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1. Gardening

What is gardening?

- ❖ Gardening is the growing of plants such as flowers, shrubs and trees as a hobby or recreation.
- ❖ Some people also grow vegetables or fruit in their gardens.
- ❖ People do gardening outdoors in the soil in their backyard, or in pots or containers on their balcony or on their patio.

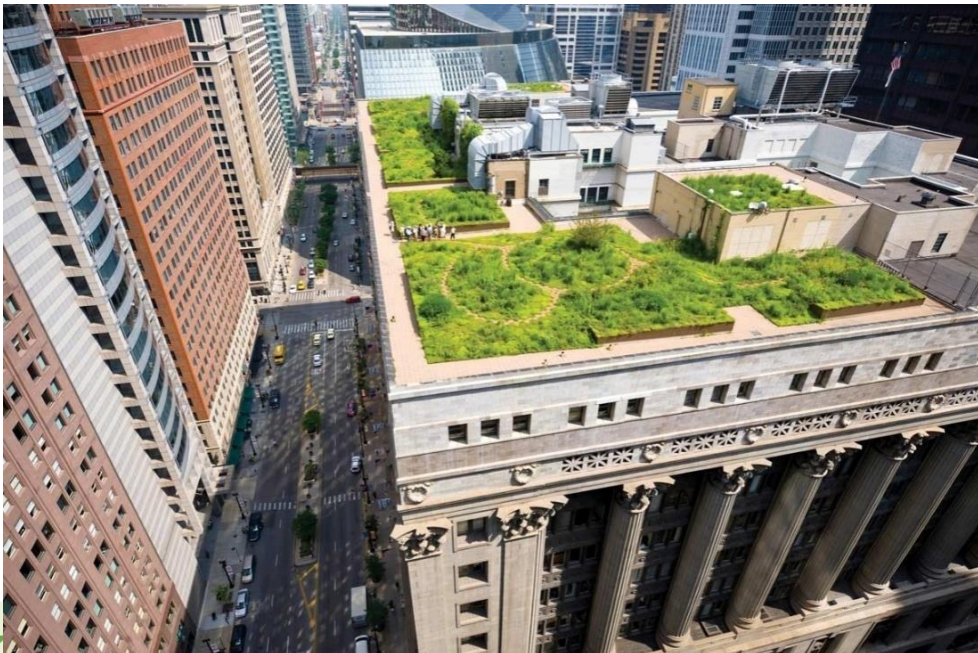
Rooftop garden:

The surface where you'll grow your plants is called the vegetation layer. The growing medium (soil) will be prepared according to the plants that you choose to grow on your rooftop garden.

Roof gardens are classified into three main types



Extensive Green Roof:



- ❖ A green roof involves the extensive greening of rooftop surfaces.
- ❖ It is typically not designed for public access or recreational use, and access is strictly for periodic maintenance.
- ❖ With a thinner vegetation support layer, green roofs are lightweight compared to roof gardens.
- ❖ An extensive green roof has a shallow growing medium-usually less than six inches.

Semi-Intensive Green Roof:



- ❖ A semi-intensive green roof system is characterized by small herbaceous plants, ground.
- ❖ Covers, grasses and small shrubs, requiring moderate maintenance and occasional irrigation.
- ❖ A typical growing medium depth for a semi-intensive green roof is 15 to 30 cm.

Intensive Green Roof:



- Intensive green roofs consist of much deeper substrates which give far greater scope to design and grow more complicated and elaborate gardens onto concrete structures.
- Wall barn supplies intensive green roof systems with soil substrates over 1 meter deep.

2. Different types of garden

Backyard Garden:



Definition:

- Home gardening is the act of turning an outside space into a productive and functional area for the family, as well as a home for plants and animals that have otherwise lost their homes to urban development.
- Home gardening involves growing fruit, vegetables and herbs for personal consumption, as well as creating aesthetics and diversity for bird and insect life with attractive flower beds.
- Home gardening requires gardening knowledge, ongoing nurturing of plants, maintenance skills, and consistent improvement.

