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## Garden Design

Secrets
Your Landscape Contractor
Doesn't Want You to Know

## Table of Contents

Garden Planning: What's in it for Me? ..... 1
The Crucial Missing Link ..... 2
Planting Flowers vs. Designing a Garden? ..... 2
Eight Steps to Designing a Garden of Your Dreams ..... 2
Assessing What You Have ..... 5
How to Assess Your Yard ..... 5
To Build a Panorama ..... 5
Transfer the Existing Landscape to Graph Paper ..... 6
How to Plot Your Yard on Graph Paper ..... 6
Put Your Thoughts on Paper .....  8
Essential Decisions: Determining Your Needs ..... 9
What is the Purpose of the Gardens? ..... 9
Garden Types ..... 11
Formal Gardens ..... 11
Foundation Planting ..... 11
Border Gardens ..... 12
Cottage Gardens ..... 12
Walkway Gardens ..... 12
Lamp Post and Mailbox Gardens (Fixture Gardens) ..... 12
Tree Gardens. ..... 12
Woodland Gardens ..... 12
Shade Gardens ..... 13
Rock Gardens ..... 13
Ponds and Water Gardens ..... 13
Container Gardens ..... 13
Window Boxes ..... 13
Wildlife Gardens ..... 13
Island Gardens ..... 14
Evening (Moon) Gardens ..... 14
Tropical Gardens ..... 14
Four-season Gardens ..... 14
Cutting Gardens ..... 14
Fragrance Gardens ..... 15
Vegetable Gardens ..... 15
Herb Gardens ..... 15
Setting Priorities ..... 17
My Top Three Gardening Priorities: ..... 18
Getting Ideas for Your Garden ..... 19
Steal from the Best ..... 19
Where to Find Information Online ..... 19
Essential Elements of Garden Design ..... 21
Shape and Pattern ..... 21
Exploiting Focal Points in the Garden ..... 21
Geometry in the Garden ..... 22
Natural Focal Points ..... 22
Plants as Focal Points ..... 22
Destinations as Focal Points ..... 22
Manmade Focal Points ..... 23
A Sense of Balance. ..... 23
Color in the Garden ..... 23
Color schemes ..... 23
Effective Color Use ..... 24
Sure-fire Color Combinations ..... 24
Texture ..... 25
Fragrance ..... 25
Repetition ..... 25
Plotting Your Dream Gardens ..... 27
Transfer Your Paper Ideas to the Yard ..... 27
Tips for Plotting Your New Gardens ..... 28
Alternate Method ..... 28
Online Garden Plans ..... 28
Selecting Your Plants ..... 29
The Holy Trinity of Plants ..... 29
Annuals vs. Perennials ..... 30
Plant Hardiness Zones and how they Affect Perennials ..... 31
USDA Plant Hardiness Zone Map ..... 32
Annual Minimum Temperature Range ..... 33
Working Within Your Budget ..... 33
Preparing your Garden Beds ..... 35
Outlining Your Garden ..... 35
Outlining Gardens with Straight Edges ..... 35
Outlining Gardens with Curves ..... 36
Clearing the Garden Bed ..... 36
Clearing the Garden Bed the Easy Way ..... 36
Testing and Correcting Soil pH ..... 37
What is pH ? ..... 37
Testing the Soil to Determine pH Level ..... 37
Collecting Soil Samples for pH Analysis ..... 38
When to sample the soil ..... 38
Equipment for Sampling Soil ..... 38
Collecting the Composite Soil Sample ..... 38
Amending your Soil ..... 39
Amending Acidic Soil ..... 39
Amending Alkaline Soil ..... 39
Beyond pH - Adding Nutrients to Soil ..... 39
When to Expect Results ..... 40
What's Next? ..... 41
Wrapping up Loose Ends ..... 41

## Garden Planning: What's in it for Me?

If you dream of creating a landscape accented with lush patches of color borrowed from the pages of Better Homes and Gardens, you've started down the right path. You can imagine the endgame. Undoubtedly you've looked around your neighborhood, eyed with envy that one yard that stands heads above the rest, studied the shelter magazines and vowed that you will do whatever it takes to make your dream come true. Congratulations. You've done more than most.

Then, your eye wanders to your backyard and reality hits. A weed here, a weed there - a few flowers popping through, tall and leggy, trying to reach the sunlight. You may have bought a house, but you also inherited the gardens. Or, perhaps dear husband surprised you with an instant garden last year for Mother's Day. Who knew all those flowers were annuals? Does any of this sound familiar? You've made a decision. This is the year of the garden, but where do you start?

You'll find all sorts of mind-numbing information about gardens and gardening on the Internet, and much of it is good information. However, many people with Web sites have one goal in mind - filling the screen with any content that will produce revenue. And, the danger is that you stumble on bad information as you surf the Internet. Among the worst information on gardening, "All you have to do is stick [the plant] into some dirt and water it once in a while." Uh-huh! In your dreams! Don't buy into "set it and forget it." It doesn't apply to gardening. There are tips and tricks to easy gardening. This is not one of them.

Gardening is a journey as much as it's an end. The joy of creating something from the first kernel of a thought all the way through to fruition is in itself satisfying. More important, if you put some thought into your gardens, you probably won't want to throw the baby out with the bathwater each spring. In the end, planning your garden saves you time, energy and money. Can you think of three better reasons to avoid planning a garden? If not, let's get started.

We'll walk you through everything, step by step. We'll give you real-life examples and solutions along the way. Everything you read has been tried and tested, and has proved successful.

Each task is simple, and each task lays the groundwork for the next task. You'll want to jump ahead to the finished product. That's what makes it so hard. It's just human nature. Use a little discipline and restraint. You can have your garden and enjoy it too
before the end of the season. Plant the right garden at the right place at the right time, and your gardens will reward for years to come.

## The Crucial Missing Link

We'll make this short and sweet to drive the point home.
The design phase is the most important step in starting a new garden or reviving a garden past its prime.

Let's put it another way. Don't put spade to soil until you have devised a plan. Plan to spend about $30 \%$ of your time planning your garden, before you break ground. Your effort will pay off with many seasons of abundant color, and in the end, it's the quickest way from point A to point B.

## Planting Flowers vs. Designing a Garden?

If you have to ask that question, then you've planted flowers and you're probably not happy with the outcome. You wouldn't just walk into your kitchen, open the pantry and throw a bunch of ingredients into a pot and call it dinner. And, you can't just stick some plants into the earth and call it gardening. You start with a meal plan in the kitchen and follow a recipe for each dish. Now you're going to start with a plan for your gardens. You can adjust the plan along the way; it's not carved in granite. In fact, once you get the gardens planted, if you're happy with them, you can use the new gardens as your plan, and add or substitute a few plants each season, just to add variety and interest.

In a sentence, throwing plants into the dirt is unconscious gardening while gardening by design is conscious gardening. The results speak volumes. Remember, part of gardening is envy! With a little work on the design phase of gardening, your yard will be the one the neighbors envy.

## Eight Steps to Designing a Garden of Your Dreams

If you're new to gardening, you'll want to work through each of the steps below. If you have some experience, you'll pick up a few tricks to perfect your own design plan. This is not the Holy Grail to garden design. It's meant as a guide to get you started and kick start your imagination. Use what works for you.

1. Assess what you already have.
2. Determine your needs
3. Set your priorities
4. Get ideas for your gardens
5. Master essential elements of garden design
6. Plot your dream gardens
7. Select Your Plants

## 8. Prepare your garden beds

You'll find tips and tricks along the way. You'll find an outstanding list of resources that accompanies this e-book. We urge you to take full advantage of the resource list.

In addition, we recommend that you take advantage of your local Cooperative Extension Services. Each state university operates this department as a public service. They're staffed with scientists, horticulturists and trained volunteers (also known as Master Gardeners) who are familiar with your local conditions. Most of their services are free, and the service that they provide to farmers and hobby gardens is indispensable. They can help you with everything from soil analysis (that service is generally offered at a nominal fee) to landscaping design, to plant selection to pest control. This is one area where your tax dollars work for you if you take advantage of the service.

## Assessing What You Have

No one, except a new homeowner building a new house starts with a blank slate. You might introduce new gardens into an existing landscape, but you're going to start with whatever's already there. If you assess what you have before you start planning what you want, goals have a way of coming into focus quicker.

