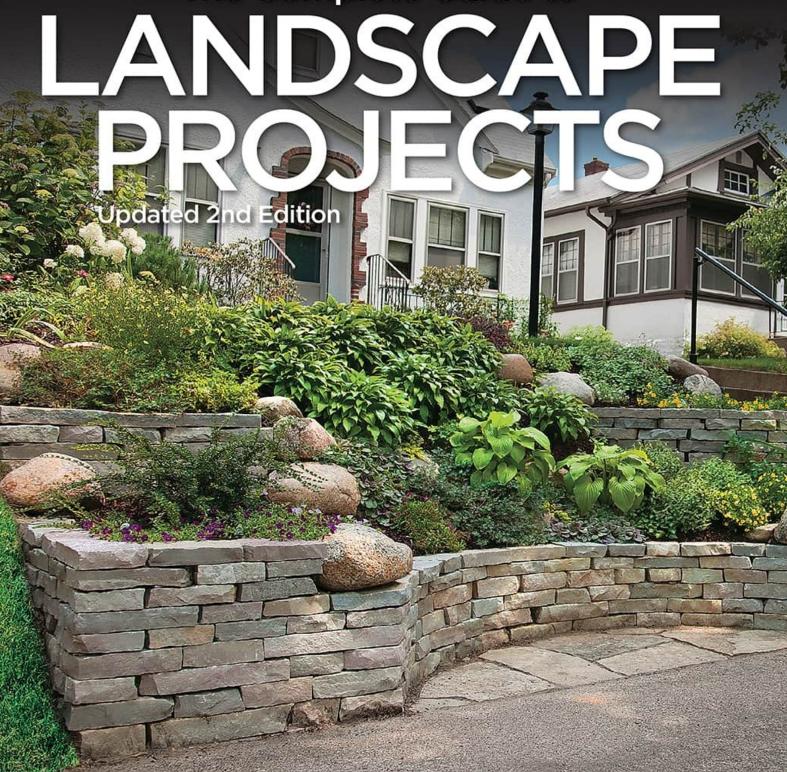
BLACK+DECKER

The Best DIY Series from the Brand You Trust

The Complete Guide to



Stonework, Plantings, Water Features, Carpentry, Fences



The Complete Guide to LANDSCAPE PROJECTS

Updated 2nd Edition

Stonework, Plantings, Water Features, Carpentry, Fences



MINNEAPOLIS, MINNESOTA



Contents

Introduction

LANDSCAPE DESIGN

Design Principles

Landscaping Styles

Landscaping by Yard Size

GREENSCAPES & GARDENS

Clearing Brush

Tree Removal

Pruning Trees

Planting Trees

Planting Windbreaks

Planting Annuals

Planting Perennials

Creating a New Garden Bed

Concrete Curb Edging

Mulching Beds

Rain Garden

Xeriscape

Zen Garden

PATHWAYS

Designing Paths & Walkways

Loose Rock Landscape Path

Steppingstone Landscape Path

Cast Concrete Steppers

Arroyo

Classic Garden Bridge

STONE WALLS

Designing Stone Walls

Stone Wall Solution

Stone Terrace Accent Wall

Interlocking Block Retaining Wall

Dry-stack Garden Wall

Mortared Garden Wall

Repairing Stone Walls

FENCES

Designing Fences: Slope

Setting Posts

Picket Fence

Post & Board Fence

Split Rail Fence

Wood Composite Fence

Vinyl Panel Fence

Ornamental Metal Fence

Bamboo Fence

WATER FEATURES

Designing Water Features

Hard-Shell Pond & Fountain

Small Gazing Pond

Waterfall & Pond

ENTERTAINMENT PROJECTS FOR LANDSCAPES

Backyard Fireplace

Backyard Fire Pit

Outdoor Brick Oven

Arbor Retreat

Metric Conversions

Resources

Photo Credits

Index

Introduction

andscape is a fairly broad word that, quite frankly, most homeowners don't use very often. We don't throw landscape barbecues on summer holidays. We don't fire up the riding lawn tractor and mow the landscape on Saturday mornings. In fact, if you ask most homeowners to show you the landscape, they'll probably direct you down the road to the nature preserve or disappear inside to find their favorite coffee table book from the horticultural society. So why is this book, which is intended for



homeowners who love DIY, called *Landscape Projects*? Why not *Backyard Projects* or *Yard & Garden Projects* or *Cool Things to Do with Your Lawn*?

The answer is largely one of convenience. *Yard* and *lawn* and *garden* are all terms we use routinely to refer to our surroundings, but no single one of them fully captures the totality of our outdoor living spaces. Landscapes include plantings, turf grass, old trees, and new shrubs. But they also include patios, fences, decks, and garden walls. Yours may feature a vegetable garden, statuary, a doghouse or two, or even a couple of old Fords on blocks. In short, if it is part of the visual environment outside the doors and windows of your home, it's part of your landscape. And, in practical terms, this means that your goal of

creating an awesome yard and garden is truly a matter of good landscaping.

In *Complete Guide to Landscape Projects* you'll find a wealth of projects that draw from just about every imaginable yard and garden element you can think of (with the possible exception of old Fords on blocks). Border and accent plantings, lawn care, building patios and pathways, creating arbors, sunscreens, and windscreens are all covered. So are some more unusual projects, such as making fire pits or wood-fired ovens. Along with the clear step-by-step instructions and photos you'll find for these and dozens of other projects, you'll also get just the right guidance you need to make decisions about which projects make sense for you. The result will be an outdoor living space that meets the practical needs of your family and looks exactly as wonderful as you'd like it to. And who knows—with some planning and careful work, you might be so pleased with the outcome that you really do invite your friends to stop over for a little landscape picnic.



home landscape is an outdoor living area that is developed element by element. It is a space that should be as well designed as any room in your house. As such, the act of landscaping your yard is to purposefully create your own environment, and often the key to this is to select a theme that follows certain principles. The theme can be wild or formal,



subtle or bold. It isn't critical that you follow your themes dogmatically, but from a design viewpoint you'll be glad you chose one.

In this chapter:

- Design Principles
- Landscaping Styles
- Landscaping by Yard Size

Design Principles

he principles of landscape design center around five basic elements: line, form, mass, texture, and color. The first three are the backbone. The last two are the skin and clothes that add visual richness and depth. Like everything else in a landscape design, lines should be intentional; curving lines are less formal, and guide the eye, providing a sense of motion and action. Straight lines and angles are a more formal approach. They are a great way to succinctly organize the landscape or replicate lines in the home's architecture or natural lines in the topography.

A mix of plant shapes, heights, and forms adds visual interest to any landscape. Most often, you'll use natural shapes to complement or contrast one another. You can, however, use repetitive plantings to create a pleasing rhythm within the landscape. Texture and color should be threads you run through the design, deliberately placed to complement or contrast other colors or textures.

That all may sound a bit fancy and academic, but it's not. It boils down to this—you build a successful landscape one piece at a time. Your theme guides your decisions, including path style, plants, surfaces, and all the other choices you make for the landscape. Theme even determines the best accents to finish your design—from water features to statuary, structures such as arbors and gates, and ornaments such as gazing balls or sundials. You'll see a few of these principles and ideas shown clearly on the following few pages.



Be up front. It's easy to forget the front yard when planning your landscape, but that's a mistake. The varied beds bracketing the front door of this house feature a profusion of flowers and shrubs. The planting is composed so that the mass increases closer to the house. This guides the eye up from the lawn, to the structure of the house, and provides a lovely, soft visual transition from the flat to the vertical.



Add night-lights. The landscape at night can be every bit as much a draw as it is during the day. Proper lighting is key, both for safety and to illuminate the charm of your design. The pool in this yard is incredibly alluring lit from within, while the fire pit is a fascinating focal point that fairly screams, "Sit and relax." Notice the open-grid design of the outdoor floor—it's a great treatment to blur the distinction between plant life and hardscape.



Make your fences fancy. Fences can be far more than simple privacy barriers. You can use fencing to partition off interior areas, as a way to create small, intimate areas within the larger landscape plan. You can also use fencing as it is in this yard, as a design element in and of itself. The simple, repetitive vertical lines of this fence create a continuity that ties together different areas in a rambling landscape. Think carefully about the style of any fence you build—it may be the perfect opportunity to accent your landscape.



Divide your space. Creating separate outdoor "rooms" is a wonderful technique for designing around a large open expanse, such as a lawn. Here, a hedge and trellis arbor offer a visual boundary that creates a sense of mystery of what lies on the other side. The best landscape designs draw a visitor through the landscape, and that's exactly what's happening here. The homeowner has used the open area of the lawn to frame an interesting focal point—a wheelbarrow planter.



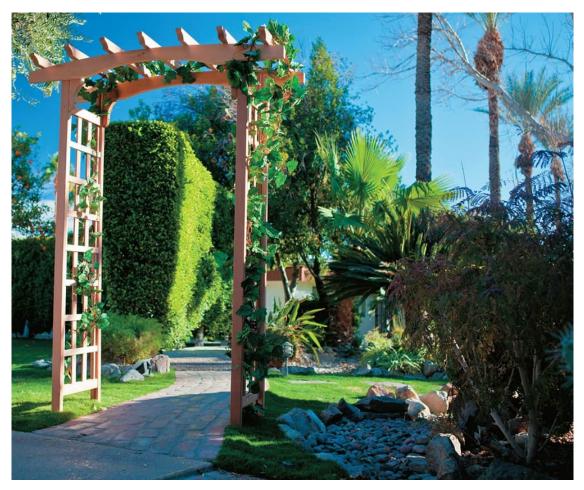
Double-down on romance. This is the traditional tiered "pineapple" fountain that suits many different styles of landscape or garden. The wide basin makes this a good choice for a bird garden because it doubles as a birdbath. The look is not ideal for informal gardens such as a country or cottage style, but it fits right in almost everywhere else. One of the great things about fountains like these is that you can use them as hidden-away surprise visuals, or as focal points in their own right, placed in the middle of a lawn, garden bed, or courtyard.



Introduce a water element. Water features are some of the most fascinating landscape elements. The koi pond in this large, wild landscape is accented with classic Eastern statuary. It's an informal, stylish look that is perfectly suited to the naturalistic surroundings, and livestock always bring color and fun into your landscape.



Mix materials to build visual interest. Effective, livable landscaping often entails creating different areas—different outdoor rooms—for different purposes. One side of this large yard has been dedicated to a sitting area defined by an open-spaced, square-cut stone patio with pebble infill. Bordered by groundcover and ornamental grasses, this area is as close to zero maintenance as you can get, and is also a drought-tolerant design.



Direct traffic. Use arbors, pergolas, archways, or gates as invitations, leading people where you want them to go in the landscape. Wood is an obvious choice for these types of structures because the material blends in well with the plant life in a lush landscape. A simple vine has been trained on this pergola with trellis side panels, softening the lines of the structure and further melding it into the surrounding landscape.



Try terracing. Slopes can be a big challenge for the home landscaper. There are lots of ways to deal with a slope, but one of the best and longest lasting techniques is to terrace the slope. This front yard features stacked timber retaining walls to create terraces filled with evergreens. It's a well-defined, easy solution that could successfully be applied to many different sloped sites. The solution is also fairly inexpensive—never a bad thing in a landscape design.



Freeform is fun. There are an amazing variety of pathway styles to choose from for your landscape. The steppingstones used in this setting are a simple-to-install option that can be arranged to accommodate just about any layout, such as following the shape of the lawn here. Steppingstones are excellent when used in or across an expanse of lawn, because mowing over them is a cinch. The look is informal, though, and you should be sure that it matches the design style you're trying to set.



Make room for art. Landscape sculpture can be the perfect way to put your fingertips on a design. Sculpture should be carefully chosen not only to suit the style of your landscape, but also to ensure that it survives the elements and ages well. A single sculpture is often more effective than a group of scattered collection throughout a garden or landscape. The abstract metal piece here perfectly complements the informal bed of trees and ornamental grasses in which it's placed. It will fit in just as well as it ages and acquires a lovely patina of rust.



Create an outdoor floor. Hardscaping—the use of hard surfaces in landscaping—offers great potential to get creative. Not only can you choose from a wealth of paving styles and materials, you can mix and match for dynamic effect. This mortar-set includes a formal linear field of bricks in various sizes and shapes, a thin border of flat black sliced pebbles, and an outer border of small, irregular stone pieces. It's enough to steal attention from any garden scene.

Landscaping Styles

ome yards are blank canvasses waiting to be painted. Your house may be a basic structure that doesn't urge you in any particular design direction, and the local plant life and terrain may not be particularly distinctive. In this case, the door is wide open for you to choose a landscape style that reflects your tastes, suits the layout of your yard, and nurtures the way you want to live in your outdoor room.

