

Forestry Facts: interesting facts about forests and wood products

[Source: #ForestProud]

Forests are ecosystems dominated by trees. They play a central role in keeping the Earth healthy, by creating oxygen, filtering fresh water, building soil, storing carbon and providing habitat for animals and plants. Forests provide essential renewable resources and are an invaluable source of diverse products and services. They provide the wood and paper products we use every day, and support jobs and local and regional economies and give us places to hike, hunt, gather and connect with nature.

[Source: www.sciencing.com]

You use products made from trees every day, such as wood and paper in addition to many products you would never guess came from a tree. Wood byproducts and chemicals extracted from trees are used to make thousands of products. Forest product companies are an extremely efficient industry. All parts of the log are used, so there is virtually no waste, and leftover sawdust is used for energy to run the mills.

Products: There are so many examples of products made from wood: houses, furniture, toothpicks, baseball bats, musical instruments, handles, charcoal, toys, crutches, fences, airplane parts, floors, boats, bridges, cabinets, canes, boxes, coffins, barrels, decks, docks, doors, matches, canoe paddles, poles, pencils, picture frames, Popsicle sticks, railroads, roller coasters, spoons, kegs, dams, athletic equipment, clothespins, ladders and spools.

Pulp: Wood pulp is used to make all paper products, including books, paper bags, notebooks, packaging material, calendars, cardboard boxes, coffee filters, egg cartons, envelopes, tissues, toilet paper, magazines, newspapers, paper towels, cards and wallpaper. Blankets, building insulation, diapers and sanitary products, and leather tanning agents also are made with wood pulp.

Cellulose: Fibers from trees are used to make rayon clothing, cellophane, adhesives, floor tiles, food additives and thickeners, helmets and hardhats, twine, luggage, sandwich bags, cigarette filters and photographic film.

Chemicals and Medicines: Natural dyes, scented oils, tar, pitch, turpentine and menthol are chemicals made from trees. Chemicals extracted from trees also are used in the manufacture of cleaning products, deodorants, fungicides, insecticides, shoe polish, perfumes, plastics, toothpaste, nylon, crayons, furniture polish, explosives, cosmetics, tape and hair spray. Sodium lauryl sulfate is a papermaking byproduct used in shampoos and shaving creams as a foaming agent. Drugs made from trees include Taxol for cancer, Aldomet/Aldoril for hypertension, L-Dopa for Parkinson's disease and quinine for malaria.

Food: Some examples of foods that come from trees are almonds, apples, apricots, avocados, bay leaves, cacao (used to make chocolate), cashews, cherries, cinnamon, cloves, coffee, cola nuts (used in soft drinks), grapefruit, hazelnuts, juniper berries (used as gin flavoring), lemons, limes, mangoes, maple syrup, nectarines, nutmeg, olives, oranges, peaches, pears, pecans, pine nuts, pistachios, plums, sassafras root (used in root beer), tangerines, tea, vanillin (artificial vanilla flavoring) and walnuts.

[Source: [Tree & Wood Facts - North American Forest Foundation](#)]

Wood is recyclable, biodegradable and durable – sometimes lasting for centuries. When it is no longer needed, it can be returned to the earth and renewed for future generations. Resources such as iron ore, coal and limestone, once removed, are gone forever.

Half an acre of forest can absorb the CO₂ given off annually by a car with average mileage.

One of the reasons your lungs feel refreshed when walking through a pine forest is because of an anti-inflammatory compound called a-Pinene, found in conifers. It is used as a bronchodilator in the treatment of asthma and abundantly present in marijuana.

The average single-family home contains over 13,000 board feet of lumber, and 94 percent of all new homes are built with wood frames.

Scientists estimate lumber manufacturing consumes just 4% of the energy used by all raw materials manufacturers. Steel and concrete manufacturers consume 56%. A steel stud requires 21 times as much energy to produce and releases 15 times the sulfur dioxide as a wood 2×4. Producing concrete emits up to 3 times more carbon dioxide, carbon monoxide, and hydrocarbon than lumber production.

Wood is a more efficient insulator, requires less energy, less clean water, and creates less carbon dioxide than manufactured insulation.

[Source: [Top 10 facts about Forests | WWF](#)]

Forests are home to over 80% of the world's land-based species of animals, plants and insects

[Source: [Forest Facts - American Forests](#)]

One mature tree in a forest can capture the same amount of carbon emissions as driving one car 1,500 miles! We cannot slow climate change without reforesting America at a faster pace.