First, go out to your street and look at your home and yard with the critical eye of a passerby. What sticks out? What do you like? What don't you like?

The most important objective is to plant gardens that complement your house. For example, if your house has, clean Scandinavian lines, you don't want the parts of your yard visible to outsiders full of tropical or cottage gardens. If you have a Tudor home, you probably don't want the front yard full of wild flowers.

## How to Assess Your Yard

Sometimes low-tech solutions work better than computer programs. Assessing your yard and planning your garden relies on three low-tech techniques. You'll use the first low-tech technique in assessing your yard. You're going to take pictures of your house from all angles, and you're going to put together a panorama of the yard.

Note: If you're adding one garden to the backyard, you can skip this step, but if you work through all the steps, you'll have an objective record of your yard. As you update your yard, you can just update your records to reflect the changes. If you're only working on one part of the yard, you can assess just that area.

## To Build a Panorama

## Equipment:

- Two or more pieces of poster board
- Camera (and printer, if using a digital camera)
- Tape or glue

It helps if you have a wide-angle lens or a zoom feature on your camera. If not, you can still cobble together a panorama or your property.

1. Take pictures of every angle of your yard, starting with the view from the street.
2. Take one set of pictures looking toward the house.
3. Take one set of pictures panning out from the house.
4. Take close-up photographs of all existing gardens.
5. Print or develop pictures.
6. Divide the pictures into three piles:

- Those that look toward the house
- Those that look away from the house
- Close-ups of existing gardens

7. Tape each of the first two stacks of photographs onto a piece of poster board (you may need more than one piece of poster board for each stack) to approximate a panorama of your yard. You can leave the third stack of photograph loose.
8. Look at each panorama with a critical eye to discover what you like and what you want to change. Even if you want to change the entire look, you'll find salvageable plants - shrubs and plants that you can transplant to another part of the yard.

As you study your panoramas, you'll notice eyesores that you wouldn't normally notice - garbage cans in need of camouflage, an untidy hedge, rosebushes that need nothing more than a simple prune. What about those gas and electric meters? You will find eyesores that escaped your notice for years, and you'll want to build camouflage into the design. For now, just make notes.

View a couple of quick tutorials on how to be a great garden photographer. Refer to the Resource Guide for two easy tutorials.

## Transfer the Existing Landscape to Graph Paper

Next, you're going to transfer all that good information from your panorama to paper. The panorama gave you a good visual overview; this next exercise will give you a more precise picture of your yard. It'll be closer reality, because you're going to draw roughly to scale.

Plotting your yard is tedious work. Enlist help. Gather the family and few friends on the weekend and make a party of it. You'll need several tape measures so several people can take measurements at the same time. You can work with the graph paper on the clipboard and supervise your crew. With help, you'll have this task finished in a few hours.

Note: If you prefer to plan your garden on the computer, visit the Better Homes and Gardens Plan-A-Garden site. You'll find the link in the Resource Guide.

## How to Plot Your Yard on Graph Paper

## Equipment:

- Graph paper
- Lead pencil with a good eraser
- Clipboard
- Tape measure or yardstick
- Ruler or straight edge
- Compass (for round objects like mature trees)
- Stakes (or similar)

Don't obsess over perfection in this exercise. Keep telling yourself that you're drawing roughly to scale. Whatever you end with will prove useful as you continue to plan your garden.

You can use one square on the graph to represent one foot, one yard or whatever measure you like as long as you use the measure consistently. Use a yardstick or a tape measure to measure distances, and use the stakes to mark areas as you finish. Attach your graph paper to a clipboard so you can carry it with you, or at the least, keep the drawing close by so you don't have to keep running inside the house to make notes.

1. Start by drawing your house to scale. You'll fill in the accurate measurements later. (That's why you're working with pencil and a good eraser.)
2. Add doors, windows, patios, garages, doghouses and toolsheds.
3. Add driveways.
4. Add gardens, ponds, existing trees, and other landscaping features.
5. Make notes of underground gas lines or fixtures that prevent you from planting over them. Note fences, garbage cans, anything that you noticed in your panorama that may need work.
6. Make notes of everything that you like. For example, suppose that you have a hammock, and it's located in the perfect spot. Make a note of it. You want a road map not just of necessary changes, but of trees, shrubs and gardens - anything that you want to keep.
7. Take measurements of all structures, fixtures and gardens, and take measurements between structures. Make a note of each measurement on the graph. You can adjust the drawing after you finish taking all of the measurements.
Note: Measure and note diagonal distances between structures to ensure greater accuracy. This is the only way to get an accurate rendering.
8. After you've taken all of the measurements, compare the graph to your measurements, and make any necessary adjustments to the drawing.
9. Finally, identify elements that you will not change, by outlining them in ink. Run a pen or a felt-tipped marker over the original pencil lines. Include your house, your driveway, pool, patio, gardens - anything that will remain as it is now during this transformation phase.

Tip: To measure freeform structures like a pond, take measurements for the length at different points and the width at different points. Measure diagonally, as well. With all of these measurements, it's easier to make a rough drawing. Using diagonal measurements to supplement measurements for length and width is called triangulation.

Make the following notes on your graph:

- Sunny, partial shade and full shade areas
- Areas where nothing grows. (That probably suggests poor soil if it's not a fullshade area.)
- Areas with poor drainage.
- Areas that light rain (anything other than a downpour) cannot reach.
- Areas with compacted soil. (Dig roughly a foot deep in the areas where you might plant a new garden.)
- Areas with strong afternoon sun
- Rocky areas
- Sloping areas

Now that you know exactly what you have, you have a starting point. Keep your starting point in mind as you assess your needs in the next section. In fact, keep the drawing in front of you, because you may find that you don't need as many new gardens as you thought.

## Put Your Thoughts on Paper

Next, you're going to make three lists:

1. What I love about my yard.
2. What I hate about my yard.
3. Plants I want to move from their present location to a new location.

Now that you know what you love and what you hate about your present yard, it'll be easy to answer the questions in the next section.

# Essential Decisions: Determining Your Needs 

The easiest way to discover your needs is to answer a series of questions. By discovering the purpose of your gardens, you'll get a clearer idea of what's essential, what's important, and what's not important. Answer the following questions as accurately and honestly as possible.

## What is the Purpose of the Gardens?

There is a wealth of free information available online; in books and magazine; however, before you begin your research, it helps to have a general idea of what you want to do. Without a general idea, each idea you find online or in magazines or books may tempt you more than the previous one-and you'll never get anywhere. You'll only confuse yourself.

Here are a few questions to help you decide the purpose of your garden. You'll find specific garden types, at least one of which will work for you.

- Do you want to improve your curb appeal or add value to your property? Curb appeal not only adds to the value of your house, but it can also mean a quicker sale. More importantly, it draws more interested buyers than an unkempt yard. Consider sprucing up your foundation, planting a tree garden around an old tree in the front yard, draping and surrounding an ugly mailbox or lamp post with a garden, or planting a walkway garden. Adding window boxes and planters to surround the front entry can quickly add curb appeal to your house with a minimum of work.
- Will you enjoy the flowers in the garden, or will you cut most of the flowers for indoor use? If you plant to cut, plant a cutting garden in a less noticeable location. If you plan to cut year-round, you'll want a four-season garden, incorporating flowering plants and shrubs for all four seasons (or at least three seasons) into the one garden. Consider a border garden in the backyard along the back or sides of the property line or an island garden in an out-of-the-way location in a larger, odd-shaped yard.
- Do you want to create privacy or hide an unattractive chain-link fence? Plant a garden along your property lines for natural privacy. You don't need to resort to a ten-foot hedge to enjoy privacy in the backyard. Cultivating a natural area with
tall ornamental grasses not only adds privacy, but may deter intruders. Who wants to wade through four-foot grass when there are easier entries elsewhere?
- Do you have an eyesore that you want to hide? Sometimes it's only a matter of adding a fast-growing flowering shrub to camouflage those garbage cans.
- Do you want to attract wildlife? You can create a nationally recognized natural wildlife habitat in your backyard by planting a garden specifically to attract hummingbirds, butterflies, and other wildlife. You can certify your property as a wildlife sanctuary through two organizations: the National Wildlife Federation, the Humane Society of the United States, and various state and local organizations.
- If you have a pond, you're only halfway there if you haven't added flora.
- Do you move outdoors during the warmer months? Do you have a year-round sunroom with a retractable roof? Consider a patio garden with containers and window boxes.
- Do you spend warm evenings on your patio? Night gardens are best during moonlit evenings, and spectacular during a full moon.
- If you believe that summer is the only season that matters, consider a tropical garden.
- Are you surrounded by shade? Have you never considered a backyard garden because your property rivals a national forest? Plant a shade or woodland garden.
- What's your climate? If you live in an arid area, you'll want succulents to dominate your gardens. If you live in a hot, humid, rainy area, you'll want a predominance of thirsty plants.
- Do you love the smell of flowers? Turn many of the garden types into fragrance gardens by adding fragrant plants.