In other cases, the local environment and surroundings may provide very strong indicators of an appropriate landscape style. You'd be wise to listen to these cues. For instance, if your home is located in a desert region of a southwestern state, you'll probably want to develop your landscape design around certain plants and features common to the area, including succulents, water-conserving hardscape and groundcovers, and shade structures. A cottage garden would simply not fit and would always look like a sore thumb—just as a desert landscape would look wrong attached to a New England home.

The location of your home may allow for multiple design possibilities. A coastal home that isn't on the water, for example, could look great with a sand-strewn seaside landscape, a Mediterranean villa look, a cottage garden style, or even a formal design.

Start by looking at plants and outdoor structures in your area. Look beyond other yards to parks and botanical gardens that often present many different styles of landscaping. When you've narrowed in on a sense of the style that most appeals to you and would be most appropriate for your home and yard, begin refining your ideas by checking out the images on the following pages.



Echo your environment. It is often best if the landscape style takes its cues from the surrounding geography and climate. This is especially true when the environment and terrain are distinctive as with a seaside home, or the high chaparral shown here. The design of this large yard takes advantage of the bordering wide-open plain and mountain views by leaving the property undefined by a fence or row of trees. The native terrain is allowed to blend into the yard, and along with terraced patios, native plants are used sparsely, in keeping with the practical realities of the drought-prone region. An antique horse-drawn wagon is used as yard sculpture to reinforce the open-plains feel of the yard.

Landscaping Style: Modern Scenic



Repeat. Repeat. The trim, straight lines and spare aesthetic of a modern home begs for the same treatment in its landscape. The designer of this front yard has obliged, using simple, repetitive plantings featuring regimented rows of spiky foliage plants with plenty of space left between the plants. The beds are formed of the same geometric shapes that dominate the walkway and the house itself. The modern look has a bonus feature of a water-conserving, low-maintenance landscape.



Less may be more. Modern architecture is all about linear perspective and minimal ornamentation. Marrying a landscape to a modern house can be challenging, but not if you throw out the conventional wisdom of what a landscape should be. Here, a curving bed provides a modicum of visual relief from the hard lines that define both yard and house. The bed is planted with drought-tolerant, hot-weather species that require little in the way of upkeep. A lawn of hot-climate grass will go brown when dormant in the hottest part of the summer, but cut short it will still have a clean, sharp look in keeping with the rest of the design. When it comes to modern-style landscapes, less is often more.

Landscaping Style: Wooded Retreat

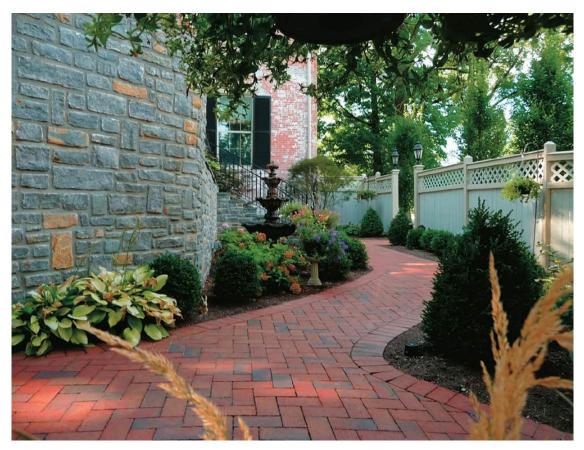


Show off your shade. Hardscaping such as the patio and garden wall shown here is the ideal way to define social and recreational areas within a wooded yard. The trees are left standing and undisturbed, and the use of natural stone fits right into the surroundings. Shade-loving annuals are excellent choices to bring seasonal color into the dappled landscape.



Keep it natural. Landscaping a wooded yard sometimes means bending to the will of the environment. The trick in working with a wooded landscape design is to balance the wholly natural appeal of a copse of trees with the variation the eye expects in a designed landscape.

Landscaping Style: The Formal Garden



Combine classic patterns. Distinctive architecture often sets a tone that the landscape can follow. Stone walls offer a stately look that is complemented by an entryway and side yard paved with a sophisticated brick pattern. A simple fence with latticework top panel and carriage lights provides a fitting boundary, while beds lined with trimmed ball-shaped shrubs and a three-tier fountain add a dignified polish to this design.



Prune a shrub or tree to add formality. Formal landscapes are defined by particular elements. Repetitive features such as the planters in this yard—and cultivated shapes like the topiary that occupy those planters—are both strong indicators of formal landscape style. Straight lines are another, established here in the weathered decking. If you're after a formal aesthetic, consider features such as these to define the look.

Landscaping Style: Magical Cottage Garden



You can't go wrong with roses. Cottage gardens are all about tumbles of flowering plants cascading across the landscape—especially roses. It's a joyously untidy, unconstrained look that seems haphazard and overgrown. In reality, cottage gardens require a good amount of maintenance to keep all the blooming plants healthy. You may fall in love with the romantic look, but unless you have a green thumb, think twice about trying to replicate this style in your own yard.



Train your plants well. A cottage-garden landscape style is best suited to small yards, and buildings that reinforce the style, such as Victorians, stone buildings, and of course, cottages. Training climbing plants—both roses and blooming vines—is a key part of the look. Lawn surfaces should be kept to a minimum and bordered by sprawling plants and blooming shrubs.

Landscaping Style: Grass-Covered Outdoor Room



Think theatrically. A big expanse of lawn is like a stage on which you can compose elements. Beds, trees, and other features can be unified into a coherent landscape design by wrapping lawn around them or vice versa. It's the thread that holds the look together. A peninsula patio such as the one in this yard becomes a platform for the audience—a place to not only unwind, but to enjoy the interplay of elements amid a sea of green.



Curved borders soften lines. The front yard lawn is a traditional landscaping element for the American home. But there's simply no need or excuse to settle for a boring green rectangle unaccompanied by any other signs of life. As this image clearly demonstrates, a variety of plantings creates a unique interplay between the solid green, flat surface and a mixture of plant colors and shapes. This front yard incorporates small trees, a trio of tall arbor vitae standing like guardians before the house, and a beautiful shrub bed with a scattering of mixed colors. Trees in containers add even more of an interest to the lawn's smooth, unvarying surface.

Landscaping Style: Zen Scene



Seek tranquility. Designers of Japanese gardens create drama from natural forms in the landscape. Typical of the style, slab steps seem to float up out of the earth in this garden, and a small evergreen has been manicured into tree form with cloud-shaped greenery. The idea behind each element is subtlety and restraint and a truly organic feel, as if nature itself had decided to lay a path or trim a tree.



Get centered. Decorative sculptures are often a part of Japanese-style landscapes. The design rarely incorporates more than one, and the sculpture is usually a culturally significant representation. This mini pagoda sculpture is typical, although seated Buddha sculptures are frequently used as well. The sculpture is usually nested among dense plantings and less often used as a centerpiece for a raked stone or sand bed.

Landscaping Style: The Country Retreat



Choose rustic furnishings. A pole arbor and matching bench provide a restful retreat in the middle of a foliage-dense country-style setting. Structures like arbors, trellises, planters, and fences are great ways to announce a style amid plantings that could cross over between several different looks. This structure with its overhead vine exclaims "country" through and through.



Capture chaos. Detailed screens, a pergola, and decking bring order to this landscape where the plants do not. They climb through fences and up posts, and

create an irregular border. This is a great way to use contrast to your advantage—attractive, ornate, and orderly structures offset by unruly plantings to provide stunning surroundings.

Landscaping by Yard Size

ard size affects landscape design in several ways. A large tree or significant water feature such as a reflecting pool may simply overwhelm a smaller yard. The styles you can choose will also be affected by yard size.

A small yard looks best when it incorporates one or two focal features, supported with plantings and surrounding background elements. Look for space-appropriate versions of popular structures and fixtures. Instead of a large centerpiece fountain, a wall fountain may be more in keeping with your yard size.

A medium-size yard has more possibilities. Some are given over to swimming pools, with the surrounding landscape design and plantings serving to make the pool look as natural as possible. A medium-size yard also allows you more flexibility in creating landscape mystery—a pathway winding out of sight into some concealed "secret garden" or restful refuge where you can hide away for a few contemplative moments.

A large yard is brimming with design potential. Large landscapes are often designed with sweeping open vistas serving the same role as empty "negative" space does in painting—to give rhythm and pacing to the overall design. Whether these spaces are hardscaped or grass, they usually entail less maintenance than a full-blown garden. Large yards also present the chance to include several different and distinct areas, such as a rose garden, lawn for recreation, and a pond. Use a pathway to unify disparate areas.

No matter how big your yard is, never let the size make you give up on good landscape design. Use a little creativity and the ideas shown here to find a beautiful solution for your yard, no matter what size it is.

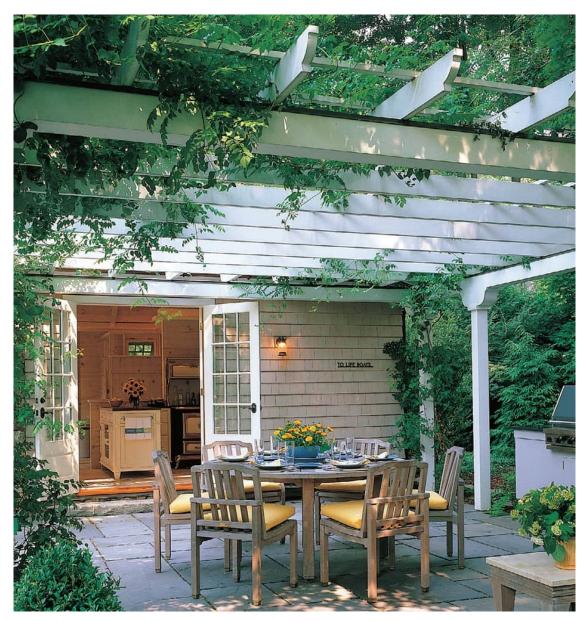


Celebrate diversity. Just because a yard is small doesn't mean it can't be diverse. And just because it's a front yard doesn't mean it has to follow some stereotypical formula for a lawn, spread out in front of foundation plantings. The designer of this front yard added a wedge-shaped bed with containers and a variety of plants. The shape itself adds a lot of visual interest, while a stone wall in front of the house creates the perception of visual depth.

Landscape Size: Small



Pack it in. Small-yard landscaping is all about maximizing potential. This eclectic design fits a lot into a tiny space. The centerpiece is a decorative brick seating circle with a path featuring bricks laid in a different direction. The design includes two shaped shrubs, a lovely detailed gate and fence, perennials and shade-loving groundcovers, and even a tomato plant in the middle of the front bed. The design leaves no lack of visual interest no matter where you're looking.



Build upward. Pergolas are wonderful structures for all yards, but they are an especially handy option if you're designing a small or medium-size landscape. Pergola designs are usually scalable, so that they can be altered to suit available dimensions. They clearly define a central area in the landscape (usually used for relaxation, socializing or both). They not only shade that area, allowing pleasantly mottled sunlight to come through, they can also support all manner of climbing plants—allowing you to go vertical with your garden greenery where space is at a premium.

Landscape Size: Medium



Divide but unify. You can make a medium-size landscape seem more expansive by breaking it into irregular shapes—something the eye always finds intriguing. The thread that holds this yard design together is a broad strip of brick edging. A long flower garden creates a stunning visual point of separation between the house and lush lawn surface.



Get a little negative. "Empty" space, like the arc of grass in this landscape, is an important element in medium landscapes. Not only is a space like this adaptable to many different activities, from cloud-gazing to a game of tag, it also serves the same role as negative or white space does in art; it is a visual pause that provides perspective for the more decorative elements of the raised beds and shrub border in the distance, and small plantings around the patio in the foreground.

Landscape Size: Large



Turn a negative into a positive. A large, steep yard may seem like a difficult site on which to design a compelling landscape. A little creative landscaping and some lumberjacking, however, can bring a slope to life. This home stands atop a small hill and the grass slope that ran down to a viewing deck below was hardly an inspired visual. The designer used the slope as a canvas on which to place an amazing assortment of shrubs, trees, and flowering plants. Looking up, the slope is viewed almost as a vertical surface, giving the plantings maximum exposure and visibility. A broad stone staircase and landings look less intimidating surrounded by plantings.



Greenscapes & Gardens

ypically, yard renovation begins with taking a hard look at what you have in your yard and then clearing away the old to make way for the new. To that end, we walk you through clearing land, including the basics on how to remove the nuisance trees, invasive plants, and thorny brush that stand in the way.

Sometimes, clearing amounts to one tall task: taking down a



tree. Perhaps removing the tree will open up a sightline and allow sunlight to brighten a gloomy corner of your yard. If the job qualifies as DIY, we show you how to fell a tree correctly. If your trees and shrubs just need judicious pruning to restore their ornamental shape, we'll show you how to do that too.