Great Ways to Transform Your Yard:

- No matter what size backyard you have, you can apply an amazing array of landscaping designs and various garden features to your space to bring your vision to life.
- This long list of backyard ideas can help transform your yard and provide insight into the plans you may have.
- It also provides excellent examples to help you envision how to use certain features, such as gazebos, raised garden beds, water features, and certain types of vegetation.

How to Start a Backyard Garden:

11 Steps for New Gardeners:

Follow these step-by-step gardening tips to turn your backyard into a garden.

Determine your climate zone:

- Success in gardening is all about putting the right plant in the right place at the right time. That starts with an understanding of the crops suited to your climatic region and the season in which to plant them.
- The USDA maintains a plant hardiness zone map searchable by ZIP code, which divides the country into 13 zones based on average annual minimum temperature.
- Find your zone and familiarize yourself with the fruits, vegetables, flowers, and herbs that thrive in it (if you're outside of the United States, consult international hardiness zone maps). Once you know your climate zone, look up the estimated first and last frost dates so you know the duration of your growing season.
- Now, when you go to your local garden center, you can look for plants labeled with the number corresponding to your hardiness zone.
- If you're buying seeds, compare the number of "days to maturity" listed on the seed packet to the length of your growing season.

Decide what to grow:

- Use the constraints of your climate zone and your personal preferences to determine what plants you'd like to grow.
- Do you want a flower garden, vegetable garden, herb garden, container garden, or a combination of several options? Ask yourself what kind of fruits and vegetables you like to eat, and plant those.
- Also, take into consideration your available home gardening space. If you only have room for a small garden, it's wise to avoid large plants.

Choose the ideal garden location:

- ❖ Most flowers and vegetables require several hours of direct sunlight a day, so look for an area that receives enough full sun for what you're growing.
- ❖ Growing plants will also be easier on a flat piece of land that's near a structure that provides some wind cover.

Acquire basic gardening tools:

- At a minimum, you'll need to invest in a sturdy shovel and a pair of gloves when you start your garden.
- But there are several other tools of the trade that might come in handy: a potting soil scoop to easily fill pots and planters, a standard kitchen knife to make precise cuts when harvesting vegetables, a battery-powered or rechargeable cordless drill to make drainage holes when converting found objects to planters, a horihori knife useful for dividing clumps of roots and other coarse garden tasks, hand pruners to cut stems and branches up to a half-inch in diameter, and a small pruning saw designed to access tight spaces when pruning trees and shrubs.

Test your soil:

- Before starting a garden, get a soil test, which can be obtained for a small fee through your local USDA cooperative extension service office.
- In addition to identifying the proportions of clay, sand, silt and organic matter in your garden soil, you'll learn if your pH level is off and whether you have any nutrient deficiencies.
- You'll also receive instructions to correct any imbalances. Ask for a test that covers toxic substances that are occasionally found in the soil, such as lead and arsenic.
- If toxins are found above safe thresholds, do not plant edibles in the soil. Instead, grow food in wooden raised beds with a barrier on the bottom that prevents the roots from getting into the ground below.

Make your garden bed:

- The first step to creating a garden bed is clearing away the existing vegetation. Weeds may be pulled by hand. Just make sure you get the roots so they don't resprout.
- If you're starting with a lawn, you may want to rent a gas-powered sod cutter to remove the grass. Then you need to prepare your plating space.
- It's best not to till unless it's absolutely necessary-digging can disrupt life beneath the topsoil (from worms to beetles to bacteria), which isn't ideal. Instead try no-till gardening: Once you've removed the debris and grass away, spread a thick layer of compost on the growing area (at least four inches thick).

- If your weeds are particularly stubborn, you can also try sheet mulching, or the process of using cardboard to compost weeds while preserving soil structure.
- It's best if the beds you create are no more than 4 feet wide so you can reach into the center without stepping onto the soft soil and compacting it, undoing all your hard work.

Decide whether to grow from seed or transplant seedlings:

- Seed starting might save money, but it's a long process with potential bumps in the road. Some seeds are stubborn about sprouting; others take ages to develop into healthy plants ready for the harsh outdoor world.
- As an alternative option, you can also go to your local nursery to buy young plants grown in a commercial greenhouse.
- Just remember you don't necessarily want the biggest plants in the batch, as these are often root bound.
- With a dense thicket of plant roots beneath the soil, these seedlings have outgrown their pots and might not transition well into the garden.

