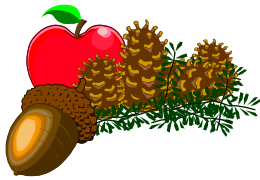


Trees and the Products We Get from Them



Scott Leavengood
Oregon State University Extension Service
Wood Products Extension Agent

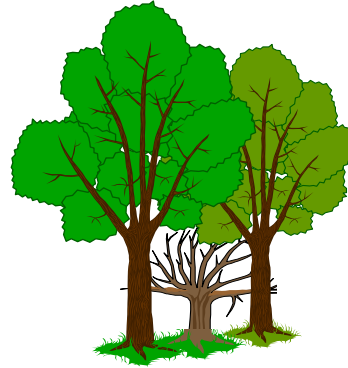
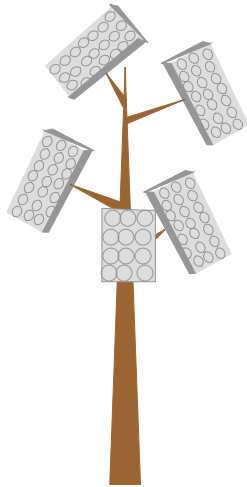


Trees:

- What is a tree?
- How do trees “eat”?
- What do the different parts of trees do?
- What are the different kinds of trees?
- What do we make from trees?

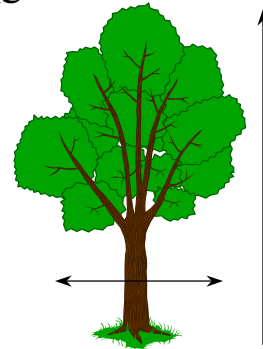
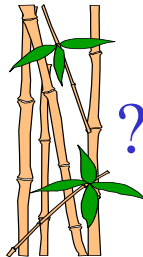


Tree: A Tower Loaded With Solar Panels

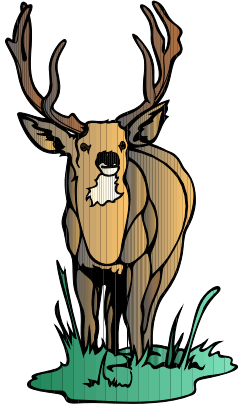


Tree- definition

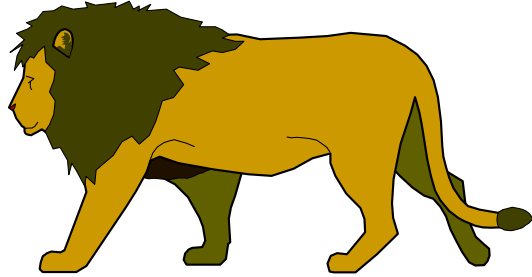
- At least 15 feet tall
- Persistent woody stem
- Exhibit secondary thickening (grow in diameter as well as height)



All living things must
eat to survive



Herbivores

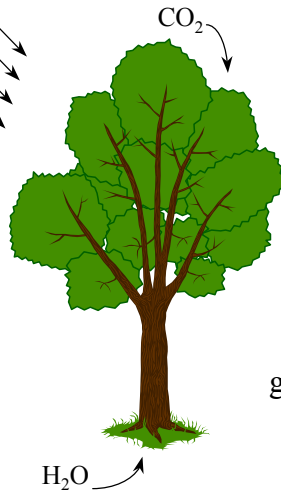
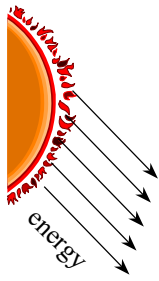


Carnivores

How do trees and
other plants eat?

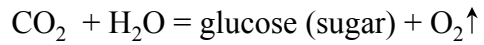


Plants “Manufacture” Their Own Food



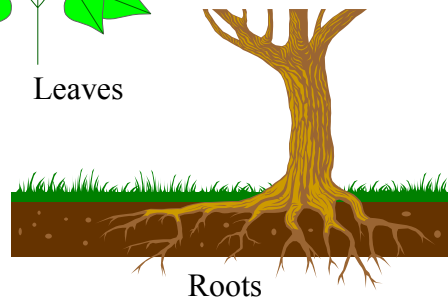
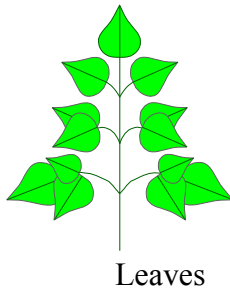
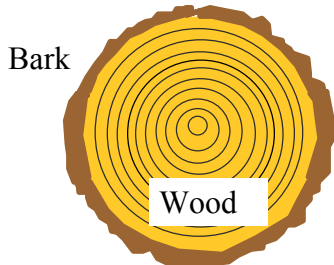
Photosynthesis

The sun provides energy used to combine carbon dioxide gas (from the air) with water (from the soil).



glucose- support life and new growth

What do the different parts of trees do?