And, now a few more, equally important questions, some of which take a look at future maintenance:

- What's your budget? Don't despair if you're working on a limited budget. You can add to your gardens over the years, and you can substitute less expensive plants for your dream plants without sacrificing the overall look of the gardens. You do not need an entire yard of rare hybrids to make a statement. If you want more expensive perennials, you can fill in with annuals and replace them over time.
- How much time are you willing to devote to maintaining and preserving a beautiful garden?
- Who will be responsible for garden and lawn upkeep? You? Or, will you employ someone to take care of routine maintenance like weeding and feeding?
- Are you obsessive about everything in your home? Or, are you comfortable with a little clutter?
- Is the garden's primary purpose for your own pleasure rather than serving a specific purpose?
- Do the neighborhood kids (or your own) use your yard as their personal playground? That's great, but a stray ball can massacre a garden as the kids try to recover it.
- What's the condition of your soil? Is your soil more closely aligned with a rock quarry? Is it hard, thick clay?

Once you settle on the purpose of you garden, function may dictate the garden to plant. If your garden serves no purpose, read on, and select the garden that best complements your mood and personality. Remember that you want your gardens to fit in with the look, feel and mood of your home.

## Garden Types

There's a garden type to suit every need and whim described below. Note the suggested plants, and supplement or substitute plants to suit your purposes. Click the links below each description to view examples of the garden type.

The Resource Guide contains a comprehensive section with links to most of the garden types.

## Formal Gardens

Renowned for their geometric shapes, large sculptures and fountains, angular look and manicured perfection, formal gardens are most at home on formal, gated estates. They need almost daily maintenance, and they're the most expensive gardens to build and maintain. Unless you can afford a gardener or you live a life of leisure, you'll probably want something less formal for your yard.

## Foundation Planting

Foundation planting consists of trees, plants and shrubs that surround the front of the house. A house without foundation plants looks bare and unkempt, and a foundation garden is a quick and easy way to add to the value of your property with a minimum of expense. It's also the most important planting in the yard. Foundation gardens, once established, need little upkeep with the right combination of plants. The object is to complement, not compete with, the house. Plant shrubs and small, slow-growing trees such as a Japanese maples rather than a profusion of flowers surrounding the front of your home. Plant taller trees and shrubs at the end of the house, with smaller shrubs occupying the center. Dogwoods and azaleas add color in the spring, nandinas add a fiery red during fall and early winter, hydrangeas add color during the summer. Rhododendrons add year-round interest with their evergreen, waxy leaves. Dot the foundation with a minimum of flowers to add a spot of color here and there when the shrubs have lost their blooms.

Note: You do not need to plant along the full length of the foundation. In fact, less is usually more when it comes to foundation planting. If you live in a cooler climate, include evergreens in your foundation planting to add year-round interest.

## Border Gardens

A border garden can disguise an ugly chain-link fence or provide privacy at the property line. It can also add low color to a stone fence. Use tall flowers or flowering shrubs in the back of the garden. Vines that grow like weeds provide seasonal disguise for a fence. Morning glory and moonflowers, both annual vines, need little care and provide a profusion of blooms throughout the summer.

## Cottage Gardens

A cottage garden is an informal garden, full of surprise. Often called a country garden, you'll find color up upon color of old favorites seeming to grow on top of one another. If you plan the cottage garden right, you won't be bothered with weeding. The flowers will choke out the weeds, not the other way around.

## Walkway Gardens

Formal or informal gardens built around a sidewalk or natural walkway add allure and draw the visitor in. You can simply rim a sidewalk with monkey grass or you can design a more elaborate walkway garden, combining several low-growing plants into a more freeform design.

## Lamp Post and Mailbox Gardens (Fixture Gardens)

If you have one of those new, gargantuan mailboxes to hold your ever-increasing daily allotment of junk mail, you might want to spruce it up a bit. Large mailboxes and lamp posts look lost when plopped in the ground without any thought to design. A few plants can work wonders for curb appeal. Use low plants such as miniature day lilies around the base, and allow flowering vines to wind their way up the posts from the foundation. Be kind to your mail deliverer. If you must plant roses around the mailbox, make sure they're miniature rosebushes.

## Tree Gardens

Large, established trees lend a natural backdrop to spring daffodils and to hostas and caladiums in the summer. Only those with a total lack of imagination would settle for a round garden where the tree serves as a doughnut hole. You'll need to plant caladiums each spring after the last frost, but hostas and daffodils are carefree perennials that multiply even with total neglect.

## Woodland Gardens

Heavily shaded areas where nothing grows present another challenge and another opportunity to work with nature. Suppose, for example, that you have an area full of pines that is so heavily shaded that you couldn't get anything to grow there if your life depended on it. Why not work with nature by spreading pine straw throughout the
area, outlining the entire area with stone, and planting a few hostas, ferns and other shade-loving plants? You can plant in masses to create a focal point.

## Shade Gardens

Even if you limit yourself to hostas for your shade garden, you can enjoy various blooms never before available in hostas. Recent hybrids have produced giant white flowers with double petals, an amazing range of delicate pastels hues, and a longer blooming season than ever before. Add a few carefree ferns to create an instant, maintenance-free shade garden.

## Rock Gardens

If your terrain slopes and is full of rocks, work with nature to create splashes of color among the rocks. Think of the fauna as accent pieces. You can quickly turn an eyesore into a work of beauty with just a few well-placed plants. Rocky areas are a gift. They provide the backdrop or the palate, and all you have to do if fill in the blanks.

## Ponds and Water Gardens

A pond without floating water lilies and other plants is only half-baked. Today's water lilies are carefree, and they add drama with their splash of color and grace with their floating petals. You'll want to use special plants and soil for your pond; otherwise, you can destroy the friendly environs and pH balance of the water. Plan to "landscape" the surrounding area even if you don't want to include water plants.

## Container Gardens

Use containers to populate your patio, terrace or pool area. They're also wonderful for tender tropical plants that can't survive the harsh winter. Just bring the whole container indoors during the colder months, place it in a sunny location or provide full-spectrum light, and you have an instant garden next summer. Containers are also the perfect environment to plant invasive plants like mint. You can plant with abandon without worry that the plants will take over. The container creates a natural barrier, and that's good for plants that can develop disease. You can contain the disease through the container's natural barrier.

## Window Boxes

Plant everything from herbs and delicate flowers to tropical plants in window boxes. Add tall, spiky plants and trailing plants such as ivy for variety. You want to think about varying height and texture as well as color. Window boxes lend a "homey" and welcoming charm to a house, particularly a cottage or summer home.

## Wildlife Gardens

Plant gardens to attract hummingbirds and butterflies. Start with bee balm and butterfly bushes, and fill in with masses of indigenous blooms. The emphasis on wildlife gardens is to provide food, water, shelter and a place for the wildlife to raise their young.

## Island Gardens

Island gardens provide a little oasis of color in the lawn. If you have two small trees or large shrubs planted together, you might plant the island garden to include the trees or shrubs. The trees serve to "anchor" the garden. If you want to plant flowers that need full sun, plant your island garden away from any shade producing trees or shrubs.

## Evening (Moon) Gardens

If you spend time outdoors at night during the warmer seasons, a moon garden provides a spectacular visual display. Evening gardens contain an abundance of white flowers against the backdrop of green foliage. Variegated foliage glistens in the moonlight. Lamium's silver white leaves bring an iridescent look to the night garden while adding carefree ground cover. Trumpet lilies, with their oversized perfumed petals atop 6-8' stems, sparkle at night. Add other large flowers that remain open at night to your night garden, and make the patio your nighttime home, especially on moonlit evenings.

