

Reading Trees

Standards of Learning

Science 5.1, 6.5, LS.4, LS.12, LS.14

Mathematics 6.4, 6.5, 6.7, 6.9

Purpose

Students will:

- Explain how the environmental conditions affect tree growth

Materials

- Yellow construction paper
- Brown crayons/markers
- Compass
- Scissors
- Rain fall spinner

Background Knowledge

Research at Jamestown has shown that early settlers struggled with environmental challenges beyond their control. The study of tree rings has shown that the settlers and Native Americans survived one of the worst droughts in history. Archaeologist Dennis Blanton of the College of William and Mary has shared his research on tree rings with the archaeologists at Jamestown Rediscovery. His research shows tree rings with the archaeologists at Jamestown Rediscovery. His research shows that the limited fresh water resources caused great hardship for the people of Jamestown. Many of the settlers died from starvation and disease which were caused by a lack of useable water. Dendrochronology is “tree-ring dating”. Climate changes create patterns in tree rings, which grow annually.

Discuss how lack of water caused stress on the settlers. How might this affect the relationships and trade systems between the Powhatans and the English?

Procedure

1. Divide class into groups of 5 or 6 students.
2. Instruct students to draw a circle in the center of the paper between 1 – 4 inches in diameter. Use a brown crayon to make a thin band of color to represent the tree rings.
3. Have each group spin the spinner to determine the next diameter ring to be added. Color each band with a brown line. Repeat until you are instructed to cut your tree.
4. Have each student cut a 1 inch wide sample through the center of the tree rings. Collect and mix samples. Randomly redistribute and have the class arrange the samples in chronological order.
5. Discuss the reasoning used to arrange samples.
6. Divide class into groups of 5 or 6 students.
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8. Have each group spin the spinner to determine the next diameter ring to be added. Color each band with a brown line. Repeat until you are instructed to cut your tree.



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10. Discuss the reasoning used to arrange samples.

Extension

- Create graphs for rainfall based on 1" ring + 10" rainfall.
- Discuss what environmental factors contribute to growth rates of lumber.

Lesson from: Historic Jamestown America's Birthplace
Historicjamestowne.org/learn/pdf/elementary_school/4-5_reading_trees.pdf

