

Why Learn Tree Anatomy?



Presented by:
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As Tree Stewards, we
volunteer in our community to
promote healthy urban and rural
forests.

Tree Stewards provide

- ✿ Training classes
- ✿ Educational programs
- ✿ Projects in our community

to increase public awareness on the value of trees while teaching about trees and tree care.

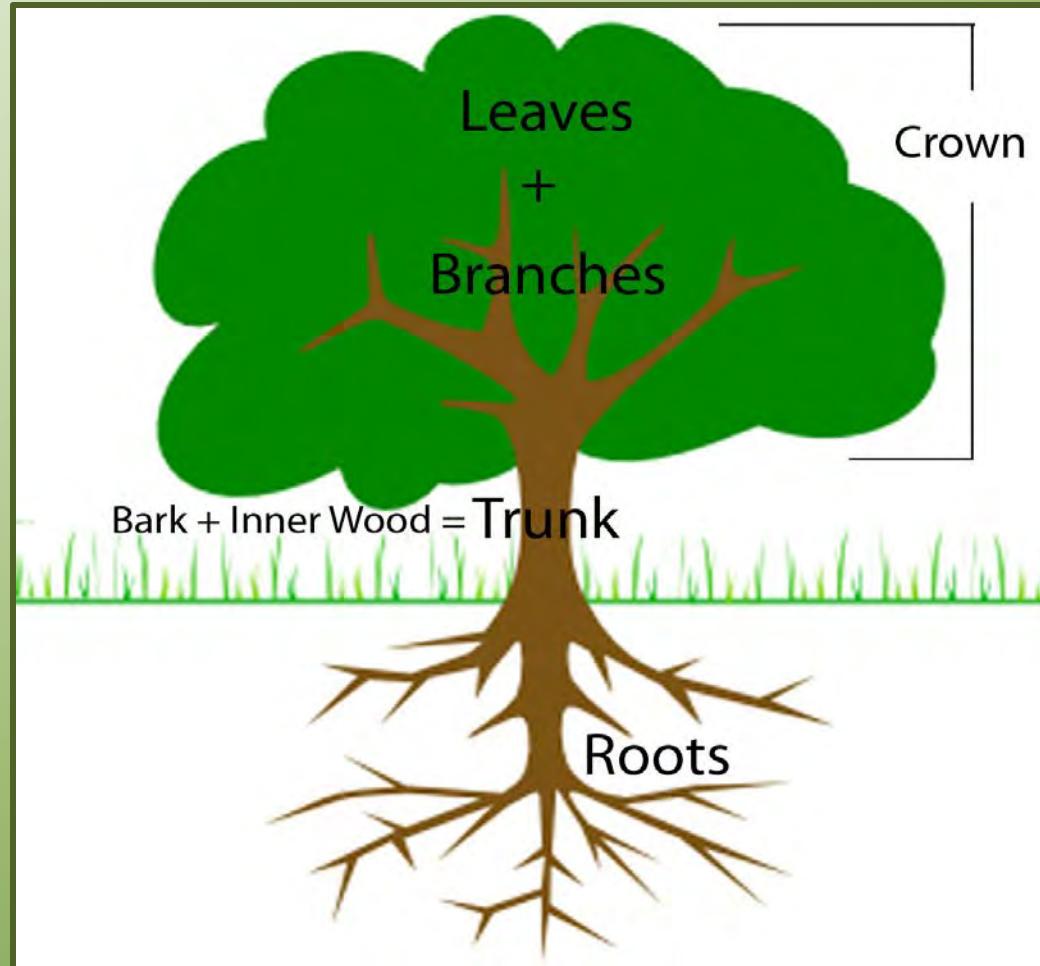
With classroom training and hands-on practice, Tree Stewards are equipped to

- ✿ Identify trees
- ✿ Counsel on tree selection
- ✿ Guide removal of invasive plants that threaten trees and
- ✿ Demonstrate proper tree planting and follow-up care

