TERRARIUMS AND DISH GARDENS

During the summer many types of plants grow outdoors. As fall comes, all but the evergreen trees and shrubs shed their leaves. Annual flowers die after being touched by frost. Perennial flowers ready themselves for winter by going dormant.

Your members can grow and enjoy many plants in their homes during the time nature rests outdoors. There are flowering and foliage-type houseplants, but the big attraction can be a pleasing dish garden or terrarium.

TERRARIUMS

Terrariums are actually enclosed dish gardens. Clear glass jars, aquariums, fish bowls, goblets, and old-fashioned candy jars that can be closed or covered with a clear material make good containers. Glass containers with small openings are hard to plant.

The sides of the container are lined with sheet moss, green side against the glass up to the soil line. For drainage, use ground-up charcoal which will prevent the medium from becoming smelly if overwatered. Place the charcoal only on the flat bottom portion of the containers. If the moisture inside the terrarium is carefully controlled, no charcoal is needed.

Here are native and tropical plants that grow very well in a terrarium.

<table>
<thead>
<tr>
<th>Native</th>
<th>Tropical or Greenhouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkweed</td>
<td>Japanese boxwood</td>
</tr>
<tr>
<td>Hepatica</td>
<td>Joseph's coat</td>
</tr>
<tr>
<td>Mosses</td>
<td>Kenilworth ivy</td>
</tr>
<tr>
<td>Partridge berry</td>
<td>Korean boxwood</td>
</tr>
<tr>
<td>Pipsissewa</td>
<td>Maranta</td>
</tr>
<tr>
<td>Seedling evergreens</td>
<td>Pellionia</td>
</tr>
<tr>
<td>Shelf fungus</td>
<td>Peperomia</td>
</tr>
<tr>
<td>Violets</td>
<td>(small leaved)</td>
</tr>
<tr>
<td>Wild strawberry</td>
<td>Philodendron</td>
</tr>
<tr>
<td>Wintergreen</td>
<td>Podocarpus</td>
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<tr>
<td></td>
<td>Selaginella</td>
</tr>
<tr>
<td></td>
<td>Small-leaved begonias</td>
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<tr>
<td></td>
<td>Strawberry begonia</td>
</tr>
<tr>
<td></td>
<td>Swedish ivy</td>
</tr>
</tbody>
</table>

*Some states have certain ferns and mosses on a “do-not-pick-or-use” list. Check with local garden clubs and the state conservation department as to restricted material.

This diagram shows how a terrarium is put together.
Check the mature size and rate of growth of a plant. Many dwarf varieties of houseplants are available. Fast-growing tropical plants are not recommended for small terrarium use. Note that plants usually grow in one of three ways—upright, rosette, or vining. The corn plant grows straight up. Some plants form a rosette, or cluster of leaves, like the strawberry begonia. The third form is a long vine like ivies. Place plants in terrariums according to the kind of growth they make.

Woods moss can be used as a ground cover in a tropical terrarium. Do not mix native and tropical materials; make a terrarium of either native or tropical materials.

Do not crowd plants. Open spots where medium shows after the plants are in can be covered with pieces of moss.

A small figurine, a lichen-covered rock, an interesting piece of bark or root can be a center of interest. A few plants, pleasingly arranged, are much more satisfactory than a jumbled mass of crowded plants.

Do not let water stand in the bottom of any terrarium. Remove the cover and let excess water evaporate. Terrariums will need only 1 or 2 teaspoons of water a month.

Place terrariums in a light place and enjoy them throughout the winter. Keep them out of direct sunlight at all times.

Plant to collect plant material for woods dish gardens and terrariums before heavy snowfall comes in your area. September and October are good months for this activity.

**Bottle Gardens**

Bottle gardens are terrariums with small openings. You and your members will need to make special tools to plant such gardens. A stiff wire with a hook bent on the end, a narrow spoon taped to a dowel or wire, long tweezers, and a cork on the end of a wire are needed. A "mechanic's helper"; wire fingers on the end of a 18- or 24-inch shaft, is an excellent help.

Woodland and dwarf materials are best in bottle gardens. A razor blade taped to a thin dowel can be used to prune materials. Long tweezers can be used to remove cut-off parts of plants.

