

## Terrarium: A Pretty Art of Glass Landscaping

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Indoor gardening refers to the growing plants indoors. Indoor gardening is practiced for different purposes and multiple styles and techniques are engaged for this purpose. The trend of indoor gardening is tremendously increasing as people are more interested to beautify their home and office spaces with different types of plants such as ornamentals, vegetables, and herbals. The reasons for the indoor gardening are purely for delight, satisfaction and to mitigate indoor air pollution etc. Indoor garden can be accommodated in any indoor space of homes, office, restaurants and anywhere the life and colour are needed. The limitation of outdoor spaces demands to imitate the nature in the form of indoor gardens. In indoor garden, plants are grown in containers, pots, ceramic made pots, or any other container. Terrarium is one such type of techniques used for growing plants generally in a sealable glass container containing soil, and can be opened for maintenance to access the plants inside. Terrariums are a great addition to any space for a countless of reasons. It is a perfect gift, and adds an intriguing natural element to any indoor space. That helps to encourage creativity and act as a wonderful learning resource for kids about tending of live plants. Indoor gardening with terrariums is entertaining and one of the attractive ways to integrate plants into any home furnishings.

### History about terrarium

The use of transparent sealable glass containers for growing house plants in Greece dates back at least 2500 years. Terrarium culture has originated from New England, where housewives keep Squawberry (Partridge berry) in hand blown glass bowls. The terrarium was invented by Dr. N.B. Ward (Physician) in 19th century in London. He published a book entitled 'On the Growth of Plants in Closely Glazed Cases'. Today the most commonly used terrariums are small ornamental terrariums, version of Wardian case.

### Terrariums are classified into four types

**1. Tropical closed terrarium:** Next up is the type that made the term terrarium popular, the closed terrarium. These terrariums look so enticing that anyone who glances at them finds it hard to ignore them. However, growing these terrariums is extremely difficult and as they are closed off, only tropical plants that grow in humidity can survive inside them. These are the terrariums that don't need any looking after cause they develop a self-sufficient ecosystem for themselves.

**2. Open terrarium:** The first and most popular type of terrarium is the open one. Open terrariums are preferred by plant lovers around the globe because of their amazing qualities. The open terrariums look incredibly appealing and they are extremely easy to look after, almost like regular indoor plants. In this type of terrarium grow almost all kinds



of plants.

**3. Hanging terrarium:** Now, let's talk about the terrariums that are invented solely for decorative purposes. The hanging terrarium is basically a normal open terrarium that comes with an option of hanging.

**4. Tray terrarium:** Our world is a creative place, so once the terrarium was released, it did not take us much time to develop different and easy variants of the said plant. The tray terrariums are a prompt example of this. As the name suggests, this one plant has all the fascinating features of a terrarium but instead of a bowl, it comes in a tray. But one thing is for sure, they look equally stunning.



### Material required for the preparation of terrarium

**Container to use:** A glass jar lidded or open based on the selection of an open or enclosed terrarium. Growing media consist of potting mixture (1:1:1:1 ratio of soil: sand: Farm Yard Manure: cocopeat), charcoal and pebbles of different colour and sizes to build the foundation. Plants of choice: Varying sizes, colors or textures to keep the terrarium contrast. Terrarium accessories for decoration Moss/sphagnum moss Spray bottle for misting watering the plants.

**Types of containers:** Choosing the right container is essential for the creation of terrarium. Any transparent glass container with a wide mouth with or without a lid can be used to make a terrarium. Suitable containers include aquariums any glass jar, wine bottle, light bulb, glass cloche etc. The glass cloche was often used to protect tender plants in the garden especially for nurturing moisture loving plants. A wide opening in the container allows fitting the hand into the container to add drainage material, soil media, plants, and decorative items.

**Media for terrarium:** Appropriate media is important for the sustainable growth of plants inside the terrarium. Three types of layers are important in adding planting media to the terrarium such as drainage layer, soil layer and plant layer are essential. A drainage layer with the non-porous material such as small gravel, sand, or bark chips to create a collection area for drainage. The second layer is the soil layer which consists of growing substrate to anchor the roots of your plants and retain moisture. Common growing media types include potting mix, coconut coir, or sand. Third layer is the plant layer consists of suitable plants for an open or closed terrarium. Other layers like activated charcoal layer for water filtration and purification, ornamental layer for the decorative appeal is optional.

