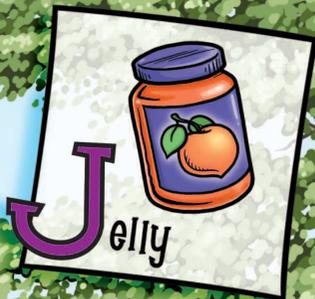
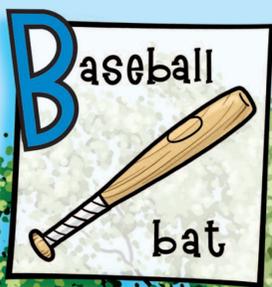


A to Z from a Tree



Tree Products

Trees are wonderful organisms from which we derive many beneficial products. Most people are aware that lumber is made from trees. But did you know that there are hundreds of other tree products, too? These products come from every part of a tree. Many tree products are made of cellulose, or cellulose in combination with other products. Cellulose is a substance that comprises the cell walls of plant cells and is the major component of wood. The following list will give you an idea of some of the items made from trees.

When we speak of tree products, we may get the idea that a product is something that must be sold. However, trees provide important benefits which do not have an associated cost, such as producing oxygen, improving air and water quality, providing watershed protection, supplying wildlife habitat and offering recreational opportunities. Trees growing as forests provide many recreational benefits, including hiking, horseback riding, camping, fishing, hunting and picnicking. Trees produce shade. Properly planted, trees can help lower air conditioning costs in the summer. Trees can act as barriers to wind, blocking cooling effects in winter and helping to stop erosion. The beauty provided by trees in all seasons of the year is priceless.

BARK

animal bedding
anti-cancer drug
bulletin boards
cork
drugs and oils
dyes
garden mulch
glues
inner core of
baseballs
shoe polish
tannin

CELLULOSE

adhesives
carpeting and
upholstery
cellophane
circuit boards
cosmetics
eyeglass frames
floor tiles
football helmets and
hard hats

HAIRBRUSH HANDLES

ice cream
imitation leather
luggage
photographic film
plastics
rayon
sandwich bags
sausage casings
shatterproof glass
steering wheels
suntan lotion
synthetic sponges
thickening agent in
shampoos
tool handles
toothpaste
wigs

FRUITS

acorns
allspice
almonds
apples
black walnuts
cashews
cherries
coconuts
crab apples
grapefruits
hickory nuts
lemons
limes
mangoes
mulberries

NUTMEG

olives
oranges
peaches
pears
pecans
plums
teas

ROOTS AND LEAVES

oils
oxygen
shade
teas

SAP AND GUM PRODUCTS

adhesives
chewing gum
cosmetics
crayons
drugs
dyes and inks
electrical insulation
explosives
fireworks
food flavorings
glues
insecticides
paint and varnishes
perfumes
rubber tires
shoe polish
soap
sugar and syrup
wax

SOLID WOOD PRODUCTS

barrels
baseball bats
baskets
charcoal
fence posts
firewood
furniture
guitars and other
stringed instruments
hockey sticks
lumber and plywood
pencils
railroad ties
tool handles
toothpicks

WOOD PULP PRODUCTS

books
building insulation
cardboard boxes
computer printer
paper
disposable diapers
grocery bags
milk cartons
movie tickets
newspapers
notebook paper
paper towels
paper plates
playing cards
postage stamps
tissues
toilet paper

Some Illinois Trees and Products Obtained From Them

black alder *Alnus glutinosa* – hand-carved wooden objects, charcoal, fuel, medicine

black ash *Fraxinus nigra* – cabinets, baskets, fence posts

black walnut *Juglans nigra* – furniture, interior finishing, cabinets, nuts, food for wildlife

black willow *Salix nigra* – flooring, boxes, crates

blackjack oak *Quercus marilandica* – charcoal, fuel, food for wildlife

blue beech *Carpinus caroliniana* – tool handles, ornamental for beauty and shade

box elder *Acer negundo* – paper pulp, interior finishing, furniture

catalpa *Catalpa speciosa* – fence posts, interior finishing, railroad ties

cottonwood *Populus deltoides* – wood pulp, fuel

flowering dogwood *Cornus florida* – tool handles, shuttles, bobbins, ornamental for beauty and shade

hackberry *Celtis occidentalis* – fence posts, furniture

iowa crab apple *Malus ioensis* – fruit used in making jelly, food for wildlife

Ohio buckeye *Aesculus glabra* – paper pulp, ornamental for beauty and shade

Osage orange *Maclura pomifera* – bows, fence posts, windbreak

pecan *Carya illinoensis* – nuts, interior finishing, furniture, fuel, tool handles, food for wildlife

persimmon *Diospyros virginiana* – golf club heads, billiard cues, fruit, food for wildlife

pumpkin ash *Fraxinus tomentosa* – boxes, paper pulp, fuel

red cedar *Juniperus virginiana* – clothing chests, pencils, fence posts

red maple *Acer rubrum* – furniture, gun stocks

red mulberry *Morus rubra* – fence posts, fruit

rock elm *Ulmus thomasii* – railroad ties, hockey sticks

sassafras *Sassafras albidum* – fence posts, sassafras tea, ornamental for beauty and shade

shadbush *Amelanchier arborea* – food for wildlife, ornamental for beauty and shade