**References**


Assembling a Terrarium

Decide with members what kinds of terrariums will be assembled. Woods materials are satisfactory, if available. Many garden centers that handle tropical plants may be able to provide 4 or 5 plants each to all members at a better price than that charged if members buy separately. Garden centers and many florists shops sell sheet moss by the pound. Florists may be able to get fresh sheet moss if you inform them of your terrarium meeting several months ahead. Fall is a good season for this activity; the terrariums can then be enjoyed through the winter months. Stress the selection of slow-growing, miniature materials, especially in bottle gardens.

Materials

Leader

Work space — a basement or heated garage that can be swept easily is ideal.
Table space for demonstration by leader and for attending members, if possible.
Newspaper to cover table space
Clear glass container
Selection of small woods plants
Various objects as possible center of interest

Member

Woods materials collected before training meetings — small ferns, mosses, evergreen seedlings, partridge berry plants, wintergreen. Be sure to collect some sheet moss. This is found growing on decaying tree trunks and moist rocks. Use a trowel to collect woods plants to get all or most of their roots.
Containers — clear glass gallon jar or fish bowl
Medium — extra woods soil gathered when collecting plants or soilless mix
Accessories — pieces of gnarled wood, small figurines, interesting stones

Application

If possible, attend a local leader training session on this subject. Set up the training session for members so that they can watch a demonstration by you closely and then return to their work area where they have placed their materials.

Before giving your demonstration on assembling a terrarium, explain the following principles:
- Plants normally growing in dry conditions, such as cacti, cannot grow in a terrarium.
- Since most plants grow rapidly in the high humidity of a terrarium, try to choose those that grow slowly.
- Some woodland materials, such as seedling trees, may not grow if badly damaged when collected.
- A terrarium should be made in a clear container with a cover.

The following may be helpful as an outline for demonstration. As you go through each step, tell why each step is done.
1. Show the clear glass container and tell why it was selected.
2. Show the plants and tell why they were selected.
3. Place sheet moss, green side out, against the glass so that the soil will not show through the sides or front of the container. Place moss higher in the back part of the container to form a hillside terrarium.
4. Add drainage material if you are using it.
5. Add a handful or two of soil or soilless mix, sloping it high in the back part of the container.
6. Build a rock ledge if it will provide a setting for a center of interest.
7. Plant the tallest material. If materials are used on either side of the rear, they should be of different heights and kinds.
8. Choose and place the center of interest.
9. Plant lower materials across the bottom front of the slope or halfway down the slope.
10. Place flat pieces of moss and lichens around planted materials to cover soil. It is best to use pieces of 2 or 3 different kinds of mosses.
11. Add several tablespoons of water. No excess water should show through the container bottom.
12. Put on the cover. If you do not have a glass cover, scotch-tape a piece of freezer bag over the opening. Leave the cover on for 3 or 4 days after planting to cut down on the chance of molds growing.
13. Explain that terrariums must never be set in direct sun. Terrariums need little water and may go 6 months without additional water.

Gather all needed materials before starting to assemble a terrarium.
Lay moss against all edges, green side out.

Green moss shows around the base.

Place center-of-interest materials, in this case colorful rocks.

Tall plants positioned along rear of aquarium.

A cover makes it a terrarium.

Positioned in a window — no direct sunlight.
Add granulated charcoal.

Mound soil to create "hills".

Lower-growing materials are planted across midarea.

Low-growing materials and moss covering all the medium complete the planting.

Have the members go to their work space to put their materials in order. Take the terrarium you have assembled apart and put it together again, step by step, as the members follow. Junior leaders are most helpful with members who have difficulties.

Brandy snifter with tropical terrarium materials

Tropical plants form a lush garden in a gallon jar.
After the members have finished their terrariums, ask them to answer the following questions about their own terrariums:

1. Are plant materials pleasingly placed?
2. Is the center of interest correctly placed?
3. Are all plant materials and figurines in scale?
4. Should some plant materials be replaced?
5. Does any soil show?
6. Are the plant materials too crowded?

If any rearranging of plant material should be done, suggest it to the member as you look over the terrarium. Find something good to say about each one. Make suggestions for improvements when necessary. Members will listen to constructive criticism if something good is said first about their work.

Suggest that members add a little water to the terrariums when they return home. Remind them that there should never be any free water standing in the bottom of the container. Leave the covers off for 1 to 4 days after planting.