Once the subtraction is complete in your yard, it's time for addition. Planting trees is rewarding and benefits your property by providing shade, increasing property value and curb appeal, and blocking wind. You'll learn how to plant a balled-and-burlapped tree and how to create a windbreak.

Finally, we explain how to plant and care for annuals and perennials. You'll find out how to create landscaping and garden beds, how to use edging, and more. And to help you conserve water, we show you how to practice waterwise gardening.

In this chapter:

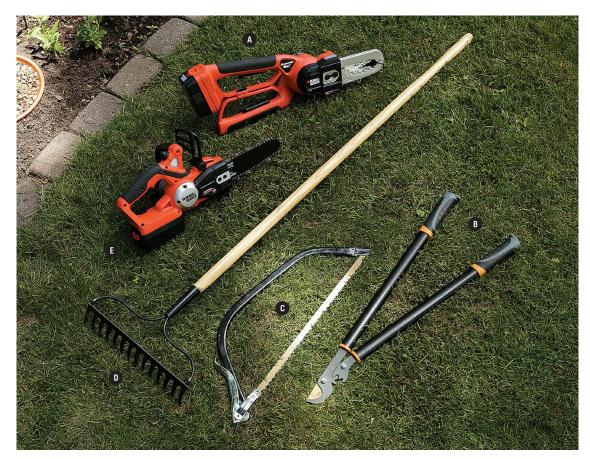
- Clearing Brush
- Tree Removal
- Pruning Trees
- Planting Trees
- Planting Windbreaks
- Planting Annuals
- Planting Perennials
- Creating a New Garden Bed
- Concrete Curb Edging
- Mulching Beds
- Rain Garden
- Xeriscape
- Zen Garden



Clearing Brush

uisance trees, invasive plants, and thorny groundcovers latch on to your land and form a vegetative barrier, greatly limiting the usefulness of a space. Before you can even think of the patio plan or garden plot you wish to place in that space, you'll need to clear the way. If the area is a sea of thorny brush or entirely wooded, you'll probably want to hire an excavator, logger, or someone with heavyduty bulldozing equipment to manage the job. But on suburban plots, brush can usually be cleared without the need for major machinery.

Dress for protection when taking on a brush-clearing job. You never know what mysteries and challenges reside on your property behind the masses of branches and bramble. Wear boots, long pants, gloves, long sleeves, and eye protection. Follow a logical workflow when clearing brush—generally, clean out the tripping hazards first so you can access the bigger targets more safely.



Cutting and removal tools used for brush clearing should be scaled for the job you're asking them to do. Simple hand tools can handle much of the work, but for bigger jobs having the right power tools is a tremendous worksaver. Tools shown here include: electric lopper (cordless) (A); loppers (B); bow saw (C); garden (bow) rake (D); chainsaw (cordless) (E).



TOOLS & MATERIALS

Pruners

Loppers

Bow saw

Weed cutter

Nonselective herbicide (optional)

Landscape fabric (optional)

Safety glasses

Gloves

Long sleeves and pants

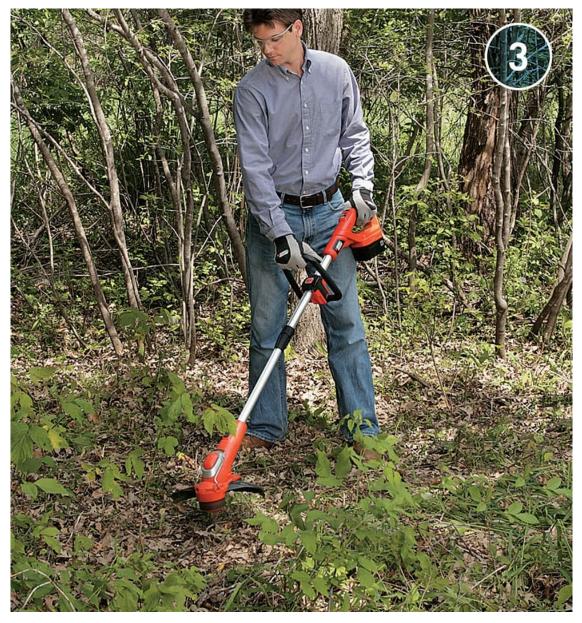
How to Clear Brush



Begin by using a tree pruner to cut woody brush that has a diameter of less than $1 \frac{1}{2}$ ". Cut the brush and/or small trees as close to the ground as possible, dragging brush out of the way and into a pile as you clear.



Next, clear out larger plants—brush and trees with a diameter of about 1 $^{1}/_{2}$ " to 3 $^{1}/_{2}$ ". Use a bow saw or chain saw to cut through the growth, and place the debris in a pile. Trees larger than 4" diameter should be left to grow or removed under the supervision of a professional.



Use a heavy-duty string trimmer or a swing-blade style weed cutter to cut tangled shoots, weeds, and remaining underbrush from the area.



Clear the cut debris and dispose of it immediately. Curbside pickup of yardwaste usually requires that sticks or branches be tied up into bundles no more than 3 ft. long. If you plan to install a hardscape surface, make sure the brush does not grow back by using a nonselective herbicide to kill off remaining shoots or laying landscape fabric.

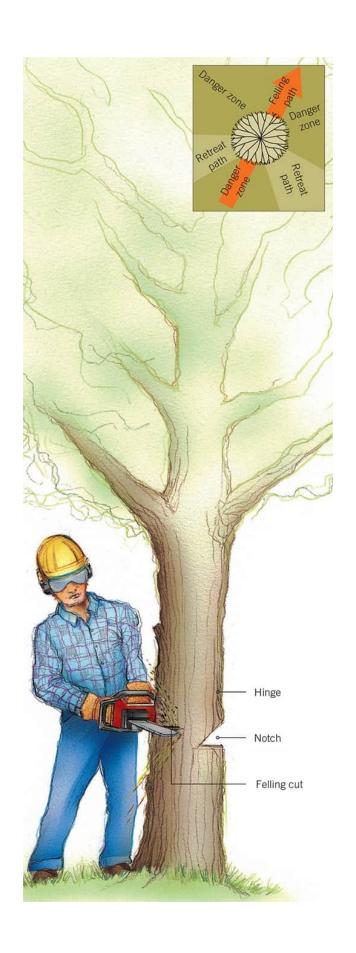
000000

Tree Removal

Removing trees is often a necessary part of shaping a landscape. Diseased or dead trees need to be removed before they become a nuisance and to maintain the appearance of your landscape. Or, you may simply need to clear the area for any of a variety of reasons, including making a construction site, allowing sunshine to a planting bed, or opening up a sightline.

If you need to remove a mature tree from your yard, the best option is to have a licensed tree contractor cut it down and remove the debris. If you are ambitious and careful, small trees with a trunk diameter of less than 6 inches can present an opportunity for DIY treecutting. The first step in removing a tree is determining where you want it to fall. This area is called the felling path; you'll also need to plan for two retreat paths. Retreat paths allow you to avoid a tree falling in the wrong direction. To guide the tree along a felling path, a series of cuts are made in the trunk. The first cut, called a notch, is made by removing a triangle-shaped section on the side of the tree facing the felling path. A felling cut is then made on the opposite side, forming a wide hinge that guides the fall of the tree.

Always follow manufacturer's safety precautions when operating a chainsaw. The following sequence outlines the steps professionals use to fell a tree and cut it into sections. Always wear protective clothing, including gloves, hardhat, safety glasses, and hearing protection when felling or trimming trees. And make certain no children or pets are in the area.





TOOLS & MATERIALS

Chainsaw

Hardhat

Safety glasses

Ear protection

Wedge

Hand maul

How to Fell a Tree



shallow uptrees with a trunk diameter NOTE: Hire of more tha



Use a chain saw to make a notch cut one-third of the way through the tree, approximately at waist level. Do not cut to the center of the trunk. Make a straight felling cut about 2" above the base of the notch cut, on the opposite side of the trunk. Leave a 3"-thick "hinge" at the center.



Drive a wedge into the felling cut. Push the feeling path to start its fall, and move into a retreat path to avoid possible injury.



Standing on the opposite side of the trunk from the branch, remove each branch by cutting from the top of the saw, until the branch separates from the tree. Adopt a balanced stance, grasp the handles firmly with both hands, and be cautious with the saw.



To cut the trunk into sections, cut down two-thirds of the way and roll the trunk over. Finish the cut from the top, cutting down until the section breaks away.



Pruning Trees

runing trees and shrubs can inspire new growth and prolong the life of the plant. It may surprise you that the entire plant benefits when you remove select portions. Regular pruning also discourages disease and improves the plant's overall appearance.

Timing and technique when pruning will, quite literally, mold the future of the shrub or tree. The trick to properly pruning trees and shrubs is to remember that less is more. Instances that warrant pruning include: pinching off the ends of plants (to maintain a bushy look); restoring an ornamental's shape with clean-up cuts; and removing rubbing tree branches, where abrasion is an open wound for disease to enter.

Light, corrective pruning means removing less than 10 percent of the tree or shrub canopy. This can be performed at any time during the year. However, when making more severe cuts, such as heading back, thinning, or rejuvenating, prune when plants are under the least amount of stress. That way, trees and shrubs will have time to heal successfully before the flowering and growing season. The best time to perform heavy pruning/trimming on most woody plants, flower trees, and shrubs is during late winter and early spring.



Regular pruning of trees and shrubs not only keeps the plants looking neat and tidy, it makes them healthier.



SHRUB PRUNING

Use a combination of these pruning methods to control shrub growth.

Pinching: The terminal of the shoot is the tip of the stem (green portion before it becomes woody). When you remove the terminal, the bud is lost, allowing lateral buds to grow. Pinching reduces the length of a shoot and promotes side (filler) growth. Pinch off especially long shoots from inside the shrub canopy.



Heading back: Increase the density of a shrub by cutting terminal shoots back to a healthy branch or bud. Cut inward or outward growing shoots to manipulate the shape. Choose your growth direction, then remove buds accordingly. The top bud should be located on the side of the branch that faces the direction you want it to grow. For example, an inward-facing bud will develop into a branch that reaches into the canopy. If you allow two opposite-facing buds to grow, the result is a weak, Y-shaped branch.

Thinning: This involves cutting branches off the parent stem, so target the oldest, tallest stems first. (You'll need to reach into the shrub canopy to accomplish this successfully.) Prune branches that are one-third the diameter of the parent stem. To visualize where to cut, imagine the Y junction, where a lateral branch meets the parent stem. Practice moderation when thinning.

Rejuvenating: Remove the oldest branches by leaving little but a stub near the ground. Young branches can also be cut back, as well as thin stems.

Shearing: Swipe a hedge trimmer over the top of a shrub to remove the terminal of most shoots; this will give you a formal topiary look. Shear throughout the summer to maintain the shape. Keep in mind, shearing is more aesthetic than beneficial: it forces growth on the exterior of the plant, which blocks light and oxygen from the center. You're left with a shell of a shrub—leaves on the outside, naked branches on the inside.

HEDGE TRIMMERS

An electric or gas-powered hedge trimmer isn't just easier to use, it offers much greater control than pruning shears for shaping hedges during the pruning process.



TREE PRUNING

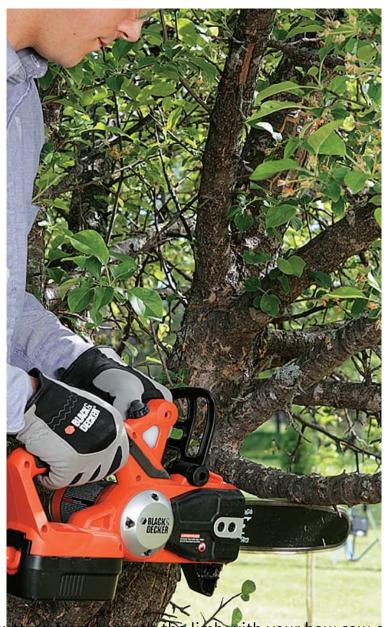
Always prune tree branches by cutting just outside the tree collar. You'll notice a circular closure around the wound as the tree begins to heal.

Thinning: These cuts reduce the tree canopy and allow wind to pass through branches. Thinning is a safety measure if you are concerned that a storm will damage a tree and surrounding property. Remove dead, broken, weak, and diseased branches. Cut them back to their point of origin or to laterals that are at least one-third the diameter of the branch you are removing. Be sure to remove less than 25 percent of foliage at one time. It's best to thin trees in the winter, when they are dormant.

Heading back: Reduce the size of your tree this way by cutting back lateral branches and then heading tips of laterals.

Reduction cut: Most common in younger trees, these cuts remove an offshoot branch back to a thicker branch attached to the tree trunk. Pictured below is a cut to remove a perpendicular branch.