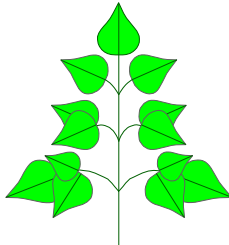


What do the different parts of trees do?

Bark

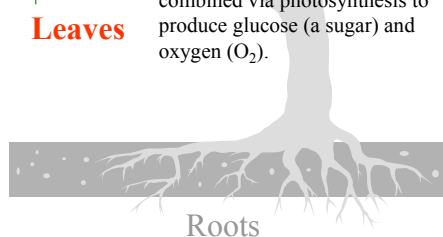


Wood provides mechanical support for the tree and is the “plumbing”, moving water from the roots to the leaves.



Leaves

Leaves are the trees “food factory.” Carbon dioxide (CO_2) is brought in through small holes called stomata. Water is brought up through the xylem (wood). CO_2 and water are combined via photosynthesis to produce glucose (a sugar) and oxygen (O_2).



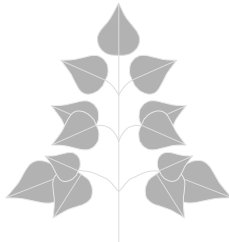
Roots

What do the different parts of trees do?

Bark



The outer layer of the bark protects the tree from damage due to mechanical damage, fire, freezing, insects, and fungi. The inner bark (phloem) conducts the sugars produced by the leaves down to the rest of the tree.



Leaves

Roots support the tree and draw in water and nutrients from the soil.

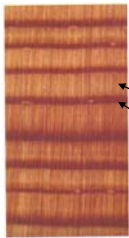


Roots

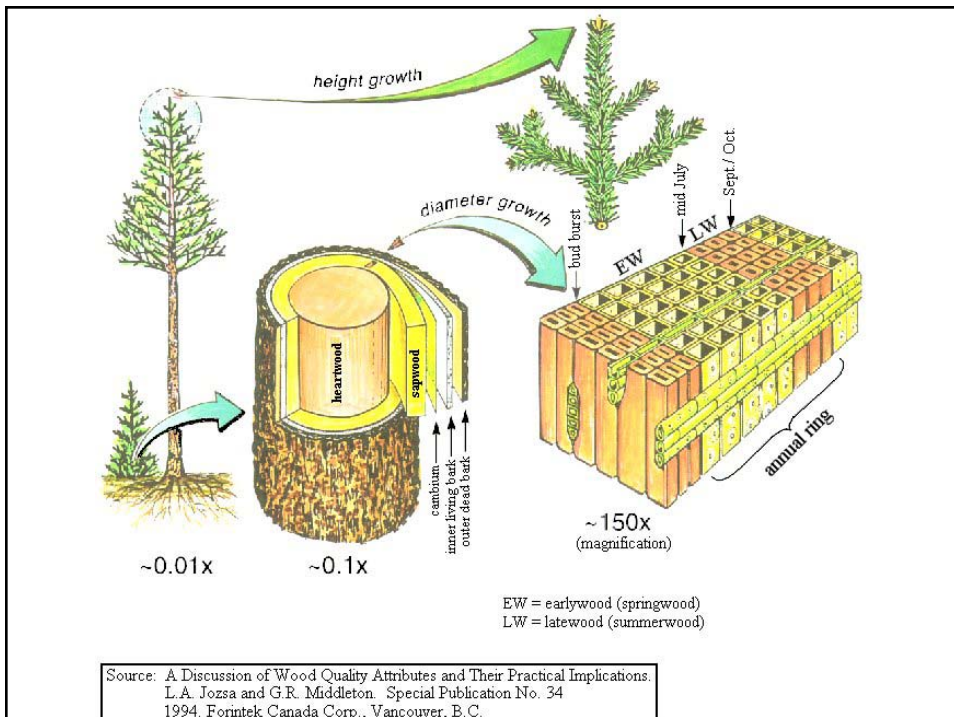
Tree growth:



- Apical meristem – growth in height
 - Height growth occurs only at the very tip of the tree – (A limb 3 ft. off the ground when the tree is a sapling will be 3 ft. off the ground when the tree is very old)

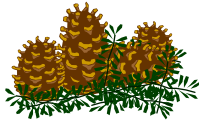
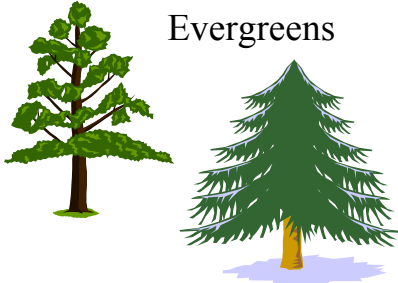


- Cambium – growth in diameter and circumference
 - Annual production of earlywood (light-colored wood) and latewood (dark-colored wood) result is the annual growth ring



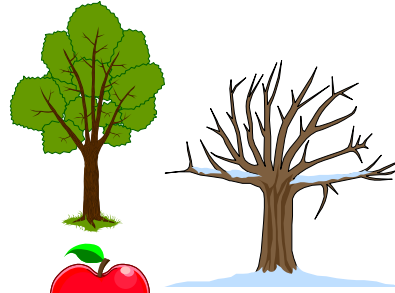
Different Kinds of Trees:

Softwoods/ Conifers/
Evergreens



Gymnosperms
("naked seed")

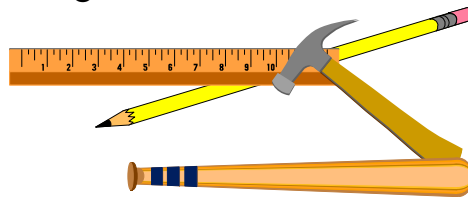
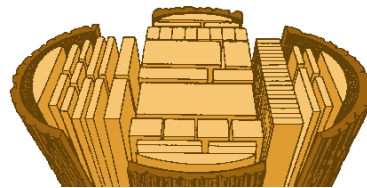
Hardwoods/ Broadleaves/
Deciduous



Angiosperms
(seed encased in an ovary)

What Do We Make From Trees?

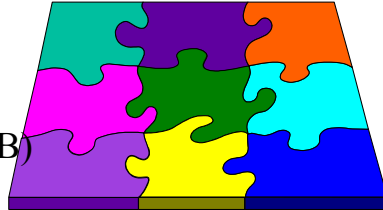
- Solid Wood Products
 - firewood (fuel)
 - lumber
 - flooring, cabinets, furniture
 - doors, windows, moulding
 - miscellaneous stuff
 - wooden spoons
 - pencils
 - yardsticks
 - tool handles



What do we make from trees?

- Composite Products

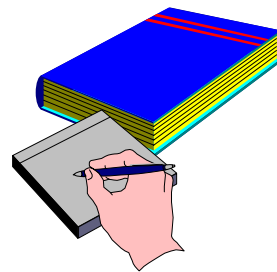
- particleboard
- plywood
- Oriented Strand Board (OSB)
- Hardboard
- Medium-Density Fiberboard (MDF)
- wood/ plastic
- wood/ concrete

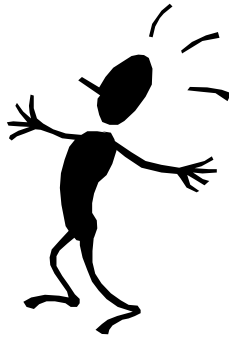


What do we make from trees?

- Paper products

- writing paper
- books
- cardboard
- paperboard (cereal boxes, etc.)
- paper bags
- toilet paper
- tape
- sandpaper





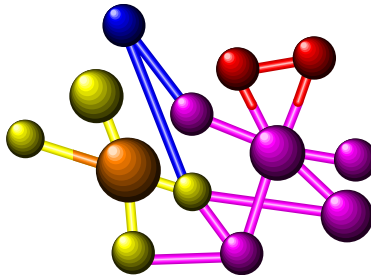
I had no idea...!!!

And there's much more!

What do we make from trees?

- “Chemical” Products

- rayon
- cellophane
- film
- latex
- turpentine
- pine-sol
- maple syrup
- food additives
- chewing gum



What's the Number One Use for
Wood in the World?



Firewood/ Fuel