## Tropical Gardens

With today's new hybrid tropical look-alikes, there's no excuse to deny yourself a tropical slice of heaven regardless of your location of hardiness zone. You'll want to plant hardy hibiscus in colder climes. They're just as lush and vibrant as the tender varieties, and you'll have a profusion of twelve-inch blooms from midsummer until the first frost. Fill in with hostas or other masses of herbaceous plants.

## Four-season Gardens

Winter is the most difficult season for novice gardeners. You won't have to baby-sit your plants during the winter, but you'll need to select plants that bloom in the winter while adding attractive foliage to the garden during the other seasons. Hellebores (Christmas rose, winter rose, Lenten rose) bloom at various times during the winter months, but their foliage is attractive even without blooms. Their size and habit are attractive additions to most types of gardens. Their only liability is their dislike for transplantation. Find a spot for them and live with it; otherwise, you risk irritating them into a few non-blooming seasons. Once they bloom, they are profuse bloomers, and their blooms range from white and pink to purple and green. Camellias, which resemble a small rose and rival the rose in variety, add height to border and foundation gardens, and provide a profusion of rose-like blooms.

## Cutting Gardens

What cutting gardens lack in curb appeal, they add to your home décor. To gain maximum enjoyment from your cutting garden, plant it in an out-of-the-way location and raid it with total abandon. Plant a combination of perennial and annual plants, showy and delicate blossoms, fragrant and plants without fragrance. You can plant the flowers closer together in a cutting garden to maximize your crop each year. You'll thin the flowers almost daily, and if you plant in an out-of-the-way location, it doesn't matter if your cutting garden looks crowded. The more you cut, the more your flowers will
bloom, except for gladiolas, lilies, daffodils, and other plants that produce a fixed amount of blooms or stalks per bulb each year.

## Fragrance Gardens

A few fragrant plants go a long way and can turn an ordinary garden into a fragrant one. Be careful not to go overboard with fragrant plants, because what you may find pleasingly fragrant, your guests may find offensive or downright nauseating. Subtle is the key word when planning a fragrant garden. Consider a few additions such as petunia, tuberose, hyacinth, lavender, gardenia, jasmine and moonflower.

## Vegetable Gardens

You can grow your own vine-ripened vegetables in your backyard. Vegetables grow nicely in a small plot, a raised bed, or even in containers right outside your kitchen door. Unless you live in the country surrounded by a lot of acreage or your house is not visible from the road, it's best to tend to your vegetables in the backyard. Just because you're growing vegetables doesn't mean the garden has to be boring. You can plant a short border to surround the garden, and you can work with the colors, textures and heights of the vegetables to add visual interest to the garden.

## Herb Gardens

Herbs are easy to grow and a welcome addition to every savory dish. Fresh herbs are also expensive to buy, making a gallon of gas look like a bargain. Fortunately, they're inexpensive to grow, and you can start them from seed or plant immature plants. However you start them, you'll enjoy them in the kitchen in a matter of weeks. If you only need a small quantity of herbs and you're growing them strictly for cooking, plant them in containers outside the kitchen door. But why stop there? Add interest to border gardens by using herbs as companion plants.

## Setting Priorities

Now that you're aware of your needs and wishes, your likes and dislikes, and you have an overview of the types of gardens, you're in a better position to set your gardening priorities. First, work through the chart below. For each entry, place an X under the proper column.

|  | Essential | Important | Desirable | Unimportant |
| :--- | :--- | :--- | :--- | :--- |
| Formal gardens |  |  |  |  |
| Front Foundation garden |  |  |  |  |
| Border gardens |  |  |  |  |
| Walkway gardens |  |  |  |  |
| Fixture gardens |  |  |  |  |
| Tree gardens |  |  |  |  |
| Woodland gardens |  |  |  |  |
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| Ponds and Water gardens |  |  |  |  |
| Container gardens |  |  |  |  |
| Window boxes |  |  |  |  |
| Wildlife gardens |  |  |  |  |
| Island gardens |  |  |  |  |
| Night garden |  |  |  |  |
| Tropical gardens |  |  |  |  |
| Four-season gardens |  |  |  |  |
| Cutting gardens |  |  |  |  |
| Fragrance gardens |  |  |  |  |
| Vegetable gardens |  |  |  |  |
| Herb gardens |  |  |  |  |

You may have to limit your choices based on reality. If you decided that everything in the chart above is essential or important, you have some real work ahead. There's no way that you can have it all in one season.

List your top three priorities, but don't limit those priorities to the list above. Include lifestyle priorities as well. Sometimes, lifestyle overrides our desires. For example, if grilling is a big part of your summer life, you'll want pleasant surroundings on the patio. Even if you didn't select container gardening as important, if you entertain on a patio every weekend, you'll want to reconsider.

Write out your three priorities. They can be three new gardens, or they can be one garden, with two requirements - tropical and low-maintenance. Keep the first list to three priorities. You'll probably add to this list later.

My Top Three Gardening Priorities:
1.
2.
3.

Put all of this paperwork away for a couple of days. Take your mind anywhere you like, except to the thought of gardening. In a few days, you'll start again, but take a break and clear your mind for a couple of days. When you return, you'll be ready to steal some ideas, adjust them, and claim them as your own.

## Getting Ideas for Your Garden

By now, you have some idea what you want. To help you solidify your ideas, it's time to look around and see what others have done. And, just for the record, it's acceptable to steal garden ideas - even entire gardens. It's more fun, however, to put your own spin and inject your own personality into your gardens, using another person's ideas as a springboard to your new gardens.

As you work through this section, you'll get a better handle on costs. You know your budgetary limitations, and you'll have to learn to work within them. Sure, a rare Chinese peony is a thing of beauty, but at $\$ 200-500$, you can find something similar in the $\$ 10$ range. That's another purpose of this exercise. You'll learn flexibility and how to make substitutions based on look and feel. It's the look and feel of the end product that matters, not the individual components.

## Steal from the Best

Again, there's nothing wrong with borrowing ideas or outright stealing them when it comes to your garden and landscape. Even if you don't have a design bone in your body, you can look at something and form an immediate opinion. Now that you've thought about your needs, wants and priorities, you'll "know it when you see it." Even if the specific plants in a photograph are not right for your area, you can make substitutions and create the same look and feel right in your own yard. Don't worry about the specifics yet.

Start your search online. You may find what you're looking for without leaving your keyboard. If you need more research, you can buy a few magazines at the local newsstand, and you can visit your library and check out an armful of books on gardening.

## Where to Find Information Online

You'll want to exploit each of the online resources listed below. The Resource Guide contains links and descriptions that you'll find helpful.

1. Search engines and directories
2. Online garden centers
3. Garden portals
4. Photo gallery
5. Other online magazines

Let's take an example. Suppose that you have decided that you want a tropical garden, but you live in a cooler climate. Try searching for "tropical looking plants," to find plants that will survive your winters while giving you a tropical look.

Finally, visit your local garden centers to see what's available. You'll find at least one horticultural expert in the "Outside Gardening" area of the store. If you visit during a slow time, he or she will spend time with you and answer your questions. Stop by the area with planted containers. Think of the container as a micro-garden, and imagine that container as a garden. Note the use of colors, textures and varying heights. Local gardening centers may also have a show garden from which you can get ideas.

Drive around your area, and take your camera. Now that you've done some basic homework, you'll view landscapes with a critical eye. Snap photographs of gardens that you like. You'll find gardens that you like, "if only..." Shoot a picture anyway. You can change that "if only" when you plant your garden.

As you look around at various gardens, pay special attention to their characteristics. It may be that you're more focused on a set of characteristics than you are a particular garden.

- Formal vs. informal
- Border vs. island
- Geometric vs. free flowing
- Pastel vs. vibrant color
- Dense vs. open spaces

Which of these "styles" appeals to you most?

## Essential Elements of Garden Design

Don't worry - you're not going to have to study a tome on gardening theory. There are, however, a few basic concepts that separate the amateurs from the professionals. Armed with this information, you will spend less time plotting your dream gardens in the next section. You'll avoid the amateur mistakes. You'll get around to planting that much quicker, and the final results will delight you instead of disappointing you.

