

Name: _____ Period: _____ Date: _____

Environmental Science Study Guide

Climate Change and Global Warming

Vocabulary

Understand and be able to apply each of these terms.

1. Weather –
2. Climate –
3. Atmosphere –
4. Troposphere –
5. Stratosphere –
6. Greenhouse effect –
7. Medieval Warming Period –
8. Little Ice Age –
9. El Nino –
10. La Nina –
11. Great Ocean Conveyor –
12. Stratoshield –
13. Cap-and-Trade System –

Critical Thinking

Be able to read, analyze, and give complete answers to questions like these.

1. Three wavelengths of energy are produced by the sun: **visible light**, **ultraviolet light**, and **infrared**. Explain how each affects us. Which is trapped by greenhouse gases?
2. The two most significant greenhouse gases are carbon dioxide and methane. What are the sources of each?

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3. Explain how **global warming** can alter the **hydrologic cycle** to cause **climate change**.

4. Climate change is a process that has occurred naturally at different points in the Earth's history. Give an example of a natural cause of global climate change.

5. How much has the Earth's average surface temperature increased since 1880? At what rate is the Earth's surface currently warming?

6. Why is the carbon dioxide detector located in Hawaii?

7. Explain why the average carbon dioxide readings are higher during the winter and colder during the summer.

8. Direct measurements of temperature are only recorded as far back as 1880. Where does the data come from before that?

9. What is the relationship between global warming and hurricanes?

10. What continent would be most affected by a disruption in the great ocean conveyor?

11. What effect is global warming having on sea levels? Why is this happening?

12. Give an example of a global warming **prevention** and **cleanup** strategy.