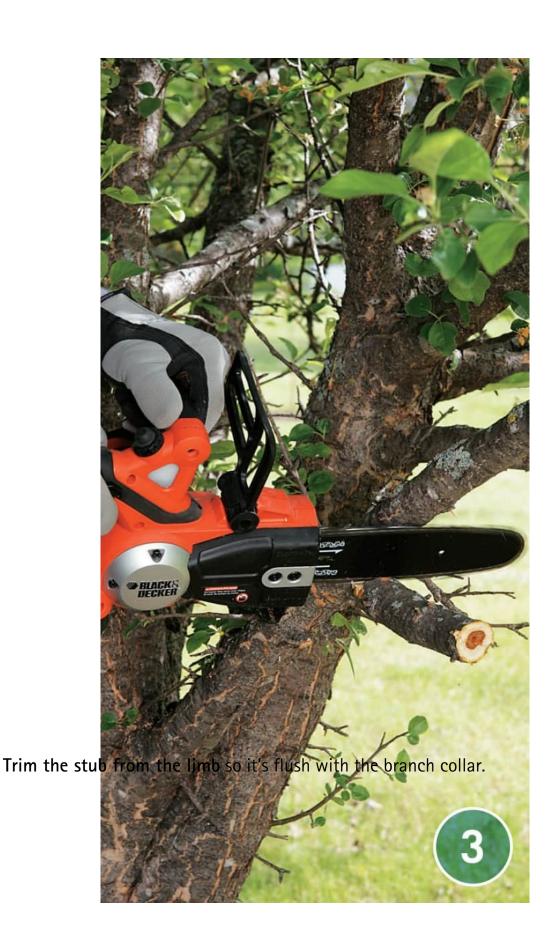
How to Prune a Tree



Start by undercutting from beneath the limb with your bow saw or chain saw.



Finish the cut from above. This keeps the bark from tearing when the limb breaks loose.





Planting Trees

rees and shrubs are structural elements that provide many benefits to any property. Aside from adding structural interest to a landscape, they work hard to provide shade, block wind, and form walls and ceilings of outdoor living areas. Whether your landscape is a blank canvas or you plan to add trees and shrubs to enhance what's already there, you'll want to take great care when selecting what type of tree you plant, and how you plant it.

A substantially sized tree might be your greatest investment in plant stock, which is more reason to be sure you give that tree a healthy start by planting it correctly. Timing and transportation are the first issues you'll consider. The best time to plant is in spring or fall, when the soil is usually at maximum moistness and the temperature is moderate enough to allow roots to establish. When you choose a tree or shrub, protect the branches, foliage, and roots from wind and sun damage during transport. When loading and unloading, lift by the container or rootball, not the trunk. You may decide to pay a nursery to deliver specimens if they are too large for you to manage, or if you are concerned about damaging them en route to your property.



Trees and shrubs are packaged three different ways for sale: with a bare root, container-grown, and balled-and-burlapped. Bare root specimens (left) are the most wallet-friendly, but you must plant them during the dormant season, before growing begins. Container-grown plants (center) are smaller and take years to achieve maturity, but you can plant them any time—preferably during spring or fall. Balled-and-burlapped specimens (right) are mature and immediately fill out a landscape. They are also the most expensive.



TOOLS & MATERIALS

Shovel

Garden hose

Utility knife

Long stake

Tree

Peat moss



How to Plant a Balled-and-Burlapped Tree



Use a garden hose to mark the outline for a hole that is at least two or three times the diameter of the rootball. If you are planting trees with shallow, spreading roots (such as most evergreens) rather than a deep taproot, make the hole wider. Dig no deeper than the height of the rootball.



Amend some of the removed soil with hydrated peat moss and return the mixture to build up the sides of the hole, creating a medium that is easy for surface roots to establish in. If necessary (meaning, you dug too deep) add and compact soil at the bottom of the hole so the top of the rootball will be slightly above grade when placed.



Place the tree in the hole so the top of rootball is slightly above grade and the branches are oriented in a pleasing manner. Cut back the twine and burlap from around the trunk and let it fall back into the hole. Burlap may be left in the hole—it will degrade quickly. Non-degradable rootball wrappings should be removed.



Backfill amended soil around the rootball until the soil mixture crowns the hole slightly. Compress the soil lightly with your hands. Create a shallow well around the edge of the fresh soil to help prevent water from running off. Water deeply initially and continue watering very frequently for several weeks. Staking the tree is wise, but make sure the stake is not damaging the roots.

Planting Windbreaks

ind saps heat from homes, forces snow into burdensome drifts, and can damage more tender plants in a landscape. To protect your outdoor living space, build an aesthetically pleasing wall—a "green" wall of tress and shrubs—that will cut the wind and keep those energy bills down. Windbreaks are commonly used in rural areas where sweeping acres of land are a runway for wind gusts. But even those on small, suburban lots will benefit from strategically placing plants to block the wind.

Essentially, windbreaks are plantings or screens that slow, direct, and block wind from protected areas. Natural windbreaks are comprised of shrubs, conifers, and deciduous trees. The keys to a successful windbreak are: height, width, density, and orientation. Height and width come with age. Density depends on the number of rows, type of foliage, and gaps. Ideally, a windbreak should be 60 to 80 percent dense. (No windbreak is 100 percent dense.) Orientation involves placing rows of plants at right angles to the wind. A rule of thumb is to plant a windbreak that is ten times longer than its greatest height. And keep in mind that wind changes direction, so you may need a multiple-leg windbreak.



A stand of fast-growing trees, like these aspens, will create an effective windbreak for your property just a few years after saplings are planted.

WINDBREAK BENEFITS

Windbreaks deliver multiple benefits to your property.

Energy conservation: reduce energy costs from 20 to 40 percent.

Snow control: single rows of shrubs function as snow fences.

Privacy: block a roadside view and protect animals from exposure to passers-by.

Noise control: muffle the sound of traffic if your pasture or home is near a road.

Aesthetic appeal: improve your landscape and increase the value of your property.

Erosion control: prevent dust from blowing; roots work against erosion.



TOOLS & MATERIALS

Shovel

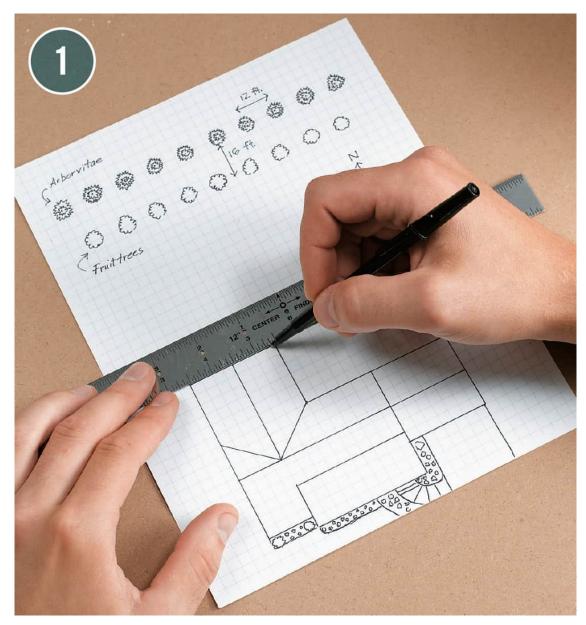
Garden hose

Utility knife

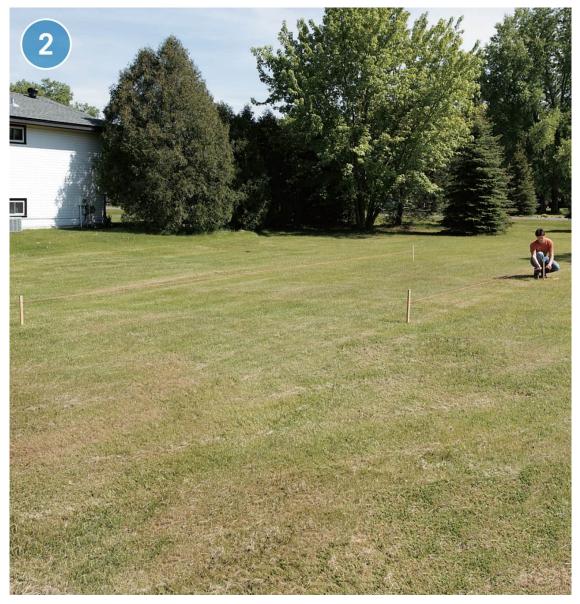
Trees

Soil amendments (as needed)





Before you pick up a shovel, draw a plan of your windbreak, taking into consideration the direction of the wind and location of nearby structures. Windbreaks can be straight lines of trees or curved formations. They may be several rows thick, or just a single row. If you only have room for one row, choose lush evergreens for the best density. Make a plan.



Once you decide on the best alignment of trees and shrubs, stake out reference lines for the rows. For a three-row windbreak, the inside row should be at least 75 ft. from buildings or structures, with the outside row 100 to 150 ft. away. Within this 25 to 75 ft. area, plant rows 16 to 20 ft. apart for shrubs and conifers and no closer than 14 ft. for deciduous trees. Within rows, space trees so their foliage can mature and eventually improve the density.



Dig holes for tree rootballs to the recommended depth (see page 37). Your plan should arrange short trees or shrubs upwind and taller trees downwind. If your windbreak borders your home, choose attractive plants for the inside row and buffer them with evergreens or dense shrubs in the second row. If you only have room for two rows of plants, be sure to stagger the specimens so there are no gaps.



Plant the trees in the formation created in your plan. Follow the tree and shrub planting techniques on page 37. Here, a row of dwarf fruit trees is being planted in front of a row of denser, taller evergreens (Techny Arborvitae).

000000

Planting Annuals

n annual is any plant that completes its life cycle in one growing season. The term "annual" is usually used to refer to long-blooming flowering plants, many of which hail from tropical areas. These flowers have the ability to bring instant gratification anywhere they are placed—from your doorstep to the mailbox at the end of the driveway. They are often used as exclamation points in a landscape.

Annuals come in almost any color imaginable, and most of their impact comes from their showy flowers. But this group of plants also offers a wide range of leaf colors, growth habits, and textures. You can use them in mixed plantings for a bouquet effect or in mass groupings where you want a large area of a single color. They make great container plants and are good anywhere you want an instant show. You will often see annuals named as part of a "series." Annuals that are part of a series all have similar growth characteristics but tend to have different flower colors.

Like vegetables, annuals can be classified as cool-season or warm-season plants based on their tolerance of cool air and soil temperatures. Cool-season annuals, which include pansies, snapdragons, and calendulas, do better in mild temperatures and can quickly deteriorate in hot weather. Warm-season annuals such as marigolds, zinnias, and impatiens grow and flower best in warm weather and do not tolerate any frost.



Planting a full hed of colorful annuals takes a bit of effort every spring, but the blossoms will delight voil for most or the growing season. Interspersing the annual flowers with shrubs or even the ennuals gives a nice contrast and sense of composition.

BUYING ANNUALS



When purchasing annuals at a garden center, look for healthy seedlings that have not overgrown their growing containers. Don't buy them too early. These young plants require daily watering and regular fertilizing, and the garden center or nursery is much better able to give this regular care than you are at home. Plants like these bluebells purchased in a 3-or 4-inch pot will look beautiful almost immediately; for a more economical project, buy smaller seedlings in flats of six or more plants.



Growing Annuals

Most annuals prefer well-drained soil that is rich in organic matter. Add a 2-to 4-inch layer of compost and mix it into the top 8-to 12-inches of soil the first year, adding a 1-to 2-inch layer of compost before planting in subsequent years. You can cover the bed with organic mulch, such as shredded bark, pine straw, or cocoa bean hulls, to reduce moisture evaporation and suppress weed growth. Just make sure the mulch doesn't overwhelm the small plants and adds to their beauty rather than detracting from it.

Some larger-seeded annuals are easy to start from direct seeding. These include cosmos, marigold, morning glory, nasturtium, sunflower, and zinnia. Smaller-seeded annuals such as petunia, impatiens, and lobelia are more difficult to sow and require longer growing times before they flower. They need to be started indoors or purchased as plants in spring in order to get flowers by midsummer.

Most warm-season annuals should be seeded indoors 6 to 8 weeks before the last spring frost, but some require 10 to 12 weeks or more. Tender annuals should not be planted outdoors until all danger of spring frost has passed. Even if they are not injured by low temperatures, they will not grow well until the soil warms. Coolseason annuals will tolerate lower temperatures, but even they don't like a hard frost. They can usually be planted outdoors about a week or two before the last expected spring frost date.

Plants started inside or purchased from a garden center need to be hardened off before planting them outdoors. Move the plants outside to a sheltered spot for a few hours, taking them back inside at night. Increase the outside time a little each day. After about a week, the plants should be tough enough to plant outdoors.