## Shape and Pattern

While you want to keep your overall look and feel in mind when you add gardens to your existing landscape, you'll want to add a variety of shapes. Choose from some of the shapes below:

- Long and Narrow
- Angular
- Square
- L-shaped
- Circular
- Curved
- Freeflowing

In addition to shape, you'll want to consider pattern. For example, you want to vary the composition of the gardens. You might want to outline some of the gardens with stone, others with ornamental border grasses and leave some without formal borders. Without variety, you'll induce boredom.

## Exploiting Focal Points in the Garden

A focal point is designed either naturally or through your design to draw the eye, to add definition to the area and to allow the visitor to slow down and take in the surrounding environment. Too many focal points compete for attention and don't allow to eyes to take in the full beauty of anything in the landscape. Too many focal points create disorder. Allow your focal points to make a statement.

## Geometry in the Garden

Circles and circular patterns are strong focal points. They draw the eye naturally. Circles need not be complete to draw the eye. Arcs and curves serve the same purpose as a full circle. By grouping dramatic plantings in the midst of a circular area, you draw attention to natural focal point. You can add drama with color, height or masses of plants.

## Natural Focal Points

Natural focal points play an important role in the overall design, as well. Specimen trees provide a natural focal point. Depending on their variety, they may reach toward the heaven or provide a billowy expanse of shade. Either way, you can further draw attention to them by adding plantings to their base or by creating a free-flowing garden to surround them.

If you live on a hilltop or on a mountain, work with the natural focal point provided by the scenery to add drama. If you're lucky enough to have a natural focal point, steer the eye toward, rather than away from, the natural focal point with walkways, gardens and plants. If, for example, your lot contains a vista with a beautiful sunset, play it up by planting red, orange and purple flowers, sunset colors that fade into the sunset. Avoid planting anything that obstructs the natural view. The last thing you want is tall shrubs and trees that impede the spectacular view.

Woodland and rocky areas, especially when they provide a contrast to a lush lawn, provide not only a natural focal point, but they provide a natural canvass upon which to build.

## Plants as Focal Points

Even if you have nothing that qualifies as a focal point, you can create one with specimen plants. Woody tropical plants such as rubber plants or colorful crotons provide a quick and easy route to a focal point. Plant coleus in masses under a tree attract attention. Try planting masses of contrasting coleus next to one another.
Contrasting textures also provide another easy to create focal point. Hostas, in all there variations, when planted together, add lush drama. You can also plant small (relatively small, that is) tropical trees in planters and arrange them in groups on the patio for an eye-catching effect. The best part about planting tropical trees in planters is that you can move them at will. There's no reason that you can't move the planters to a garden. Either use the planter as a design attribute or camouflage it with plants.

Line the driveway with every imaginable variation of iris for a springtime flash of color and year-round foliage.

## Destinations as Focal Points

Use destinations as focal points. There's no easier way to entice the garden visitor to stop and reflect than to provide them with a resting point. Garden benches, ponds with seating areas and boulders can all serve as destinations to stop and drink in the surroundings. At night, lighting can create different focal areas than might be immediately visible during the day.

## Manmade Focal Points

Ponds, trellises, and garden art such as orbs, fountains, sculptures, and bird baths can help you create a focal point anywhere you like. Even a single vase that contrasts with its surroundings, planted with masses of flowers could attract the eye.

The challenge is to ensure that everything looks planned and thought out, that the focal points look natural and not forced and that the end product is appealing, not offputting. You want your gardens and your yard to offer serenity, not add more stress to an already overstressed life. When in doubt, less is more. Of course, you'll have more than one focal point; just be sure that they don't compete with one another by positioning them well away from one another.

Check the Resource Guide for links to examples of focal points.

## A Sense of Balance

Symmetry is perfect balance. You'll find an almost total sense of symmetry in formal gardens. Informal gardens tend toward the asymmetrical. Even without using symmetrical gardens, you can offer an overall sense of symmetry by balancing the big picture without forcing perfect balance onto every aspect of the garden and landscape.

## Color in the Garden

The best thing about color in the garden is that nature knows no boundaries when it comes to color. Nature doesn't care about complementary and harmonizing colors. In a completely natural setting, you're apt to find blues and greens next to reds, oranges and purples. Nature is bold and playful, and there's no reason that you can't be playful too. Just don't give yourself a headache in the process by mixing every color of the rainbow, one on top of the other. Use masses of color broken by foliage, nature's "white space," for maximum effect. It's not nice to compete with Mother Nature. Flirt with her whimsy, but stop short of tacky.

## Color schemes

While you read through this section, open the Aggie Horticultural color wheel. You'll find the link in the Resource Guide. It's easier to follow along with the color scheme explanations if you look at where the colors fall on the wheel. Garden center stores carry color wheels, or you can print the color wheel above on a color printer. Keep the color wheel handy while you decide on your use of color, and take it with you when you shop for plants.

Color schemes that are pleasing are said to harmonize (not to be confused with harmonizing colors on the color wheel), and they fall into several categories in the garden:

- Complementary - Uses colors that fall close to one another on the color wheel. For example, red violet, red and red orange all fall close together on the color wheel.
- Monochromatic - Variations of the same color, ranging from soft and subdued (pastel) to vivid. Look at each of the long spokes on the color wheel to view a monochromatic color scheme.
- Harmonizing (also known as contrasting) - Harmonizing colors fall opposite each other on the color wheel. Examples include shades of yellow and purple and shades of orange and blue.
- Polychromatic - As often found in nature, many colors falling together in the same garden.
- Neutral - Black, silver and white. This color scheme is most often used in an evening garden. Green is also considered a neutral color in the garden, as it provides the backdrop against which to display other colors.


## Effective Color Use

Keep in mind the following axioms when planning color for your gardens.

1. When selecting a garden color scheme, concentrate on one scheme per garden.
2. When using color around the foundation or other fixed structure, the overriding consideration is just common sense - the color shouldn't clash with the brick or fixtures.
3. Bright colors jump out at the eye while pale colors recede. What does this mean in practice? If you want to hide an eyesore, plant pastels around it. If you want to draw attention, add bright colored plants.
4. Color affects human emotion.

- Strong, colors excite us, and they are visible from a distance.
- Pastels subdue and relax us, creating an environment of tranquility. They're best planted for viewing at close range. When planted in the distance, they look washed out and lose their effect.
- Warm colors (red, yellow, orange) make us feel warm.
- Cool colors (purple, blue, silver) make us feel cool. (Hint: that's why they're described as warm and cool.)


## Sure-fire Color Combinations

- Green and white, especially with variegated green foliage
- Yellow and blue
- Yellow and purple
- Orange and purple
- Red and yellow
- Pink and blue
- Pink and purple
- Blue and white (true blue is the rarest color found in the garden)


## Texture

Varying textures in the garden, especially a monochromatic garden, provides contrast and depth. Textures add vital interest to the monochromatic garden, but creative use of texture is important to all gardens. Texture can bring the garden to life and add excitement to an otherwise ho-hum garden.

Textures fall into three categories:

- Fine
- Medium
- Coarse (also known as bold)

You'll find everything from tall wispy foliage to thick, stocky succulent leaves. Varying textures is every bit as important as using color. Most plants fall somewhere in between the two extremes, and by adding a few fine or dramatic textures you alter the look and feel of the garden.

As a general rule, you'll want mostly medium textured plants. Add a little something tall and spiky and a little something light and airy.

## Fragrance

Plants are most fragrant early in the morning and in the evening. They're least fragrant during the height of the day. When you shop for plants, if fragrance is one of your priorities, shop as early as possible.

Don't forget that fragrance does not always mean sweet. One of the easiest ways to add fragrance to the garden is by planting herbs: basil, peppermint, spearmint, oregano, sage, thyme, and rosemary.
Plant a few fragrant flowers in patio containers near the kitchen door. Every time you open the door, the fragrance will drift into the kitchen. Bring cut mint into the kitchen to sweeten the kitchen and eliminate odors naturally.

## Repetition

Have you ever seen a hand-picked bouquet where no two flowers are alike? There's no theme, no continuity - just a bunch of unrelated cut flowers with central theme. On the other hand, a bouquet comprised of two dozen red carnations doesn't hold a lot of interest either. The most appealing bouquets weave a theme by combining all of the above elements with repetition. For example, a tropical bouquet might contain six
dahlias, twelve Asiatic lilies and six Stargazers against a backdrop of appropriate greenery. It's the repetition that ties the bouquet together.