Plant your seeds or seedlings with care:

- When planting seeds, make sure to sow them at the proper depth indicated on the seed packet, tamp the soil firmly over them with the palm of your hand, and water them whenever the surface of the soil dries out.
- When planting seedlings, carefully turn the pot over while putting your hand on top of the soil with the stem between your fingers. Gently squeeze the pot on all sides and shimmy it off.
- Grasp the mass of soil in your hands and massage it lightly until the roots are no longer stuck in the shape of the pot.
- If the plant is root bound, you'll have to massage it more vigorously, perhaps even using a knife to loosen the mat of roots.
- Finally, use your hands or a small trowel to create a hole in the soil no bigger than the root mass. Position the plant, cover the roots with soil (making sure not to cover any part of the stem in the process, which is a death sentence for many types of plants) and press it firmly into the earth.

Water sufficiently:

- Typically during the growing season, plants require about an inch of water per week.
- If there hasn't been rainfall, make sure you're providing a sufficient amount of water.
- To eliminate guesswork, an easy way to check if plants are thirsty is to simply stick your finger two inches deep into the soil.
- If it feels dry, then it's most likely time to water. And remember, most plants are better off slightly dry than sopping wet.
- Too much water can cause harmful root rot. When watering, your goal is to make the soil moist but not soggy.

Use mulch liberally:

- By covering the soil with rocks (which can keep the soil moist and warm) and organic matter, weeds have a hard time germinating and the earth is kept cool and moist.
- Worms and other beneficial soil creatures love mulch; as it decays, it becomes fuel for the soil food web, just like compost.
- It's important to match the right type of mulch with each crop.
- Wood chips are ideal for fruit trees, shrubs, perennial flowers, and other large, long-lived plants. Dainty vegetables prefer less weighty mulch such as straw or leaves.

Maintain and care for your garden:

- There is a seasonal rhythm to garden maintenance. Spring is all about keeping the weeds from getting a toehold.
- Summer requires extra vigilance to keep the garden well watered. Fall is the season for cutting things back and cleaning up.
- Throughout the growing season, pay attention to what the plants tell you.
- A yellow or deformed leaf is a sign that you should clip it off. A plant collapsing under its own weight is calling out for staking.
- Dense, overgrown vegetation demands careful pruning to open things up so that sunlight and fresh air can circulate.

Consider the benefits of growing your own vegetables at home:

- ❖ Lowers the cost of providing your family with healthy, organic vegetables
- ❖ Reduces the environmental impact of transporting and warehousing food
- ❖ Makes your meals more personal, tasty, and interesting
- ❖ Connects your family to the natural cycles of weather, growth, and renewal
- ❖ Cultivates mindfulness and provides healthy outdoor exercise
- ❖ Provides wholesome activity and lasting memories for your children

Add organic matter

- Once the soil is turned and any large clumps are broken up, you can enrich the soil with organic matter.
- This material should be dug, or hoed, into the top 6" of soil where it will be available to the root systems of young plants. The best sources for organic matter are:

Compost:



- ❖ Compost adds nutrient-rich humus which fuels plant growth and restores vitality to depleted soil. The compost bin is an essential part of any backyard vegetable garden.

- ❖ In close residential neighborhoods, sealed compost units are best because they don't smell or attract pests or flying insects.
- ❖ There are two basic types of sealed composters: units that stand on the ground and have open bottoms; these usually sell for \$50 - \$400.
- ❖ Compost tumblers are fully sealed and off the ground, and they sell for \$150 - \$850. Compost tumblers also speed up the composting process.
- ❖ To learn more about compost and composters, read our Composting Guide. To see our collection of composters for sale, visit our store for Composters and Composting Accessories.

Animal Manure:



- ❖ Cow or horse manure is good sources of organic matter. Ideally, the manure should be well aged so it doesn't burn any tender transplants.
- ❖ The liability of bringing manure into your garden is the weed seeds it may contain.
- ❖ This can be mitigated through the use of mulch, which covers the ground and blocks light from reaching any weed seeds.