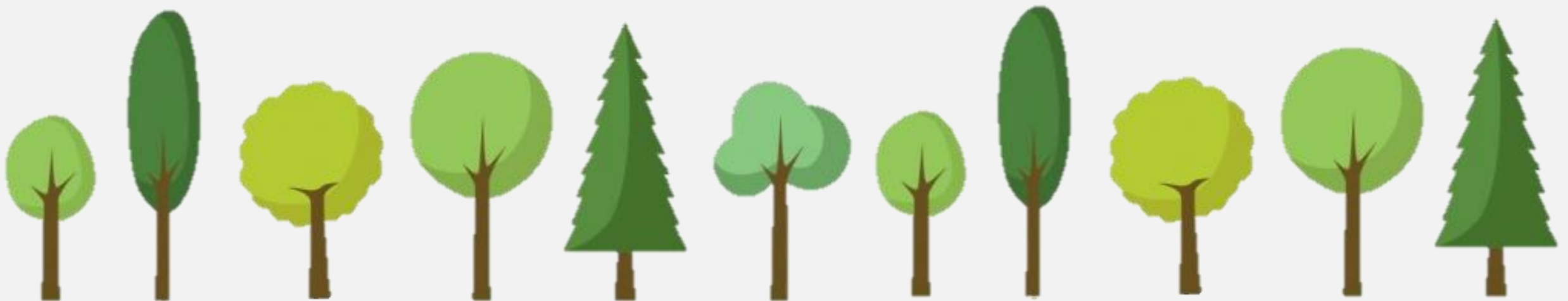


FRUIT PRUNING BASICS

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WHY PRUNE?

- Three main reasons why we prune:
 1. Tree health
 - Remove dead, diseased, dying branches
 - Improve air circulation
 - Decrease probability for disease



WHY PRUNE?

- Three main reasons why we prune:
 1. Remove dead, damaged or diseased wood
 2. Direct growth
 - Get desired shape and form
 - Renew bloom and vegetative growth
 3. Improve air circulation and light penetration



WHY PRUNE?

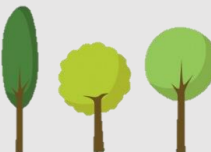
- Three main reasons why we prune:
 3. Create an environment to produce fruit or bloom
 - It's all about **LIGHT**!
 - Cannot create bloom, fruit, or new growth without adequate light



WHEN TO PRUNE?

DORMANT PRUNING

- Most trees and shrubs
- Easy visualization
- Less disease risk
- Dormant cuts stimulate new growth



HOW DOES CUTTING STIMULATE GROWTH?



- Trees maintain a balance between above and below ground growth
- Cuts made when trees are dormant disrupt the balance
- Tree focuses energy on producing new growth to regain balance





WHEN TO PRUNE?

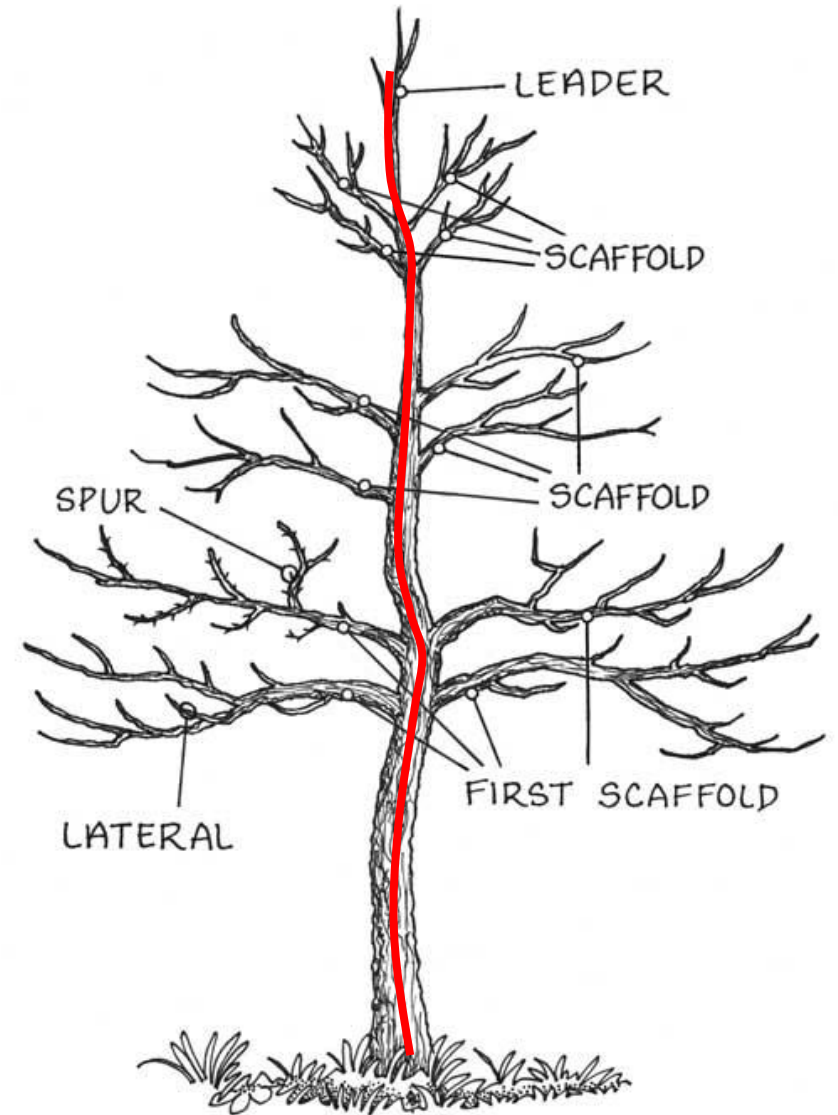
SUMMER PRUNING

- Fruit coloration
- Increase air circulation in the canopy
- Trees that are too vigorous
- Higher disease risk



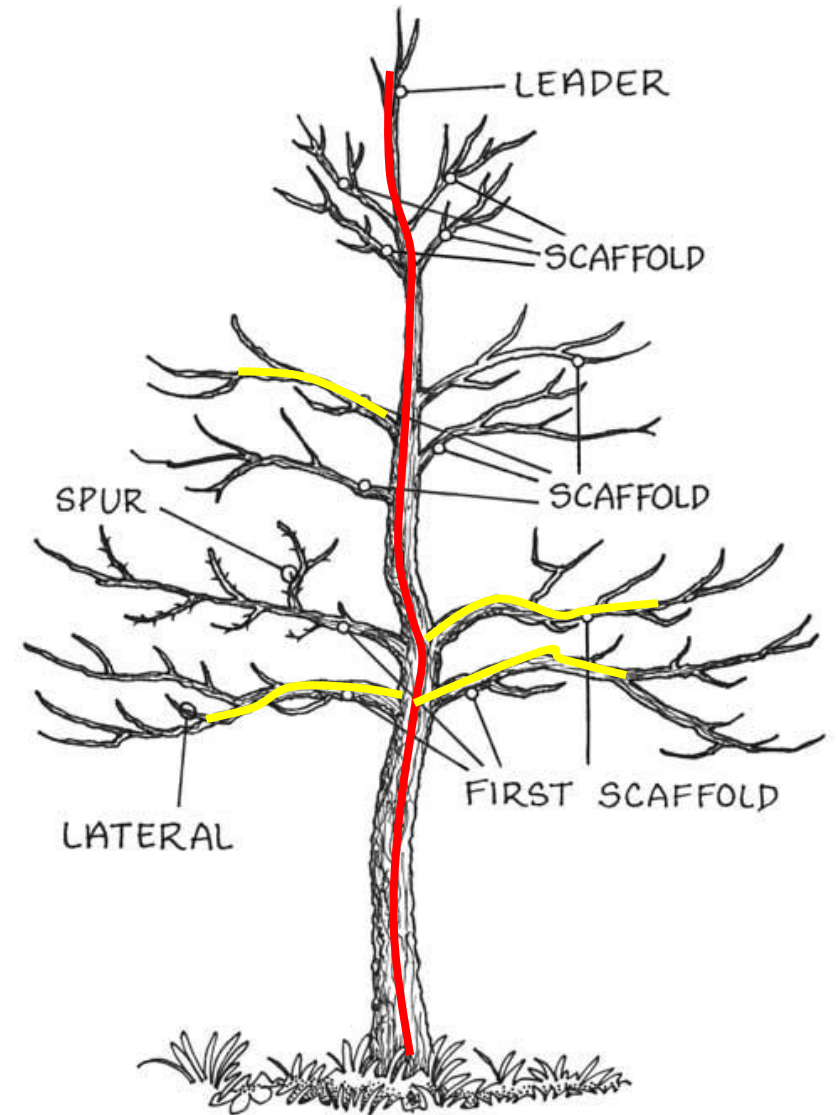
TERMINOLOGY

- LEADER = main trunk(s)