ANNUALS THAT AREN'T ANNUAL

There are some plants that are called "annuals" even though they technically live more than one year. Biennials, those plants that complete their life cycle in 2 years, are usually grouped with annuals. Hollyhocks and Canterbury bells, both technically biennials, will bloom their first year if set out early enough. Tender perennials such as geraniums and verbenas are also usually treated as annuals, even though they will survive from year to year in mild-winter climates. Because they are quick to bloom like true annuals, they are usually grown for one season and thrown out at the end. Lantana is an example of a woody shrub that is often grown as an annual in cold climates.



Foxglove (*Digitalis purpurea*) is a biennial, meaning it doesn't flower until its second summer after seeding. But it is often grouped with annuals in references and at nurseries.

Tips for Planting Annuals



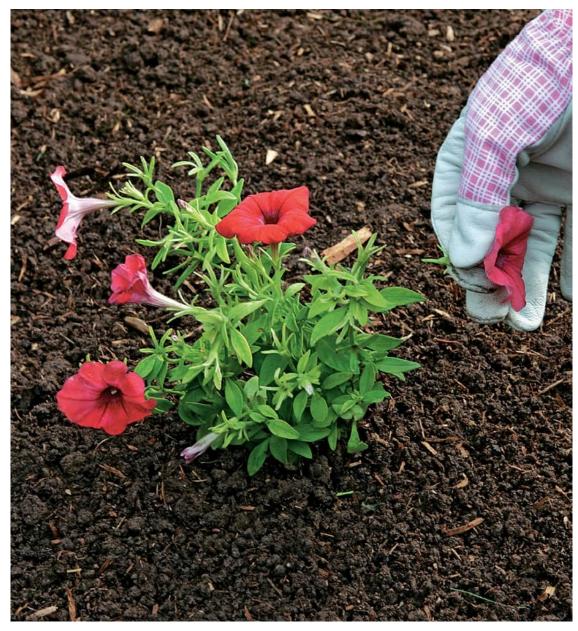
To remove annual seedlings, gently pop the young plants from their cell-packs by squeezing the bottoms and pushing up. Do not grab plants by their tender stems or leaves.



Plants growing in peat pots can be planted pot and all, but remove the upper edges of peat pots so that the pot will not act as a wick, pulling water away from the roots.



When planting annuals, plant at the same depth they were growing in the containers. If your growing medium is properly prepared, it will be loose enough that you can easily dig shallow planting holes with your fingers. For gallon pots, use a trowel, spade, or cultivator.



Pinch off any flowers or buds so the plant can focus its energy on getting its roots established rather than flowering, then water well.



Care of Annuals

Weeding. Weeding is probably the biggest maintenance chore with annuals; these plants do not compete well with weeds. Keep garden beds weed free by pulling regularly or covering the soil with organic mulch. Remember to keep the mulch away from the plants' stems.

Watering. Most annuals need at least 1 to 1 ½ inches of water per week from rain or irrigation. More may be needed during very hot weather and as the plants get larger. Water thoroughly and deeply to promote strong root growth. Allow the soil surface to dry before watering again. Soaker hoses and drip irrigation that apply water directly to the soil are best. Overhead irrigation destroys delicate blooms and can contribute to many fungi and molds. Watering is best when completed in the morning hours, so foliage has a chance to dry before cooler evening temperatures set in.

Feeding. Annuals put a lot of energy into blooming and require regular applications of nutrients. An easy way to provide annuals with the nutrients they need is to use a slow-release, or time-released, fertilizer at planting time. One application will slowly release nutrients with every watering. Although these fertilizers cost more than other types, they are usually worth the investment to save yourself from having to apply biweekly liquid fertilizer applications. The newer annuals require high soil fertility to do their best. Apply a slow-release fertilizer at planting time, mixing it in with the soil, and plan to follow up with biweekly applications of a water-soluble fertilizer.

Grooming. Because they are only around for a few months, most annuals don't require a lot of grooming. Some of the taller types may need staking or support systems of some type. Staking is best done at planting time to avoid damaging roots. Some annuals benefit from

pinching to promote bushiness. This list includes petunias and chrysanthemums. In general, pinching any plant that has become too leggy or too tall will make it bushier and more compact. One grooming task almost all annuals will benefit from is deadheading.

DEADHEADING

Deadheading is the process of removing spent flowers from annual plants to help stimulate prolonged and repeated blooming. Although tedious and completely optional, it is a good idea for a number of reasons. Removing spent flowers encourages rebloom, eliminates seed production and self-seeding, and makes your garden and landscape look a lot nicer. Cut back to the next set of leaves to encourage new buds to open.



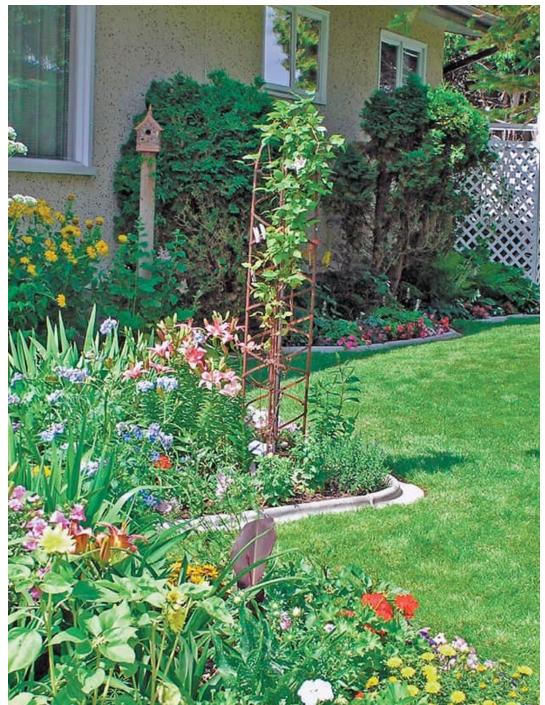
Pruning can invigorate some species. Petunias can be cut back in midsummer to within a few inches of the ground, fertilized and heavily watered, and they will be full and attractive again in just a few weeks.

Planting Perennials

plant that is perennial will survive more than one year, and technically can include trees, shrubs, grasses, bulbs, and even some vegetables. In gardening, the term "perennial" is usually used to describe herbaceous flowering plants that are grown specifically for their ornamental beauty. Typical perennials include daylilies, hostas, delphiniums, and yarrow.

Unlike annuals, perennials do not bloom throughout the growing season. Their bloom period can range anywhere from a week to a month or more. Many people shy away from perennials because of their higher initial cost. The extensive choices can also be overwhelming. But the fact that perennials live on from year to year provides several advantages. You will save the labor, time, and expense involved in replanting every year. Your garden will have continuity and a framework to work within. But the most appealing thing about using perennials is the astonishing array of colors, shapes, sizes, and textures available.

The tops of herbaceous perennials often die in the fall, but the roots survive the winter and send up new growth during the spring. Some herbaceous perennials grow a rosette of foliage (small leaves that grow along the base of the plant, similar to what biennials grow) after the stems die off.



For home landscaping, the term perennial is typically used to mean flowering plants that return anew every growing season after dying back at the end of the previous growing period.

Perentials can be divided into evergreen and deciduous. Perennials that keep their foliage all year-round are evergreen perennials.

Deciduous perennials lose their foliage during the fall or winter and

produce new top growth in spring.



Perennials are a very diverse and versatile group of plants. There are perennials that will thrive in every soil type, from full sun to full shade. This sunny border includes daylilies, chrysanthemums, and coneflowers.

Creating a Perennial Border

As versatile as perennials are, the spot where they really shine is in a perennial border. A perennial border is a wonderful way to bring beauty to your landscape and enjoy these fascinating plants throughout the year. The goal with a perennial border is to create a garden with interest from early spring through fall, and even into the winter. A border is usually more interesting if it contains a wide variety of heights, colors, and textures, but some beautiful borders can be created with all one-color plants or with a target peak bloom time, such as spring.

The trick to designing a beautiful perennial border is to select plants that bloom at different times so you have something blooming throughout the growing season. This may take you a few seasons to master, but it is quite gratifying when it all comes together. Select a mix of early, mid-, and late bloomers that match your soil and sunlight conditions.



With a little planning, your perennial border can have something going on from early spring through fall, as in this garden, which includes coneflower, rudbeckia,

astilbe, and violas.



Comprising common but beautiful perennial plants, the border garden seen here frames the relaxing lawn nicely. Included in the garden are iris, hosta, daylily, and daisy.



Planting Perennials

Most perennials are best planted in spring so they have an entire growing season to develop roots and become established before they have to face winter. Rainfall is also usually more abundant in spring. But container-grown plants can be planted almost any time during the growing season, as long as you can provide them with adequate moisture. If you plant in the heat of summer, you may need to provide some type of shading until the plants become established. Fall planting should be finished at least 6 weeks before hard-freezing weather occurs. Early spring is a good time to plant perennials in colder climates.

Plant spacing depends on each individual species and how long you want to wait for your garden to fill in, but generally about 12 inches is good for most herbaceous perennial plants. Obviously the more plants you can afford the sooner your garden will be more attractive and the fewer weed problems you will have. However, planting too densely can be a waste of money and effort.

Good soil preparation is extremely important for perennials, since they may be in place for many years. Dig the bed to a depth of 8 to 10 inches and work in at least 2 inches of organic matter before planting.



A cottage garden is a charming way to incorporate perennials into a landscape. It typically has a looser, more relaxed style and usually includes a lot of old-fashioned and fragrant flowers. It is a good style for people who like to have a lot of different plants.



Select a variety of perennials with varying bloom times, flower colors, and plant heights, as well as a few plants with interesting foliage to fill in.

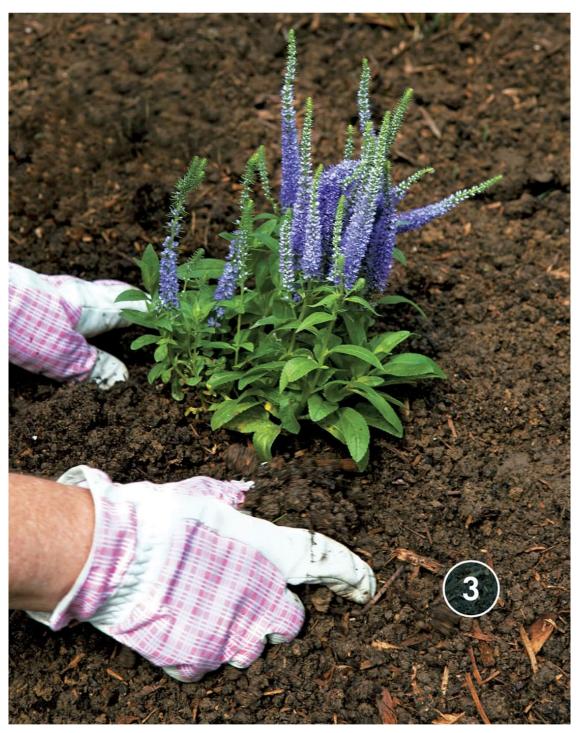




Before removing plants from their containers, place them in the prepared garden to see how they will look together. Experiment with different groupings until you find an arrangement that pleases you.



Dig a hole about twice as wide as each container and deep enough so the plant is just a little higher than it was in the container, to allow for soil settling. Dig holes one at a time to make it easier to maintain the arrangement.



Gently remove the plant from its container and pull apart any circling roots. Fill in with soil and tamp it around the plant.



Water the entire garden thoroughly to settle the soil around the roots. Make sure the plants get plenty of water until they are established.

TIP: Create a shallow well ringing around the base of the stem to trap water so it doesn't run off as quickly.



Creating a New Garden Bed

hances are there is already something growing where you want to install your new garden. And chances are it's not desirable vegetation. As tempting as it is, do not just jump right in and start planting, figuring it will be easy to just pull the weeds as you go. Proper site preparation is the key to success. Take the time to get rid of existing vegetation and improve the soil before you start putting plants in the ground. This preparation will pay significant dividends.



TOOLS & MATERIALS

Garden hose

Spade

Newspapers or cardboard (optional)

Spray herbicide (optional)

Soil amendments

Landscape edging

Landscape spikes

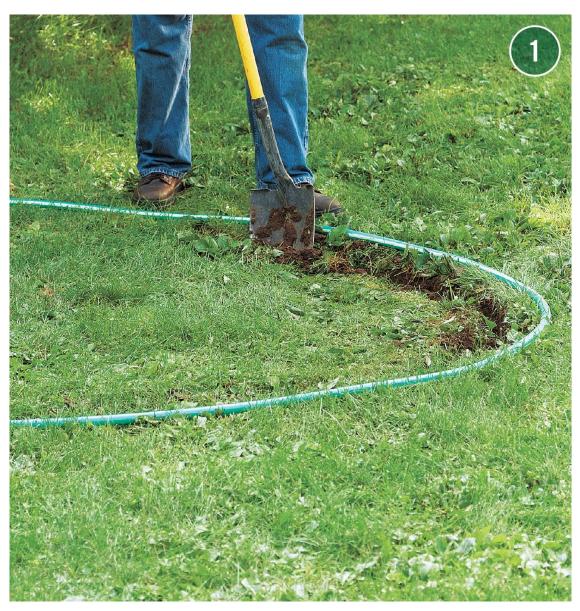
Maul

Garden rake

Mulch



How to Create a New Garden Bed



Use a sun-warmed garden hose to lay out your proposed garden, following the topography of the site. Most gardens look best with gentle curves rather than straight lines.



