

An Introduction to Bonsai

By Charles Harder

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Good types of plants and trees for beginning bonsai:

Maple: Japanese or Trident (Acer Palmatum or Acer Buergerianum)

Juniper: there are many species with common names like: Hollywood, Shimpaku, Green mound

Elm: (Ulmus Parvifolia)

Crab Apple or even regular Apple: (Malus Sylvestrus or Malus Malus)

Cotoneaster: (Cotoneaster Horizontalis)

Hornbeam: (Carpinus Betulus)

Flowering Quince

Ornamental Pomegranate

Cedar: Blue Atlas or Deodar

**Tam Juniper and Italian Cypress do not make good bonsai and they will frustrate and disappoint you.*

Some Basic Bonsai Terms:

Bonsai: (Pronounced “Bone – Sigh”) this is actually a conjunction of two words: Bon (Pen) meaning basin or pot and: Sai, meaning to plant.

Jin: this is a dead branch or stub of a branch – achieved by removing the bark and or tearing or carving in such a way that it appears to have fallen off due to age or the elements.

Shari: (Or Sharimiki) This is where the bark of the trunk has been removed, sometimes even the entire top section of the tree – trees that have been struck by lightning, survived a fire or a branch has fallen off and ripped a section of the tree away – also achieved by a selective removing of the bark.

Dai: this is the platform or mat that your tree is displayed on.

Nebari: this is basically the exposed roots in your pot – most mature trees have a base of roots, that even if marginally visible, shows that the tree has a stable base – this is an important aspect to give the impression that the tree has been growing a long time.

Movement: This is where the art of bonsai comes in; the trunk needs to flow from side to side and also front to back (except in the case of a formal upright tree) and the branches need to give the impression that nature has molded them – remember to draw upon what nature has shown you and what feels right to you.

Front: Yes your tree will have a front – which will be the direction that faces the viewer – but remember that this is a 3 dimensional art and should be styled with that in mind.

\$@%^*#: When you are bending a wired branch and you hear it break.

What is bonsai?

Let's start with the word; pronounced "bone – sigh" this literally means: plant in a pot. There is no such thing as bonsai seeds; what they are selling in those packages are just various tree and plant seeds. What we use for bonsai is; any woody plant with well proportioned leaves or needles. Quite a few trees, bushes and even herbs have the potential to be a bonsai. The primary intent is to create a tree that is a miniature version of what you would see in nature or to represent a much larger tree.

To begin; let us examine the anatomy of a bonsai tree: starting with the roots, then the trunk, branches, foliage and finally the pot.

Roots:

Look at an older, well established tree; either the roots will spread out along the ground, before finally disappearing into the soil, or there will be a distinct flare near the base of the tree at ground level. Whether the roots bury into the ground or you see exposed roots, try to encourage a solid looking root base, this will provide the impression of a well established tree. If the roots of your bonsai are thin or unevenly spaced, one can provide the illusion of solidity, by placing larger stones, to give the impression of growing up through rocks, or you can mound up the soil a bit to provide the illusion of root taper.

Trunk:

With a bonsai tree, you typically want a lot of "movement" in the trunk. In essence what that means is that you want the trunk to move from side to side as well as front to back. If the trunk is straight, then it needs to be straight throughout the tree. If there is a slight curve, then maintain the curve and have the branches reflect the same. Always look for a trunk-line that has some interest. The other feature that helps with the esthetics is that the trunk should start out at its base with a flare and then gradually taper towards the apex or top of the tree. If your tree has an interesting bark fissured and craggy, that helps with the impression of age.

Avoid any trunk that has a bulge in the middle of the trunk or what is known as inverse taper – most typically found on grafted trees - it will take far to many years to try and correct this type of deformity.

Branches:

The first branch should start about one quarter to one third the way up the trunk, and this should also be your longest and thickest branch. Then gradually reduce the thickness and length of each branch as they go up the tree. The second branch should be on the opposite side of the tree. The third branch should be directed toward the rear of the tree and then continue the pattern as you proceed up the tree. If the trunk is angular or straight, then the branches should continue the pattern or style. If the trunk is curved, then you want your branches to curve as well. The tree will end up looking odd, if you have a straight trunk and angular or curvy branches.

Foliage:

Ideally the smaller leafed plants, will make more convincing bonsai, however, there are several types of plants and trees that by regular leaf pruning and care, can reduce the leaf size. A lot of junipers and pines can naturally work well with the tree style that you choose. Bear in mind, the leaf size when determining the size of the tree that you grow or train. It will help with the impression, if the foliage is in proportion to the size of your tree.

