



FIVE STEPS FOR PRUNING YOUNG TREES

1. Remove broken, diseased, dying, or dead branches.

Look around the tree. If you see any broken, diseased, dying or dead branches, remove them behind the point of injury. In some cases, the whole branch may need to be removed. In other cases, just the injured part can be cut off

2. Select a leader and remove competing leaders.

The leader is the central stem of the tree. Carefully follow the trunk of the tree from bottom to top. The trunk should narrow into a single stem that is in a vertical position. This is the leader. There should be only one leader. If more than one leader exists (competing leaders), then the strongest and most vertical stem should be selected as the central leader and the other stems removed, cut back, or possible selected as permanent branches (see step four).

3. Select the lowest permanent branch.

It also called the lowest scaffold branch. The lowest permanent branch is the lowest branch attached to the trunk that will remain on the tree throughout its lifetime. The location and use of the tree usually determine the position or height of the lowest permanent branch. For a street tree, the lowest permanent branch over the sidewalk might be 2.4 meters, while over the street at least 4.3 meters of clearance may be required. Branch heights for street trees often are mandated by local ordinance. For a tree in a parking strip, the lowest permanent branch might be 1.8 or 2.1 meters from the ground if it is positioned parallel to the parking strip. The lowest branch for a tree in a park or yard often will be lower than that of a street tree, but the amount of clearance depends on specific use and maintenance considerations.

Look for a vigorous branch with a strong attachment that meets the height requirement. Its stem diameter should be one-half (or less) of the trunk diameter where the branch attached to the trunk. You may want to label or tie a piece of string on this branch so you

can identify it later. If the tree is too small for you to select a branch at the desired height, then you'll have to wait until the tree grows taller (see step five).

Smaller temporary branches should be left close to the lowest permanent branch. Larger temporary branches should be pruned back to one or two buds.

4. Select scaffold branches and cut back or remove competing branches.

Scaffold branches are the permanent branches of the tree and constitute much of its framework. Scaffolds are located above the lowest permanent branch and are selected based on spacing and size considerations. Remove branches that have weak attachments (for example, those with included bark). Such branches should not be used as scaffolds.

Vertical spacing between scaffolds depends on the expected size of the tree at maturity. Scaffold branch spacing should be 45 centimetres or more for trees expected to achieve a trunk diameter of 30 centimetres or more at maturity. For smaller trees, scaffold spacing of 30 centimetres or more is recommended.

Scaffold branches also should be spaced radially around the trunk, like spokes in a wheel. This vertical and radial spacing of scaffolds gives the tree good balance and form. Select scaffold branches starting with the lowest permanent branch and proceed up and around the trunk.

If scaffold selection is difficult because of the selection of the lowest permanent branch, then it might be better to determine which vertical and radial branches will provide the best overall scaffold system. In some cases, it will be necessary to go back to step three and select another lowest permanent branch based on the best combination of scaffolds. Selected scaffolds should have strong attachments. Branch diameter should be no more than one half of the diameter of the trunk at the point of attachment. Remove branches that are close to the scaffolds (within 10 centimetres) and are equivalent size. If competing branches are needed to maintain canopy size, reduce their length by 50% or more to subordinate and reduce growth. Leave small-diameter branches as temporaries. Keep in mind that as the tree grows, branch size and the space it occupies change, and

you may find that some branches are no longer suitable as scaffolds. In this event, a scaffold may need to be removed (for example, if it has grown too large and is crowding other branches) or a new scaffold may need to be selected. Be prepared to re-evaluate scaffold selection as the tree develops.

5. Select temporary branches below the lowest permanent branch.

Some or all of the branches located below the lowest permanent branch can be retained as temporary branches. Remove branches with a diameter greater than one-third of the diameter of the trunk at the point of attachment. Shorten the length of temporaries to two to four buds.

