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TO THE TEACHER

Science is everywhere, and the best way to learn it is to experience it. That is why taking students on field trips can be an exciting and rewarding experience. Nothing makes a concept as real as learning to apply it to everyday life. To do that, teachers must stretch their legs and get their students out of the classroom.

This book is designed to make it easy for the teacher to get up and out. Each field trip lesson provides the student with some background information and one or more student activity pages to be completed during the trip. This strategy helps students focus their attention on the topic you are teaching and keeps them actively engaged in learning.

On the teacher information page of each activity, there is a grading rubric to help evaluate students' work. Little or no equipment is needed for the activities.

There are several kinds of field trips that teachers and students can take.

1. Field Trips in the School Building

How often do you explain to your students that the techniques of measurement they learn in class are required skills in many jobs? Do you remind them that examples of the simple machines they study in physical science can be found all over the school building? Have they surveyed their school environment to determine how dependent we all are on wood products?

Take students out of the classroom and into other parts of the school. Have them really examine the components of their building.

2. Field Trips on the School Campus

Students are somewhat interested in their book's description of a worm or a seed. However, they are excited at the prospect of actually examining the real thing. Schools are not isolated from the real world, and by just walking out the school doors, you can connect your students to real-life science.

3. Field Trips off Campus

Load everyone into a school bus and take students to see the world. Instead of talking about endangered animals, visit them. Do not try to explain how stalactites look; go and see some. Nothing impresses students more than a trip and a change in their routine. Take advantage of the facilities near your school, whether they are tourist attractions like zoos or public utilities like sewage treatment plants.

THE WONDERS OF WOOD

Teacher Information



TIME REQUIRED

One to two hours, depending on the number of places visited

Objectives: Students will identify ways that products from the forest are used inside the school building.

Teaching Strategies: Before this trip, discuss some of the products the forest gives us. Remind your class that trees yield products made from paper (books, cards, wrapping paper), cellulose (carpet, Ping-Pong balls, luggage), bark (bottle corks), and resins (cosmetics, rubber gloves).

Divide the class into small groups of two or three. Each group should select a person to serve as the data recorder who carries the student activity page. During the tour, students should observe their surroundings closely.

Instruct students to read the Background Information and answer the Pre-Lab Questions.

You may wish to have students tour locations such as the auditorium, principal's office, cafeteria, gym, bathroom, special classrooms and the library.

Evaluation: At the conclusion of the field trip, each group should hand in the completed student activity pages.

A suggested grading rubric:

Criteria	Points allowed	Points awarded
Pre-Lab Questions correct	20	_____
Group was on task during the activity	20	_____
Product Chart completed	20	_____
Products ranked	10	_____
Thought questions answered	30	_____
Total Points	100	_____

THE WONDERS OF WOOD

What good is the forest to you and me? Forests provide us with a variety of material that we use every day, such as food, rubber, paper, wood and medicine. In addition, forests play a larger role in the ecosystem. They are vitally important in producing oxygen, preventing erosion, moderating the climate, and providing food and shelter for animals.

Have you ever thought about all the uses for a tree? You may have seen tall pines being cut down. Sometimes, workers use chain saws to remove the limbs from the tree and cut the tree into more manageable pieces. Depending on their intended destinations, these pieces are loaded onto trucks and hauled away. On very large tree farms, specialised equipment cuts the trees, strips their limbs and bark, and then loads them on a truck in one efficient process.

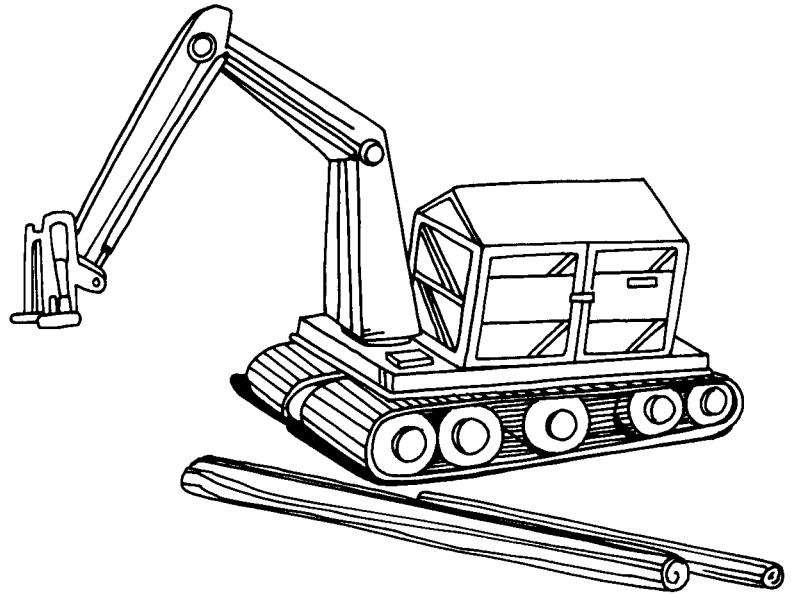


Figure 1. Trees are cut, stripped and loaded with the same piece of equipment.

There are four basic categories of products that are made from trees:

- A. Paper products – used in objects such as books, cereal boxes, wrapping paper, tissues, toilet paper and newspapers.
- B. Cellulose products – used in carpet, pillows, Ping-Pong balls, shampoo, plastic film, insulation, toothbrush handles and wallpaper paste.
- C. Bark products – used in corks for wine bottles, the cork centre of a cricket ball, and many types of medicines.
- D. Resin products – used in cosmetics, paint thinner, coating for pills, rubber gloves, and paint.

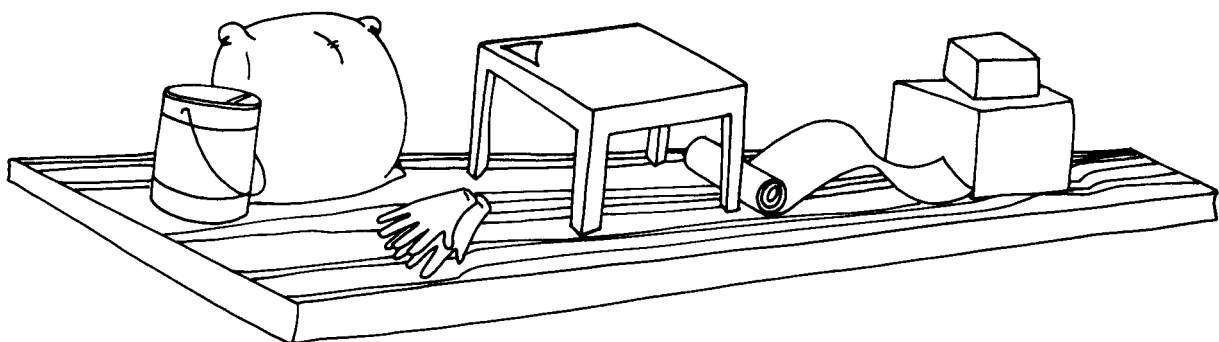


Figure 2. Some of the products that trees provide for our community

These categories do not even include the foods that trees produce. Trees give us a huge variety of fruits and nuts. The forest products industry provides jobs for millions of people from foresters to mill workers to engineers.

Pre-Lab Questions

1. List some products made from trees.

2. In the ecological sense, why are trees important? _____

3. Recycling tree products saves money and consumes fewer trees. Name one tree product that can be recycled. _____
4. You are a pine tree standing in the forest. Workers arrive to cut you down and change you into timber that can be used for construction. Describe everything that happens to you from the time you are cut until you become a piece of timber. _____