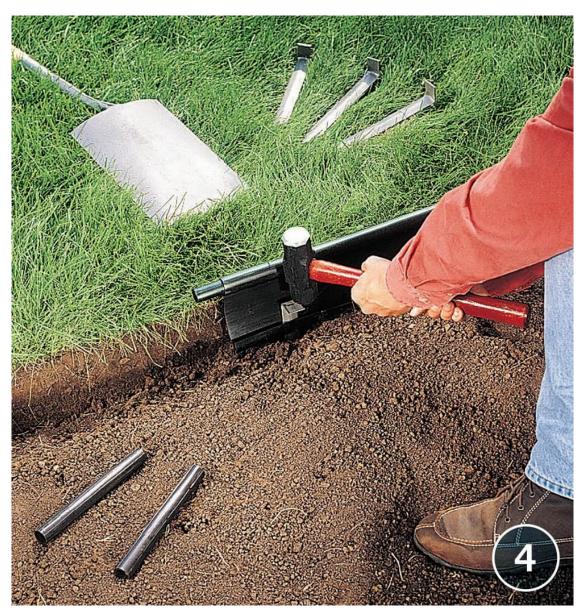
TIP: Smother the existing vegetation in the garden bed area with about 6" of organic mulch such as straw, shredded bark, or compost. Mow closely in the spring, then cover the area with a thick layer of newspaper or cardboard and then add the organic mulch. Keep the newspaper and mulch in place all summer. Replenish the mulch in fall, and by the next spring your garden should be ready for planting. This method works best on lawn areas rather than areas with lots of deep-rooted perennial weeds.



Remove existing vegetation. There are several ways to get rid of existing vegetation. Which way you choose depends on how much time you have and how you feel about using herbicides. The most natural way to create a new garden bed is to dig it up manually. Just be sure to get rid of all the existing plant roots. Even tiny pieces of tough perennial-weed roots can grow into big bad weeds in no time. A major disadvantage with this method is that you lose substantial amounts of topsoil. To avoid this, if you have the time, you can simply turn the sod over and allow it to decay on site. This will take at least one growing season.



Once the existing vegetation is dead or removed, turn the soil by hand or with a tiller, and add soil amendments. Do not use a tiller without killing all existing vegetation first—it may look like you've created a bare planting area, but all you've done is ground the roots into smaller pieces that will sprout into more plants than you started with. Even after multiple tillings spaced weeks apart, you'll be haunted by these root pieces.



Install landscape edging to keep lawn grasses from invading your garden. The best option is to install a barrier of some type. When it comes to barriers, it's worth paying more for a quality material. Metal edging buried 4" or more into the soil effectively keeps turf from sneaking in. If you go with black plastic edging, use contractor grade to avoid having to replace it in a few years.



Cover the new garden with mulch. Mulching your new garden will not only help keep the weeds from settling in, it will also help maintain soil moisture and prevent the soil from washing away until you can get the plants established. Cover the entire prepared garden bed with 2" to 3" of an organic mulch such as shredded bark, pine bark nuggets, cocoa bean hulls, or shredded leaves. Avoid using grass clippings; they tend to mat down and become smelly.



Concrete Curb Edging

oured concrete edging is perfect for curves and custom shapes, especially when you want a continuous border at a consistent height. Keeping the edging low to the ground (about 1 inch above grade) makes it work well as a mowing strip, in addition to a patio or walkway border. Use fiber-reinforced concrete mix, and cut control joints into the edging to help control cracking.



TOOLS & MATERIALS

Rope or garden hose

Excavation tools

Mason's string

Hand tamp

Maul

Circular saw

Drill

Concrete mixing tools

Margin trowel

Wood concrete float

Concrete edger

 1×1 wood stakes

1/4" hardboard

1" wood screws

Fiber-reinforced concrete

Acrylic concrete sealer

Eye and ear protection

Work gloves



Concrete edging draws a sleek, smooth line between surfaces in your yard and is especially effective for curving paths and walkways.



How to Install Concrete Curb Edging

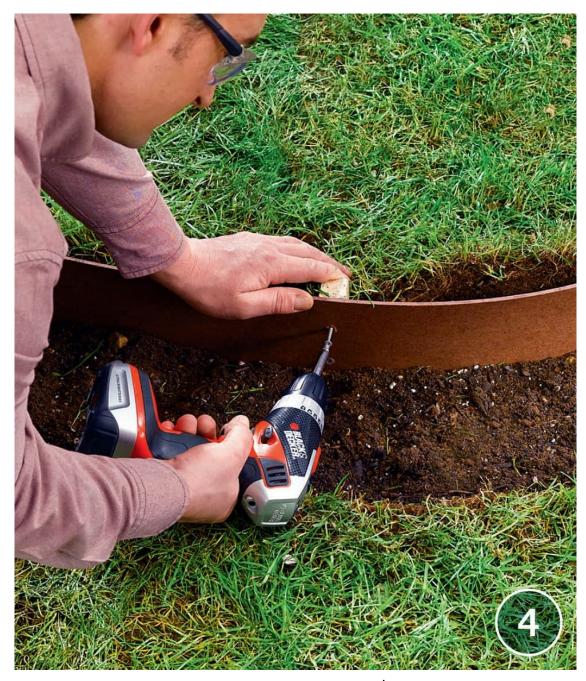


Lay out the contours of the edging using a rope or garden hose. For straight runs, use stakes and mason's string to mark the layout. Make the curb at least 5" wide.



Dig a trench between the layout lines 8" wide (or 3" wider than the finished curb width) at a depth that allows for a 4"-thick (minimum) curb at the desired height above grade. Compact the soil to form a flat, solid base.



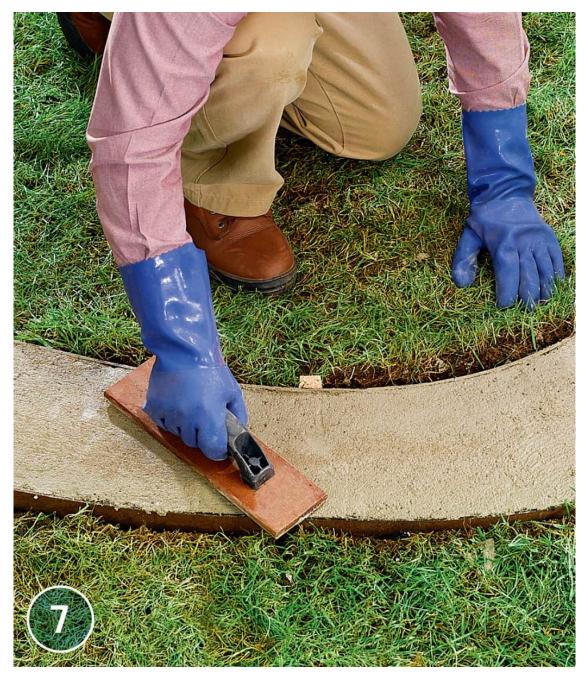


Build the form sides by fastening 4"-wide strips of 1/4" hardboard to the insides of the stakes using 1" wood screws. Bend the strips to follow the desired contours.



Add spacers inside the form to maintain a consistent width. Cut the spacers from 1×1 to fit snugly inside the form. Set the spacers along the bottom edges of the form at 3-ft. intervals.





Tool the concrete: once the bleed water disappears, smooth the surface with a wood float. Using a margin trowel, cut 1"-deep control joints across the width of the curb at 3-ft. intervals. Tool the side edges of the curb with an edger. Allow to cure. Seal the concrete, as directed, with an acrylic concrete sealer, and let it cure for 3 to 5 days before removing the form.

000000

Mulching Beds

ulch is the dressing on a landscape bed, but its benefits run deeper than surface appeal. Mulch protects plant and tree roots, prevents soil erosion, discourages weed growth, and helps the ground retain moisture. You can purchase a variety of mulches for different purposes. Synthetic mulches and stones are long-lasting, colorful, and resist erosion. They'll never break down. Organic mulches, such as compost and wood chips, enrich soil and double as "dressing" and healthy soil amendments.

No matter what type of mulch you choose, application technique is critical. If you spread it too thick it may become matted down and can trap too much moisture. Too thin, it can wash away to reveal bare spots. If it is unevenly applied, it will appear spotty.

Consider timing before you apply mulch. The best time to mulch is mid-to late-spring, after the ground warms up. If you apply mulch too soon, the ground will take longer to warm up and your plants will suffer for it. You may add more mulch during the summer to retain water, and in the winter to insulate soil. (As weather warms, lift some of the mulch to allow new growth to sprout.) Spring is prime mulching time.



Mulch comes in many varieties, but most is made from shredded wood and bark. Because it is an organic material, it breaks down and requires regular refreshing.



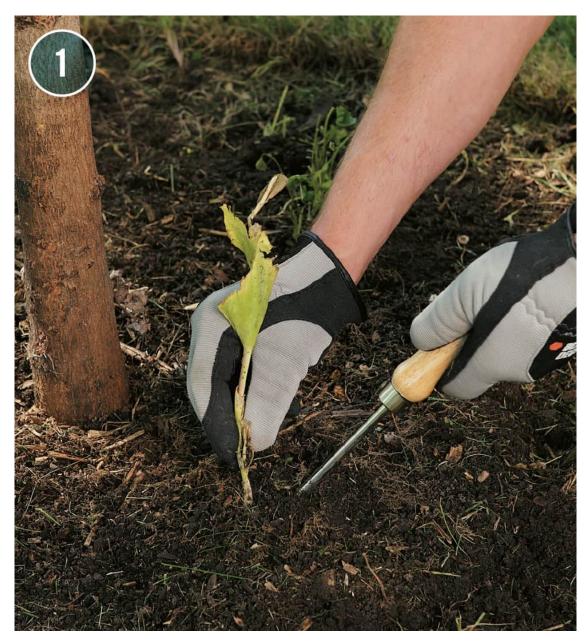
Organic:

- Compost
- Lawn clippings (free of chemicals)
- Leaves
- Wood chips or shavings
- Bark
- Manure

Synthetic and Stone:

- Recycled rubber mulch
- Stone or brick
- Landscape fabric





Remove weeds from the bed and water plants thoroughly before applying mulch. For ornamental planting beds it often is a good idea to lay strips of landscape fabric over the soil before mulching.



OPTION: Help contain the mulch in a confined area by installing flexible landscape edging.



Working in sections, scoop a pile of material from the load (wheelbarrow or bag) and place the piles around the landscape bed.



Spread mulch material to a uniform 1" thickness to start. Do not allow mulch to touch tree trunks or stems of woody ornamentals. Compost can double as mulch and a soil amendment that provides soil with nutrients. If you don't make your own compost, you can purchase all-natural products such as Sweet Peet.



Rain Garden

rain garden collects and filters water runoff, which prevents flooding and protects the environment from pollutants carried by urban stormwater. Rain gardens provide a valuable habitat for birds and wildlife, and these purposeful landscape features also enhance the appearance of your yard. In fact, when a rain garden is installed and planted properly, it looks like any other landscape bed on a property. (There are no ponds or puddles involved.) The difference is, a rain garden can allow about 30 percent more water to soak into the ground than a conventional lawn.

Though a rain garden may seem like a small environmental contribution toward a mammoth effort to clean up our water supply and preserve aquifers, collectively they can produce significant community benefits. For instance, if homeowners in a subdivision each decide to build a rain garden, the neighborhood could avoid installing an unsightly retention pond to collect stormwater runoff. So you see, the little steps you take at home can make a big difference.

Most of the work of building a rain garden is planning and digging. If you recruit some helpers for the manual labor, you can easily accomplish this project in a weekend. As for the planning, give yourself good time to establish a well-thought-out design that considers the variables mentioned here. And as always, before breaking ground, you should contact your local utility company or digging hotline to be sure your site is safe.





TOOLS & MATERIALS

Shovels

Rakes

Trowels

Carpenter's level

Small backhoe (optional)

Tape measure

Wood stakes, at least 2 ft. long

String

6 ft. 2×4 board (optional)



BEFORE YOU DIG

Determine the best place for your rain garden by answering the following questions:

- Where does water stand after a heavy rain?
- What is the water source? (drainpipe, runoff from a patio or other flat surface, etc.)
- What direction does water move on your property?
- Where could water potentially enter and exit a rain garden?
- Where could a rain garden be placed to catch water from its source before it flows to the lowest point on the property?
- Do you need more than one rain garden?