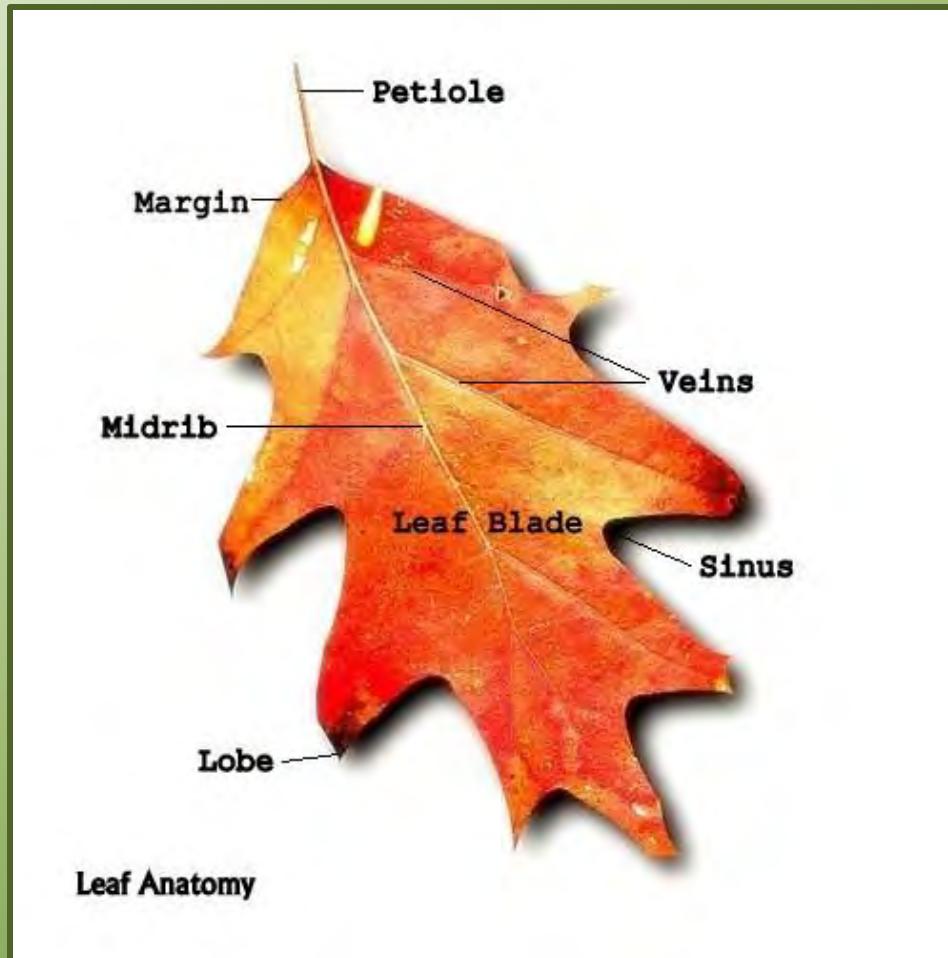
Tree Anatomy and Stewardship

- ✿ Anatomy is defined as *the art of separating the parts of an organism in order to discover their position, relations, structure, and function*
- ✿ Without knowledge of tree anatomy we would not be able to understand how trees grow and thrive and what needs to be done to protect them from harm