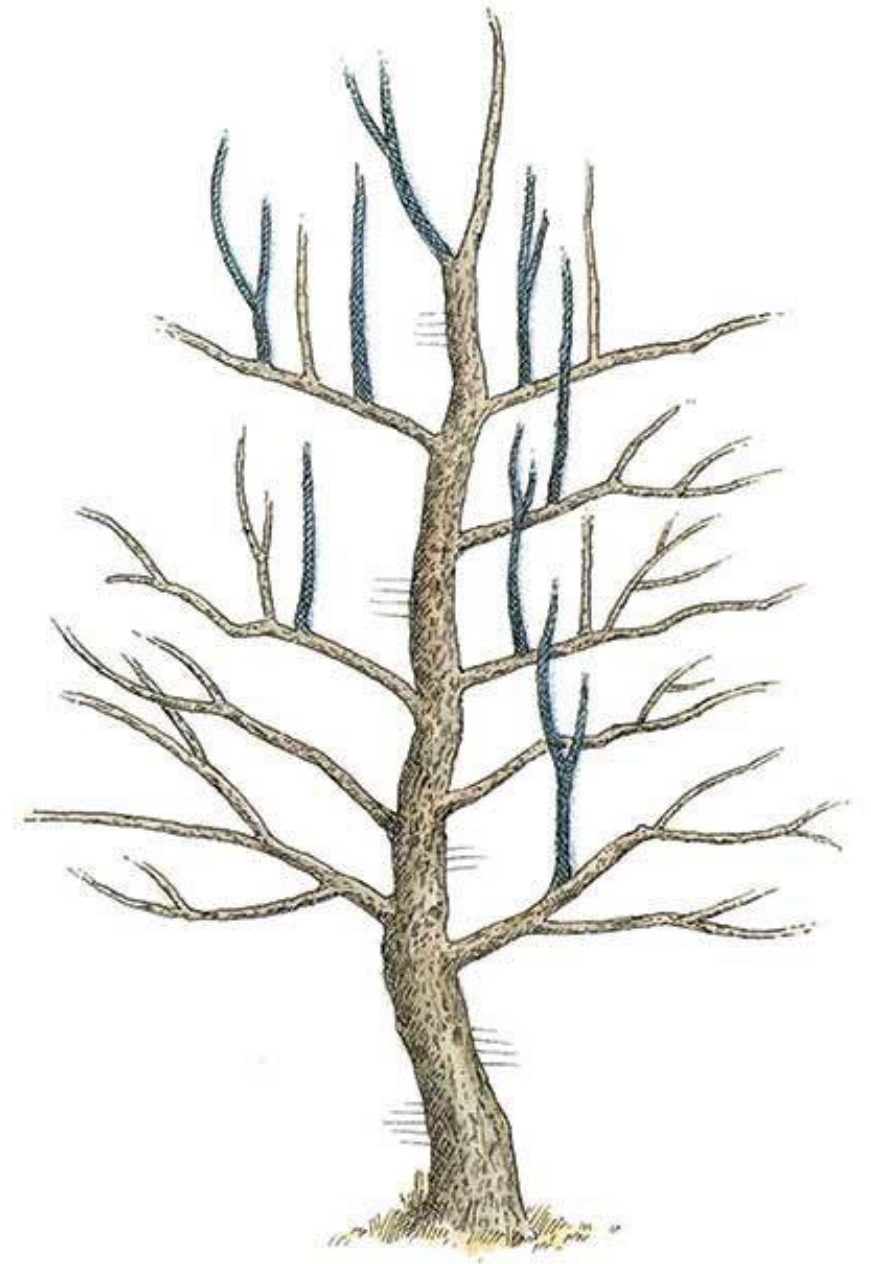
TERMINOLOGY

- SCAFFOLD = main branch(es) that originate from the leader



TERMINOLOGY

- WATER SPROUTS = vertical shoots that arise from the canopy



TERMINOLOGY

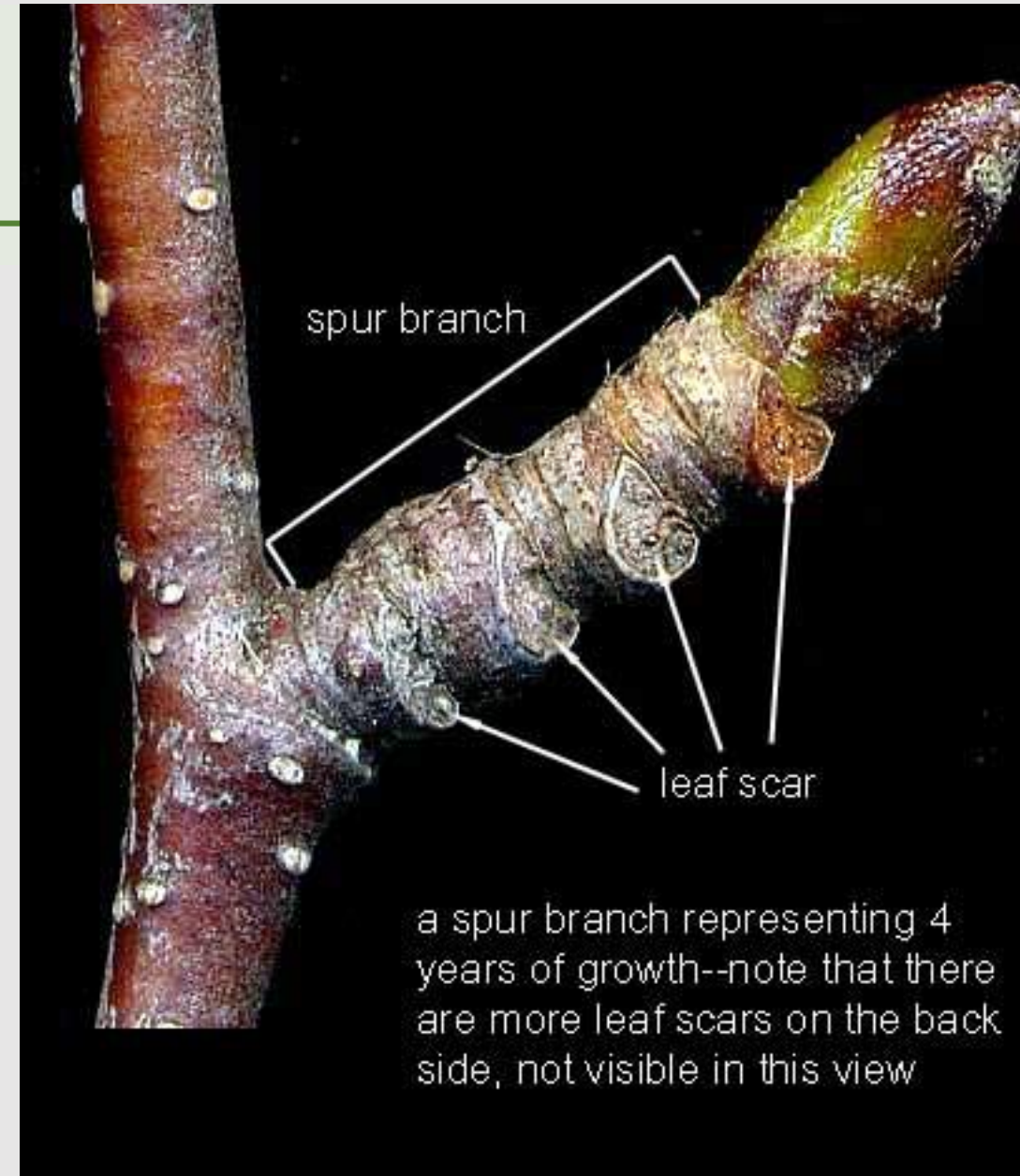
- SUCKERS = vertical shoots that arise from the roots