Pot:

The pot should compliment your tree, not only in color, but also size and shape. A good rule of thumb is; for the depth of your pot to be 2 time the diameter of the trunk and the width should be 1 to 1-1/2 times the height. But remember, these are only suggestions and the bottom line is that the pot compliments the tree.

Basic rules for bonsai (more like suggestions)

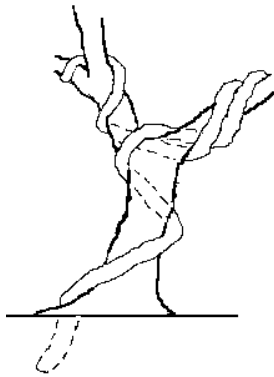
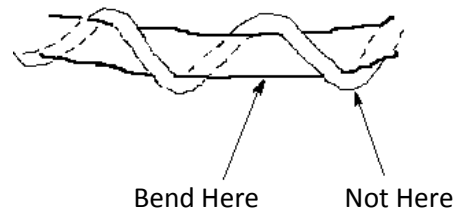
Position branches on the outside of the trunk or branch bends.



Avoid branches on the inside of bends.

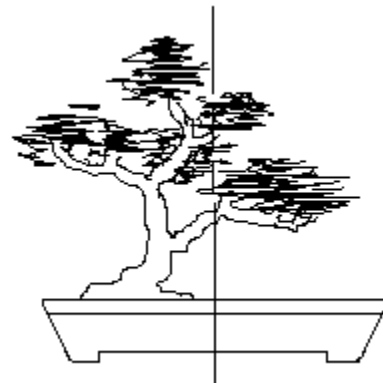
The purpose of wiring is to move a branch to a new position. If the position or shape is what you want, then there is no need to add wire.

When wiring; keep wraps evenly spaced, and snug but not so tight that it "bites" into the wood, and not so loose that it does not support the branch or trunk.

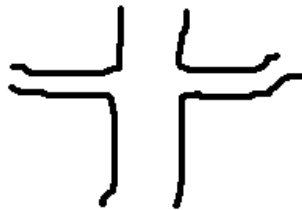
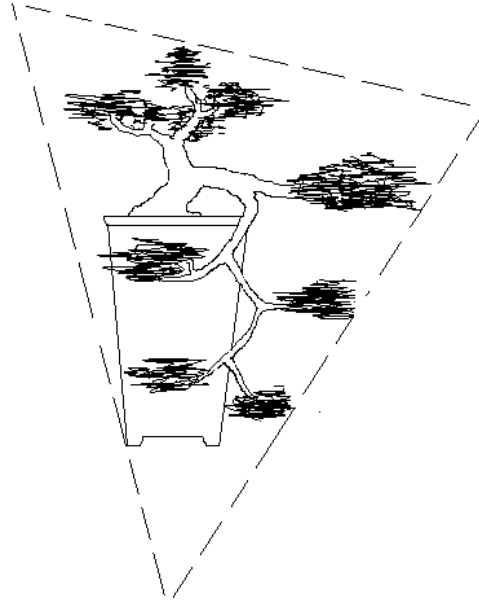


Anchor wire, either into the soil or around another branch.

Always offset tree position in pot (do not center tree)



Try to create a visual triangle between tree and pot.
For most styles, you will want the apex (top) of the tree
and the trunk to be on the same centerline.



Attempt to not have 2 or more branches
directly opposite each other (bar branch)

Try not to allow branches to cross over each other.



The first branch should be the thickest and longest branch. The second branch should be slightly shorter, and on the opposite side of the tree. The third branch toward the rear of tree and so forth up the trunk.

Generally the apex (top) of the tree should lean toward the viewer.

All of the above being said, these are all merely suggestions and there are no hard and fast rules for bonsai. If you achieve the look you want and are happy with the results, then how you have styled your tree is correct.

Bonsai is an art form, and you are the artist, if it is pleasing to you and you like the way it looks, then it is perfect!

The bonsai year:

Winter:

In early winter, there is still a little time for last minute wiring before the wood hardens off. But later this season, it becomes a time for reflection; a time to sharpen and clean and oil your tools, a time to clean out empty pots and locate new ones, a time to review your books and magazines, or a good time to sketch out ideas for some of your trees in training and play with the concept of restyling an existing tree by sketching it into a different style. This is not a time to fertilize, be patient and eagerly wait until the first appearance of leaf buds before resuming any feeding.

