



From Trees to Products

We depend on trees for many everyday products

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We all know that trees provide many useful products: lumber for building construction, furniture, paneling, cabinetry and flooring, as well as paper of all sorts. But tree products go far beyond wood and paper. You might be surprised at just how many tree products you use every day, and where they are found. In fact, wood products are so prevalent that each American uses an estimated 100-foot tree's worth each year.

Solid Wood Products

When trees are cut into lumber at a sawmill, pieces of wood, bark and sawdust are left over. This material does not go to waste! Modern industries use all parts of the tree to produce a variety of products.

Softwood lumber, such as pine, is usually used for building structures, while hardwood lumber is more often used for flooring, cabinetry or furniture. Trees can also be cut into posts and poles, for use as pilings, utility poles and railroad ties. Smaller pieces of wood can be made into items like pallets, musical instruments, toys, pencils, sports equipment and decorative objects.

Sawmill leftovers or pieces of small trees are combined with adhesives and other chemicals to form other solid wood products. Plywood is made from thin sheets of wood that are glued together. Engineered or composite woods are made by gluing and pressing chips, flakes or sawdust

into a durable solid. This wood can be made into beams, sheets or interior furniture parts. Oriented strand board (OSB) and medium density fiberboard (MDF) are common composite woods.

Wood can also be used for fuel, and not just as firewood. Wood waste from mills or logging sites (biomass) can be burned directly for heat and electricity. It can also be manufactured into fuel pellets or charcoal.



Wood Pulp Products

Wood is made of cellulose fibers and a glue-like material called lignin. Pulping, the process of separating cellulose and lignin using heat and chemicals, gives rise to many useful products.



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The cellulose fibers in pulp are used to make papers of all kinds: newspaper, magazines, books, copy paper, packaging, tissue and paper towels. Cardboard, liner board and brown Kraft paper are sturdier pulp products. A type of pulp called fluff is the highly absorbent material used inside diapers.

Variants of cellulose thicken and give proper consistency to makeup, toothpaste, shampoo, medicines and paint. Cellulose products can also be used in foods, to prevent caking or improve texture.

Rayon and acetate fabrics for clothing are produced from cellulose fiber, as is cellophane wrapping and photographic film.

Hard plastics, such as those found in football helmets, combs, eyeglass frames and dinnerware, are manufactured from wood fiber, sometimes in combination with other materials.

Tall oil, a by-product of the pulping process, is used in detergents, perfumes, cosmetics and paints.

Torula yeast, another pulping by-product, is high in protein and is added to baby and pet foods, cereals and other foods.

Products from Other Tree Parts

Tree bark, sap, fruits, seeds and leaves also provide products and substances that are used straight from the tree or manufactured into products.

Apples, pears, peaches, pecans, walnuts and almonds are some foods you can pick directly from trees. Other foods from trees require some processing; these include chocolate, cider and some spices.

Medicines, such as the cancer drug taxol and aspirin, have been extracted from the bark of specific species.

Maple syrup is not the only product made from sap. Various gums and resins form the basis of products such as chewing gum, flavorings, waxes, varnishes and some cosmetics.

Industrial products like rubber, adhesives, solvents, dyes and inks can also be produced from trees.




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