Basic Tree Parts

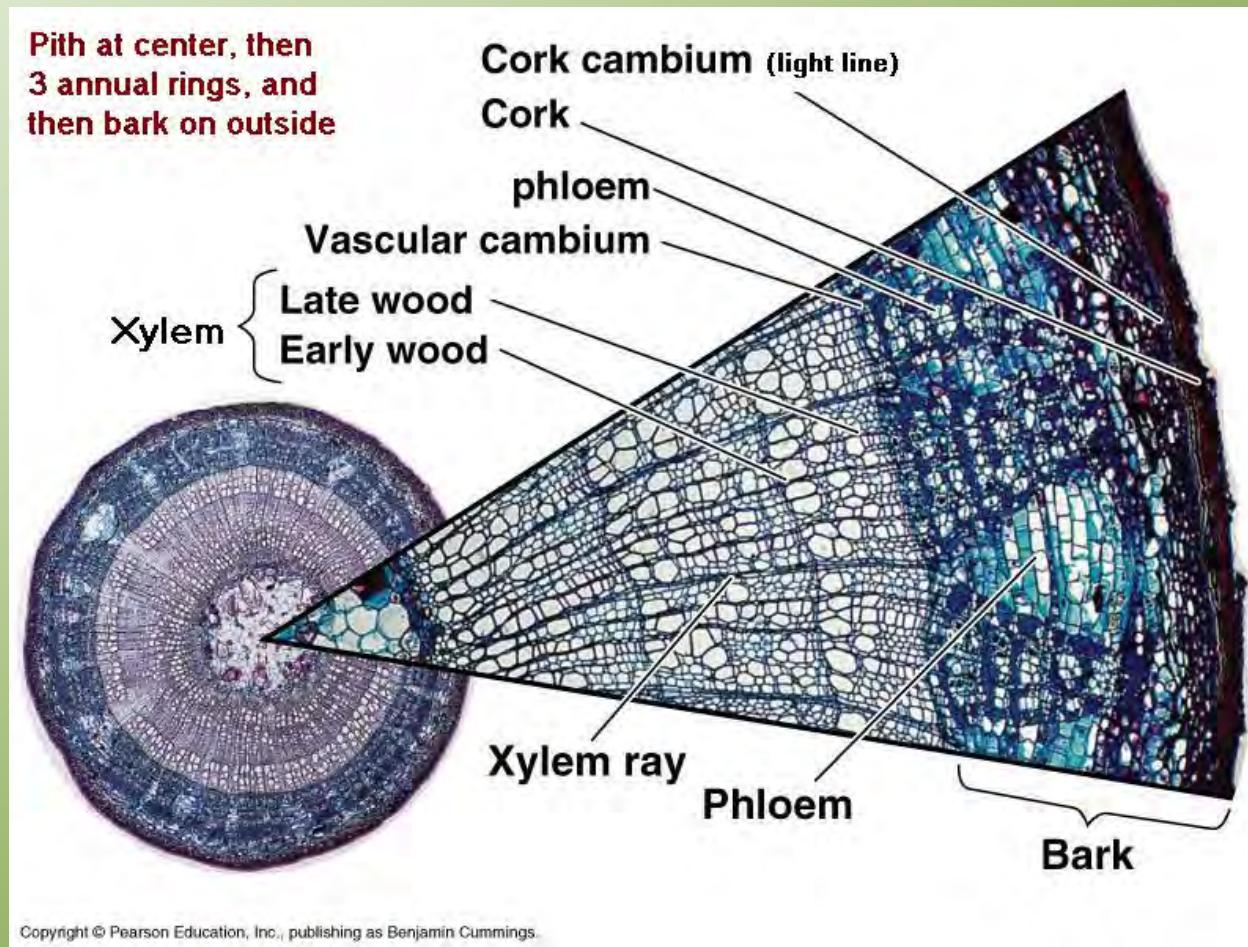


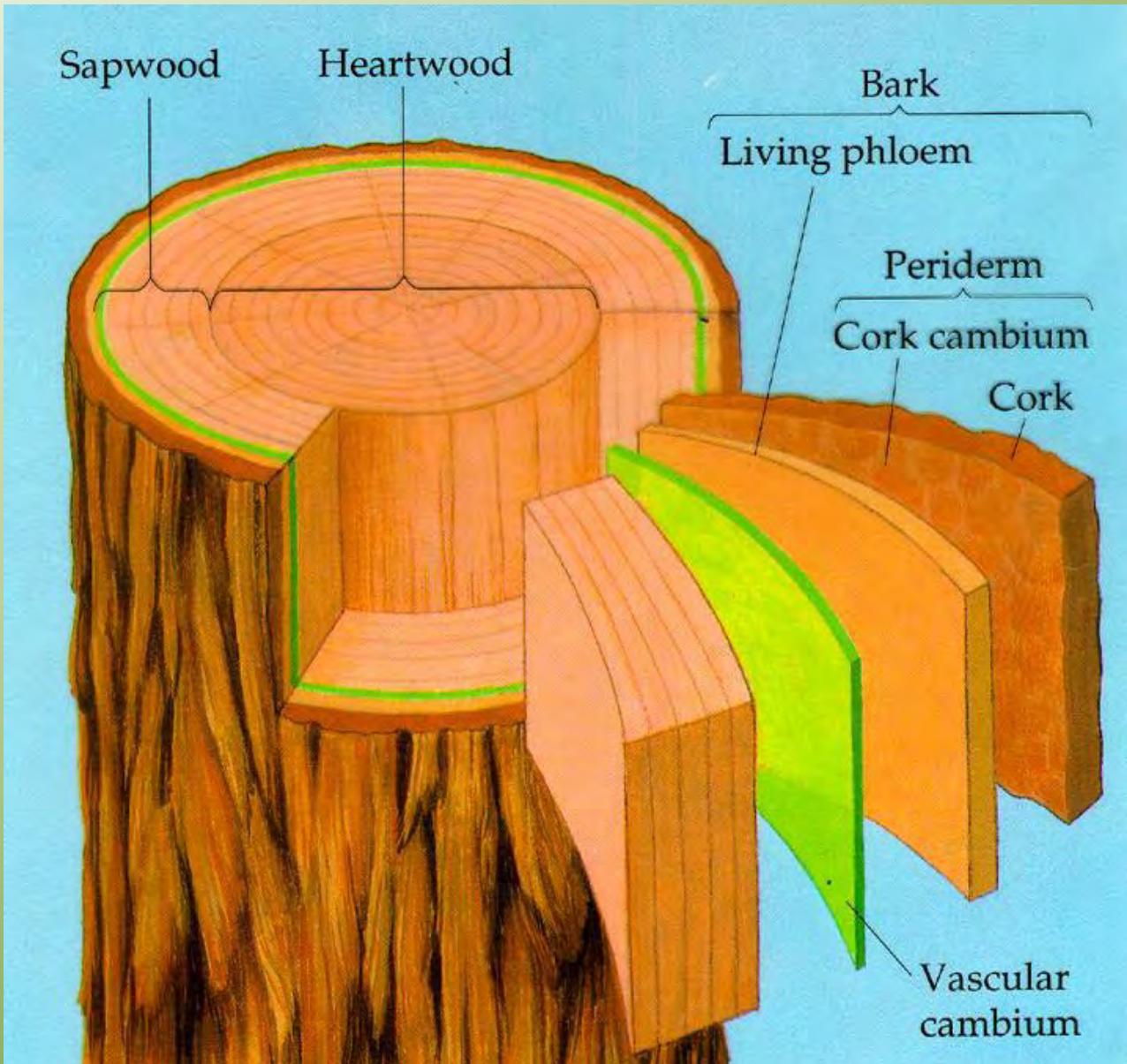
Leaf Anatomy



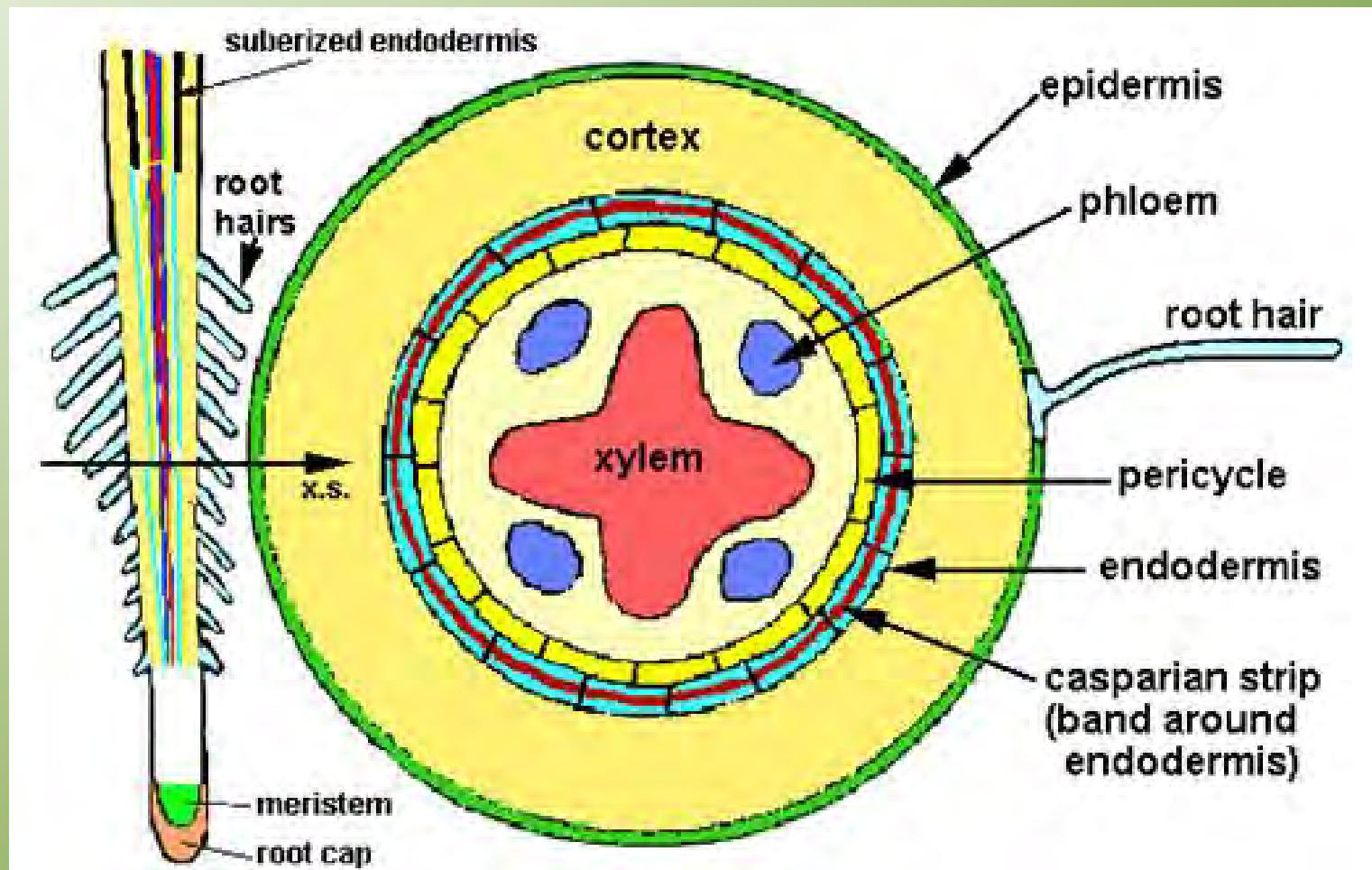
- ✿ Leaves are food factories for the tree.
- ✿ Powered by sunlight, the green substance in leaves, called chlorophyll, uses carbon dioxide and water to produce life-sustaining carbohydrates.
- ✿ This process is called photosynthesis. Leaves are also responsible for respiration and transpiration.