shagbark hickory *Carya ovata* – tool handles, nuts, fuel, baseball bats, chips for adding hickory-smoked flavor to meats, food for wildlife

shingle oak *Quercus imbricaria* – shingles, construction, food for wildlife

sour gum *Nyssa sylvatica* – wood pulp, gun stocks, flooring, ornamental for beauty and shade

sugar maple *Acer saccharum* – furniture, interior finishing, cabinets, maple sugar and syrup, ornamental for beauty and shade

sweet gum *Liquidambar styraciflua* – lumber, furniture, flooring, ornamental for beauty and shade

sycamore *Platanus occidentalis* – furniture, interior finishing, ornamental for beauty and shade

tulip tree *Liriodendron tulipifera* – lumber, veneer cores to which other wood can be glued, canoes, frames, ornamental for beauty and shade

white ash *Fraxinus americana* – furniture, baseball bats, tool handles, interior finishing, oars, polo mallets, ornamental for beauty and shade

white oak *Quercus alba* – interior finishing, cabinets, lumber, furniture, barrels, flooring, fence posts, fuel, food for wildlife, ornamental for beauty and shade

white pine *Pinus strobus* – interior finishing, lumber, ornamental for beauty and shade, food for wildlife

wild black cherry *Prunus serotina* – cabinets, furniture, interior finishing, food for wildlife

wild plum *Prunus americana* – fruits used in making jelly, food for wildlife

witch hazel *Hamamelis virginiana* – astringent, ornamental for beauty and shade

Tree Resources

The Illinois Department of Natural Resources' (IDNR) Division of Education provides numerous Illinois-specific, tree-related items to supplement your classroom lessons.



Illinois Tree Trunk

Borrow an *Illinois Tree Trunk* from any of the approximately 50 lending locations statewide, and you'll have a plethora of resources to access for grades preK through 10. Lumber squares, leaves, tree "cookies" and tree seeds provide

actual samples from trees. Forestry sampling equipment and field guides are included, as is forestry career information. Six activity kits provide everything you need to teach about tree ring dating, biodiversity, how trees grow and other topics. Numerous lessons and activities cover a variety of objectives, including forest management. All lessons are correlated to the Illinois Learning Standards and Illinois Early Learning Standards, where appropriate. Posters, CD-ROMs, videos, books, and a cell model are available for use as well. To find the lending location nearest to you, visit <http://dnr.state.il.us/education> and select "Items for Loan." Make your reservation today!



Kids for Trees CD-ROM

The *Kids for Trees* CD-ROM is designed for students of grades preK through three. You'll find lessons about what trees do to make food, why leaves change color,

people who work in the woods, seed dispersal, how to plant trees and many other topics. Join the Prairie Professor for a video tour of what trees are, how they function and how they help people. The *Hike Along with an Interpreter* video illustrates many of the topics from the lessons. Supplemental resources provide other options for teaching about trees with young students. This CD-ROM is available to teachers in Illinois by written request on school letterhead. Send request to the IDNR Division of Education, One Natural Resources Way, Springfield, IL 62702.



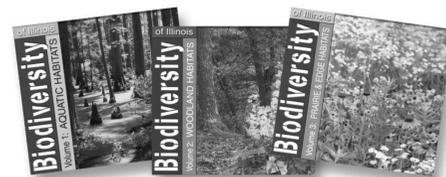
Posters

Use the beautiful posters from the IDNR as references in your classroom. The two-sided format provides images or illustrations on the front side and information on the back. Spanish-language versions of some of the posters are offered. All posters are 24" wide by 36" long. To order, go to <http://dnr.state.il.us/teachkids>. The posters may be used in a variety of ways and are suitable for all grade levels.



Activity Books and Worksheets

Enhance your lessons with Illinois-specific information by using tree-related activity books and worksheets from the IDNR. These items were developed with the Illinois Learning Standards as their foundation and are meant to supplement your existing curriculum. Activity books include information and student activities, generally in a 24-page format. Order copies at <http://dnr.state.il.us/teachkids>.



Biodiversity of Illinois CD-ROMs

These CD-ROMs are field guides to more than 1,000 species that live in or pass through Illinois. Each species page has at least one image of the subject as well as information about classification, features, behaviors, appropriate habitat, Illinois range, sounds (when available/feasible) and status (endangered/threatened/common and non-native/native). The CDs are networkable on an in-school network and compatible with PC or Mac systems. The *Biodiversity of Illinois* CD-ROMs are offered free of charge to teachers in Illinois by written request on school letterhead. Send request to the IDNR Division of Education, One Natural Resources Way, Springfield, IL 62702.



Illinois' Natural Resources Trading Cards

Meant for learning instead of trading, these cards are designed with an image on the front and information on the back. Mammals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, fossils, rocks and minerals are included. The accompanying poster for each set shows all the cards in the set and provides information on the reverse side regarding categories included in the set and how you might use the cards to help meet some of the Illinois Learning Standards. Teachers in Illinois schools may request one of each set of the cards and its accompanying poster by written request on school letterhead. Please specify the set number in your request and mail to IDNR — Education, One Natural Resources Way, Springfield, IL 62702.



Illinois Department of Natural Resources • Division of Education
One Natural Resources Way • Springfield, IL 62702-1271 • 217/524-4126
<http://dnr.state.il.us> • dnr.teachkids@illinois.gov

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Illustrated by Mr. C. Johnston