

Name: _____ Hour: _____ Date: _____

Ice Core Webquest

Go to Ms. Ladin's webpage (Lafinscience.weebly.com) and go to the page labeled "Ice Core Webquest", under the Earth & Space Science tab. Click on the "PBS – Warnings from the Ice" link. Answer the following questions in **COMPLETE SENTENCES**.

1. What is an ice core?
2. Where could you find ice cores?

Click on the link at the bottom of the page, "Ice Core Timeline". Answer the following questions in **COMPLETE SENTENCES**.

3. How long did it take fallout from the Chernobyl nuclear disaster to appear in the snow in Antarctica?
4. Describe the trends occurring in the graph of the atmospheric gases.
5. What accounts for the spike in the sulfate graph at years 1750 and 1800?
6. How does the information found in the ice cores explain what happened to the Vikings?
7. Under the "Dating" tab, what do the dark bands in the ice core mean?
8. How can scientists determine the temperature from thousands of years ago in the ice cores?
9. Take a look at the "Global Warming" tab. How does the information presented there relate to the paper you are currently researching and writing?

Close out the "Ice Core Timeline". Based on what you have seen so far, please answer the following questions in **COMPLETE SENTENCES**.

10. If you were a scientist, what would you look for in an ice core to determine what is causing the warming trend on Earth currently?
11. If you could do so for your research, list two questions that you would ask a scientist who works with ice cores.

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If you would like to take a look at some facts about Antarctica, click on the “Antarctic Almanac” link. The “Water World” link is a computer simulation of what would happen if all the polar ice melted.

Go back to Ms. Ladin’s webpage and click on the “Ice Core Basics” link. Answer the following questions in **COMPLETE SENTENCES**.

12. Why do scientists use ice cores for data?

13. How many years could a shallow ice core (100-200m) show?

14. Using the information from the above question, how many years do you think a deep ice core (2000-3000m) could show?

15. On the left side of the page, click the link for “Ice Core Drilling”. List the steps the team has taken in order to obtain the ice core.

16. On the left side of the page, click the link for “Ice Cores on the Antarctic Peninsula”. How much time does the James Ross Island ice core encompass?

Go back to Ms. Ladin’s webpage and click on the “Ice Core 101” link. Answer the following questions in **COMPLETE SENTENCES**.

17. List the sources of atmospheric aerosols.

18. Why do you think ice cores can give information about the atmosphere?

19. What identifies a volcanic eruption? What identifies atmospheric radioactivity?

Finish answering the following questions in your notebook.

20. Do you agree with the method of using ice cores in order to determine information about the past? Explain your reasoning.
21. How could you use ice cores to determine what Earth was like in the past?