**Planting the terrarium:** The largest plants among the selected ones can be planted in the middle of the glass container, and then the smaller ones can be planted around. Decorative items, moss, shells, pebbles or rocks of different size and colours can also be added make terrarium attractive.

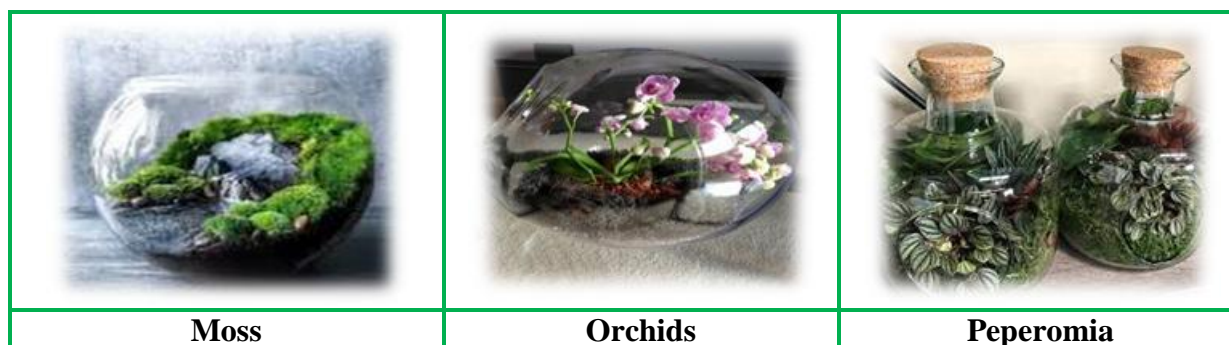
**Selection of suitable plants:** Tropical plant varieties viz., ferns, mosses, orchids, and air plants, are generally kept within closed terrariums due to the conditions being similar to the humid environment of the tropics. Ferns are versatile and hardy plant species likes warm



environment with high humidity and they have huge variety of shape and textures. Air plants, cacti and succulents are good low-maintenance choices for this modern-style terrarium. Succulents are not good choice for closed terrariums and the lack of drainage leads to root rot. It is a great specimen to use in open terrariums because of their low maintenance needs and adaptation to arid environments.

#### Plants suitable for terrarium:

S.No.	Plant	Species
1.	Air plants	<i>Tillandsia bulbosa</i> , <i>Tillandsia stricta</i>
2.	Foliage	<i>Calathea orbifolia</i> , <i>Philodendron Hederaceum</i> , <i>Fittonia albivenis</i> , <i>Tradescantia zebrina</i>
3.	Moss	<i>Thuidium delicatulum</i> , <i>Hypnum cupressiforme</i> , <i>Tortula ruralis</i> etc.
4.	Fern	<i>Pellaea rotundifolia</i> , <i>Phlebodium aureum</i> , <i>Adiantum microphyllum</i> , <i>Nephrolepis cordifolia</i> , <i>Davallia fejeensis</i> , <i>Nephrolepis exaltata</i> etc.
5.	Peperomia	<i>Peperomia prostrata</i> , <i>Peperomia rotundifolia</i>
6.	Orchids	<i>Miniature Phalaenopsis</i> , <i>Masdevallia</i> , <i>Pleurothallids</i>



**Designing a terrarium:** The terrarium designs are limited with the creativity of the designer. It can be designed following theme for example tropical rain forest, fairy garden, water fall, water garden, outdoor garden, etc. The themes may be created by material or plants oriented. The shape of the container and related decorative accessories can be chosen to match the theme of the terrarium.

**Designing the terrarium can follow the following principles** **Balance:** This is the state of equilibrium can be created by symmetrical and asymmetrical way around the central axis. Symmetrical balance is achieved by the exact duplication on both sides. The asymmetrical balance creates curiosity which can be accomplished by the inclusion of different colour, texture, and shape. **Unity or harmony:** It is the overall effect of various features, styles, and colours of total scene of the terrarium. It can be attained by following the rule of three by planting in odd numbers.

