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Introduction

Summer is over and the garden outside is finished for the year. All the plants outside have either gone dormant for the winter or finished their life cycle. But gardeners who still crave the satisfaction and rewards of growing things can put their gardening talents to work indoors during the winter.

Whether your gardening need itches during the winter or not, having plants in the house can add to the overall health of your household. Having one plant for every 100 square feet in your house helps remove indoor pollutants. In addition, plants take up carbon dioxide and give off oxygen as a waste product.

Humans, of course, take up oxygen and give off carbon dioxide as a waste product. So, having plants in the house makes for a healthy and equitable exchange for humans and plants.

A fancy greenhouse is not necessary to grow vegetables and beautiful flowers indoors. Many plants can thrive in your house and there are several techniques to help you keep your green thumb working all winter long.
Lighting

One of the first things you will need to address for your indoor gardening is lighting. No matter what else you do for your plants, if they do not have the proper lighting they will not thrive. Lighting is, in fact, the most important aspect of indoor gardening. When choosing decorative plants for your home, look for plants that require medium to low light, like Philodendrons, some ivy and some ferns.

Plants And Indoor Light

Plants that are not getting enough sunlight will generally have thin stems and smaller leaves. The leaves will also be lighter on a plant that is not getting adequate light.

Most plants with medium light requirements will benefit from a south facing window. Windows that face east and west will generally give plants with medium light requirements adequate sunlight, as well. However, plants that prefer low light will probably prefer a north facing window.

Because the sunlight comes through your windows from one side only, even when placing your plants near windows with the proper amount of sunlight you will still need to make sure that all sides of the plant get the full benefits of the light.

The foliage on the side of the plant that is facing away from the window will reach for the light, growing up and over toward the window and making your plant look uneven.

The foliage on the side of the plant facing away from the window may even be a lighter color. Each week, rotate your plant so that a different side of the plant is facing the window. This will allow all the foliage on the plant to grow evenly and healthy.

If the windows in your home do not let much light into the house, if they are shaded by trees or buildings or if the angle from the sun just does not allow much light into the room, you can use artificial light for your plants.

Most hardware stores and some supermarkets carry incandescent grow lights that will screw into a regular socket and will provide your plants with supplemental light when there is some, but not enough, sunlight. There are also a variety of specialty grow lights that will also provide the necessary light for growing vegetables inside and for starting spring seedlings inside.
**Specialty Grow Lights**

- One type of specialty grow light is an HID (High Intensity Discharge) light. HID lights come in two types; the Metal Halide (MH) bulb, which produces lighting in the blue spectrum and is ideal for foliage growth, and, High Pressure Sodium (HPS) bulbs, which give a red-orange light, ideal for increasing bud and flower production. The MH bulbs can be used as a primary or single lighting source while the HPS bulbs are best used as a secondary or additional lighting source. MH and HPS bulbs can be used together to give your indoor plants the full spectrum of light.

- Compact fluorescent full-spectrum lights are now available that, especially when used in multiples, can provide some plants, such as African violets and herbs, with all the light they need.

Most hardware stores will carry a wide variety of specialty grow lights and they can also be found online by searching for grow lights.

**Reflectors**

Reflectors can be an effective way of maximizing the use of electric grow lights. Place reflective Mylar or white paper around the edge of the containers to reflect the light back up onto the plant. Aluminium foil will also reflect heat back up onto the plants and should not be used as a reflector.

Using an electric timer on your grow lights will keep your plant’s day and night cycles regulated. Plants do need a night cycle for rest in order to grow properly.

When using banks of artificial lighting for your indoor plants, care must be taken to provide adequate ventilation. The heat from multiple electric bulbs can build up and be detrimental to the plants. Leave a window cracked for several hours a day, if possible, or run a ceiling fan or portable fan to circulate the air.
Proper watering of your indoor plants is as important as proper lighting. More indoor plants are killed by over-watering than by any other cause, so it is important to know the water requirements of each plant that you have indoors. It is also important to note that plants that are grown indoors in containers will require more frequent watering than plants grown outside in the ground because the containers restrict the growth of the root system. Electric lighting also creates a drying effect that creates a need for more frequent watering.

