

## **Paleoclimatology**

### **A WebQuest for *Careers in Earth Science: Climatologist***

#### **Introduction**

Scientists can compare today's climate with the past, such as the Mesozoic climate, by using a time machine. Although it's not a real time machine, scientists can obtain data from the past because of a discipline of climatology known as paleoclimatology. Paleoclimatology is the study of ancient climates or climate that occurred in the distant past. Scientists know what the environment was like in the Mesozoic due to fossils and other data extracted from ice cores. Ice cores are similar to a time machine as they contain particulates and unique gas content which give paleoclimatologists information about what the climate was like millions of years ago. In this WebQuest, you will look at other methods scientists use to collect data in order to compare the climate of the past with today's climate.

#### **Task**

It is essential that scientists have the most accurate information possible. They use information from the past and compare it with current climate data. Information from the past can help predict future patterns. Your task is to research technologies that assist climatologists with gathering data, such as ice cores.

#### **Research**

Use the following questions to guide your research.  
**(Record your answers on the sheet provided)**

1. What other disciplines of climatology exist?
2. What other data are used to study climate?
3. What data can one ice core tell a scientist?
4. How is knowing what happened in the past useful to scientists?

#### **Product**

You will create an attractive, three-fold pamphlet that explains two other disciplines of climatology. You may produce the pamphlet by hand, or use a computer program to produce the finished product. Use art, text, and headings to inform the reader of the pamphlet about the different ways data is collected and how the data is useful to climatologists & paleoclimatologists. Be sure to include visuals of ice cores or other samples/ tools used as well as detailing why knowing what happened in the past is useful to scientists today. Use the research questions above to help you organize & design your pamphlet. Include any additional information you find interesting.

**Resources**

Be sure to use accurate, reliable resources. Utilize resources such as journal articles, magazine, or newspapers to get detailed scientific research on climatology.

**Evaluation**

Read the following rubric to see how you will be scored on the WebQuest.

<b>Criteria</b>					<b>Points</b>
	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	
<b>Task</b>	The task was not completed.	Some effort was made, but major ideas are missing.	The task was completed, but some information was incorrect.	The task was completed with great attention to detail.	
<b>Research</b>	The process was not followed or used.	The process was followed, but not all information was obtained.	The process was followed, but some answers were incorrect.	It was clear that the information gathered was complete and informative.	
<b>Product</b>	The product was not done, or not done well and is incomplete.	The product included most of the required elements and important ideas. An attempt was made to make it appealing.	The product included all the required elements and some important ideas, and was visually appealing.	The product included all the required elements, was exceptionally appealing, and included extra, helpful information not asked for.	
<b>Total Score</b>					

## Research

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