Okay, so it's raining, but is it enough for your tree? It is always better to check the moisture content of your trees, as winter winds can dry out your tree almost as fast as summer heat.

Cover or bring in delicate trees near the house or into the garage on nights you expect a hard frost.

Spring:

This is where the real fun begins; this is the time of year for vigorous growth, potting and styling. Early spring is a perfect time to begin any air layering you may want to do. This time of year you will be busy, styling trees, checking wire on your branches to make sure that the rapid growth does not swell beyond the wire – this will cause scarring on the trunk and branches if not removed in time that will take many years to heal avoiding the dreaded spiral scarring.

Water regularly and fertilize frequently – if you are using a common liquid style fertilizer use it at half strength from the listed instructions, but a bit more often.

Summer:

Keep an eye on your plants health and if needed, spray them to keep them pest free. Rotate each plant every week or two to maintain an even growth and fresh air, plus this allows you to check on the health and shape from all sides, especially if your tree is near a wall or fence.

Do not let your plants grow out of control, especially the faster growing trees like maples, junipers and elms. Keep new growth trimmed or pinched so you do not lose the shape you've spent all your time working on. Thin out any compact or dense growth to allow air and light to reach the interior of your tree.

Be aware of which trees need shade, partial sun or prefer full sun, but definitely pay attention to the moisture level in the soil.

Fall:

Here again is a second growing season, perhaps not as rapid or vigorous as in the spring time, but your trees have another opportunity to get out of control, you will begin to learn which trees you will need to spend more time with. Begin feeding with a high phosphate fertilizer for your flowering trees to build up reserves and buds for next spring. This is also a good fertilizer for your pines and junipers.

Wire:

The wire we use will either be aluminum wire with a copper coating or copper . Aluminum wire is easier to bend and is a little less expensive, but it will generally take a larger gauge wire to bend a branch than you would with the copper wire. If you are using copper wire, then I suggest that either you buy it annealed through a specialist store or you can go to your local electronics supply and purchase grounding wire and anneal it yourself. To anneal the wire place it into your fire place or into your barbeque after you are done cooking and allow the wire to get orange hot, then remove and allow to naturally cool down (do not quench the wire with water or a blast of cold air otherwise it will harden the wire as opposed to making it soft and easy to work with.

Sources for bonsai material:

The best places to look for plant materials are: local garden centers and nurseries. Look for the tree, plant or bush that no one else wants, due to it having a misshaped branch or overly long trunk, or even a section that has died out. There are also a number of bonsai nurseries where the material has already been started and typically the tree has already had some root pruning and even general branch placement, however, this material tends to be more costly than basic garden material. For pots, there are several locations that sell imported pots or you can purchase them online. Tools and wire also can be found locally or online.

Books:

I find a lot of bonsai books at thrift shops and discount used book stores, as well as the new books through online and local bookstores.

Some thoughts on watering:

- First: and the most obvious reason it provides water for your tree.
- Second; the water that flows through the soil carries nutrients to and through the roots your tree needs.
- Third: and least obvious, the flow of water washes the spent gasses and mineral salts that otherwise might build up in the soil which would harm the health of your tree and pulls in fresh air.

An old saying is to water three times:

Once for the soil

Once for the pot and

Once for the tree

Be aware of the water retention in each tree's soil; slight differences in the soil materials from each plant as well as the pot size and depth, location in your yard and the type of tree makes the; "one method fits all" style of watering difficult. Learn to customize your watering habits to conform to your individual trees needs.

By passing the water over your tree at least three times with your sprayer, you allow the water to soak into the soil and leave some extra water for giving the organic material time to hydrate and soak up the moisture fir the tree to absorb later. Remember that all parts of the plant absorb water to some degree, so do not water just the soil, around 30% of the moisture intake for a plant doesn't involve the root system at all. By washing off the foliage it helps the plant absorb moisture and keeps the dust and pollutants off of the plants leaves.

Soil:

The soil you chose for your tree will affect how the roots grow, and also impacts feeding and water absorption; it is where the other half of your tree lives, so this is your second biggest consideration in maintaining the health of your tree. The soil requirements of each individual tree will vary, but a good rule of thumb if you are just starting out is: 30% inorganic and 70% organic for deciduous trees and 70% inorganic and 30% organic for conifers and evergreen plants.

I joke that if you have a room of 10 bonsai enthusiasts, you will have 10 different recipes for the perfect bonsai soil.