00000

Preparing the Land

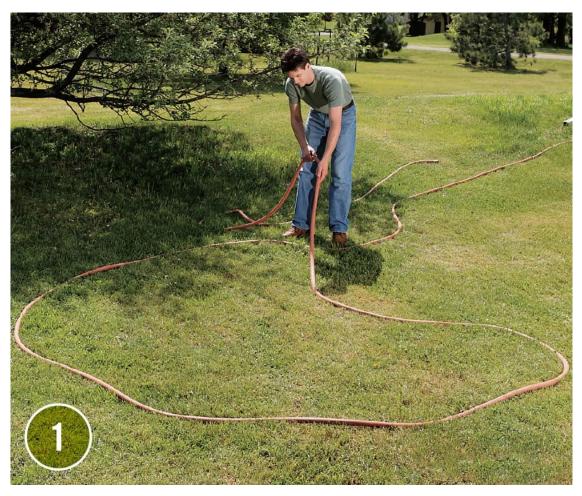
Soil is a key factor in the success of your rain garden because it acts as a sponge to soak up water that would otherwise run off and contribute to flooding, or cause puddling in a landscape. Soil is either sandy, silty, or clay based, so check your yard to determine what category describes your property. Sandy soil is ideal for drainage, while clay soils are sticky and clumpy. Water doesn't easily penetrate thick, compacted clay soils, so these soils need to be amended to aerate the soil body and give it a porous texture that's more welcoming to water runoff. Silty soils are smooth but not sticky and absorb water relatively well, though they also require amending. Really, no soil is perfect, so you can plan on boosting its rain garden potential with soil amendments. The ideal soil amendment is comprised of: washed sharp sand (50 percent); double-shredded hardwood mulch (15 percent); topsoil (30 percent); and peat moss (5 percent). Compost can be substituted for peat moss.

While planning your rain garden, give careful consideration to its position, depth, and shape. Build it at least 10 feet from the house, and not directly over a septic system. Avoid wet patches where infiltration is low. Shoot for areas with full or partial sun that will help dry up the land, and stay away from large trees. The flatter the ground, the better. Ideally, the slope should be less than a 12 percent grade.

Residential rain gardens can range from 100 to 300 square feet in size, and they can be much smaller, though you will have less of an opportunity to embellish the garden with a variety of plants. Rain gardens function well when shaped like a crescent, kidney, or teardrop. The slope of the area where you're installing the rain garden will determine how deep you need to dig. Ideally, dig 4 to 8 inches deep. If the garden is too shallow, you'll need more square footage to capture the water runoff, or risk overflow. If the garden is too deep, water may collect and look like a pond. That's not the goal.

Finally, as you consider the ideal spot for your rain garden—and you may find that you need more than one—think about areas of your yard that you want to enhance with landscaping. Rain gardens are aesthetically pleasing, and you'll want to enjoy all the hard work you put into preparing the land and planting annuals and perennials.





Choose a site, size, and shape for the rain garden, following the design standards outlined on the previous two pages. Use rope or a hose to outline the rain garden excavation area. Avoid trees and be sure to stay at least 10 ft. away from permanent structures. Try to choose one of the recommended shapes: crescent, kidney, or teardrop.



Dig around the perimeter of the rain garden and then excavate the central area to a depth of 4" to 8". Heap excavated soil around the garden edges to create a berm on the three sides that are not at the entry point. This allows the rain garden to hold water in during a storm.



Dig and fill sections of the rain garden that are lower, working to create a level foundation. Tamp the top of the berm so it will stand up to water flow. The berm eventually can be planted with grasses or covered with mulch.



Level the center of the rain garden and check with a long board with a carpenter's level on top. Fill in low areas with soil and dig out high areas. Move the board to different places to check the entire garden for level.

NOTE: If the terrain demands, a slope of up to 12 percent is okay. Then, rake the soil smooth.



Plant specimens that are native to your region and have a well-established root system. Contact a local university extension or nursery to learn which plants can survive in a saturated environment (inside the rain garden). Group together bunches of three to seven plants of like variety for visual impact. Mix plants of different heights, shapes, and textures to give the garden dimension. Mix sedges, rushes, and native grasses with flowering varieties. The plants and soil cleanse stormwater that runs into the garden, leaving pure water to soak slowly back into the earth.



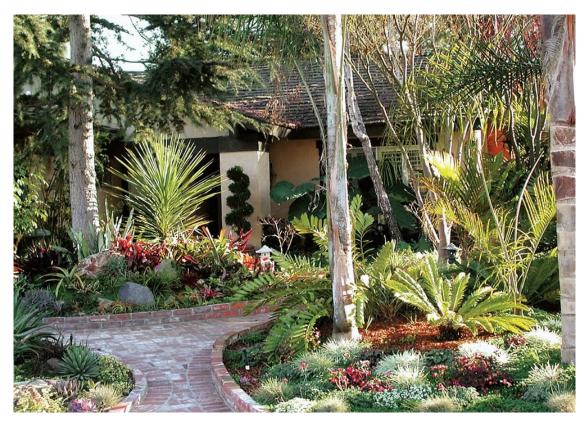
Apply double-shredded mulch over the bed, avoiding crowns of new transplants. Mulching is not necessary after the second growing season. Complement the design with natural stone, a garden bench with a path leading to it, or an ornamental fence or garden wall. Water a newly established rain garden during drought times—as a general rule, plants need 1" of water per week. After plants are established, you should not have to water the garden. Maintenance requirements include minor weeding and cutting back dead or unruly plant material annually.



Xeriscape

eriscaping, in a nutshell, is waterwise gardening. It is a form of landscaping using drought-tolerant plants and grasses. How a property is designed, planted, and maintained can drastically reduce water usage if xeriscape is put into practice. Some think that xeriscaping will become a new standard in gardening as water becomes a more precious commodity and as homeowners' concern for the environment elevates.

Several misconceptions about xeriscaping still exist. Many people associate it with desert cactus and dirt, sparsely placed succulents and rocks. They are convinced that *turf* is a four-letter word and grass is far too thirsty for xeriscaping. This is not true. You can certainly include grass in a xeriscape plan, but the key is to incorporate turf where it makes the most sense: children's play areas or front yards protected from foot traffic. Also, your choice of plants expands far beyond prickly cactus. The plant list, depending on where you live, is long and varied.



Xeriscaping is associated with sand, cacti, and arid climates, but the basic idea of planting flora that withstands dry conditions and makes few demands on water resources is a valid goal in any area.



TOOLS & MATERIALS

Basic tools Fill

000000

The Seven Principles of Xeriscape

Keep in mind these foundational principles of xeriscape as you plan a landscape design. First begin by finding out what the annual rainfall is in your area. What time of year does it usually rain? Answering these questions will help guide plant selection. Now look at the mircoenvironment: your property. Where are there spots of sun and shade? Are there places where water naturally collects and the ground is boggy? What about dry spots where plant life can't survive? Where are trees, structures (your home), patios, walkways, and play areas placed? Sketch your property and figure these variables into your xeriscape design.

Also, carefully study these seven principles and work them into your plan.

- **1. Water conservation:** Group plants with similar watering needs together for the most efficient water use. Incorporate larger plantings that provide natural heating and cooling opportunities for adjacent buildings. If erosion is a problem, build terraces to control water runoff. Before making any decision, ask yourself: how will this impact water consumption?
- **2. Soil improvement:** By increasing organic matter in your soil and keeping it well aerated, you provide a hardy growing environment for plants, reducing the need for excess watering. Aim for soil that drains well and maintains moisture effectively. Find out your soil pH level by sending a sample away to a university extension or purchasing a home kit. This way, you can properly amend soil that is too acidic or alkaline.
- **3. Limited turf areas:** Grass isn't a no-no, but planting green acres with no purpose is a waste. The typical American lawn is not water-friendly—just think how many people struggle to keep their lawns green during hot summers. If you choose turf, ask a nursery for water-saving species adapted to your area.

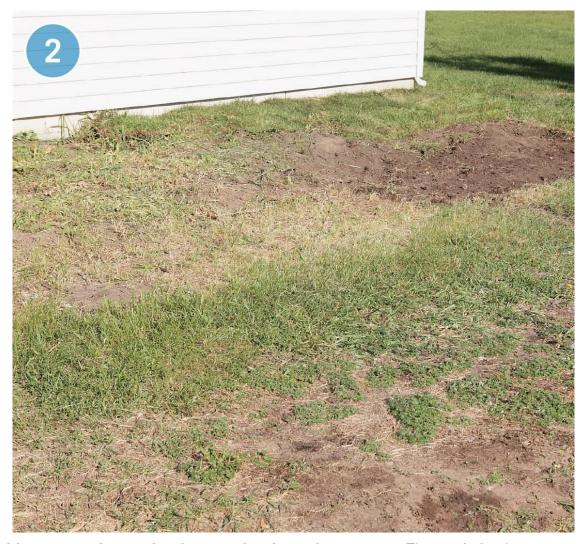
- **4. Appropriate plants:** Native plants take less work and less water to thrive. In general, drought-resistant plants have leaves that are small, thick, glossy, silver-gray, or fuzzy. These attributes help plants retain water. As a rule, hot, dry areas with south and west exposure like drought-tolerant plants; while north-and east-facing slopes and walls provide moisture for plants that need a drink more regularly. Always consider a plant's water requirements and place those with similar needs together.
- **5. Mulch:** Soil maintains moisture more effectively when its surface is covered with mulch such as leaves, coarse compost, pine needles, wood chips, bark, or gravel. Mulch will prevent weed growth and reduce watering needs when it is spread 3 inches thick.
- **6. Smart irrigation:** If you must irrigate, use soaker hoses or drip irrigation (see page 43). These systems deposit water directly at plants' roots, minimizing runoff and waste. The best time to water is early morning.
- **7. Maintenance:** Sorry, there's no such thing as a no-maintenance lawn. But you can drastically cut your outdoor labor hours with xeriscape. Just stick to these principles and consider these additional tips: 1) plant windbreaks to keep soil from drying out (see page 38); 2) if possible, install mature plants that require less water than young ones; 3) try "cycle" irrigation where you water to the point of seeing runoff, then pause so the soil can soak up the moisture before beginning to water again.

Zone 1	Below -50°F	
Zone 2	-50°F to -40°F	
Zone 3	-40°F to -30°F	
Zone 4	-30°F to -20°F	
Zone 5	-20°F to -10°F	
Zone 6	-10°F to 0°F	
Zone 7	0°F to 10°F	
Zone 8	10°F to 20°F	
Zone 9	20°F to 30°F	
Zone 10	30°F to 40°F	
Zone 11	40°F to 50°F	





Plan the landscape with minimal turf, grouping together plants with similar water requirements. Refer to the Seven Principles of Xeriscape as you sketch (see page 59). Always consider your region's climate and your property's microclimate: rainfall, sunny areas, shady spots, wind exposure, slopes (causing run-off), and high foot-traffic zones.



Divide your xeriscape landscape plan into three zones. The oasis is closest to a large structure (your home) and can benefit from rain runoff and shade. The transition areas is a buffer between the oasis and arid zones. Arid zones are farthest away from structures and get the most sunlight. These conditions will dictate the native plants you choose.



Plant in receding layers by installing focal-point plants closest to the home (or any other structure), choosing species that are native to the area. As you get farther away from the home, plant more subtle varieties that are more drought tolerant.



As you plant beds, be sure to group together plants that require more water so you can efficiently water these spaces.



Incorporate groundcover on slopes, narrow strips that are difficult to irrigate and mow, and shady areas where turf does not thrive. Install hardscape such as walkways, patios, and steppingstone paths in high foot-traffic zones.



Mulch will help retain moisture, reduce erosion, and serves as a pesticide-free weed control. Use it to protect plant beds and fill in areas where turf will not grow.



Plant turf sparingly in areas that are easy to maintain and will not require extra watering. Choose low-water-use grasses adapted for your region. These may include Kentucky Bluegrass, Zoysia, St. Augustine, and Buffalo grass.



OPTION: Install a drip irrigation system to water plants efficiently.



Zen Garden

hat's commonly called a Zen garden in the West is actually a Japanese dry garden, with little historical connection to Zen Buddhism. The form typically consists of sparse, carefully positioned stones in a meticulously raked bed of coarse sand or fine gravel. Japanese dry gardens can be immensely satisfying. Proponents find the uncluttered space calming and the act of raking out waterlike ripples in the gravel soothing and perhaps even healing. The fact that they are low maintenance and drought resistant is another advantage.

