



Red Alder



HAVE YOU THANKED A TREE?

Bringing the Forest into Your Home

Purpose of This Activity: To understand the important role Washington's forests play in providing products we depend on in our daily lives.

We often take for granted the resources we need to make our life comfortable. The forest is a vital part of the earth; every one of us relies on what our forests supply – air, water and soil nutrients. We also enjoy the products made from trees, and many jobs depend on Washington forests, both directly and indirectly.

Forest managers, other scientists, environmental groups and Indian tribes are working to change the way we manage our resources. In order to meet our economic needs, as well as protect our timber, fish, wildlife and water, we must work together. How can we protect vital resources and still have wood products and the use of our forests?

Think about the products we get from trees, and note these items on a piece of paper. Using this list, and adding to it as needed, identify items from trees used at each stage of your life, starting from the time you were born. Create a chart portraying the most important forest products at various stages of your life.

After doing this, read the articles “Splinters Don’t Count” and “Things Made from Pulp, Paper and Chemicals.” Identify examples of common and uncommon forest products from each category such as:

- Ethyl alcohol products – artificial vanilla and vinegar
- Tissue products – disposable diapers, toilet paper and paper towels
- Pulp products – football helmets, ping pong balls, puzzles, books
- Lignin products – gummed tape, linoleum, medicated poultry feed
- Lumber products – plywood, rolling pins, pencils

Make a display that shows:

1. Five or more products from your home that could have come from Washington's forests. (Try to find one from each of the five categories listed above.) Either attach the product to your display or attach a picture or drawing.

2. Trace each product from your home back to the forest. List all the steps that you think were needed in manufacturing that product. List all the possible jobs related to the making, transporting and selling of that product. Illustrate this information for your display.
3. Include a product or resource that could be substituted for the forest product. Are the replacement items from renewable or non-renewable sources? Do the replacement products require the use of more energy in their production?

As you work on your display, consider the following questions:

1. Do the products we get from trees need to come from trees, or can they be made from other materials? What are some trade-offs involved in using other materials? In using trees?
2. How much of the products we get from trees do we really need to use? Are there alternatives to using the amount of tree-related products used by our society?
3. What effects will our increasing population have on the forest products industry?

Splinters Don't Count

How Many Forest Products Can You Name?

Adapted from Puget Parade
Volume 1, Number 1

Just for fun, name 2500 products that come from trees. But don't count lumber, plywood, paper—or splinters.

Before you get started, here's another challenge: What do beekeepers, Maine lobstermen, chicken ranchers, photographers, and Texas wildcatters all have in common?

The work they do, the products they sell, all depend on co-products from trees.

Now before you settle down to make your list of those products, remember trees are renewable. There are no “dryholes,” no “exhausted veins,” no “bottom of the barrel” in a forest—if we practice good forest management.

But for centuries people saw trees only as lumber, or firewood.

In the process of making lumber, however, there was a tremendous amount of waste. Sawdust, bark, and wood scraps all had to be hauled away or burned—and that created more complications.

Finally, scientists came along and peered into the very structure of trees. They found a brew of chemicals. The stuff of energy. And new ways of taking a tree apart, and shaping it into human needs.

They perceived, in short, that the molecular lattice-work of a tree had a potential beyond their wildest dreams. The lights burned late at research centers all over the country.

The story of how the forest industry used this research to create new products, new markets, new ways of doing things and even new energy, is too big of a story to be told here. But to help with that incredible list you'll be working on, we'll outline some of the products that depend on the exotic chemistry of a tree. We'll start with:

Bark

Up to 21 percent of a cord of wood may be bark. Much of it is used as fuel in forest industry mills. It is also a source of chemicals, resins, waxes, vitamins, plywood adhesives, plastic fillers, lacquers, and oil-spill control agents. Bark is also used for mulches and soil conditioners.

Wood Flour, Resins

Wood flour and resins are principal components of dinnerware, toys, handles for cooking utensils, telephone parts, camera cases and appliance housings.

Cellulose

Cellulose is used in making tool handles, photographic films, sausage casing, and football helmets. Acetate filament yarns make textile products such as clothing, drapes, and rugs. Nitrocellulose is used in making solid rocket propellants and other explosives.

Alcohol and Yeast

Alcohol and yeast are co-products of the fermentation of natural wood sugars. The alcohol produced in Bellingham is of extremely high purity and has many uses such as vinegar, cosmetics, solvents, and food carriers.

One kind of yeast from wood sugar is used in baby food. Another type is used in food for cattle, fish and chickens. A third type goes into pet foods. Wood sugar yeast has been found to make bees and lobsters grow faster!

Turpentine, Tall Oil

Turpentine and tall oil are important ingredients in paint, varnish, adhesives, asphalt, printing inks, rubber products, soaps and polishes. Synthesized essential oils are used in chewing gum, toothpaste, menthol cigarettes, detergents and shampoos.

Spent Pulping Liquids

Products from spent pulping liquids are used in artificial vanilla flavoring, cement, ceramics, fertilizers, oil well drilling compounds, cosmetics, gummed tape and certain drugs for hypertension and Parkinson's disease. These co-products come from a Bellingham facility.

Energy

Bark, ground wood and spent pulping liquids are used by the pulp and paper industry for energy. Nationally, half the energy used to make pulp and paper is created from bark, ground wood and these liquids.

Lobsters and bees grow faster, chickens prosper, photographers have film for their cameras, and mud additives make drilling easier for Texas oil-men – all because of chemicals and co-products from trees.

Now that you have a hint, get busy on that list of tree products. Here's a suggestion that might help: Inventory just about everything in sight, in the next room and out on the street. That'll give you a good start – but remember, splinters don't count.



Western Red Cedar

Things made from Pulp, Paper, and Chemicals: “Co-Products of the Pulping Process”

Adapted from Puget Parade
Volume 1, Number 1

rayon	highway surface	popsicle sticks
cellophane	oil and gas wells	umbrella handles
photographic film	liquid soap	flooring
newspaper	radio and television panels	kitchen cabinets
alcohol	shelf paper	knife handles
space craft reentry shields	vacuum cleaner bags	grocery bags
book paper	flypaper	milk cartons
telephone casings	glasses frames	egg cartons
football helmets	corks	buttons
roofs	guitars	magazines
ping pong balls	name tags	photographic slides
fishing floats and tackle	gift boxes	automobile instrument
flashlight cases	movies	panels
camera cases	decoys	draperies and bedspreads
artificial snow	snowshoes	stadium seats
toilet seats	fence posts and fencing	trailers and mobile homes
artificial vanilla flavoring	heels for shoes	puzzles
vinegar	facial and bath tissues	toys
cosmetics	paper towels	mirror backs
fertilizer	hair spray	signs
ceramics	nail polish	stereo cabinets
sausage casings	laxatives	speakers
diapers	linoleum	can labels
clock cases	tires	posters
rubber tires	paint	Venetian blinds
foam rubber	telephone books	missile and radar domes
bread wrapping	yeast	crepe paper
diplomas	award certificates	confetti
hand cleaners	masking tape	salad sets
lubricants	varnish	printing ink
tax forms	atlases and maps	golf tees