Photo source: Purdue University,
<https://www.purdue.edu/hla/sites/yardandgarden/so-long-suckers/>

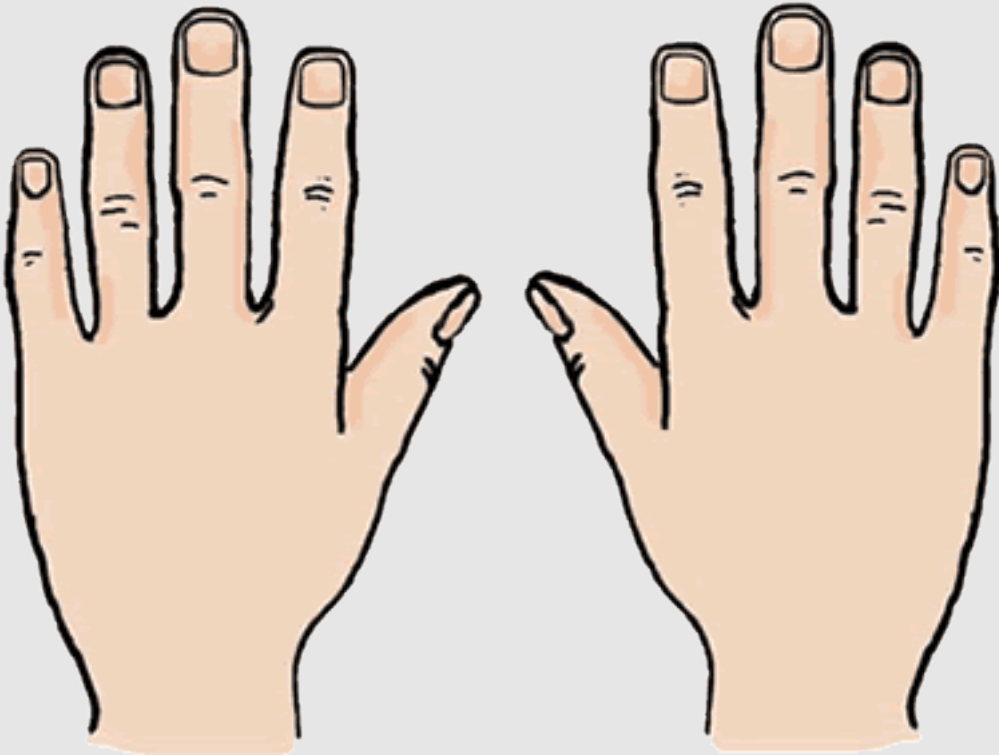
TERMINOLOGY

- SPURS = small thorn-like stems where fruit is borne



PRUNING TOOLS

HANDS AND FINGERS



- Pinch off new unwanted growth
 - Suckers
 - Watersprouts
- Remove pests



PRUNING TOOLS

HAND PRUNERS

- Bypass pruners
 - Start at about \$20
 - Fancy features: replaceable blades... etc.
- Anvil pruners (no)
 - Don't give a clean cut
- ½-inch diameter limit
- Keep 'em SHARP, CLEAN, & ADJUSTED

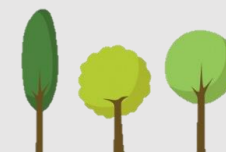




PRUNING TOOLS

LOPPERS

- Bypass blade
- 1 ½-inch diameter limit
- Long enough handle to reach, but still be comfortable
- Keep 'em SHARP, CLEAN, & ADJUSTED



PRUNING TOOLS

HAND SAW

- Curved blade vs. straight blade
- Cuts with PUSH and PULL
- Cuts larger diameters larger than 1 ½-inch
- Keep 'em SHARP & CLEAN



A WORD ABOUT TOOLS...

If you are struggling, sweating,
or swearing, you are using the
WRONG TOOL



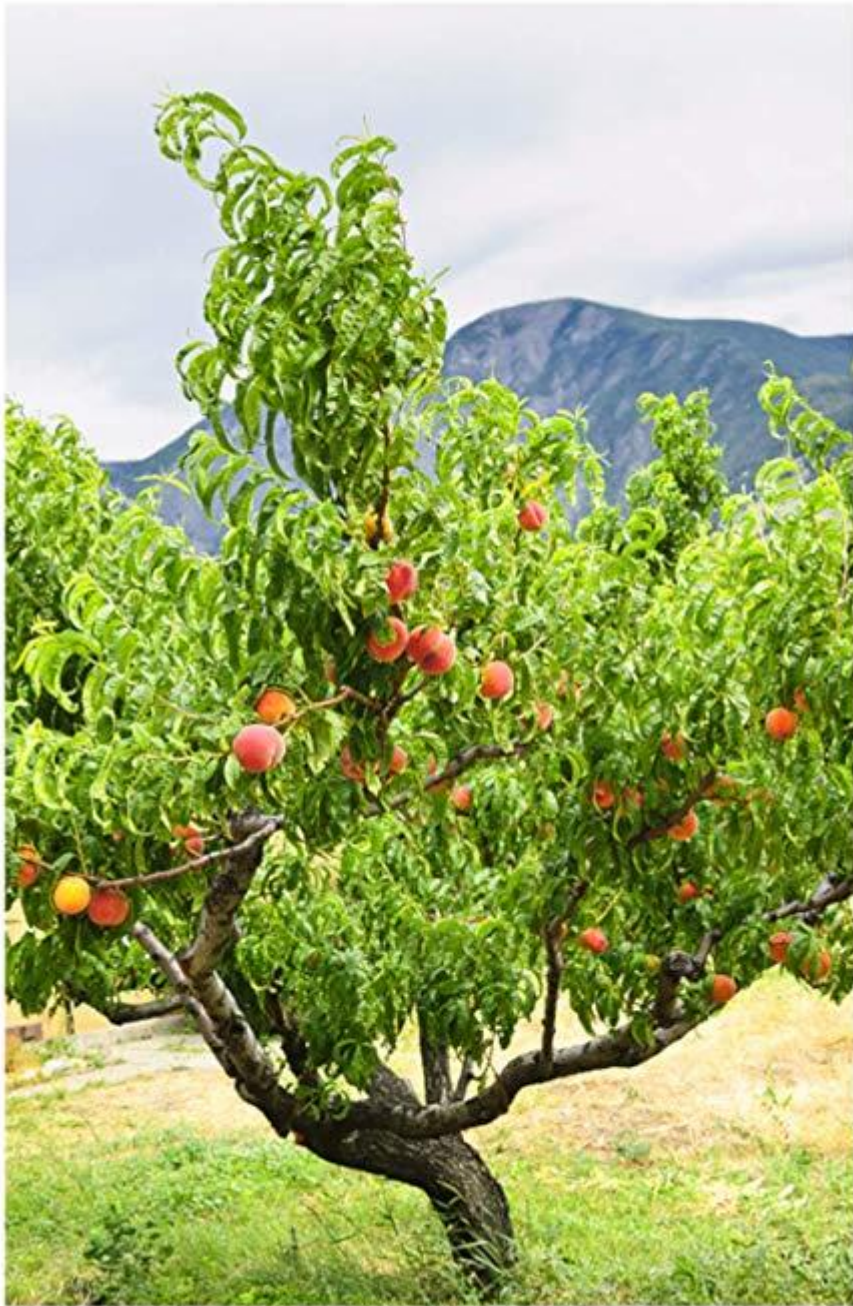
PRUNING TOOLS



PLANT KNOWLEDGE

- What plant is it?
- What is the plants function?
- Where does the fruit grow?
- How does the plant grow? Bloom time?
- How big do I want the plant to get?