Summary

Terrariums can be assembled from woods, meadow, or tropical plant materials. Materials used must like high humidity and low-light growing conditions. Get to know slow-growing and small-sized plants for terrarium use. Terrariums are a pleasing bit of greenery easily cared for during winter months.

Assignment

Assemble small terrariums for shut-ins or as gifts. After a year’s experience you may wish to make terrariums for sale.

Study plants at garden centers so that you can select correct terrarium material.

![Woods plants and rabbits share a fish bowl.](image1)

![A small rock ledge gives a fawn a resting place.](image2)

![Evergreen seedlings, mosses, and rocks form a landscape for the pausing rabbit.](image3)

![A pear-shaped container has a cliff for a frog to hide under.](image4)
Dish Gardens

A dish garden is a number of interesting plants pleasantly arranged in a suitable container. The container can be round, square, oblong, or any convenient shape for your selected use. Brass, copper, and iron containers should be lined with aluminum foil. Pottery containers in shades of blue, green, or brown can also be used. Wooden, plastic, paper-mahce, and fiber containers must be chosen selectively for color and suitability.

Not all plant materials grow happily under the same conditions. Think of a cactus plant, happy in the hot and dry southwestern states, moved into one of the boggy Florida swamps! Soon the cactus would shrink and die because it could not change into a bog plant. Plants that like the same conditions belong in one type of dish garden.

To assemble dish gardens you will need:

Containers. A low metal or pottery container of any shape at least 3 inches deep and not more than 8 inches high. Brass, copper, pewter, and iron containers are available in a number of styles. Pottery containers in dark or dull colors are very satisfactory.

Pottery and wood containers—not liner in wooden one.

Growing medium. A good houseplant soil 1 part sand, 1 part loam, 1 part peat moss can be used. A soilless mix can also be used. Exception: For cactus use 2 parts sand, 1 part loam, 1 part peat moss. Prepared mixes for growing cacti can be purchased.

Fertilizer. To the soil mixture add any 3-10-5 or 4-12-4 fertilizer at the rate of 1 level teaspoonful to a 6-inch pot of soil. (Pot measurements are of the diameter of the top of the pot.)

Drainage. A layer of gravel, sand, broken pot, or granulated charcoal is needed in the bottom of the container. This should be at least ½ inch in depth and can be more if the dish is deep.

Plants. Dish garden plants should be slow-growing types. Plants can be selected from the wild or can be purchased. In general, there are 4 different dish garden types:

<table>
<thead>
<tr>
<th>Woodland Gardens*</th>
<th>Desert Gardens</th>
<th>Mesembryanthemums</th>
</tr>
</thead>
<tbody>
<tr>
<td>Club mosses</td>
<td>Kalanchoes</td>
<td>Ophiopogon</td>
</tr>
<tr>
<td>Ferns</td>
<td>Haworthia</td>
<td>Sansevierias</td>
</tr>
<tr>
<td>Ground pine</td>
<td>Euphorbias</td>
<td>Sedums</td>
</tr>
<tr>
<td>Houndock</td>
<td>Aloe</td>
<td>Semprevivums</td>
</tr>
<tr>
<td>Hepatica</td>
<td>Yucca</td>
<td>Sedums</td>
</tr>
</tbody>
</table>

See the list of plants under terrariums. If the air in the house is not too dry, many of those plants can be used in dish gardens.

Field and Moorland Gardens:

<table>
<thead>
<tr>
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<th>Lichens</th>
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<tbody>
<tr>
<td>Grasses</td>
<td>Mosses</td>
</tr>
<tr>
<td>Hawkweed</td>
<td>Peatmoss</td>
</tr>
<tr>
<td>Juniper seedlings</td>
<td>Woodstrawberry</td>
</tr>
</tbody>
</table>

Room setting for dish gardens throughout the winter.

Woods Dish Gardens

Woods dish gardens are assembled from plants collected along roads, hedgerows, and in woods. Many of these plants grow in areas of light shade. Therefore, woods dish gardens can be used on a low table, on the mantle, or in another location that does not get full sun. Mosses from the woods are often the major plants. These plants grow best if misted every day.

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* Some states have certain ferns and mosses on a “do-not-pick-or-use” list. Check with local garden clubs and the state conservation department as to restricted material.
Put a layer of small gravel, pearl chips, sand, or ground-up charcoal in the bottom of the container as drainage material. If the dish garden is watered too much, the excess water will gather in this drainage layer.