If you are very new to the hobby and are not sure, then I would recommend you use a standard cactus potting mix for your bonsai soil, until you familiarize yourself with the soil needs of your various trees. The most important feature is that the soil be well draining so as not to smother the roots or allow mineral salts to build up in your pot.

One can always buy pre-made bonsai potting soil which has better draining properties than a garden center regular potting mix and generally does not have mixed in fertilizer. You can find this soil in specialist nurseries or sometimes even in your local nursery. This is probably the easiest and least time consuming when you are ready to pot up or re-pot your tree.

Eventually you will probably want to get around to making your own bonsai soil mix, which is not as hard as you may think. Organic materials would be sphagnum moss, loam, or peat and your inorganic materials would consist of: decomposed granite, horticultural sand, lava and pumice. Ideally you would pass all of your soil materials through a sieve to remove the super fine and the large particles providing an even size soil particle for your tree.

Notes on pests:

One should always be diligent of the traditional pests in the garden: aphids, caterpillars, snails and the like, which should be handled by physical removal or other spray or systemic methods, but also be cautious of squirrels, cats and dogs who like to dig or even uproot your tree to bury various objects. Try to place your tree up off the ground on a shelf or stand to reduce accessibility to these four legged friends.

Informal upright – Moyogi

Broom – Hokidachi

These are the forms that reflect the most natural of the tree styles. With the informal upright, the trunk will flow from side to side, front to back. The branches will project from the outside curve of each bend, reducing in size to the apex, which should lean slightly toward the viewer. With the broom style, the trunk starts out straight, then branches out with increasing branch structure to form a symmetrically curved top.

When selecting a plant for an informal upright, the important features are a solid root base and an interesting trunk line. The plant choices for this style can be virtually any needle or small leaved tree. And can range from a tree and pot small enough that would fit in the palm of your hand to over 4 feet tall and still give the impression of a mature tree. For the broom style, the common choices are, but not limited to: Elm, Oak, Zelkova, Box and Olive.

Find the front of your tree by rotating it around, if needed gently moving branches aside to view the trunk line. If you are using nursery stock, it sometimes helps to remove the tree from its pot. If the trunk needs more movement or bends a direction you do not want it to, then start wiring from the bottom of the tree, anchoring the wire into the soil, then out to the end that you have chosen for your apex. Remove extraneous branches as you are wiring. If you are unsure whether a branch should be removed; don't, you can always cut it off later. After wiring the trunk, wire the other main branches if needed and remove any branches on the inside of your bends.

Now that you have shaped the trunk, position your lower branch to one side, this should be your longest and thickest branch. The next branch, should be slightly shorter and on the opposite side. The third branch is generally positioned toward the rear of the tree and then staggering in a radial pattern around the tree until you reach the apex. You will want to avoid having a branch placed toward the front of the tree until the last couple of branches near the apex. At this time you can remove any branches you were unsure of earlier.

Look at trees in nature for your inspiration for this style. The broom style should remind you of fruit trees or one that you might find in a park, with a large solid straight trunk that branches out to form a canopy with either an umbrella shape, or slightly egg shaped crown. Try to avoid making your tree look like a lollipop.

Pots for these styles can be shallow; octagonal, square, round, rectangle or oval, however, a deeper pot will work just as well.

These are a fun style to create, because most plants will naturally take these forms and do not often require a lot of wiring to make a realistic tree. This is your living art, so have fun with it.

Cascade Style – Kengai

Semi-Cascade - HanKengai

This style should depict a tree that has grown on a cliff face or in another extreme situation, or you can imagine this tree leaning over a lazy river or stream. With this style, there will typically be only one major branch, although sometimes extra small ones that will reach down, with either a small apex or a jinned apex or perhaps there would not be anything other than the curve of the exposed trunk. The difference between a semi-cascade and a cascade is the degree that the trunk extends below the rim of the pot. The semi-cascade will end anywhere between the middle of the pot to just above the rim, the cascade generally will extend below the bottom edge of the pot.

When selecting a plant for the cascade style, the important aspects are a solid root base and at least one dominant branch, or an interesting trunk that is not too thick or brittle to bend. The popular choices for these styles are: cedars, pines, juniper, yew, cotoneaster, or deciduous trees such as; oak, maple, hornbeam, hawthorn or pomegranate. That should not exclude; azalea, pyracantha or even rosemary. Unless the tree has a strong vertical growth, most any tree should work for this style.