**Types Of Water**

Indoor plants can be watered with regular tap water. The chlorine and fluoride that is added to most city water will not harm your house plants. However, do not water your plants with water that has been run through a water softener, especially a water softener that uses salt. If you do buy bottled water for your plants, buy regular spring water or drinking water, not distilled water.

Distilled water has had all the minerals removed and your plants do need the minerals that are naturally found in drinking water. Use water that is the same temperature as the room the plant is in. Using water that is too cold or too hot can shock your plant’s root system.

The humidity in the room is also an important factor to consider in your plant’s water needs. If the room air is very dry, consider using a humidifier. Air that is too dry for too long can cause the leaves of the plant to dry and curl at the edges. You can also mist the plants leaves, depending on the plant, if the air in the room is too dry. Mist the leaves early in the day to prevent them from rotting overnight.

**When To Water**

Not all plants have the same water requirements. Tropical plants may require more water than Mediterranean plants and flowering plants will require more water than plants that do not flower. Carefully read the watering instructions for all the plants or seeds that you purchase.

Along these same lines, not all of your plants will need watering at the same time. The size of each plant, the amount of light and ventilation each plant gets, the temperature and humidity of the room all have an effect on how much water a plant needs.
Watering all of your indoor plants at the same time each week is not a good practice. Instead, learn to tell when your plants need water by the feel and color of the soil. As the soil dries out it will become a lighter color and will eventually begin to pull away from the sides of the container and even crack.

A good way to check the moisture content of the soil is to stick your finger into the soil one or two inches deep. If the soil at the bottom of the hole is dry, your plant needs water.

Do not water your plants until the soil is dry enough that the plant actually needs water. When the soil is too wet the plant can not get enough oxygen and will literally drown. The roots will turn brown and will rot or will be subject to disease and the leaves will turn yellow and will fall off.

While it is better to let a plant get a little too dry than to over-water it, letting a plant stay too dry can also kill the roots. If you are away from home often or find it difficult to gauge when your plants need water, you can invest in self-watering planters that will constantly give your plants the proper amount of water.

Do not water your indoor plants at night. Transpiration, the process where water vapour passes through the leaves of the plant, is an important part of the watering process and can not occur at night in indoor plants.

Do not automatically assume that the plant needs watering if it appears stressed. Carefully check the soil's moisture by sticking your finger as far down into the dirt as possible before you water a plant that appears stressed.

**How To Water**

There are two methods you can use to water your plants. One method is to water your plants from the top of the soil. When watering from the top of the soil, use a watering can with a narrow spout that will fit between the leaves to prevent splashing too much water on the foliage. Water all over the top of the soil, not just in the middle on or the sides.

You can also water your plants from the bottom. For some plants that do not tolerate moisture on their leaves, such as African violets, this is the best method. This method is also preferred for most plants because it allows the water to soak up through the entire soil base.

Many plant containers have large saucers that go underneath the pot. Fill this saucer with water and allow the soil to soak up the water through the drainage holes. Allow the water to stand for one hour and then drain off any remaining water.
Do not allow the remaining water to stay in the saucer. This will result in over-watering and prevent the roots from receiving the oxygen they need.

If you container does not have a saucer, fill a sink or large bucket partially with water and place the plant container in the sink or bucket. Make sure that the water does not flow over the top of the container. Let the plant sit in the water until the top of the soil is moist.

Plants that are consistently watered from the bottom may eventually show signs of salt build-up on the top of the soil. If this salt build-up is moderate, water the plant from the top of the soil thoroughly and discard the water that drains out of the soil. If the salt build-up is heavy, scrape off the top layer of the soil, taking care not to disturb the roots, and replace it with fresh soil.
Fertilizing

Most indoor plants will not require frequent fertilizing. A good application of fertilizer every two to three months should be sufficient for most indoor plants.

Do not fertilize new plants for at least two months because they will have already been fertilized at the nursery.

Carefully read the printed instructions that come with your plant or research on your own to make sure you know the fertilizing needs of each particular plant.

There are many good commercial fertilizers on the market made specifically for house plants. Carefully follow the label directions when fertilizing your plants and you will avoid over and under feeding your indoor plants.