In the same way, you don't want to plant a garden that is nothing more than a collection of plants. While incorporating the elements of design into the garden, repeat colors, shapes, textures and plants throughout the garden. A good rule of thumb is to plant grouping of the same plant. Plant odd numbers of plants in each grouping, and plant a minimum of three plants per grouping.

## Plotting Your Dream Gardens

Now that you've got some idea what constitutes a nice garden to match your needs, it's time to transfer some of your knowledge and needs into concrete action. It's cheaper to make your mistakes on paper where you can simply erase them. It's also more expedient. For your next assignment, you'll revisit your graph.

## Equipment:

- Your completed graph and copies
- Pencil with a good eraser
- More graph paper
- Tracing paper
- Ruler or straight edge
- Compass
- Colored pencils

Scan your original graph. If you don't have a scanner, take the graph to a copy center and make plenty of copies. You don't want to have to repeat work. The original graph furnishes a starting point.

Once you've got your new gardens plotted on graph paper, you may want to plot each new garden on a separate piece of graph paper. If a new garden is large or you will plant lots of different plants, take the time to plot it. That way you'll get a more accurate idea of what you need to buy to fill the garden. If you're only making adjustments to existing gardens or planting small gardens, there's no need for a separate rendering.

## Transfer Your Paper Ideas to the Yard

If plotting your original graph seemed like drudgery, plotting your dream gardens will feel a lot more like fun. Think of your new graph as a treasure map. This is where you put your dreams on paper, give them shape, color and bring them to life. The emphasis of this exercise is on color, texture and proportion. You'll fill in the details in the next exercise when you get to select the actual plants. In this exercise, you'll also make a new home for any plants that you want to relocate to a new location.

Use colored pencils to bring color to your new gardens. You'll worry about height and texture in the next exercise. For now, you just want to get a proper mix of foliage and color and an overall idea to guide you in your selection of plants in the next exercise. If
you have some ideas for plants, make notations on the graph, but don't force those ideas just yet. Think flow, balance, color, and texture for now. The details will fall into place in the next section.

Your drawing doesn't need to be fancy. You'll find an example of a three-dimensional drawing in the Resource Guide if you want to get fancy.

## Tips for Plotting Your New Gardens

- Add anchors first - trees, shrubs, specimen plants and large garden art.
- Add any features that require other materials - Stones to outline the garden or walkways through the garden.
- Relocate saved plants - Locate the list of garden plants, shrubs and small trees that you want to keep and move to a new location. Incorporate those into your plans first. Perhaps it's a small tree or shrub that you want to move to a new garden as an anchor. Draw it into the graph of the new garden.
- Note evergreens - Reserve one colored pencil for evergreen plants, shrubs and trees. That way you'll know at a glance what areas will provide winter interest.
- Add perennials - Consider perennials permanent plants, and don't expect optimal results (especially blooms) for at least a couple of years.
- Add annuals - Reserve portions of the garden for annuals so that the garden design remains fresh from year to year.


## Alternate Method

If colored diagrams leave you cold, there's a better way for you to envision the final garden. You'll need poster board and pictures from magazines. You can also scan pictures from books and print them on a color printer. You might want to work through this process even after completing the drawing the above. The drawing on graph paper gives you a general idea. The poster board "treasure map" can help you fill in the details as you work through the plant selection process in the next section.

1. Sketch the garden outline on the poster board.
2. Cut pictures from magazines or from scans that you have printed.
3. Tape or glue the pictures onto the poster board.
4. Rearrange as necessary.

## Online Garden Plans

Some people feel that they don't have an artistic bone in their bodies. They're wrong, of course, but if you count yourself among the artistically challenged, there's no need to fret. Better Homes and Gardens offers a wealth of free online garden plans. Check the Resource Guide for the link.

## Selecting Your Plants

Once again, you're going to answer a few more questions. By now, you realize the purpose of these inquisitions. After you answer the questions, the real fun kicks in, and it's downhill from here.

- Do you have small children or pets? If you have either, avoid poisonous plants.
- Do you prefer vibrant colors or subdued pastels?
- Do you live in the house year-round? If this is your primary residence, you'll want to plan color for at least three seasons: spring, summer and fall, also known as early season, mid season and late season. Allocate a portion of your budget to bulbs for spring blooms - crocus, daffodils, tulips, iris and other spring flowers.
- Do you have time for on-going maintenance like deadheading spent buds? If not, you'll want to stay away from plants that require deadheading for continued blooming. Perhaps you really like petunias, but you know they require constant deadheading. There's good news: a new variety of "wave" petunias does not require deadheading. Check for new and improved cultivars of old favorites.
- Do you want a predominance of foliage or blooms? Or, does shade dictate that you concentrate on interesting foliage?
- Do you want to plant once and be done with the chore, or do you enjoy spring planting? Your answer will determine whether you choose mostly perennials or annuals.
- Do you live in a hot, dry climate? Are you subject to water rationing in the summer. If so, stick to plants that thrive with a minimum of water. Many new cultivars have been developed to be drought resistant.


## The Holy Trinity of Plants

When selecting your plants, pay attention to the foliage as well as the blooms. Many plants sport colorful foliage. Incorporate colorful foliage into your shade gardens where blooming flowers are less common. Take into consideration three important factors as you go about selecting your plants.

- Form (also known as habit or shape and size) - Balance the garden with a mixture of large and small plants. Add anchor plants to your gardens-large specimen plants, trees or flowering shrubs. Add a few anchor plants that provide winter interest, especially to the foundation. Anchor plant selection takes
precedent over smaller plants. You will live with your anchor plants for many years and they help to set the overall mood of the garden. Once established, you don't want to move them! If you want flowering shrub and it's too large for the garden, ask about miniature varieties. Miniature varieties have sprung onto the scene in recent years at an escalating rate.
- Texture
- Color


## Annuals vs. Perennials

If you're planting only one new garden, you should be able to populate the entire garden with whatever you want. If not, add perennials as your budget allows, and fill in with annuals. Perennials add attractive foliage to the garden even after they finish blooming. By planting perennials that bloom at different times, you can easily achieve a three-season blooming garden.

You'll want to allot a portion of your garden space to annuals each year for variety. Annuals are an inexpensive way to update established gardens each year, and annuals provide instant color for the entire season. They also allow you to change your mind and change the mood of the garden each season without a lot of expense. Don't expect an annual to take you from early spring through fall. Annuals typically bloom heavily for one season.

In addition to deciding between annuals and perennials, you'll need to match the plant to its environs. Sun and shade pose the biggest constraints. Many plants do well in partial sun. Partial sun usually means at least four hours of sun each day. Some plants such as coleus and impatiens do well in full sun or shade as long as they receive adequate water in full sunlight.

Early spring flowers such as crocus, daffodils and tulips pose little problem regarding sunlight, because they usually bloom before the trees sprout their leaves.

For your convenience, we've listed popular annuals and perennials below, grouped by their sun requirements. You can view examples of each plant at the Berkley.edu photo database. You'll find the link in the Resources Guide. You'll also find other helpful databases in the Resource Guide.

| Annuals |  | Perennials |  |
| :--- | :--- | :--- | :--- |
| Sun | Shade | Sun | Shade |
| Marigolds | Impatiens | Peonies | Toad lily |
| Ageratum | Begonia | Verbena | Hosta |
| Allysum | coleus | Aster | Fern |
| Cockscomb | Browallia | Blackeyed Susan | Astilbe |
| Cosmos | Lobelia | Sunflowers | Hellebores |
| Daisy | Caladiums | Butterfly bush | Hydrangea |
| Flowering tobacco | Tuberous begonias | Bee balm | Creeping wintergreen |
| Geranium | Fuchsia | Coreopsis | Lamium |
| Impatiens | Monkey flower | Coneflower | Lily of the Valley |


| Llobelia | Wishbone flower | Daisy |
| :--- | :--- | :--- |
| Zinnias |  | Lantana |
| Nasturtium | Russian sage | Azalea |
| Periwinkle | Sedum | Brunnera Jack Frost |
| Petunias | Yarrow | Heuchera |
| Portulaca | Ornamental grasses | Bluebells |
| Purslane | Ice plant | Grape Hyacinth |
| Salvia | Poppies | Geranium (some) |
| Snapdragons | Hollyhock |  |
| Verbena | Lupine |  |
| Vinca | Columbine |  |
| Wax begonia |  | Day lilies |
|  | Asiatic and Oriental lilies |  |

## Notes:

- The list of annuals also includes tender perennials, perennials that usually do not survive winter and should be treated as an annual.
- Few annuals grow in full shade. Most require a little sunlight in order to produce full foliage and blooms.