Trunk Anatomy

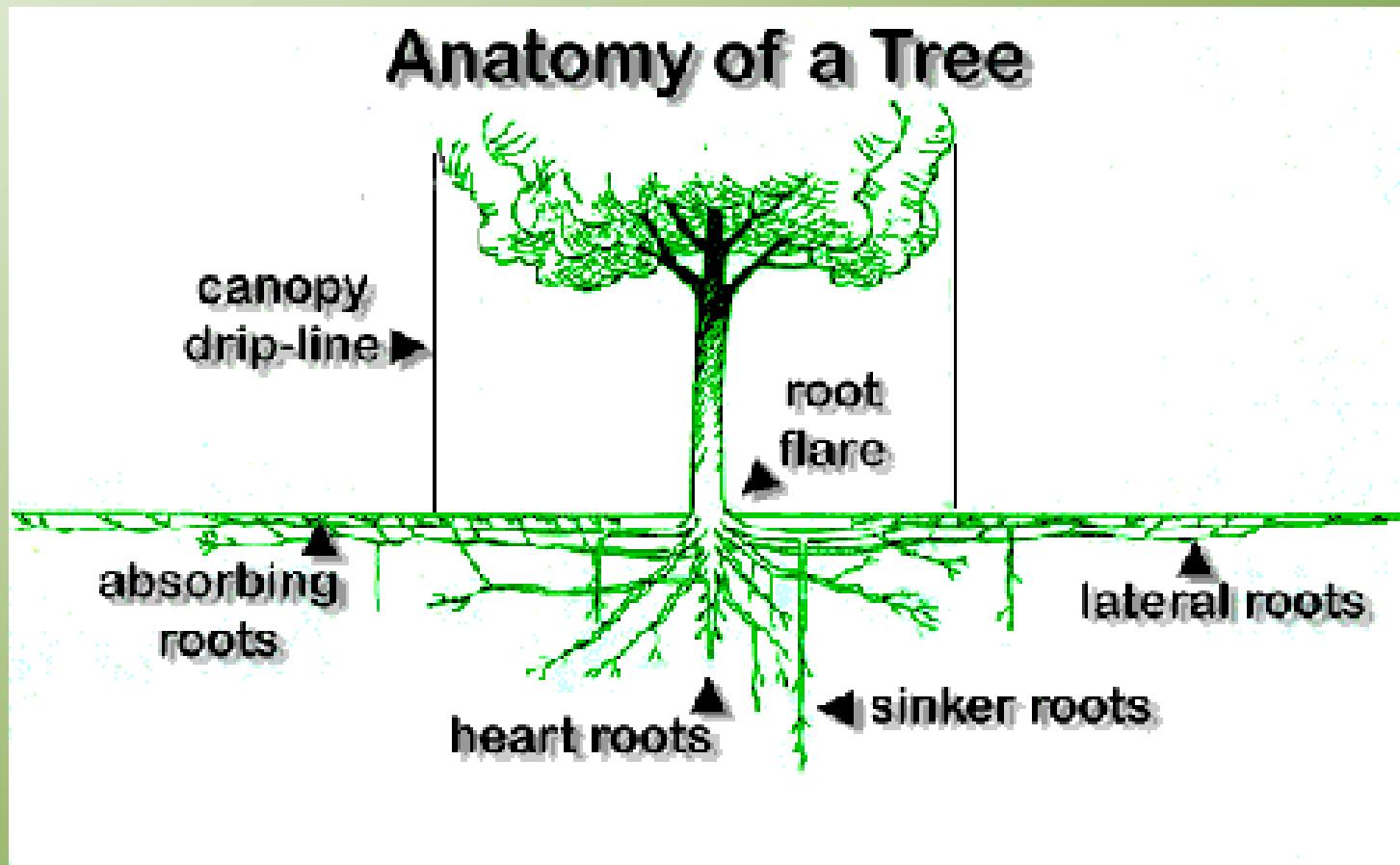




Root Anatomy



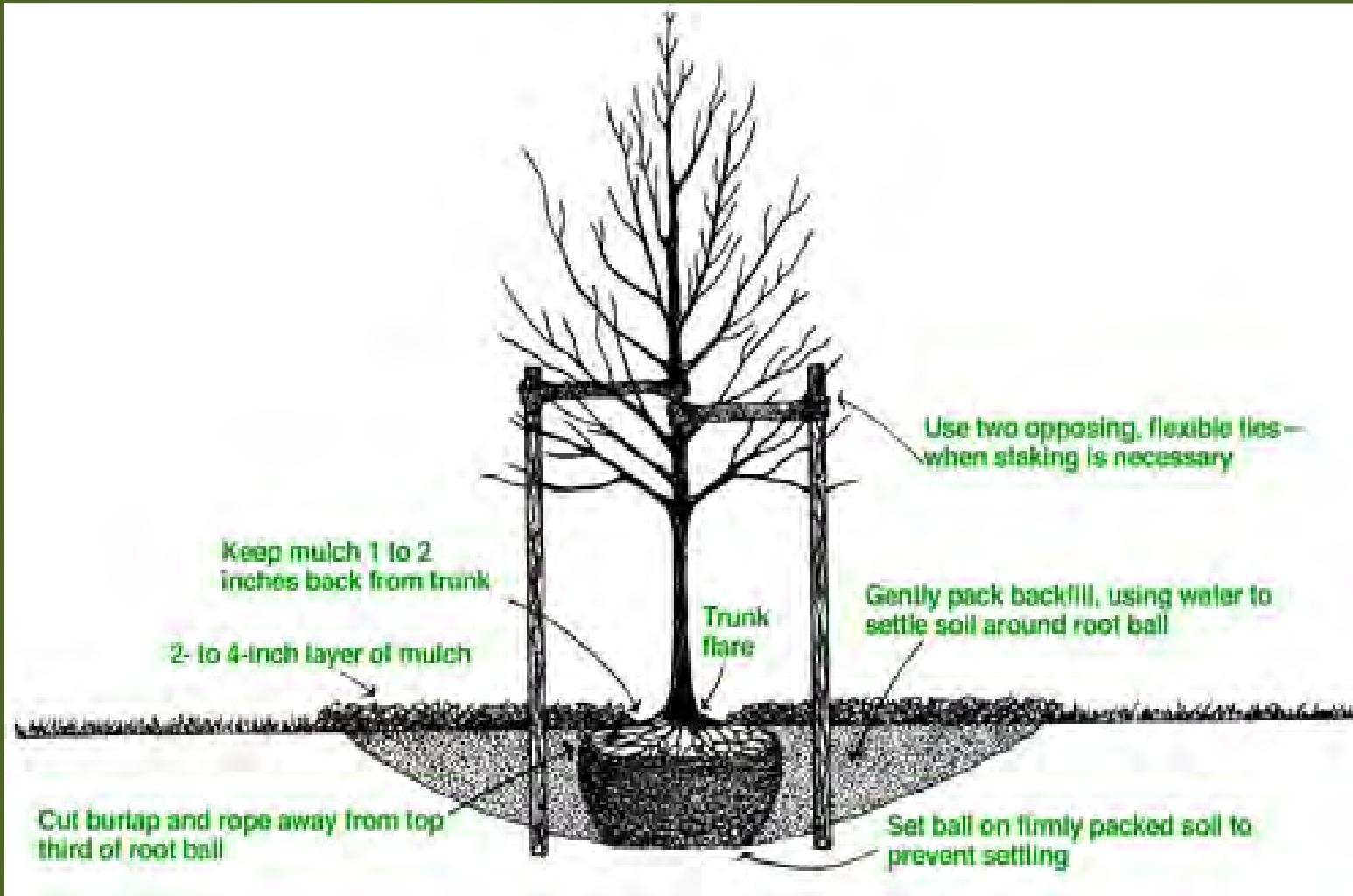
Types of Tree Roots





Crotona Commona Anne Jacobson

Proper Tree Planting Technique





Mulch Volcano - BAD



Proper Mulching



Note visible 'flare'
at base of trunk.







Risks to Trees on Construction Sites



Crown dieback

Often evident only after
several years

Bark wounds

Material storage

Soil pollution

Tree / building
incompatability

Raising and lowering
of soil levels

Excavation and
stripping of
topsoil

Trenching for drains
and service runs

Compaction

Root dieback

From what you have learned about tree anatomy, what's the harm being done to the following trees?