Plants that have been over fertilized will have dried or burned leaves. If you feel you have over fertilized your plants, water them thoroughly from the top and discard the drained water for two to three weeks.
Room Temperature

Not all plants have the same temperature requirements. Carefully read the instructions that come with your plant for any specific temperature requirements. As a general rule, most house plants do well in day time temperatures of 65° F to 75° F and 50° F to 60° F night time temperatures.

These temperatures can vary as much as plus or minus 10 degrees for most plants. Plants with different temperature requirements will generally have that noted prominently in the printed planting instructions that come with the plant.

Major temperature fluctuations are harmful to indoor plants. Try to keep the temperature as stable as possible in the rooms where your indoor plants live.

The leaves will turn yellow and fall off on plants that are grown in temperatures that are too cold. A plant that is grown in temperatures that are too hot will be small and will have weak stems and leaves.
Choosing The Right Container

Size

It is important to choose a container that will give your indoor plants plenty of room to grow and small enough that the plant will not put all its energy into expanding its root system to fill the available space.

For example, when transplanting a four inch potted plant into a new pot, the new pot should be no more than two to four inches larger.

When transplanting a twelve inch potted plant, the new pot should be no more than four to six inches larger. When you grow your indoor plants from very young plants, you may need to transplant three or four times before the plant reaches its mature size.

Drainage

All plant containers should contain drainage holes in the bottom of the pot. Plants that are not allowed proper drainage will suffer from oxygen deprivation and the diseases that can effect roots when they are kept too wet.

Clay and pottery pots are excellent containers for indoor plants because the pots absorb some moisture; however plastic containers also work very well. Whatever material the container is made from, it must have proper drainage holes in the bottom of the pot.

If the container you have chosen does not have drainage holes, drill or cut several holes about the size of a pencil into the bottom of the pot to allow excess water to drain. Space the drainage holes evenly all around the bottom of the pot to allow for even drainage.

It is best to purchase a large saucer with your plant pot. This will allow you to water your plants from the bottom, if you choose, and will also keep freshly watered plants from dripping on to furniture and floors.
Potting And Repotting

The first step in repotting indoor plants is to make sure the new containers are clean and free of insects and disease. Even if the containers have never been used before, it is a good practice to wash them well with regular dishwashing liquid and a couple of teaspoons of bleach. Rinse the pots thoroughly with clear water until all traces of the bleach smell are gone.

Use a good commercial potting soil. Garden soil is not suitable for indoor plants although you can mix in up to one-half pure compost with the potting soil. There are also commercial potting soils now that contain timed release fertilizers which are excellent for use in repotting indoor plants.

The soil should be dark and moist with no clumps or rocks. If necessary, put the soil through a sieve to break up hard lumps and sift out any rocks or debris. If the soil is dry, place the soil in a bucket or pan and water it lightly, mixing the soil around in the bucket or pan to get it all moistened. Let this moistened soil stand for an hour or two to make sure the moisture is evenly distributed. If you add too much water, just let the soil dry for a day or two before potting your plants.

Transplanting

With the moist, sifted soil, fill the pot about one-third with soil. Grasp the plant by its stem and gently slide it out of its existing pot, dirt and all. Then place the plant, with the dirt, into the new pot, pressing it down lightly.

The plant’s existing dirt and root ball should come up to about one inch below the rim of the pot. This will allow you to water from the top of the pot occasionally or consistently, if you desire. The plant’s stem should not be covered with dirt or it will rot and the plant will die.

If the plant sits too low in the pot, take it out and add more dirt to the bottom of the pot until the plant’s root ball and existing dirt sits about one inch from the rim of the pot.

Carefully fill in soil around the plant to about one inch below the rim of the pot, making sure to keep the existing dirt and root ball level with the new dirt in the pot. Press the soil firmly but gently down as you fill the pot to prevent air bubbles and excess settling.

Water carefully from the top, making sure that the water doesn’t sit on top of the soil.

When your indoor plant has become root bound it will stop growing. Grasp the plant by the stem and slide it from the pot, dirt and all. It the roots are tightly packed and
covering the outside of the dirt and growing out through the drainage holes, the plant is root bound and the roots will need trimmed before you repot it.

With a sharp pair of scissors or pruners, cut away about half of the tightly packed roots. Then loosen the remaining roots on the outside of the dirt so that they will grow down into the soil of the new pot and repot normally.

