

### **Climate Change Video: The Big Chill**

1. How many times have ice sheets covered the planet? When did the last major ice sheet occur?
2. Explain the theory behind cyclic climate change? What are the time intervals? (Note: you may have to do extra research to find this answer)
3. Why is Greenland important to climate change history?
4. How deep can these cores be extracted? How many years do these cores represent?
5. What's one paleoclimate characteristic that can be interpreted from the ice cores?
6. What general data is used to interpret past climate temperatures?
7. What is the driving element according to one theory presented by the film?
8. What current provides thermal energy to the waters off of Britain? What is it's nickname and why?
9. What is the discharge involved with the convection of the Gulf Stream?
10. What occurs to the Gulf Stream waters at northern latitudes? Why?
11. What fossil is of interest when sampling mud cores and what is the mineralogical and chemical composition of their shells?
12. What climatic events may result from global warming?
13. If all ice on Greenland melted how high would mean sea level rise?
14. How much fresh water is leaving Greenland?
15. What is the theory behind the conveyor belt stoppage and global warming?
16. Why would global warming result in greater amount of precipitation?
17. What was Peterson's indicator of changing ocean convection dynamics?
18. How much has the Gulf Stream decreased in flow?
19. How could disruption of the oceanic convection systems effect global climate?
20. Methane gas is produced how?
21. Colder climates may effect what Eurasian climate phenomenon?