Protecting Trees During Construction



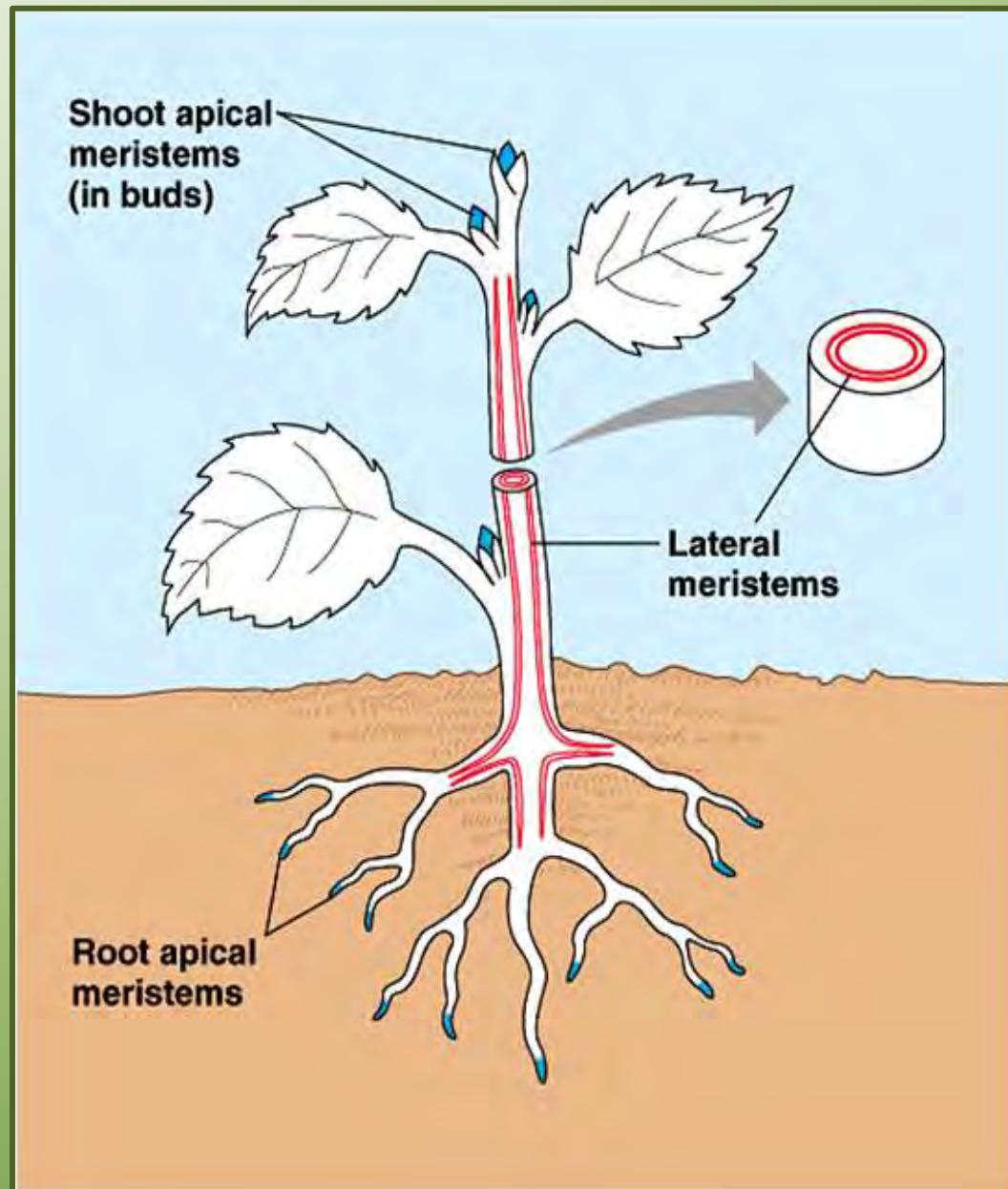
How Tree Anatomy Relates to Proper Pruning Techniques