**Planting Cuttings**

When you have taken cuttings from other plants and rooted them in water there comes a time when they need to be transferred from the water to soil.

Fill the new container about one third full of the potting soil and place the cutting inside the pot, holding it so that the bottom of the roots drag slightly onto the soil.

If the stem of the cutting does not come to about one inch from the rim of the pot, add more soil until it does. Then carefully fill the pot with soil, holding the cutting straight and lightly packing the soil around it up to about one inch from the top of the pot.

Water carefully from the top, making sure that the water does not stand on top of the soil.
Growing An Indoor Herb Garden

Growing herbs indoors is simple and enjoyable. Simply select a spot in your home with ample sunlight or prepare artificial lights to either supplement or fully provide the light your herbs will need. Compact fluorescent lights can supply all the light your herbs need if used within two feet of the plants. Depending on the number of plants you plan to grow, you may need more than one light.

Choose a container that will provide ample room for the mature plants and that will give your herbs proper drainage. A 16 inch rectangular pot will have enough room for about four herb plants.

You can start your herbs from seeds in the same pots where you plan to grow them or you can start them in seedling pots. You can also buy established herb plants at local gardening centres. One note: herbs are very sensitive when it comes to transplanting. It is probably best for beginning gardeners to start the seeds in the pots where the mature plants will remain.

Some of the easiest herbs to grow are rosemary, oregano, chives, basil, cilantro and parsley. However, most herbs are easy and forgiving plants and should prove no problem to the dedicated indoor gardener.

Plant your herbs as you would any other plant and water as needed. Many herbs, such as rosemary and oregano, are Mediterranean plants and prefer a drier soil. To test to see if your herbs need water, poke your finger into the soil around the plants as far as it will go.

If the soil at the bottom of the hole is dry, your herbs need water. Watch your herbs carefully for signs of drying. If the leaves begin to look wilted or become too dry, then you are not giving your herbs enough water.

Herbs need very little fertilizer. Use a fertilizer formulated for house plants and follow the label directions carefully, applying the fertilizer only once every two or three months.

Fresh herbs are a delightful addition to any kitchen. They give off a fresh scent and add great flavor to your cooking. And they are so simple to grow and maintain that anyone can have an indoor herb garden.
Some Common House Plants Can Be Poisonous

When decorating with indoor plants, it is a good idea to know which plants can be harmful to pets and children. The following is a list of common house plants that should be kept out of reach of pets and children who might be prone to chewing or putting the leaves in their mouths.

- **Philodendron**

  The Philodendron is an ivy-type plant with heart-shaped leaves and is one of the most popular house plants. Eating or chewing this plant will cause a burning sensation in the lips, mouth and throat and may cause a rash.

  Rinse the child’s mouth thoroughly with clear water. A large amount must be eaten to cause a severe reaction however it is a good idea to call poison control if your child does ingest the leaves.

- **Pothos**

  Pothos is another very popular house plant. It is a large ivy-type plant with heart-shaped leaves that are streaked with yellow or white. Eating or chewing this plant may cause a burning sensation in the lips, mouth and throat and may cause a rash.

  Rinse the child’s mouth thoroughly with clear water. It does require a large amount to cause a severe reaction but it is a good idea to call poison control if your child does ingest the leaves.

- **Dieffenbachia or Dumb Cane**

  This is a large plant with large, oblong leaves that have white splotches. Eating or chewing this plant may cause a burning sensation in the lips, mouth and throat, a rash and it may also cause temporary speech impairment. Wash the child’s mouth with clear water and call poison control.

- **Azalea or Rhododendron**

  This is a flowering shrub that comes in a variety of colors. This is a dangerous plant and should be kept away from children and pets.

  This plant may cause burning in the mouth, vomiting, diarrhea, headache, skin prickling, dimness of vision, muscular weakness, a slow heart beat, abnormally low
blood pressure, convulsions and coma. This plant may cause death. If your child ingests any of this plant call poison control immediately.

- **Oleander**

This is a flowering shrub with white, pink or red flower clusters, with long narrow leaves up to 10 inches long. This plant is very toxic and should be kept away from children and pets. This plant may cause death. If your child ingests any of this plant call poison control immediately.
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