

Railroad Ties

LEARNING AREA: Inquiry and Research

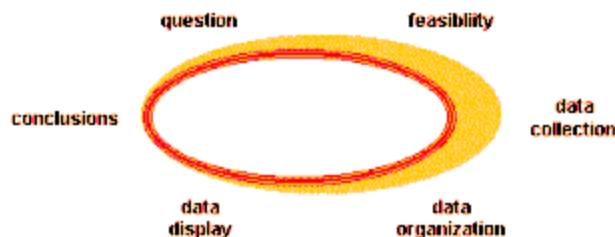
EDUCATIONAL LEVEL: High School

CONTENT STANDARD: Issue Analysis

A student shall research an issue and evaluate proposed solutions by:

1. gathering information on past or contemporary issues;
2. identifying relevant questions or a range of points of view;
3. summarizing relevant background information;
4. examining information from each source for bias and intended audience;
5. identifying areas of conflict, compromise, or agreement among various groups concerning the issue;
6. evaluating multiple positions and solutions for the issue, including analyzing conclusions, arguments, and supporting evidence, identifying motives of groups or individuals
7. analyzing feasibility and practicality; identifying impact on policies; comparing alternative solutions, and projecting consequences

LARGE PROCESSES/CONCEPTS:



ASSESSMENT TASK:

DESCRIPTION:

Students shall research the use of oak trees for railroad ties, evaluate the long term impact on the oak tree stands and recommend a substitute material for use as railroad ties.

ASSESSMENT TASK: Railroad Ties

PRODUCTS/EVIDENCE OF LEARNING:

The student shall:

1. Gather statistical information on oak trees.
2. Analyze the data in group settings
3. Identify issues.
4. Recommend a replacement material.
5. Record all conclusions in a written report.

OVERVIEW:

The purpose of this activity is to determine how much longer the railroad industry can use oak trees as railroad ties before a substitute tie is developed. The student must determine where oak trees grow, estimate the number of oak trees that are harvested annually for railroad ties, estimate the number of oak trees available for cutting, and identify other uses for the oak trees. The student shall recommend a substitute product to be used as a railroad tie to replace oak.

The student shall use the following resources for research:

- The Internet
- Public Library
- Department of Natural Resources
- Lumber Industry
- Railroad Industry

Once the data is gathered the student will write a one page report. This report shall summarize the data gathered. The student will then share the data with the class. The class will review the findings and make a recommendation for the continued use of oak or a substitute material. The conclusion will be put in writing and submitted to the teacher. Individual reports will also be signed and turned in for credit.

CHECK LIST:

| STUDENT | TEACHER |
|---------|---|
| _____ | _____ Presentation clearly summarizing relevant information |
| _____ | _____ Identifies resources utilized by rail transit |
| _____ | _____ Demonstrates multiple sources of information resources in data |
| _____ | _____ Responses to classmates questions reflect understanding of research topic |