PRUNING TOOLS

PLANT KNOWLEDGE

- What plant is it?
 - PEACH
- What is the plants function?
 - PRODUCE FRUIT
- Where does the fruit grow?
 - 1-year-old wood
- How does the plant grow? Bloom time?
 - Open vase form, blooms spring
- How big do I want the plant to get?
 - Want to be able to pick fruit, no ladder

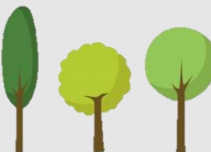


PRUNING TOOLS



PLANT KNOWLEDGE

- What plant is it?
 - FUJI APPLE
- What is the plants function?
 - PRODUCE FRUIT
- Where does the fruit grow?
 - 2-year-old and older, spurs
- How does the plant grow? Bloom time?
 - Modified central leader, blooms spring
- How big do I want the plant to get?
 - Want to be able to pick fruit, short ladder



PRUNING TOOLS



PLANT KNOWLEDGE

- What plant is it?
 - Lilac
- What is the plants function?
 - Flower, possibly some shade
- Where does the fruit grow?
- How does the plant grow? Bloom time?
 - Bloom time early spring, slow grower
- How big do I want the plant to get?
 - 5-6 feet tall, natural rounded form



PRUNING TOOLS

PLANT KNOWLEDGE

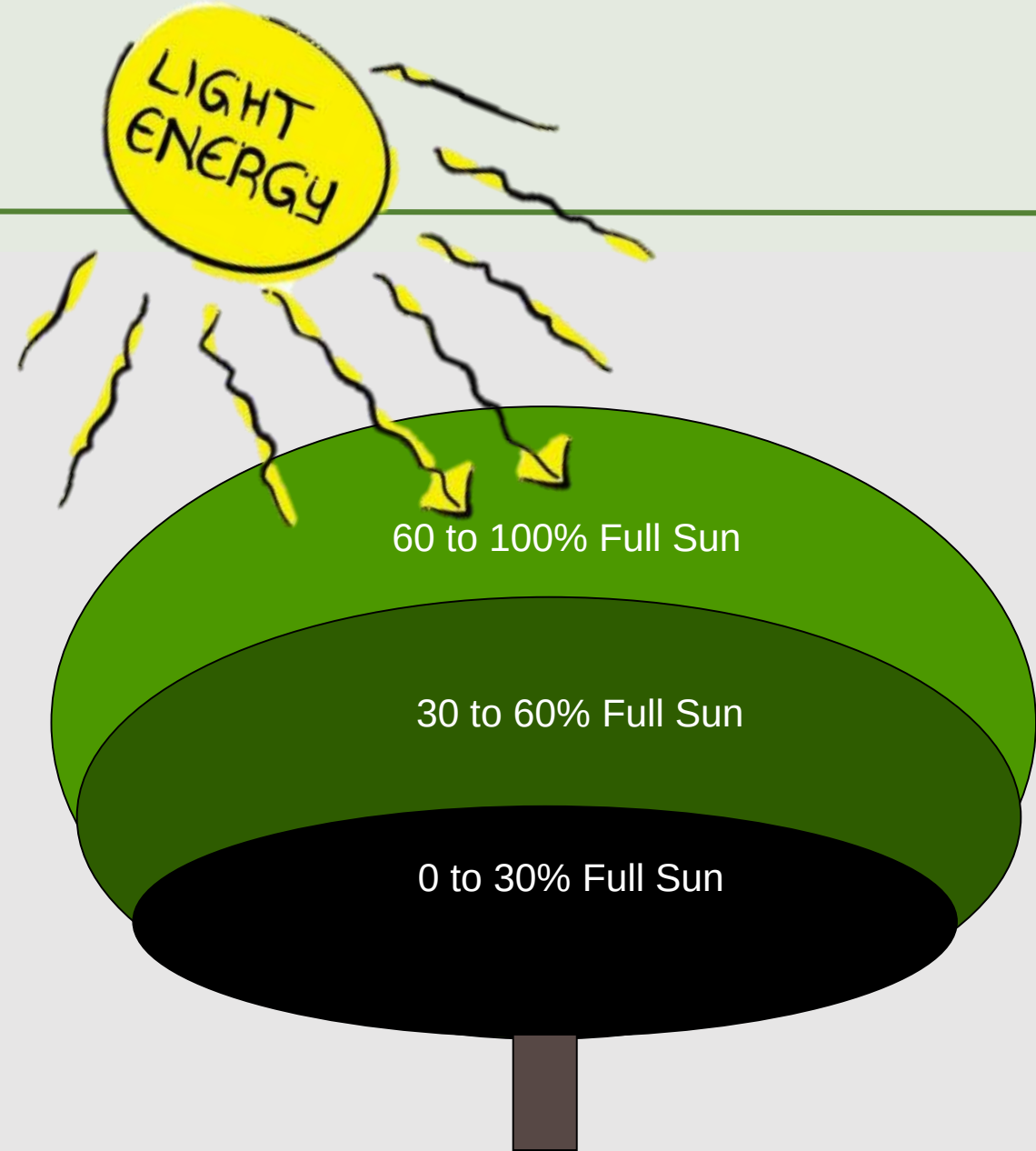
- What plant is it?
 - Norwegian Sunset Maple
- What is the plants function?
 - Shade
- Where does the fruit grow?
- How does the plant grow? Bloom time?
 - Early spring bloom, slow growth
- How big do I want the plant to get?
 - Large



