



# Trees: Recorders of Climate Change

## Student Page

Name \_\_\_\_\_

Date \_\_\_\_\_ Class \_\_\_\_\_

**The Question: Has the climate changed over the last 600 years?**

### Make a hypothesis.

A hypothesis is a statement about how something works or how something happened. Based on the question above, make your own hypothesis. Write it in the space below.

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### Collect and analyze tree ring data!

1. Measure the total length of the tree ring "core" at each station. Make your measurements in millimeters. Write each measurement into the "total thickness" column of the table.
2. Fill in the number of years of each time interval in the "number of years" column.
3. Divide each "total thickness" measurement by the "number of years" to get the average ring thickness for each time interval. Use at least one decimal place (example: 2.3).

| Time intervals | Number of years | Total thickness (mm) | Average ring thickness |
|----------------|-----------------|----------------------|------------------------|
| <b>Example</b> | <b>50</b>       | <b>200</b>           | <b>200/50=4</b>        |
| 1402-1449      |                 |                      |                        |
| 1450-1499      |                 |                      |                        |
| 1500-1549      |                 |                      |                        |
| 1550-1599      |                 |                      |                        |
| 1600-1649      |                 |                      |                        |
| 1650-1699      |                 |                      |                        |
| 1700-1749      |                 |                      |                        |
| 1750-1799      |                 |                      |                        |
| 1800-1849      |                 |                      |                        |
| 1850-1899      |                 |                      |                        |
| 1900-1960      |                 |                      |                        |

### What does it all mean? Write your answers to the questions below on the back of this page.

1. Based on the ring thickness data, do you accept your hypothesis, or reject it?
2. Based on the ring thickness data, would you speculate that some intervals were warmer or cooler than others? If so, which was the warmest interval? Which was the coolest interval?
3. How certain are you of your interpretations? Would you like to see more evidence? If so, what type of evidence and from what time interval?
4. Doing research often brings up more research questions. What sorts of questions would you want to look into for future research? List at least two questions.
5. Why do climatologists need at least 30 years of data to describe climate?