

Name: _____ Period: _____ Date: _____

APES Study Guide

Climate Change and Global Warming

Vocabulary

Understand and be able to apply each of these terms.

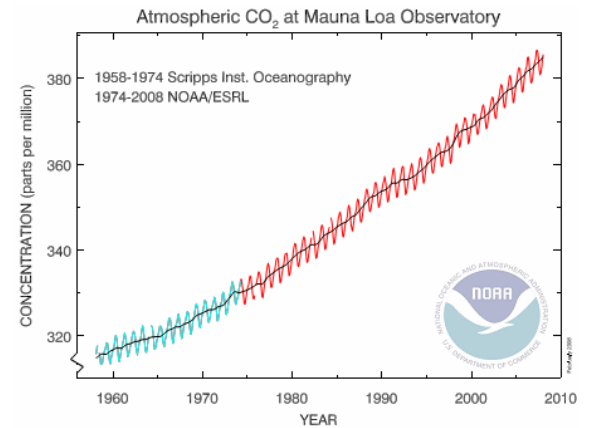
1. Troposphere -
2. Greenhouse effect –
3. Ice Age –
4. Proxy –
5. Albedo –
6. Hydrologic Cycle –
7. Anthropogenic greenhouse gas emissions –
8. Carbon sequestration -

Critical Thinking

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

9. Describe how the atmosphere during the Precambrian period was different than today.
10. List four greenhouse gases.
11. What is the difference between an interglacial period and glacial period within an ice age? What are we currently in?
12. Explain how ice cores are used as proxies to measure temperature and greenhouse gas concentration.
13. What is another example of a proxy besides ice cores?

14. This is the graph of the atmospheric CO₂ levels as measured in Hawaii. Why does the line go up and down every year?



15. Briefly explain how each of the following factors have changed over the last 150 years.

a. Global average surface (land and sea) temperature:

b. Arctic sea ice extent:

c. Land ice extent (Greenland and Antarctica):

d. Sea Level:

16. Due to global warming, the range of some insects has increased. Give an example, and describe a negative consequence of this insect.

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

18. Why is the Great Ocean Conveyor Belt important to Western Europe? How could it be impacted by global warming?

19. Temperate (non-polar) glaciers only make up about 1% of the total land ice in the world. How could their loss affect human populations?

20. What two aspects of the hydrologic cycle are impacted by global warming? How could this affect weather patterns?
21. What populations would be the most affected by sea level rise?
22. Most scientists (agree / disagree / are mixed) in regards to the IPCC conclusions that global warming is occurring, and that humans are at least partially responsible for it.
23. Give an example of a global warming prevention strategy.
24. Give two examples of an agricultural release of greenhouse gas.
25. Why is **carbon capture and storage** not implemented in every coal-fired power plant?
26. Give an example of a geoengineering strategy to combat climate change.
27. Explain how **emissions trading** would have worked, if the 2009 Cap-and-Trade bill had passed the U.S. Congress.