

Chapter 23 Review Questions

1. Describe the structure of the atmosphere. What gasses make up the atmosphere and in what percentages? Include the qualities of each of the atmospheric layers.
2. Explain what is shown by figure 23.2.
3. Define "climate."
4. Familiarize yourself with the climate graphs shown in figure 23.3 Which of the climate models best describes where we live and why?
5. Looking at figure 23.4 on page 497, what are some things you can say about the history of Earth's climate?
6. Why is the bullet list on page 498 a compelling argument for the reality of Climate change? Can you find more recent data? If so does it support this trend?
7. Describe the "Milankovitch cycles." Why are they important?
8. Describe the "ocean conveyor belt." How might it effect climate?
9. Why is glacial ice useful in understanding about climate and how do we use it? Refer to figure 23.7.
10. What types of things are monitored in real time to help us understand global climate? refer to figure 23.8.
11. What are GCMs and how are they used?
10. Describe how the greenhouse effect works. What gases are involved in the greenhouse effect?
11. What is "anthropogenic?"
12. What is the "atmospheric window?" and why is it important in understanding climate change?
13. What are the major greenhouse gasses and how and why are they changing?
14. What does the graph in figure 23.16 tell us about the relationship between CO₂ and global temperature?
15. Describe each of the negative and positive feedbacks which may be influencing global warming.
18. What are aerosols and how do they relate to global climate?
19. How do volcanoes relate to global climate?
21. Describe the effects global warming might have. Include some comment on each of the paragraphs following the heading "Changes in Climate" on page 512.
22. What are some of the expected effects of sea level rise?
23. Use the bullet list on page 516 to describe why certain kinds of infectious diseases are likely to increase as the climate changes.
23. According to section 23.7 at the end of the chapter, if global warming is increasing due to anthropogenic effects, what adjustments should humans make?