



Little Ice Age Data Analysis

Student Page:
Solar Activity

Name _____
Date _____ Class _____

Solar Activity During the Little Ice Age

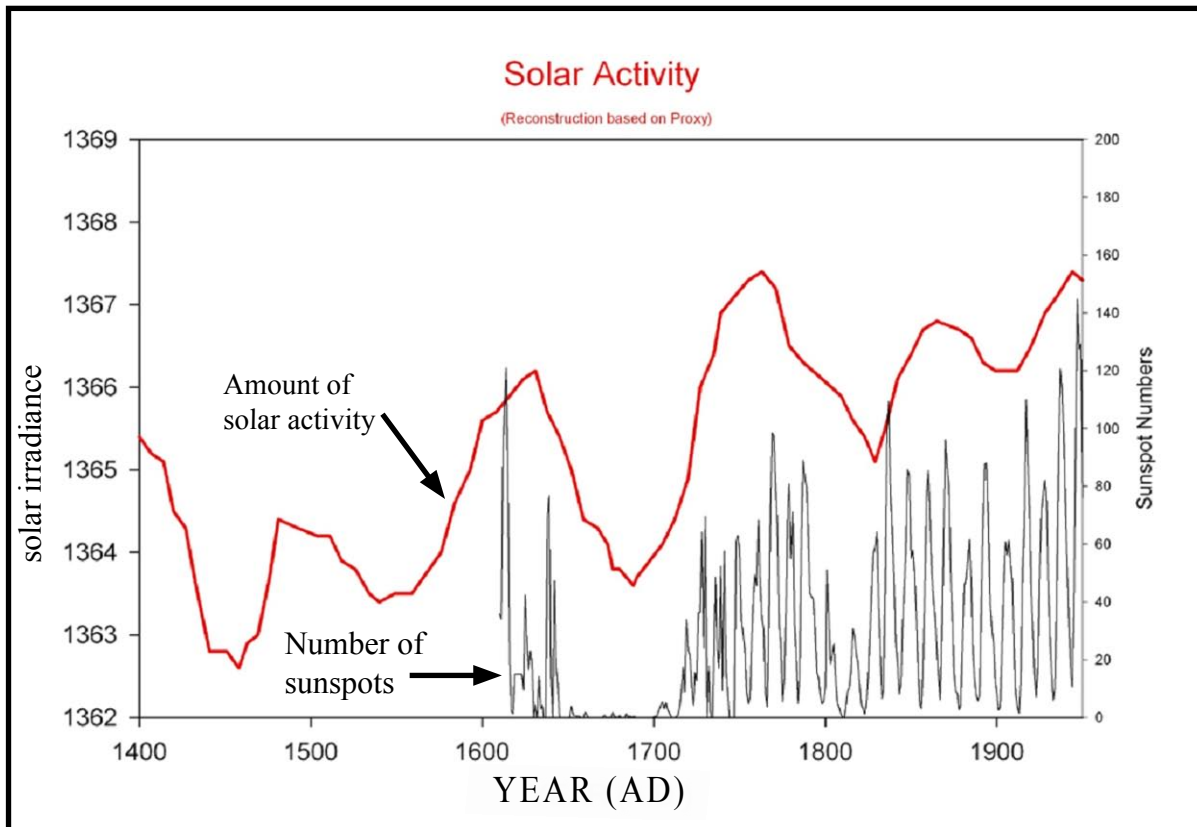
Directions:

In the graph below, the bottom jagged line indicates the number of sunspots counted during each of the solar cycles observed between AD 1400 and 1950.

The upper line in the graph shows when solar activity increased and decreased during this time period, taking into account the sunspot cycles and other observations of the Sun.

Study the graph to answer the following questions:

- Do the highest numbers of observed sunspots coincide in any way with the line showing the highest levels of solar activity? If so, in about what years is this true?
- Do you think more solar activity would increase or decrease the amount of sunlight reaching the Earth's surface? Please explain.
- Write on the line below the years in which the sunspot cycle was entirely absent or the least number of sunspots was observed. Circle these locations on the graph.





Little Ice Age Data Analysis

**Student Page:
Volcanic Activity**

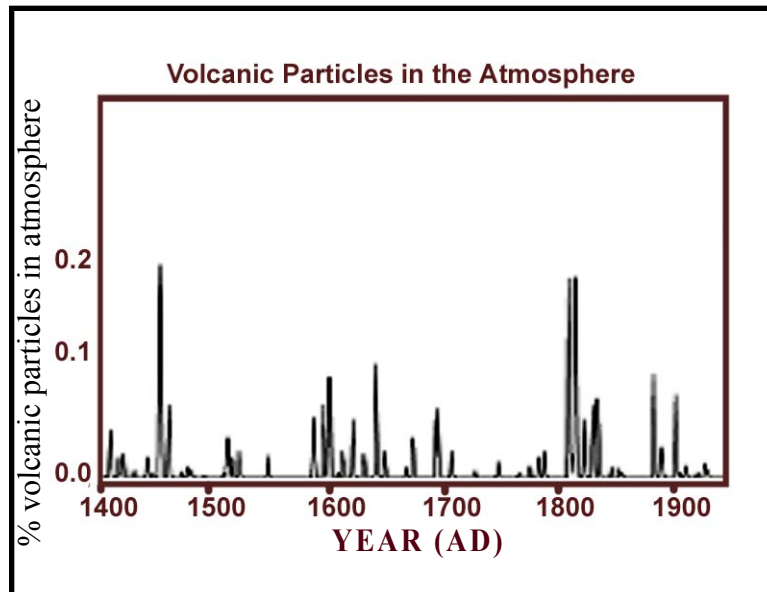
Name _____
Date _____ Class _____

Volcanic Activity During the Little Ice Age

Directions:

Study the graph shown below of volcanic particles in the atmosphere as you answer the following questions:

- How do you think volcanic particles get into the atmosphere?
- What do you think volcanic particles are made of?
- Do you think volcanic particles in the atmosphere would increase or decrease the amount of sunlight reaching the Earth's surface? Please explain.
- Do you think that a major volcanic eruption might help bring about global warming or global cooling? Explain your answer.
- Write on the line below the years in which there were especially high amounts of volcanic particles in the atmosphere. Circle these locations on the graph as well.





Little Ice Age Data Analysis

**Student Page:
Tree Growth**

Name _____
Date _____ Class _____

Tree Growth in Northern Europe

Directions:

The graph below represents the average growth of many different trees, not just one tree. Study the graph and answer the following questions:

- Does this graph indicate that the amount of tree growth tends to remain the same from year to year, or vary a lot over time?
- Does the pattern of tree growth indicate times when growth was slower? If so, circle places on the graph when tree growth was slower.
- What might slower growth mean about the climate?
- Write down the years on the line below when the amount of tree growth in Northern Europe was especially low.

Tree Growth in Northern Europe