## Plant Hardiness Zones and how they Affect Perennials

When you shop for perennials, you'll find a tag accompanies each plant. On the back side of the tag, you'll find a wealth of information: amount of sunlight required, how tall the plant will grow, whether it's an annual or perennial, what type of soil it prefers and how much water it requires.

You'll also find an indicator of its hardiness zone. Wording varies, but the statement will say something like "hardy to Zone X." Each area in the United States is assigned a zone according to average lowest winter temperature. Zones run from 1-11, with 1 assigned to the coldest areas and 11 assigned to the warmest areas.

When the tag indicates "hardy to Zone X, " that means that Zone X is the coldest zone in which the plant can tolerate and survive the winters. If the plant is a foundation plant, and you cover it with a thick layer of mulch, it's possible for the plant to survive in the next coldest zone, but there are no guarantees. The warmth generated from inside the house may keep the adjacent area warm enough for you the "push" one zone. It all depends on the weather, and the winter weather has been unpredictable in recent years.

Some perennials last for years and years, multiplying over the years. Others seem to disappear for no reason after several vigorous growing seasons. Keep your receipts for at least a year. Most garden centers guarantee their plants for one year, and some mailorder and Internet garden centers guarantee some plants for life. They're betting that you won't keep the receipt. If you do keep the receipt, they'll replace the plant.


Annual Minimum Temperature Range

| Zone | Fahrenheit | Celsius | Example Cities |
| :---: | :---: | :---: | :---: |
| 1 | Below -50 F | Below -45.6 C | Fairbanks, Alaska; Resolute, Northwest Territories (Canada) |
| 2a | -50 to -45 F | -42.8 to -45.5 C | Prudhoe Bay, Alaska; Flin Flon, Manitoba (Canada) |
| 2b | -45 to -40 F | -40.0 to -42.7 C | Unalakleet, Alaska; Pinecreek, Minnesota |
| 3a | -40 to -35 F | -37.3 to -39.9 C | International Falls, Minnesota; St. Michael, Alaska |
| 3b | -35 to -30 F | -34.5 to -37.2 C | Tomahawk, Wisconsin; Sidney, Montana |
| 4a | -30 to -25 F | -31.7 to -34.4 C | Minneapolis/St.Paul, Minnesota; Lewistown, Montana |
| 4b | -25 to -20 F | -28.9 to -31.6 C | Northwood, Iowa; Nebraska |
| 5a | -20 to -15 F | -26.2 to -28.8 C | Des Moines, Iowa; Illinois |
| 5b | -15 to -10 F | -23.4 to -26.1 C | Columbia, Missouri; Mansfield, Pennsylvania |
| 6a | -10 to -5 F | -20.6 to -23.3 C | St. Louis, Missouri; Lebanon, Pennsylvania |
| 6b | -5 to 0 F | -17.8 to -20.5 C | McMinnville, Tennessee; Branson, Missouri |
| 7a | 0 to 5 F | -15.0 to -17.7 C | Oklahoma City, Oklahoma; South Boston, Virginia |
| 7 b | 5 to 10 F | -12.3 to -14.9 C | Little Rock, Arkansas; Griffin, Georgia |
| 8a | 10 to 15 F | -9.5 to -12.2 C | Tifton, Georgia; Dallas, Texas |
| 8b | 15 to 20 F | -6.7 to -9.4 C | Austin, Texas; Gainesville, Florida |
| 9a | 20 to 25 F | -3.9 to -6.6 C | Houston, Texas; St. Augustine, Florida |
| 9 b | 25 to 30 F | -1.2 to -3.8 C | Brownsville, Texas; Fort Pierce, Florida |
| 10a | 30 to 35 F | 1.6 to -1.1 C | Naples, Florida; Victorville, California |
| 10b | 35 to 40 F | 4.4 to 1.7 C | Miami, Florida; Coral Gables, Florida |
| 11 | above 40 F | above 4.5 C | Honolulu, Hawaii; Mazatlan, Mexico |

Hardiness zone map and information courtesy of USDA

## Working Within Your Budget

If your goal is to add curb appeal, concentrate on the foundation, the walkways and the front entrance. You'll get more bang for your buck by tidying whatever you've got in place and sprucing up the entrance, patio and driveway areas. If your gardens are untidy, clear the clutter. Mulch and soil conditioner cover a world of sins, and they're inexpensive.

If you're starting multiple gardens or if you're landscaping your property from scratch, you'll have to keep within your budget. Remember that you do not have to fill in every inch of space with plants. Here are some pointers to help with budgeting.

- Purchase and plant trees, shrubs and foundation plantings first. Most of these take time to mature, and you want to get an early start.
- Pay special attention to entrances, especially the one that you and your guests use most frequently. You want to present a welcoming atmosphere.
- If you've got a patio, terrace or deck, work on that area next. You'll be glad you did when it's time to relax.
- Next, you want to tackle a garden or two in the backyard. Perennials are more expensive than annuals, but you can start by planting your backdrops - hostas, ferns and other fast-growing plants with interesting foliage. You can also find immature plants of these types at basement bargain prices, particularly if you buy in bulk. For example, full-grown, mature hostas can run as high as $\$ 25$ or more. You can buy immature hostas that will grow larger each season for around $\$ 2$ if you catch a sale.
- Day lilies, iris, hostas, ferns and other plants need dividing and thinning every few years. Ask friends and neighbors if they have plants to spare.
- Business complexes often change their gardens every season. You can drive by and ask the landscapers for the plants that they're pulling up. Usually, they dispose of the plants they pull up, and they might as well dispose of them in your gardens.
- For quick color, consider purchasing gladiolas in bulk. They're dirt cheap, and if you plant at two-week intervals from spring through summer, you'll have nonstop color throughout the summer and into the fall. You'll also have a supply of dramatic cutting flowers that last up to two weeks.


## Preparing your Garden Beds

The empty garden is the virgin canvas awaiting your artistic creation. Just as any artist first prepares the canvas, so you will prepare the garden. Now it's time to get your hands dirty. While technically, not a part of garden design, an ill-prepared garden bed will frustrate all other attempts at preserving a healthy garden.

## Equipment:

What you'll need will depend on the shape of your garden, the condition of your soil, and whatever materials you'll need for outlining or creating paths through your garden . You'll also need any seating or garden art that you wish to place in or around the garden.

- Handheld laser pointer or long straightedge
- Rope or twine and stakes (for gardens with straight edges)
- Long garden hose (for gardens with curves)
- Shovel
- Tiller (optional)
- Topsoil
- Water retention crystals (optional, but essential if your area is drought prone)
- Compost
- Mulch


## Outlining Your Garden

You'll outline your garden differently depending on whether you're creating a curved garden or one with straight edges.

## Outlining Gardens with Straight Edges

1. Place the first stake and measure the first straight line with a handheld laser or long straightedge.
2. Place the second stake.
3. Repeat until you've placed all the stakes.
4. Outline the garden by stringing heavy twine around the outside of the stakes.

## Outlining Gardens with Curves

The easiest way to outline a garden with curves is to use an old-fashioned garden hose. It's much easier to use than heavy twine, and it's easy to make adjustments as you outline the garden.

## Clearing the Garden Bed

Chances are the area you're clearing for the garden contains grass and weeds. Some people just till the area hoping the seeds will somehow disappear. Not a chance. You'll pay dearly as the season progresses by taking this shortcut. There are only two ways to clear the garden bed of grass and weeds:

1. Clear them.
2. Kill them.

## Clearing the Garden Bed the Easy Way

You can painstaking clear the bed if you like, using a shovel to clear the top soil with the grass and weeds. There's a much simpler way to create a new garden bed: smother the offending grass and weeds.

## Equipment:

- Newspaper
- Leaves
- Topsoil
- Vermiculite or perlite
- Compost


## To kill the grass and weeds and prepare the soil:

1. Dig at least six inches deep around the outline and remove the garden hose or stakes and twine.
2. Cover the entire garden bed with at least four pages of newspaper.
3. Water thoroughly until all layers of newspaper are waterlogged.
4. Cover newspaper with a thick layer of leaves.
5. Water thoroughly again.
6. Top with a minimum of eight to ten inches of topsoil.
7. Add water retention crystal if you live in an area prone to dry summers.
8. Add vermiculite or perlite, and work the amendments into the soil.
9. Work the compost into the soil.