Once you have selected your tree, rotate it around until you find the most visually pleasing angle, tipping the tree on its side to give you an idea how deep you may want the branch or trunk to extend. Often times if you are using nursery stock, remove the tree from the pot. Begin wiring from the bottom of the tree out to the end that you have chosen removing extraneous branches. Remember that if you are unsure whether a branch should be removed, don't, you can always remove it later, but you can never glue it back on. After wiring the branch or trunk, gently begin bending it over, remember that it should "grow" from side to side as well as front to back, creating a lot of visual movement. Remember also to not have any branches on the inside of any bends you create.

Now that you have shaped the major branch or trunk into the cascade, wire and position the small apex, if your tree has one, and then remove any branches that you were unsure of earlier. Think about your tree; is it growing out of the side of a cliff? Is it struggling to survive after a landslide? Or is it gracefully growing over that peaceful stream, tickling the water with its leaves?

Pots for this style are usually deeper than the standard shallow pot, often taller than it is wide.

I want to again stress that there is no right or wrong way to shape your tree, if it looks good and pleases you then it is perfect.

Windswept style – Fukinagashii

This style should depict a tree that has grown on a mountain top, cliff face or other area that the constant prevailing winds have shaped its form. Typically its branches only grow in one direction, or perhaps there will be one branch that tries to grow counter to the wind, but the constant force of nature will bend it back around in the direction of the other branches.

A straight trunk can be used, but it will be more convincing if the trunk is slanted in the same direction as the rest of the branches. Also remember when styling this tree that it is under constant battering from the elements, so one does not want to have large pads of foliage and an excess of branches.

When selecting a plant for this style, think about the areas where this type of tree might grow, so the best choices for this style would be: junipers, pines, cedars, spruces or even some of the hardier deciduous trees, like hawthorn or even oak. These types are found naturally in the harsh environments that shape the larger versions of these trees, but are also somewhat resistant to the manipulations of heavy pruning and wiring to create the windswept style.

Another consideration when selecting your plant prior to creating your tree is to look at the root structure. Again this tree is struggling to stay rooted to the side of the cliff or mountain top; you are looking for either large side roots or at least one large side root that will help you determine the side opposite the lean of your tree. In nature, the roots would naturally develop heavier opposite the lean of the tree to anchor it better into the ground.

After you have selected your tree, unless you have a heavy side root as discussed, rotate your tree and lean it over to get an idea where the front or viewing angle of your tree will be. Then remove all or most of the branches on the side where your imagined wind is coming from.

Think about your tree being buffeted by the wind; did the branches break off? Were the branches ever able to even grow on that side? Position the remaining branches by wiring if needed.

With most bonsai, one does not want to have branches cross another branch, however, with this style it is acceptable to have a branch bent back and cross in front of the trunk. If the branches were broken off because of the wind, then here is where you can practice your jin or shari. If the branches were never allowed to grow, then cut the wind side of the branches flush with the trunk of your tree.

Pots for this style are usually shallow and are best with natural or rough finishes and often times can be planted in or on rocks to help with the impression of a tree growing in the wild.

Literati – Bunjin

This is perhaps one of the most fun styles to create, as it does not conform to the usual “rules” of bonsai. Deriving its name from the images painted by ancient Chinese and later Japanese artists, it is reminiscent of the elegant but simple brush strokes that imply a solitary tree standing alone on a mountain top or outcrop of rocks. One can see this style in nature, of old growth trees that have dropped most or all of their lower branches. The focal point of this form is the trunk, which should give the impression of freedom of growth, either with a sinuous twist or slightly slanting, so try to avoid a rigid straight trunk. Whatever your choice, the trunk should be full of “character”. Keep the branches to the upper third or less of the tree and they should bear just enough foliage to keep the tree healthy.

Typically this style is most effective with pines or junipers, but it will work equally well with deciduous trees such as elm, larch, crabapple, quince, bougainvillea or azalea. The pots most often will be round, square or hexagonal, or can even be natural bowl shapes; but keep it shallow as anything too large would overpower the elegant nature of your tree.

Begin by removing branches from the lower half of the tree, leave stubs of branches if you want to create a jin or shari, or cut the branches flush depending on the “look” you want to create. Once you get to the upper portion, start looking at the branch structure, using your hands to “visually” remove them from your tree prior to cutting them off. Then either by pruning or wiring, arrange the last few branches to finalize the image. This style allows the most in artistic expression, utilizing plant material that may not fall into any other category of style.

Have fun with this style, as there is no wrong way to decide on the branch arrangement or position. This is the ultimate form of bonsai expression and should reflect your personal view.