**Proportion or scale:** It is the size relation of one component with other in magnitude and the sense of distance can be created by planting smaller/fine textured plants in the periphery of the container and larger/coarse textured plants in the centre.

**Focal point:** The place/point where the viewer's eye is first attracted which can be created by stones, rocks or with different coloured/textured plant.

**Rhythm:** Repetition of an object or a plant in a cyclic pattern is called rhythm. **Simplicity:** Overcrowding with plants and objects should be avoided by following simplicity

#### Care of the terrarium

**Watering:** In a closed terrarium, water is usually not required for 4 to 6 months. Check for the absence of condensation inside the container or any signs of wilting plants to determine

the need for watering. For open terrariums, occasional watering is necessary but less frequent compared to other houseplants. Unless it's a desert-type dish garden, frequent watering is essential. Always water lightly to prevent standing water in the gravel and charcoal, which can lead to root diseases. Excessive watering can disrupt the terrarium's internal drainage system. After watering a closed terrarium, allow the foliage to dry before replacing the cover.

**Light:** Avoid direct sunlight for both open and closed terrariums. While a dish garden with plants requiring bright light can be placed in direct sun, direct sunlight can cause excessive heat buildup in closed or tall open containers, potentially harming most plants. Most terrarium plants thrive in good light but not extremely bright conditions. If the terrarium lacks sufficient light, consider using artificial light sources such as a 100-watt bulb placed near the terrarium or fluorescent tubes positioned over it for 16 to 18 hours daily. Rotate the terrarium occasionally to ensure even plant growth from all angles.

**Pruning:** Regular trimming is necessary as plants in a terrarium tend to outgrow their limited space. Light trimming encourages side-shoot growth and maintains plant size. Prune by pinching out tips before plants become overly tall for healthier growth. Ensure all trimmed vegetation is removed from the terrarium to keep it tidy.

**Fertilization:** Terrarium plants generally don't require frequent fertilization to prevent rapid growth. Avoid fertilizing for at least a year after planting. If plants seem pale or lack vigor after the first year, consider using a diluted water-soluble houseplant fertilizer at a quarter of the recommended rate for normal houseplants. Ensure no fertilizer solution remains on the foliage after application.

**Other Maintenance:** While terrariums are low-maintenance, occasional plant changes or removal may be necessary. Exercise caution when adding new plants to prevent introducing potential issues. Regularly inspect and maintain the terrarium to ensure a healthy and appealing indoor display.

### **Companies/Online communities involved in Terrarium business in India and abroad:**

The gifting industry in India is witnessing a surge in companies and startups specializing in diverse offerings. Established online platforms like Ferns and Petals have embraced the trend of selling terrariums across a broad price spectrum, ranging from INR 399 to 5599. These terrariums have gained popularity as a favored gifting choice, as highlighted on their website. Flower Aura, operating in 21 states, also offers terrariums priced between INR 599 and 2499. They stand out by allowing buyers to customize their terrariums, offering options from plant selection to containers and accessories. This personalized approach has become a unique selling point for the startup, attracting attention through social media campaigns. They specifically target the tech-savvy youth demographic, enticing them with discounts using hashtags like #gracefulgreens. Woodlings, a startup based in Bengaluru, specializes in a diverse range of indoor plants and handmade terrariums. Their emphasis on uniqueness is striking—eschewing mass production, they ensure that each terrarium is distinct. This individuality sets their products apart from others in the market. However, they encounter challenges such as handling delicate glass containers and ensuring swift shipping for live plants, particularly in the case of tropical closed moss terrariums created between May and June 2022. Several other companies operating in this space include My Bageecha, Urban Plant, Nursery Live, Ugao, West Elm, and Decorizz India, contributing to the growing market of gifting options in the realm of terrariums and indoor plants

### **Conclusion**

A terrarium is a fun and easy project. Place a mini greenhouse in your kitchen to grow fresh herbs or add rustic decoration to your living space. In a chaotic and hectic world, a terrarium can restore a sense of calm and control. These miniature gardens are a great addition to your home.

## References

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