If you've never heard of this method, you'll be surprised at how well it works if you try it. The more layers of newspaper you use, the fewer weeds you'll find poking through. Onions will always poke through, but you'll find that you rarely have to spend more than a few minutes weeding the garden.

You can add newspaper, leaves and little mulch each fall. The newspaper will begin to disintegrate over the winter, but you'll find that spring weeding is a breeze.

## Testing and Correcting Soil pH

After clearing the garden area, the most important task is to prepare the soil. The soil is to the garden what the foundation is to the house. Ensuring proper soil pH is the most important thing you can do to ensure healthy plants. (We take for granted that you'll water your plants regularly.)

After the first year, you realize that your new garden isn't living up to your expectations, falling far short of those slick photographs in the catalog. Or, perhaps your established garden has been on the decline over the past few seasons for no obvious reason. We weren't kidding when we said that a proper soil environment was the key to a healthy garden.

Unless you've neglecting your garden's basic needs, the culprit may be the soil pH level. The pH level indicates the availability of essential nutrients (nitrogen, phosphorous and potassium) to your plants. Adding fertilizer to soil with a pH imbalance is useless; the nutrients in the fertilizer are not available to the plants. An inhospitable pH factor can throw your entire garden out of kilter. It's like building a house on a faulty foundation.

You don't need a chemistry degree to understand pH , and you don't need to be a chemist to adjust the soil pH factor to achieve results in your garden. We'll give you a quick overview of pH , show you how to determine your pH and provide general guidelines for adding amendments to your soil to normalize the pH level.

## What is pH ?

All matter is either acidic or alkaline. pH (potential of hydrogen) measures the absence or presence of hydrogen ions in matter. A high concentration of hydrogen results in a low pH , while a low concentration of hydrogen results in a higher pH . Yes, it does sound backward!

Vinegar and lemon juice have a high acid content and are referred to as acidic. Baking soda and ammonia are alkaline substances. The pH scale ranges from 0 to 14 , with a pH of 0 assigned to the most acidic substances and a pH of 14 assigned to highly alkaline substances. A pH factor of 7 is neutral, so a factor of greater than 7 indicates the substance is alkaline and a pH factor of less than 7 indicates alkaline matter.

## Testing the Soil to Determine pH Level

The only way to accurately determine the pH level of your soil is by testing it. There are three ways you can test your soil:

- DIY - Purchase a do-it-yourself-kit at any lawn and garden center. Follow the manufacturer's instructions. This is the least costly method, and some kits include charts and general recommendations. You'll also find a toll-free customer support telephone number included with most kits. DIY pH testers include litmus paper, pH meters, and kits including test tubes and chemicals. Discuss your needs, knowledge level, plants and cost constraints with garden center employees to determine which testing method is best for you.
- Contact your county university cooperative extension service - Extension services are the best return you'll ever receive on your tax dollars. Part of their mission is to educate areas gardeners. Contact them for instructions on sending soil samples, and for a nominal fee, you'll receive a list of recommendations, based on the analysis. The advantage of using your county extension service is that they are more familiar with local soil and growing conditions than a lab located half-way across the country. You can follow up by telephone and receive unlimited free help on almost any gardening matter from experts - priceless.
- Commercial laboratory testing - This is the most expensive form of pH testing, but labs usually test for a variety of factors, not just pH levels. Perform an Internet search to compare features and costs. You'll receive an in-depth report from commercial labs, but you may not receive the same level of hand-holding as the extension services provide.


## Collecting Soil Samples for pH Analysis

The pH analysis is only as good as your soil sample. The results of the test depend on when, where and how you collect the soil. A faulty analysis can cause you to add unnecessary or improper amendments, wasting money. Wait until conditions are right to gather your samples.

## When to sample the soil

You can take soil samples any time of the year, but no later than a couple of months before spring planting. Additionally:

- Collect samples before adding fertilizer or organic matter.
- Collect samples when the soil is relatively dry; otherwise, air dry the samples.


## Equipment for Sampling Soil

Before you start, gather your equipment. All equipment must be meticulously clean and free from any chemicals. Leftover chemicals will affect the pH analysis and render a faulty reading. You'll need:

- Stainless steel soil probe, spade, garden trowel or bulb auger
- Plastic bucket
- Plastic bag (or whatever container the lab has supplied to hold the final sample)


## Collecting the Composite Soil Sample

You'll need one composite sample for each area of use. Each composite sample requires 10 or more mixed samples. Collect separate composite samples for flower gardens,
vegetable gardens and lawn. If you have two vegetable gardens with different vegetables, collect two composite samples. If you have a perennial garden in one area of your yard and a hybrid rose garden in another, collect two composite samples. To ensure an accurate composite sample, don't touch the soil. The pH in your body can affect the analysis.

1. Brush aside any loose debris before digging.
2. Dig 10 (or more for larger areas) samples of soil from different areas of the garden to a depth of at least six inches.
3. From each sample, remove a one-inch core of soil and add to the plastic bucket.
4. After you've added all of the samples to the bucket, sift through the soil with a clean trowel and remove any foreign objects such as pebbles, sticks or insects.
5. Crumble the remaining soil with the trowel and mix thoroughly.
6. If the soil is damp, spread it on clean plastic or newspaper and allow it to air dry.
7. Add the mixed soil to a clean plastic bag or other container for testing. You'll probably need less than a cup for each sample, but follow the instructions on the kit or from the lab.

## Amending your Soil

In general, the most hospitable pH range for plants lies between 6.0 and 7.0. Note that pH numbers increment by a factor of 10 : a pH of 7.0 is 10 times more alkaline than a pH factor of 6.0. Unlike mulch, which lies on top of the soil, work amendments into the soil to a depth of approximately 10 inches so that the roots benefit from the amendments. Always work amendments into the dry soil to avoid compacting the soil.

## Amending Acidic Soil

A pH level above 7.0 is usually too alkaline. To lower the pH and add acidity, add sulfur to the soil.

## Amending Alkaline Soil

A pH level below 6.0 is usually too acidic. To raise the pH and make the soil more alkaline, add lime to the soil.

## Beyond pH - Adding Nutrients to Soil

When testing the soil pH , you may find that the soil is deficient in one or more nutrients. After you've corrected the soil pH , nutrients in the soil become available to the plants. Now you need to ensure a proper level of nutrients in the soil. The following information should be viewed as a set of general guidelines. Always follow the instructions on the amendment package, because concentrations vary. In general:

- Low nitrogen level - add fertilizer
- High nitrogen level - water frequently and discontinue fertilizing until nitrogen level returns to normal
- Low phosphorus level - add bone meal
- High phosphorus level - water frequently and switch to a low-phosphorus fertilizer until level returns to normal
- Low potassium level - add potash
- High potassium level - water and discontinue adding additional potash until level returns to normal


## When to Expect Results

Amendments take time to work their magic on an already established garden. Expect to see improvement within one to two months after amending the soil. Chemical amendments offer a temporary solution. For best results, test the soil and add necessary amendments annually.

Achieving a longer-term solution is possible by using organic amendments. Add organic materials such as compost, manure and peat each spring before planting season, and work into the soil. Organic matter may remedy chemical imbalances. At worst, the soil will require fewer chemical amendments.

If you're starting with a new garden bed, the proper soil pH will guarantee that your plants get the best possible start. Check your soil pH each fall and amend needed to lay the groundwork for groundbreaking blooms. If you skip the annual soil pH test for several years, your garden may begin to decline. Soil pH is probably part of the problem. When you begin to enjoy the rewards of a healthy, vibrant garden again, you'll find the motivation to keep your soil's pH balanced.

## What's Next?

## Wrapping up Loose Ends

Now that you have a plan to follow, the remaining work is the most satisfying:

1. Plant.
2. Water.
3. Enjoy...until the next gardening season.

Remember that a garden isn't built in one season. It takes several years to mature. Each year, you'll thrill at the progress your gardens make. You can't rush nature, but you can slow down and enjoy each phase of the garden's process. Good luck with your gardens, and happy gardening!

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