Forest or Group planting – Yose Uye

This too is a really fun style to create; making your own miniature little grove or forest of trees, arranging them in such a way as to give the impression of walking through a park or forest. This style is most effective with straight, upright trees, like: pines, maples, cedar, hornbeams, elms, larch boxwood or even crabapple or myrtle.

Begin by selecting several similar species of trees but of varying heights and thicknesses. You will want to use an odd number of trees up to about 11 or 13, beyond that number, it really does not matter how many you use. The largest of your trees should be placed to one side of the pot, near the front. The rest of your trees should be placed behind, ensuring non-symmetrical placement. The positioning should be creative, putting some on one side of the pot and a few on the other to provide a natural looking path between the trees. Or you can group them together like a miniature grove. Always strive to provide depth to your creation as this will most likely be viewed from several angles. Keep in mind that each tree should create a triangle and the group as a whole should create triangles when viewed from the top. These plantings also look really nice when accented with moss, or an interesting rock or small pile of rocks. You can use a lighter color sand or small grain rock to give the impression of a stream or path.

The pot for this style of bonsai should be low and very shallow, or there are some pots that are divided with one side for planting trees and a sealed side that can be filled with water to give the impression of a stream or pond. One can even add a small goldfish to this side and imagine having a small koi pond. Another type of “pot” is to plant your forest on a slab of rock, like slate or marble. If using a flat plate or slab, then mix peat with clay, to make a thick paste to create a barrier wall inset from the edge. This will provide a well in which you can plant your trees. With this type of planting care must be given when watering so as not to wash away the soil.

As you develop your forest, keep in mind the harmonious balance of placement, spacing, color and texture, generating an intriguing contrast that provides the scenery of a walk in the woods.

Landscape Planting - Saikei

In all parts of the world, there are mystical craggy mountains where the mists rise up from unknown depths, and trees cling precariously to the crevices. It is from mountains such as these, that the Chinese extracted their first "Penjing" (Pre- Japanese Bonsai). Trees that had survived the extremely harsh conditions, twisted with the winds, growing out to the light, and clinging to whatever surface was available.

We try to capture something of this magic in the small world of "Saikei". Saikei is the blending of art, horticulture, good commonsense gardening, coupled with tender loving care to create in miniature, a landscape, with all the features you would find in the great outdoors.

Distant horizons Peaceful scene with rocks and trees Miniature landscape

The advantages are many.

There is no heavy digging as in your garden. There is very limited weeding. It can be totally absorbing when you are creating or enjoying your Saikei, you are transported to another world. Just as an artist starts with a blank canvas & determines the composition, the balance, the perspective; to the artist, space is just as important as the features. So it is with Saikei. A single windswept tree, clinging to a cliff face with a rocky shoreline below, perhaps a little white sand where the rocks reach the sea of gravel.

You must remember to keep everything relative to size, and maintain perspective, that depth of vision.

Rocks form an important part of your landscape. Like wood, most rocks have a grain or veins, so it is important to follow the flow and keep the grain going in the same direction. Always use the same type of rocks for each landscape you create, and arrange them so as to emerge from the soil, not sit on top of it. Begin by placing one, two or three rocks. They can be anchored down by using epoxy and wires and then wiring them into the bottom of the pot, or mix up peat and clay to form a paste and use that mixture to position the rocks. Like other aspects of bonsai design, do not center the rocks or try to make them symmetrical.

After your rocks are placed, then arrange one or several trees; either on top of the rocks, growing out from between the rocks or placed such that the rocks imply a distant mountain or even a rocky hillside.

Your selection of trees in many ways is broader than for bonsai. While they do not necessarily require the style features to be as exacting as in bonsai, we still do need to select trees with small leaves or scales such as juniper, cypress, cotoneaster, azalea and I have seen very successful landscapes using; thyme, or even rosemary. After your trees are placed and the image is nearing completion, you can add mosses, ground cover or even low grasses to complete the scene.

Pots for this style are similar to group or forest plantings in looking best in shallow trays or slabs.

The care of your Saikei is the same as for Bonsai, adequate watering, fertilizing and trimming when necessary, and commonsense shelter on days of extreme weather conditions. Because it is not as rigid in its demands as Bonsai, Saikei is more relaxing and possibly more enjoyable, and the results from your efforts are almost immediate. You don't have to wait for a branch to grow or a scar to heal, only a little time for nature to soften the edges and green up the moss.