

The Art and Science of Good Pruning

John Eisenhower, ISA Certified Arborist WE-5213A
Integrity Tree Service, Inc. 602-788-0005 www.itreeservice.com

Good pruning is both an art and a science. It combines artistic expression and research-based data to make proper pruning decisions. The results are safe, healthy and beautiful trees. But you say I'm not an artist! And I'm definitely not a scientist! Can I still get good results from my pruning? The aim of this article is to help answer that question.

A design precept states that *form follows function*. In simple terms this means that the way something looks results from the way something works. If we understand the function, we can better understand the form. Beautiful plants in nature have a shape or form that complements their natural growth habit and their proper function in the landscape. This principle applies to pruning trees. When trees are structurally sound with the help of good pruning practices, they also look their best...naturally! Get the science right and the art tends to take care of itself.

You might say it sounds too simple. How do you we get the science right? Well, let's talk about it.

First, getting the science right means pruning to complement a tree's natural growth habit. For example, mesquite trees have a weeping growth habit with lateral branches that grow downward, often to the ground. These branches are important for many reasons, one of which is to stabilize the trees during windstorms. Based on this information, if we leave more of these branches on the tree, it compliments the tree's natural function and the result is a stronger, more beautiful form. By accommodating nature instead of fighting against it, the tree withstands the next monsoon and lives to tell the story. Remember, genes always win. If we work with them, not against them, we take the first step in getting the science right.

Second, getting the science right means knowing proper pruning principles and techniques. There are a number of ways to acquire good pruning skills. One is by trial and error. From my experience, this process of learning involves a lot of error! You may also have been trained in the field under the supervision of another arborist. Or you may have taken a class on pruning. These are time-tested ways to gain understanding of trees and how to prune them. Whatever the source, this distilled wisdom of experts who have been there and done that is better than winging it on your own.

Other resources are the great books on pruning available today. These books can help fill in the gaps where you still might lack some understanding. A good starting place is the *ANSI A300 Pruning Standard*. This industry benchmark is a must read. It'll take you one hour to read and it's easy to understand. It puts the cookies on the bottom shelf! Get it, read it and then read the ISA's Best Management Practices publication titled *Tree Pruning*. This small companion to the A300 is a practical guide to help you implement the A300 standards. A more in-depth manual on tree pruning is Ed Gilman's *An Illustrated Guide to Pruning 2nd edition*. This book will help take you to the next level.

Speaking of the next level, here's some tips to help you improve your pruning. Remember, get the science right and the art takes care of itself.

1. Don't prune so much interior foliage. After removing deadwood and structural problems inside the canopy, leave the remaining interior branches. These small branches, including watersprouts, feed their host stems at their point of attachment. This helps develop branch taper necessary to support increasing end weight as the tree matures. Also, if crown reduction cuts are needed in the future, these secondary branches are extremely valuable. You've probably seen those over-thinned trees with excessive end weight on all the branches. They need crown reduction out on the ends but there's no interior foliage left to cut back to.
2. Concentrate pruning in the often-neglected outer third of the tree's crown. Excessive end weight is responsible for damage to many trees that have never been properly pruned in the outer portion of the canopy. Aim for an even distribution of foliage throughout the crown.
3. Remove or reduce codominant stems. Stems that challenge the main trunk or leader for dominance in the canopy should be removed or reduced in size. If the challenging stem is larger than ½ the diameter of the main stem, it may be better to reduce it instead of remove it. This process of reduction is called subordination. It allows the main stem to grow without competition from laterals.

As you gain a better understanding of your trees and their unique qualities, you'll find pruning is less a mystery and more a ministry! If knowledge is power, that power is pruning with confidence. So do some reading, take a class and then go have some fun in the trees. Happy pruning!