Forest products currently store more than 1 million metric tons of carbon dioxide equivalent. That is equal to the carbon emissions from driving more than 21 million cars for one year.

Nationwide in the U.S., trees reduce energy use for heating and cooling by 7.2%, on average.

55% of America's drinking water originates from forests—mainly the rivers and streams that run through them. Every 10% increase in forest cover in a watershed leads to a 20% decrease in costs for water treatment downstream.

It has been found that yards with more trees can increase property values by up to 15%.

Roughly half the weight of the dried wood is carbon.

[Source: <https://www.thinkwood.com/sustainability>]

Wood is the only naturally renewable building material. Wood stores carbon and requires less energy throughout its life cycle. Demand for wood products helps ensure forested land remains forested.

North America has more certified forests than anywhere else in the world. Modern forestry standards ensure a continuous cycle of growing, harvesting and replanting.

Demand for forest products keeps forests as forests. Growth in demand for forest products has led to greater forest productivity and inventory for storing carbon.

Active forest management, or forest thinning, mitigates wildfires, cuts carbon emissions, replenishes area waterways, expands wildlife habitat, and creates jobs in rural areas.

Each year, the U.S. plants over 1 billion trees and Canada plants over 600 million trees. Both countries have spurred more than 50 consecutive years of net forest growth that exceeds annual forest harvests due to responsible forest management.

Just a 1% increase in annual demand for industrial wood products could drive 77,000 square miles of new sustainably managed working forests – roughly half the area of California state.

Foresters practice forest regeneration to ensure forests have enough natural seeds, seedlings, and tree sprouts to grow for the future and assist natural growth, after disturbances like wildfire. This increases biodiversity and decreases endangered species.

[Source: www.wfpa.org]

PAPER HISTORY In ancient times, people wrote on animal skins, bones and clay tablets. Around 3500 BC, the Egyptians wrote on a woven mat of reeds called papyrus, which is where the word paper comes from. Around 2,000 years ago, the Chinese discovered that they could make a thin paste of mulberry bark, hemp and rags and let it dry into a sheet in the sun. Many types of paper are now made from wood.

CELLULOSE IN MANY PRODUCTS Cellulose fibers are converted and used in many products. Cellulose gum is what makes toothpaste “paste” and helps it stay on the toothbrush. In parmesan cheese, cellulose powder keeps the grated cheese from getting lumpy. Shampoo would be just watery soap without cellulose to make it thick.

CHEMICALS FROM TREES How can we create so many different chemical products from trees? When chemicals are removed from the tree and mixed with other chemicals, a chemical reaction occurs. The energy from this reaction can create a completely different chemical. This is how chemicals from trees can be used to make products as different as artificial vanilla flavoring and frames for your eyeglasses.

[Source: [ForestBioFacts](#)]

Do you start your morning by enjoying a cup of latte? Did you notice that the milk carton you opened was possibly made completely from a wood-based material, including its bioplastic coating? Every day, we run into different wood-based products more often than we think. Many food products are sold in wood-based packaging, we use tissues every day and even coffee would be more difficult to make if there were no filter bags. What is more, wood-based cellulose is used in many food, cosmetic and medicinal products as different fillers and additives, such as in ice cream, ketchup, medicines and toothpaste.

[Source: <https://northamericanforestfoundation.org/it-comes-from-trees/>]

Soft ice cream uses cellulose, the chief constituent of the cell walls of plants and wood, as a thickener and a stabilizer. This wood product helps the ice cream to keep its shape.

Nail polish uses nitrocellulose, which is cellulose exposed a nitrating agent, for strength and quick-dry properties. Essentially, trees give us fashionable fingers.

Parmesan cheese also uses cellulose. This is FDA approved, as cellulose is a harmless organic matter and helps to prevent shredded cheese from clumping.

Ink incorporates tall oil rosin from hard pines (subgenus Pinus). Some inks are also made with nitrocellulose. BIC ballpoints will never be the same.

Ping pong balls are made from celluloid, which is a composition of nitrocellulose and camphor.

Sunscreen is made with plant product like almond oil, clove bud oil and cocoa butter. A summer necessity for all!

Doritos use smoke flavoring made from liquefied and refined lumber mill sawdust

Toothpaste usually contains several different wood components, such as cellulose gum and xylitol, which is made specifically from birch trees. Trees keep us minty fresh!

Chewing gum uses wood chemicals like rosin esters, a solid form of resin obtained by pines.

Some paints contain hydroxyethyl cellulose, which is a gelling and thickening agent.

Medicine in the form of quick-dissolve tablets often uses refined microcrystalline cellulose as a pill filler.