GUIDING PRINCIPLES

LIGHT IN THE CANOPY

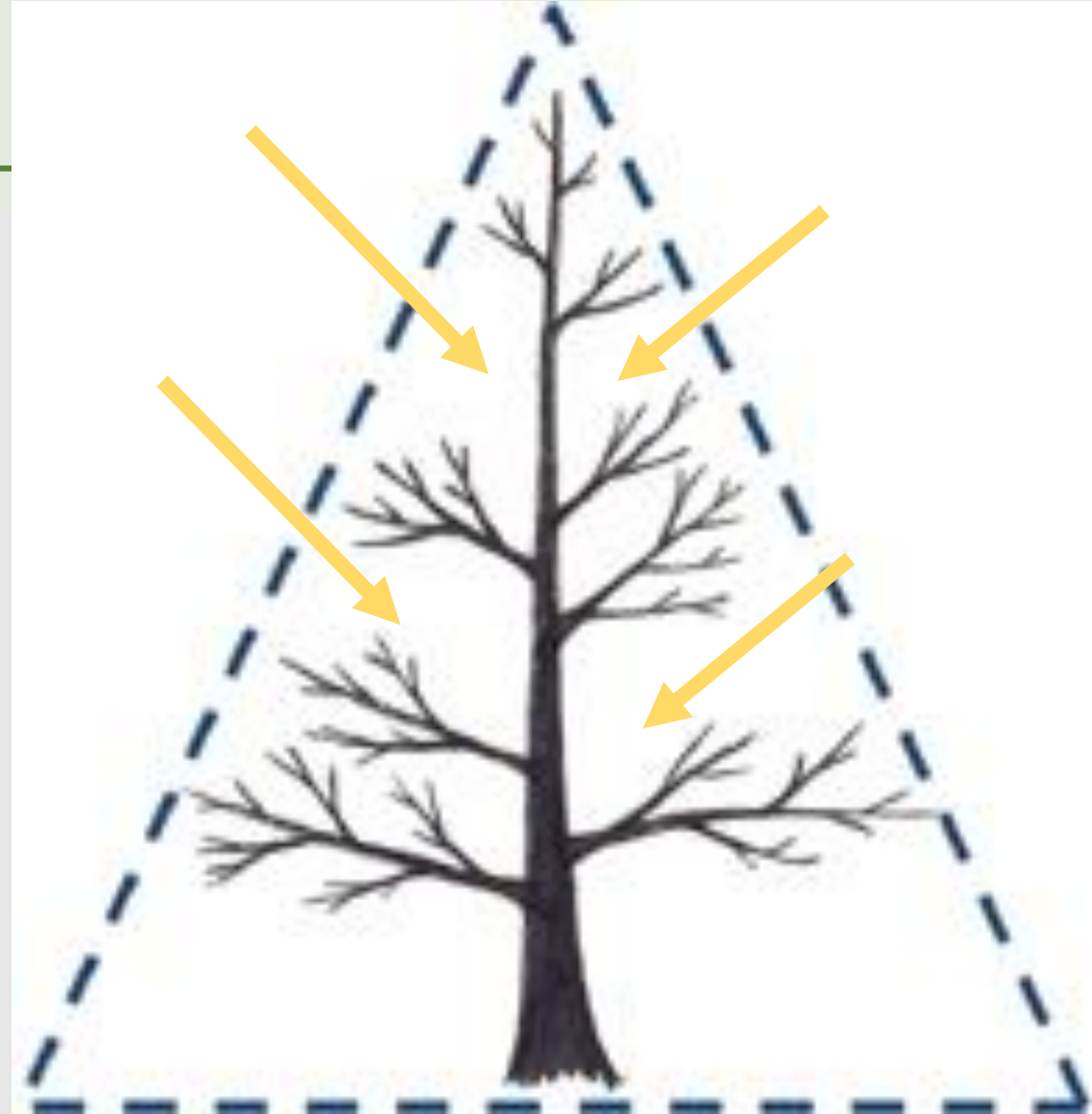
- What drives fruit production?
- How does it affect fruit?
 - Color
 - Flavor
 - Yield – 30% of full sunlight is the minimum needed for flower bud initiation



GUIDING PRINCIPLES

LIGHT IN THE CANOPY

- Tree shape is important
- Want to create channels of light into the canopy



GUIDING PRINCIPLES



BRANCH ANGLE

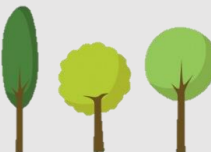
- Horizontal vs. vertical growth
 - Vegetative?
 - Fruitful?
- Ideal branch angle
 - Between 30-45° above horizontal
- Wider branch angles support heavier loads





GETTING GOOD ANGLES

- Pruning cuts
- Spreaders
- Clothes pins
- Ties
- Trellising



MAKING CUTS



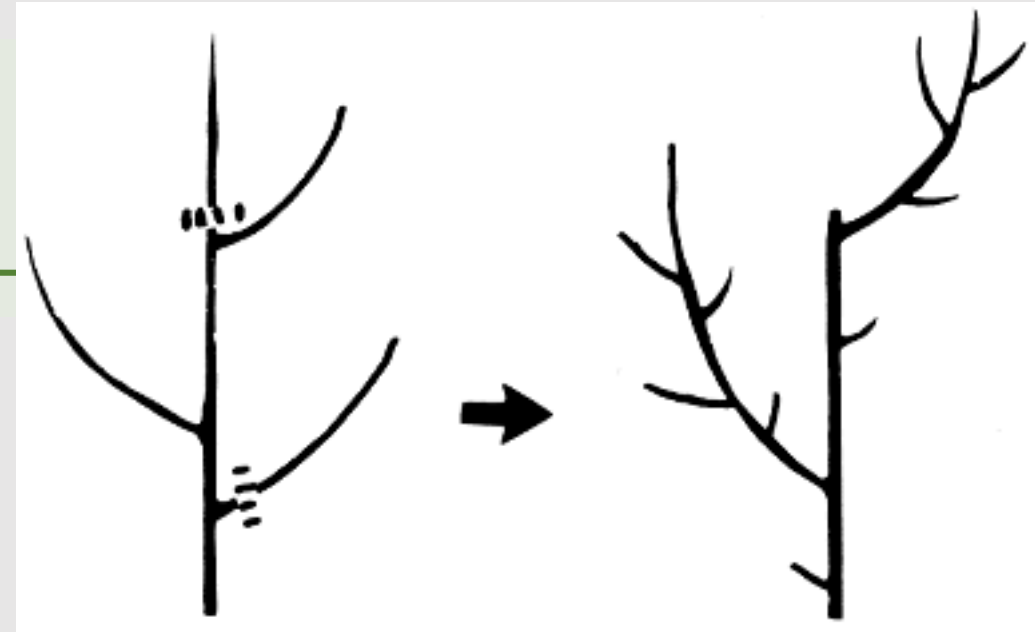
- **TWO** main cuts:
 1. Thinning cut
 2. Heading cut
- Both are used in fruiting and non-fruiting trees



PRUNING STRATEGIES

THINNING CUT

- Used to remove a stem or branch back to the point of origin
- RESPONSE: branch will not grow back
- Natural looking cut



PRUNING STRATEGIES

THINNING CUT

- Should be cut at the branch collar
- Cuts that are too deep will heal slowly
- Increases risk of disease