Site your garden on flat or barely sloped ground away from messy trees and shrubs (and cats), as gravel and sand are eventually spoiled by the accumulation of organic matter. There are many materials you can use as the rakable medium for the garden. Generally, lighter-colored, very coarse sand is preferred—it needs to be small enough to be raked into rills yet large enough that the rake lines don't settle out immediately. Crushed granite is a viable medium. Another option that is used occasionally is turkey grit, a fine gravel available from farm supply outlets. In this project, we show you how to edge your garden with cast pavers set on edge, although you may prefer to use natural stone blocks or even smooth stones in a range of 4 to 6 inches.



A Zen garden is a small rock garden, typically featuring a few large specimen stones inset into a bed of gravel. It gets its name from the meditative benefits of raking the gravel.



TOOLS & MATERIALS

Stakes

Mason's string

Garden hose

Landscape marking paint

Straight 2 × 4

Level

Measuring tape

Compactable gravel

Excavating tools

Crushed granite (light colored)

Hand maul

Manual tamper

Landscape fabric

Fieldstone steppers

Specimen stones

Border stones

Eye protection and work gloves

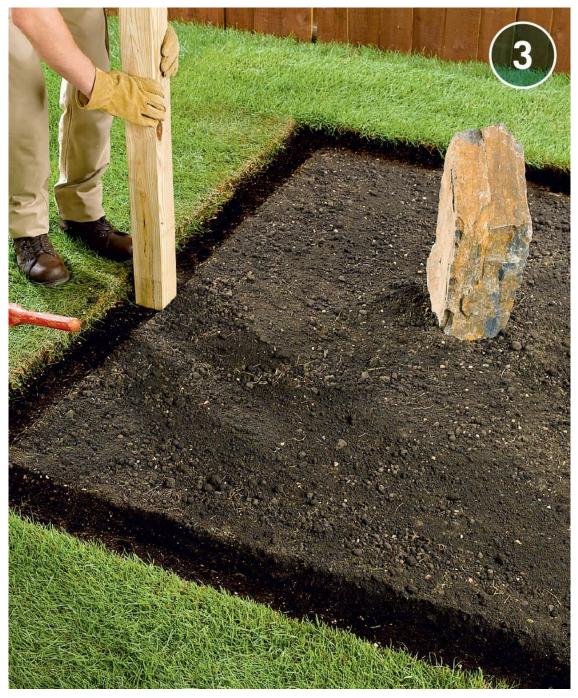




Lay out the garden location using stakes and string or hoses and then mark the outline directly onto the ground with landscape paint.



Excavate the site and install any large specimen stones that require burial more than $^{1}/_{2}$ ft. below grade.



Dig a trench around the border for the border stones, and lay down landscape fabric.



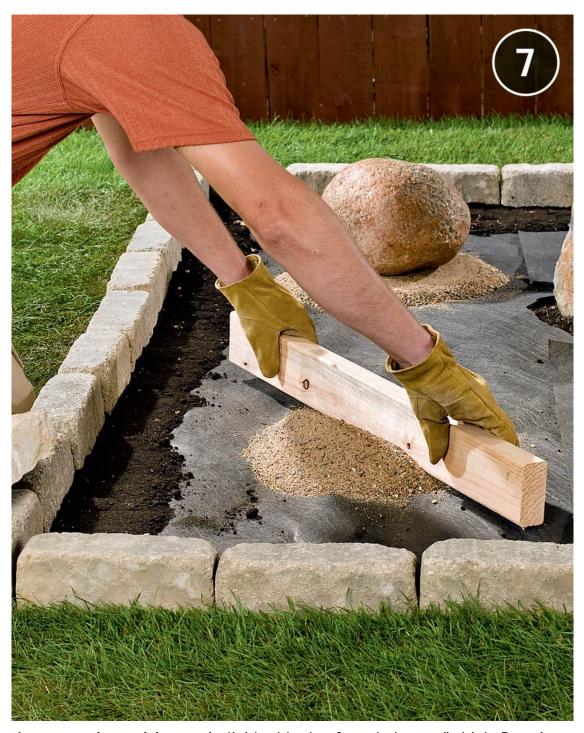
Pour a 3" thick layer of compactable gravel into the border trench and tamp down with a post or a hand tamper.



Place border blocks into the trench and adjust them so the tops are even.



Test different configurations of rocks in the garden to find an arrangement you like. If it's a larger garden, strategically place a few flat rocks so you can reach the entire garden with a rake without stepping in the raking medium.



Set the stones in position on individual beds of sand about 1" thick. Pour in pebbles.



Rake the medium into pleasing patterns with a special rake (see next page).



HOW TO MAKE A ZEN GARDEN RAKE

Once you have constructed your Zen garden, you will use two tools to interact with it: your eyes and a good rake. While any garden rake will suffice for creating the swirling and concentric rills that are hallmarks of the Zen garden, a special rake that's dedicated to the garden will enhance your hands-on interaction.



Many Zen garden rakes are

constructed from bamboo. Bamboo is lightweight and readily available, especially through Internet sites. While you can certainly choose this material, you're likely to find that the lightness can actually work against it, causing you to exert more strain to cut through the raking medium. A rake made from solid wood has greater heft that lets it glide more smoothly through the medium. The rake shown here is made using only the following materials:

- 1 ¹/₄"-dia. by 48" oak or pine dowel (handle)
- 1/2" by 36" oak or pine dowel (tines)
- 2" \times 3" \times 9 1/2" piece of red oak (head)

Start by sanding all of the stock smooth using sandpaper up to 150 grit in coarseness. Soften the edges of the 2×3 with the sandpaper. Drill a $1 \frac{1}{4}$ " dia. hole in the head for the handle (Figure 1). The hole should go all the way through the head at a

22 ½° downward angle (half of a 45° angle), with the top of the hole no closer than ¾4" to the top of the head. Use a backer board when drilling to prevent blowout and splinters.



Figure 1

Next, drill ½"-dia. by 1"-deep seat holes for the tines in the bottom edge of the blank. Locate centers of the two end holes 1" from the ends. Measure in 2 ½" from each end hole and mark centers for the intermediate tines. Use masking tape to mark a drilling depth of 1" on your drill bit and then drill perpendicular holes at each centerline. Cut four 5"-long pieces of the ½"-dia. oak doweling for the tines. Apply wood glue into the bottom of each hole and insert the tines, setting them by gently tapping with a wood mallet (Figure 2). Then, apply glue to the handle hole's

sides and insert the handle so the end protrudes all the way through. After the glue dries, drill a ½"-dia. hole down through the top of the head and into the handle. Glue a ½" dowel into the hole to reinforce the handle (this is called pinning).



Figure 2

Finally, use a back saw, gentleman's saw, or Japanese flushcutting saw to trim the handle end and the handle pin flush with the head (Figure 3). Sand to smooth the trimmed ends and remove any dried glue. Finish with two or three light coats of wipe-on polyurethane tinted for red oak.



Figure 3

NATIVE PLANTS

Native plants are those species that grew naturally in an area before the greatest influx of European settlement, about the mid-1800s in most areas of North America. Native plants tend to lend themselves to less formal gardens, but many of them can also be used in formal settings as well.

There are many benefits to using native plants. For many gardeners, the initial attraction comes from native plants' reputation of being lower maintenance than a manicured lawn and exotic shrubs. For the most part this is true—provided native plants are given landscape situations that match their cultural requirements. Because they have evolved and adapted to their surroundings, native plants tend to be tolerant of tough conditions such as drought and poor soil and are better adapted to local climatic conditions and better able to resist any negative effects of insects and diseases.

The less tangible—but possibly more important—side of using native plants, is the connection you make with nature. Gardening with natives instills an understanding of our natural world—its cycles, changes, and history. By observing native plants throughout the year, a gardener gains insight into seasonal rhythms and life cycles. You will see an increase in birds, butterflies, and pollinating insects, making your garden a livelier place.

To find out what plants were native in your area, check out your state's Department of Natural Resources website, which often includes a list of native plants or links where you can find them. Your agricultural extension office can be helpful as well.



Native plants and natural gardens tend to be more informal and loosely structured, but they can also work fine in smaller, more formal settings with the right plant selection and planting techniques.



BOULEVARD GARDENS

There are many good reasons to garden on the boulevard: that narrow area between the municipal sidewalk and the street. In denser urban areas the space offers additional gardening square footage where it is often scarce. From an environmental standpoint, a boulevard garden creates a buffer for the street and sewer system, and the absence of clippings created by mowing a traditional grass boulevard helps keep unnecessary organic matter and lawn fertilizer out of the sewer system. Often, boulevards are left to "go native" by planting prairie grasses and other hardy, indigenous plants. More frequently these days, homeowners are truing to these strip areas to plant edibles.

Before you plant a boulevard garden, you should check with your municipality to see if there are restrictions you need to be aware of—these are usually related to height and sightline issues, as well as the need to maintain access from the street. Also, if you live in areas where the streets are plowed in the winter, it's likely that the soil on your boulevard contains high levels of road salt. This may limit your plant selection: inquire at your local garden center about plants that are salt tolerant.

Tips for Boulevard Gardening

- Good soil drainage is key since you need the water to percolate down rather than run off.
- Keep your soil line slightly below the sidewalk and curb heights to make sure no soil washes away.
- It's usually best to stick with low-growing clumping plants, but wider boulevards can handle shrubs and even small trees.
- Make sure your plants don't block people's ability to see at intersections

IIILEISECHOIIS.

• Stay away from prolific self-seeders; even a couple extra plants can make this small space look weedy.



Boulevard strips, or tree lawns as they are sometimes called, are the narrow areas between the sidewalk and the street. As prevalent as they are in urban landscapes, boulevards are often neglected when it comes to gardening. This is unfortunate since they are in plain view of anyone who visits or passes by on the sidewalk.

Pathways

hink of a pathway as a natural narrator. It tells the colorful story that draws people into your outdoor space. Sure, you can leave to chance the discovery of all the beauty and varied features of the backyard you've worked so hard to create. Or you can use a pathway to gently lead visitors to your annuals bed, prize roses, water feature, arroyo and bridge, garden bench, or gazebo.



The takeaway about the projects in this chapter—beyond that they generate immense gratification and a quick transformation of your outdoor area—is they are easy to pull off. They require negligible maintenance, make your yard look established and stately, and they protect your plants from those musing meanderers who might mangle your marigolds. While these pathways projects are not difficult, they do require a design and knowledge of materials, base drainage, and borders. All in all, it's a fun chapter with projects that promise to make your outdoor space inspiring and moving (literally).

In this chapter:

- Designing Paths & Walkways
- Loose Rock Landscape Path
- Steppingstone Landscape Path
- Cast Concrete Steppers

- Arroyo
- Classic Garden Bridge

Designing Paths & Walkways

he purpose of paths and walkways in the landscape is twofold: to visually connect various "rooms" and features; and to map out sensible, accessible, and comfortable walk routes from point A to point B—that is, from patio to garden, from sidewalk to front porch. A utilitarian approach is to lay a path for safety reasons, creating a clear-cut pedestrian runway that is meant to purposefully usher people to a destination. But many paths are much more than a means to an end. Your path will communicate to visitors where to go and how to get there. A less formal path will encourage a slower pace, forcing exploration. Steppingstones artfully placed in a garden will merely suggest a trail through a crowd of plant life. You'll eventually find the treasure at the end of the trail—prize roses, a gurgling fountain. The pleasure is in the journey.

While designing a path and considering materials for these projects, consider the experience you want people to have as they navigate the walkway. Do you want to guide them quickly without distraction, or do you hope they'll discover a cozy sitting area along the way? With your goals in mind, you can begin to sketch a road map.

Think of a path as a mini highway system for your yard. You may only require a single walkway that leads from a side garage door, around the house, to the deck out back. Or, your landscape design may include pockets of interest that you want people to discover: a pond, gazebo, bench, garden, or children's play area. In this case, you'll need some "side streets" or back roads. Your main artery will probably serve as a safe route with the sheer purpose of clearing the way for pedestrians. Pathways may branch off of this key walkway. These are the scenic byways.



A pebble pathway contained by a loose-laid brick border provides just enough tracking for people to safely meander through a woodland backyard.



Mixing materials can lead to very interesting and pleasing pathway designs, provided it is done with some discretion and design savvy. The loose gravel and flagstone pathway above has a distinct organic quality and a sense of relaxation and flow. The smaller pathway (inset) cobbled together from sections of old railroad ties, rocks and shells certainly is unique, but there is little to tie the elements together visually. In addition, the irregular walking surface created by the short, perpendicularly laid ties and the fairly large rocks does present a tripping hazard. With pathways and steps, surprises are best avoided.





A steppingstone walkway allows grass "grout" to grow. A path is important for guiding the eye, and foot traffic, through a landscape.

