _____ Block: _____

Miller and Spoolman's Living in the Environment 16th ed.

Chapter 19 Reading Guide – Climate Change and Ozone Depletion

Case Study – Studying a Volcano to Understand Climate Change

1. Explain why studying a volcano helps us understand climate change, and what we learn by doing this.

Section 19-1 – How Might the Earth's Temperature and Climate Change in the Future?

2. Summarize the history of Earth's climate change.
3. Explain the importance of the greenhouse effect.
4. What are some human activities that emit greenhouse gases?
5. Describe the evidence in support of the scientific consensus about human-induced global warming. (Science Focus)
6. Identify elements of uncertainty related to the theory of global warming, and what role they play in public perception.

Section 19-2 – What Are Some Possible Effects of a Warmer Atmosphere?

7. Describe the consequences of global warming.
8. Why are projections varied? (Figure 19-7)
9. Describe the cause, effect, and evidence of melting ice in Greenland. (Science Focus)
10. Explain possible impacts of global warming.
 - a. Drought
 - b. Melting
 - c. Sea level
 - d. Extreme weather
 - e. Biodiversity
 - f. Agriculture
 - g. Human health

Section 19-3 – What Can We Do to Slow Climate Change?

11. Explain what needs to be done in order to slow the rate of global warming in terms of energy and population.
12. Explain what governments can do to slow climate change.

Section 19-4 – How Have We Depleted Ozone in the Stratosphere and What Can We Do about It?

13. Describe the causes and effects of ozone depletion.
14. Describe the four major conclusions of Rowland and Molina. (Science Focus)
15. Explain what has been done and what we need to do to reverse ozone depletion.
16. Describe causes and effects of skin cancer.
17. Describe the types of skin cancer and what you should do to minimize your risk.