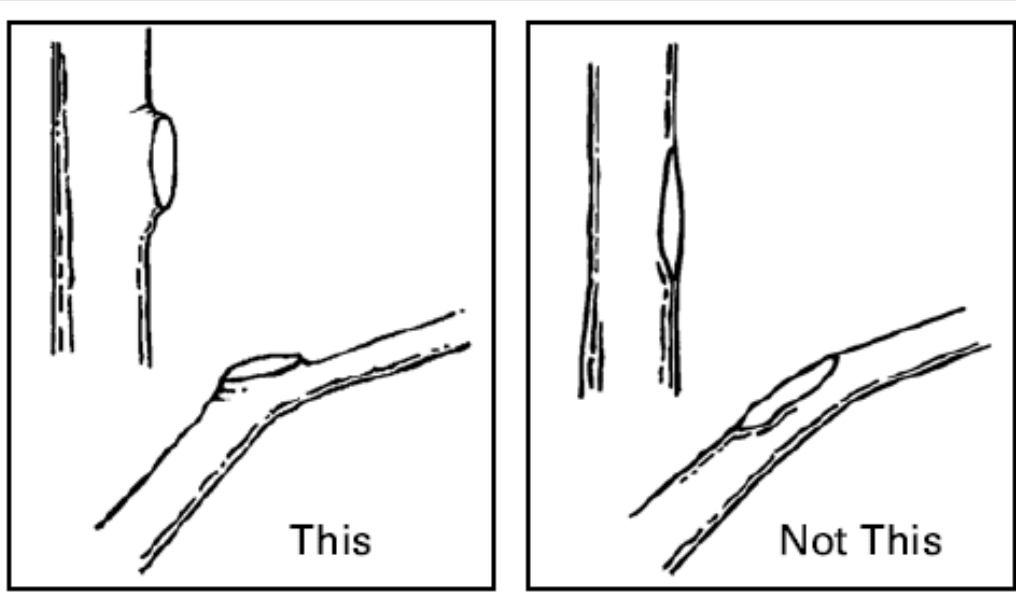


Photo source: OSU, <https://u.osu.edu/gelley.2/2018/03/02/pruning-fruit-trees/>



PRUNING STRATEGIES

HEADING CUT

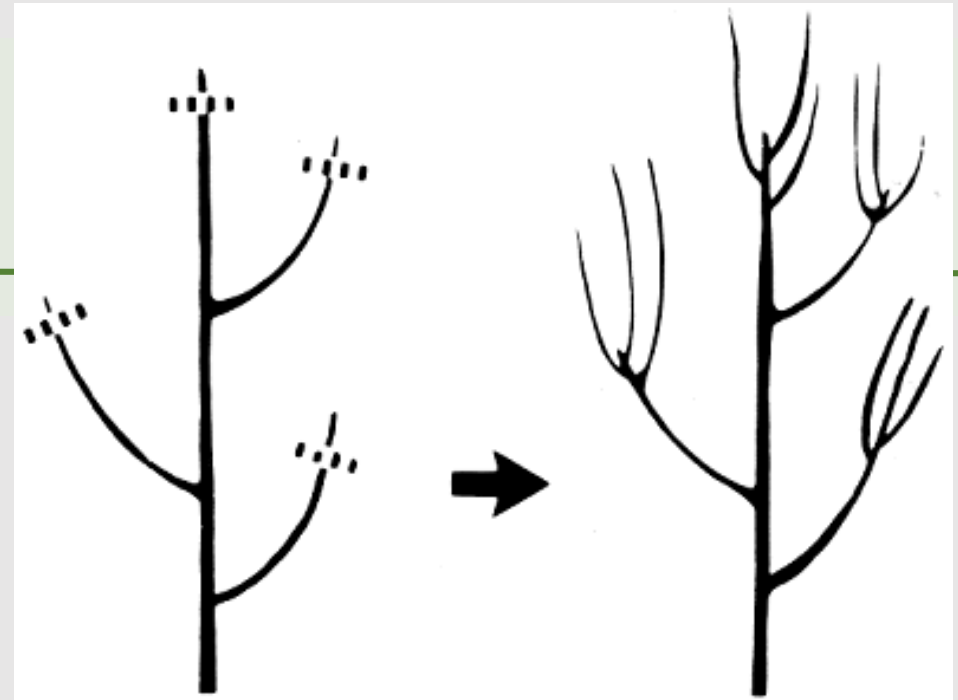
- Used to cut or HEAD the tip of a branch
 - Can be used to change direction of growth
 - Cut just above a bud facing in the direction of desired growth



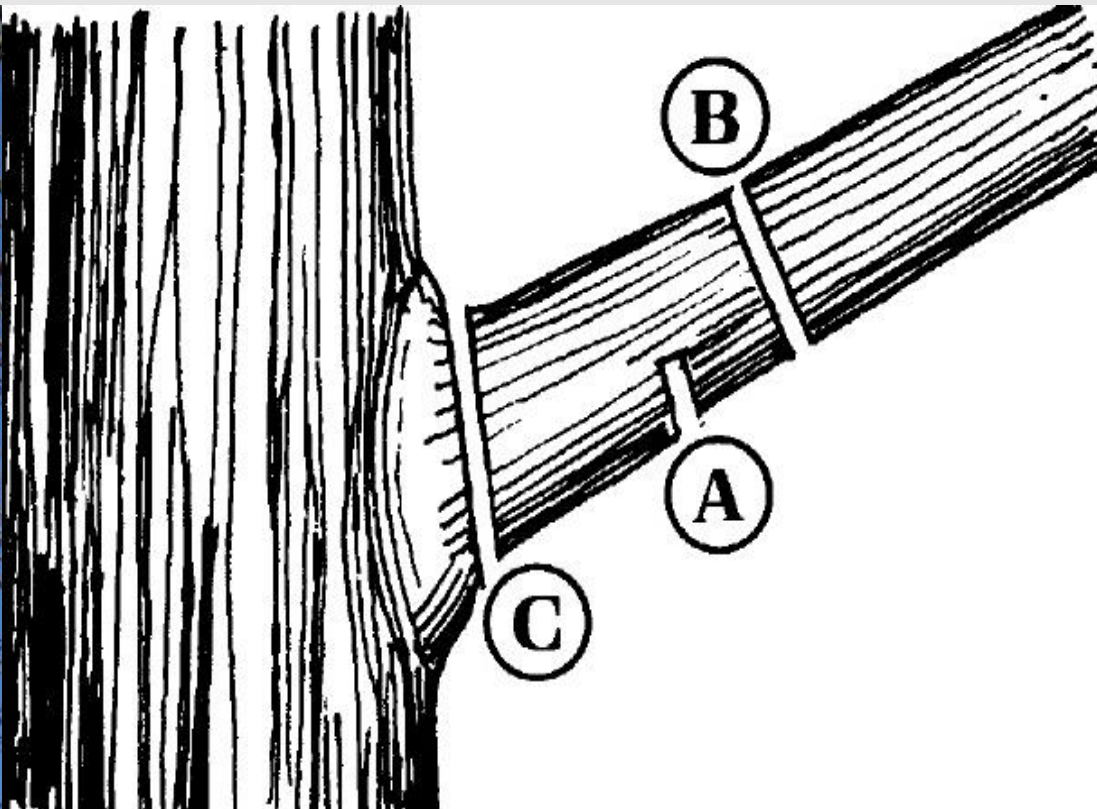
PRUNING STRATEGIES

HEADING CUT

- RESPONSE: fuller, bushier growth
- Used in peaches and stone fruit to shorten/strengthen crop bearing branches
- Should NOT be used in other fruit or on landscape trees very often

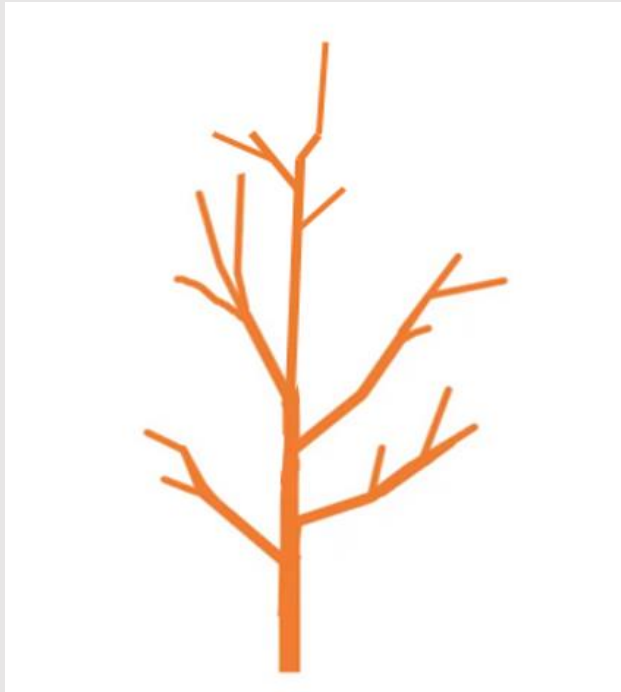


LARGE CUTS DONE CORRECTLY

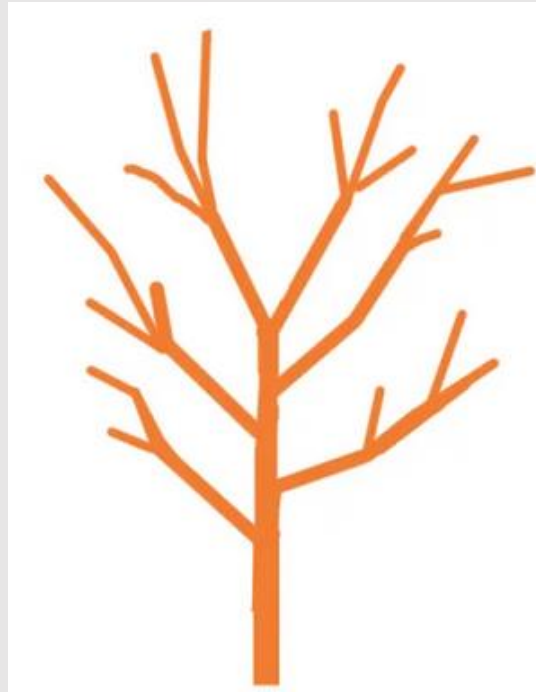


TREE SHAPE AND FORM

- What shape or form are you after?
- Can you make a few cuts to direct growth to support that form?