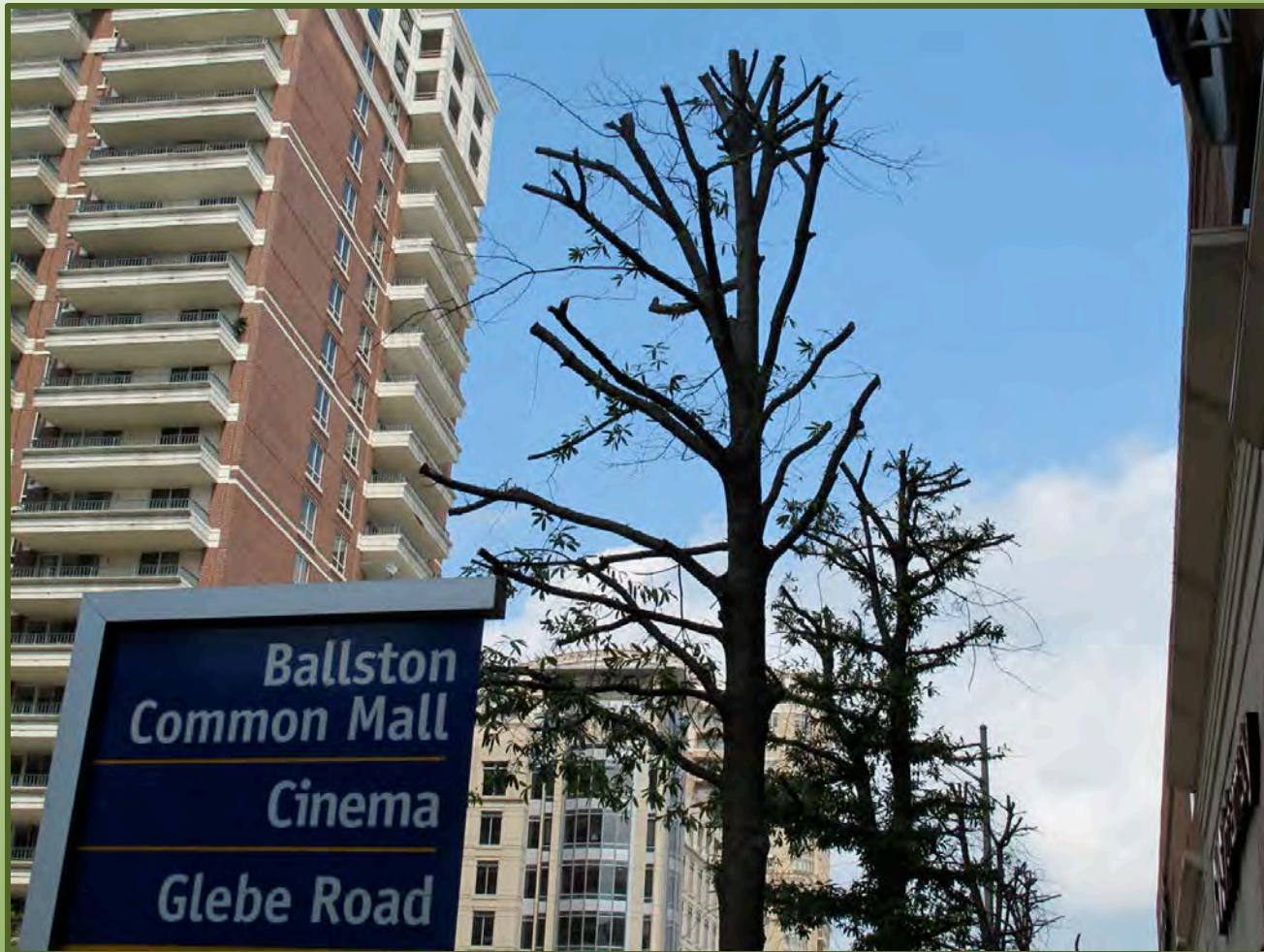
Why Prune Trees?

- ✿ For health of tree
- ✿ For safety of people and property
- ✿ For plant appearance

How does a tree grow?

- ✿ In humans and other animals growth can occur in most parts of the body. As we mature, our bones, skin and muscle all increase in size.
- ✿ Trees do not grow like this. Trees grow by producing new cells in a very limited number of places.





Trees Wounds are *Sealed*
Not
Healed



INCORRECT: STUB
CUTS DON'T ALLOW
FOR PROPER TREE
GROWTH.



CORRECT: THIS
CUT WAS MADE AT
THE COLLAR.



INCORRECT: FLUSH CUTS
LEAVE TREES OPEN
FOR DECAY.

Sealed Tree Wound



Incorrect Pruning Technique and Tree Disease – Target Canker



Other Environmental Threats to Tree Health



**From what you have learned about
tree anatomy, what's the harm being
done to these trees?**



This is an example of what happens when the weed whacker gets too close to a young tree. This tree will never be a healthy and mature tree.

A tree well would have prevented this from happening and saved a tree.









Ivy is a Threat to our Trees

**CHOKING
Hazard**

Learn How to Take Ivy Off Trees





**Assignment for next week's
Tree Stewards class:**

Read Units 1, 2 & 3