

History Channel Video: *A Global Warning*

Name: _____ Period: _____ Date: _____

1. Why is climate change a concern for society?
2. What was the Earth like 650 million years ago?
3. What do drop stones or erratics tell us was happening in Death Valley in the geologic past?
4. What effect does a drop in CO₂ concentration have? A rise?
5. What effect does the presence of snow/ice have on climate in terms of incoming solar radiation?
6. How did volcanic eruptions contribute to the great Permian extinction 250 million years ago?
7. How did fossil breathing pores tell us that there was a high level of CO₂ in the atmosphere 250 million years ago?
8. Is it possible for human carbon emissions to be as high as the volcanic emissions that caused the Permian extinction 250 million years ago?
9. How does methane (CH₄) compare to carbon dioxide (CO₂) in terms of its heat trapping capability?
10. How will the increase in ocean temperatures contribute to the release of frozen methane (CH₄)?
11. How are the size of coral reef growth bands an indicator of global ocean warming?
12. How are coral a good indicator of past sea levels?
13. What are Milankovitch Cycles? How do they change Earth's climate?
14. By how much have global average temperatures risen in the past 100 years?
15. What happens to sea levels as glaciers (land ice) melt?
16. Why doesn't melting sea ice that is already in the ocean affect global sea levels?
17. What happened on the planet between 125,000 and 11,500 years ago?
18. How can ice cores give evidence of past climates?
19. How can the increase of certain types of oxygen isotopes give evidence of climate change?

20. What happened to mega mammals 11,500 years ago?
21. What are some hypotheses about the extinction of the mega-mammals 11,500 years ago?
22. What caused the little ice age (also known as the Maunder Minimum) 400 years ago?
23. What did the eruption of Mt. Tambora in 1815 do for Earth's climate?
24. What forms when SO₂ combines with H₂O in the upper atmosphere? What does this chemical in the upper atmosphere do to global temperatures? HOW does it affect temperatures?
25. What will happen to the Earth when the super volcano in Yellowstone National Park in Montana erupts again?
26. What are recent severe weather patterns showing us is happening to our climate?
27. What is permafrost? Why is it SO important to keep it frozen?
28. How could the activities of humans contribute to runaway global warming?
29. How can past climate data help us to see that humans are having an effect on climate?
30. How will our world and its living species change at the current rate of warming? What is happening to the polar bear right now?
31. What technologies MUST be developed in order to stave off human-induced global warming and its devastating results? What technologies MUST be immediately reduced and eventually retired?
32. How could the activities in China, other developing countries, and the United States put us over the top in terms of CO₂ emissions?
33. How do you feel about climate change after seeing this video? Do you think that humans are to blame for global warming or is what we are seeing just a natural climate cycle? Do you see yourself altering your daily habits to reduce your carbon dioxide emissions? How might you do that? Give me your HONEST feelings about this topic now that you know what you know. You MUST put this in essay form and you MUST have at least 10 sentences! This question is worth 10 points and will be graded on how well you address the topic. Continue it on a separate sheet of paper if necessary or type it if you wish.