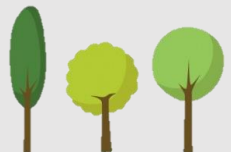
Central leader
Apples



Modified Central Leader
Apples, pears, cherries



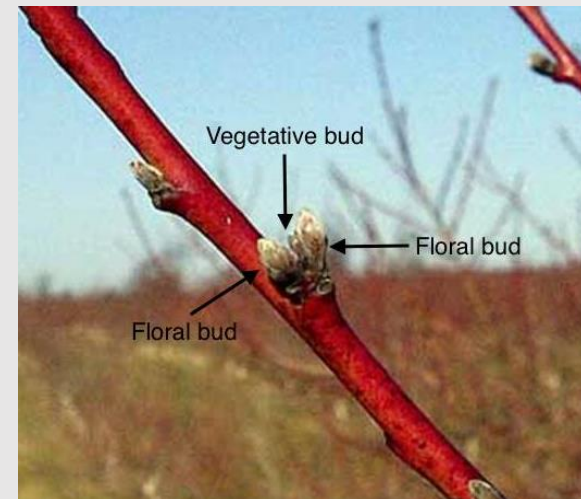
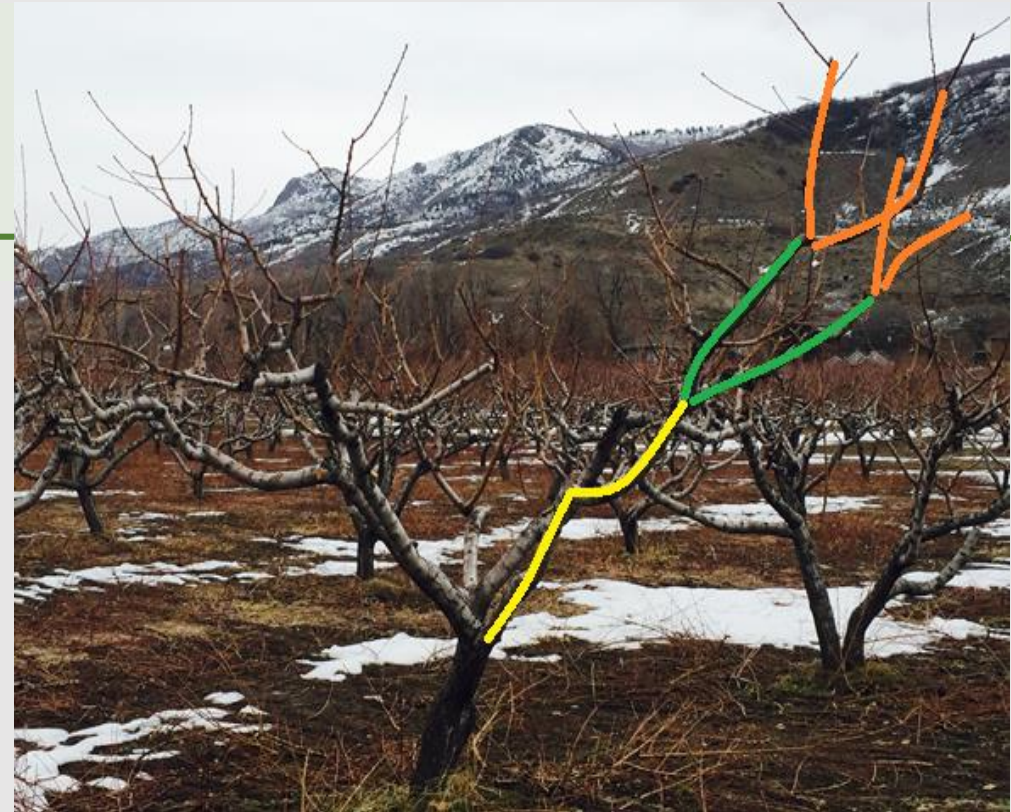
Open vase
Peaches, stone fruit



STONE FRUIT

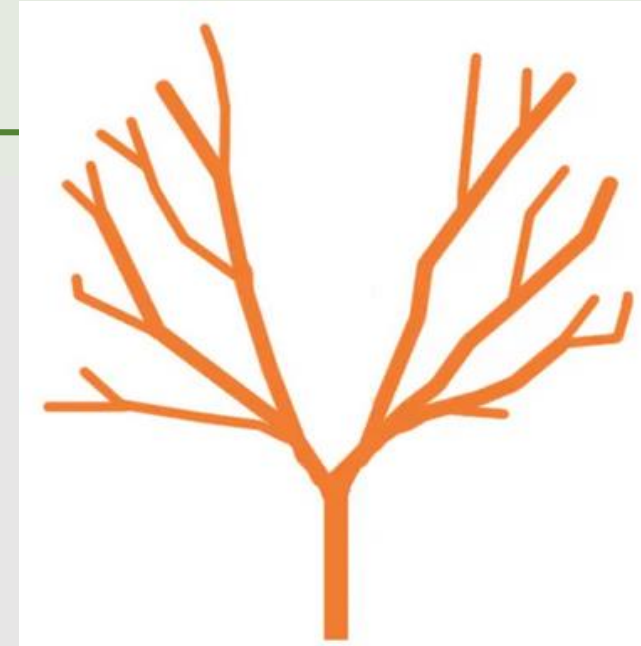
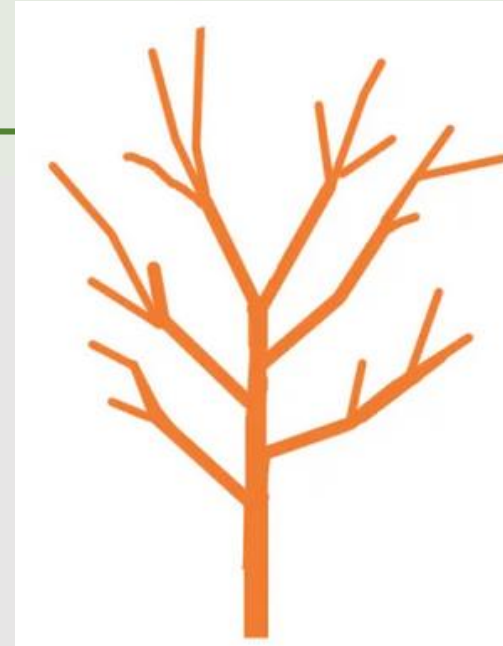
PEACHES, PLUMS, APRICOTS

- Pruned to OPEN VASE
- Peaches:
 - Fruit is formed on 1-year-old wood
 - Renewal pruning
- Apricots and Plums:
 - Fruit is formed on spurs



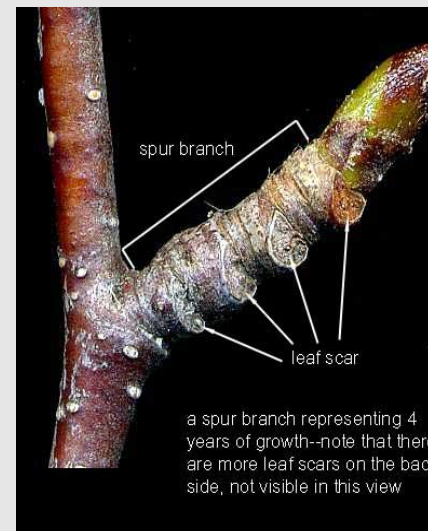
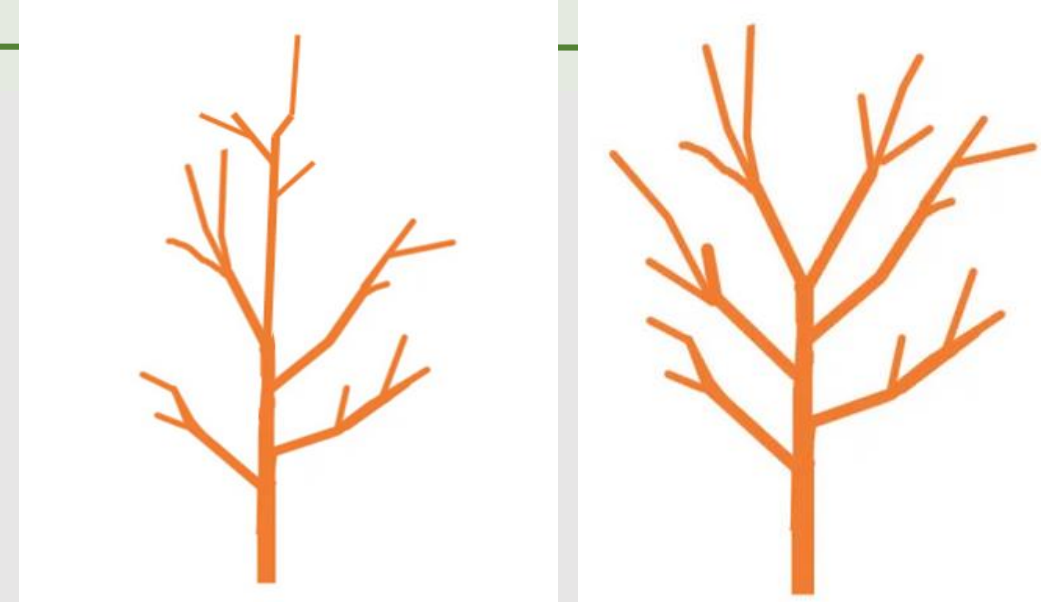
CHERRIES

- Pruned to MODIFIED CENTRAL LEADER or OPEN VASE
- Fruit is formed on spurs, 2-year-old wood
- Light is important for bud formation
- Renew old branches by making a STUB CUT, leaving 4 to 6 inches so the branch can regrow



APPLES AND PEARS

- Pruned to MODIFIED CENTRAL LEADER or CENTRAL LEADER
- Fruit is formed on spurs on 2-year-old and older wood





PRUNING TRIAGE

DEAD or DYING

- Remove all dead branches
- Includes broken branches
- Branch coloration is a sign of branch death
- Safety hazards



PRUNING TRIAGE

DISEASED

- Source of disease for surrounding trees
- Will eventually die
- Safety

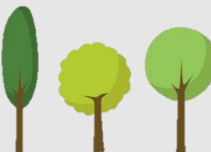




PRUNING TRIAGE

DUMB

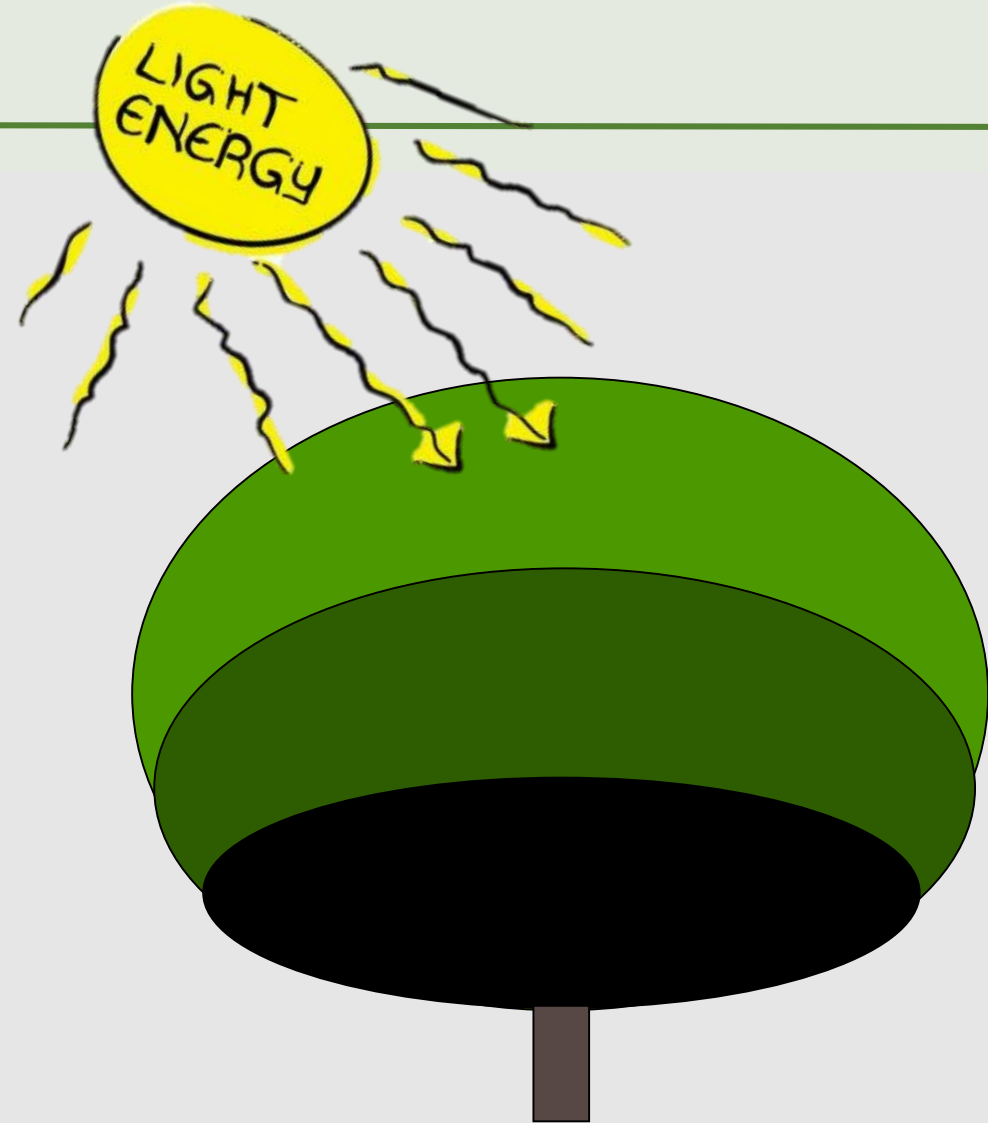
- Branches that:
 - Hit you on the head
 - Make mowing difficult
 - Don't make sense, odd, out of place
 - Will cause problems
 - Rubbing and crossing branches
 - Watersprouts and suckers



PRUNING TRIAGE

LIGHT

- Stand back and look at how the light filters through the canopy
- Can light get into the middle of the tree?
- Is it enough light?
- Soccer ball test...



THINNING FRUIT

WHAT SIZE FRUIT DO YOU WANT?

- Should be done when fruit is quarter sized
- Leave largest fruits
- Peaches and nectarines:
 - Want a fruit every 6-8 inches



THINNING

WHAT SIZE FRUIT DO YOU WANT?

- Apples and pears:
 - Thin back to “king” fruit
 - Biennial bearing
 - Coddling moth
- Apricots, plums, cherries
 - Not usually thinned



RULES OF THUMB



1. Never remove more than $\frac{1}{3}$ of the wood in the tree at one time
 - Does not include dead wood
2. One person prunes – second opinions increase divorce rates
3. It takes a while to get this down – BE PATIENT WITH YOURSELVES!
4. Go to other pruning classes to remind yourself and gain knowledge



QUESTIONS?