Gather a little more soil than hangs onto the roots of the plants as you carefully dig them up. The extra wood soil is put on top of the drainage layer. Plants are then planted in the wood soil where they will feel at home. Soilless mix can be used as a planting medium.

Tiny appropriate figurines or other center-of-interest objects can be used in dish gardens. Tiny pottery animals, elves, interesting small stones, gnarled pieces of roots, or a lichen-covered rock can be a center of interest. Gaudy-colored or large figurines are generally not appropriate. Figurines of brown or shades of green are best.

**Dish gardens viewed from all sides.** If the garden is to be viewed from all sides, interest can be gained by having the soil mounded higher in the center. On top of the mound, plant one of the seedling trees. The tallest tree should be about 1 1/2 times the longest dimension of the container. Let partridge berry vines creep around the inside edge of the container. Place one or two tiny pottery animals halfway down the slope. Then place 6 to 8 plants of 2 or 3 kinds on the slope. Cover all exposed soil with one type of flat moss. Practice placing different materials for their best effect.

A tiny piece of mirror can act as a pond. A path of sand can lead through a woods dish garden. Be sure the pool or walk is in scale with the figurines.

**Formal design**

splits plant materials
roughly in half.

**Informal design**

balances upright against trailing plants.

**Dish gardens viewed from one side.** If the dish garden is seen from one side only, it can be made level or can resemble a sloping hillside. Again, try various placings for the center of interest to find where it looks best.

A woods dish garden is more attractive if you create contrast. Use a piece of bark, a shelf fungus, or a gnarled piece of wood behind some of the plants. This should be done only with gardens to be viewed from one side.

The tallest material should be about 1 to 1 1/2 times the longest dimension of the container. The tallest plant can be placed in the center back of your planting or toward one side. *Formal* placing of material means that plant material is rather evenly divided on each side of a line through the center of the planting. In *informal* balance the plants are usually high on one side and low and vining on the other.

**Desert Dish Gardens**

The best colors for containers of desert dish gardens are light blue, reddish, or buff. Most desert plants have a gravish cast from spines or fuzz. The container can be quite shallow — 1 1/2 to 2 inches deep. Cacti like dry places and are used to thriving in hot sun and with little moisture. The soil mixture placed on top of the drainage layer for a desert garden is 2 parts sand, 1 part garden soil, and 1 part peat moss or compost. The sand lets excess moisture drain out of the growing medium. There are prepared media for cacti gardens.

An interesting desert garden can be made from many

![Cacti and succulents in a dry setting, with white sand for medium cover.](image)

![A cacti garden in a shallow container.](image)
different types and sizes of cacti. Choose only 2 or 3 kinds
in various sizes. Follow design rules for placing materials:
place the tallest toward the back, the lowest ones in front.
A piece of bleached wood or an interesting stone or cactus
plant can be a center of interest.
For a finished look, cover the soil showing after planting
with a thin layer of white sand, pebbles, stone chips, or
crushed flower pots. Water desert gardens no more than
once a week. Let the surface dry thoroughly between
waterings. These gardens are best for “dry-air” homes.

Tropical Dish Gardens
Houseplants that like lots of water are used for tropical
dish gardens. You will recognize many of the houseplant
names suggested for such gardens.
The soil mixture for a tropical dish garden is 1 part
garden soil, 1 part sand, and 1 part peat moss. Soilless
mixes are excellent. These materials should be thoroughly
mixed before being placed in a container. Do not forget to
put a layer of drainage material in the bottom of the
container.
If the dish garden is to be seen from all sides, mound
soil a little higher in the center or use the largest plant in
the center. Group smaller plants around it. If the garden
is to be seen from one side only, use the tall plant toward
the back and center.
Many rooted cuttings of houseplants can be used in
tropical gardens. Some common houseplants suitable for
tropical dish gardens are:

- African violet
- Philodendron
- Bromeliads
- Podocarpus
- Croton
- Small-leaved ivy
- Grape ivy
- Snake plant
- Peperomia
- Wandering Jew

Watch for plants with interesting leaf markings or colors.
The plant with the most interesting characteristics would
be good for a center of interest. Plants are chosen for their
habit of growth — upright, self-heading, or vining. Many
plants can be pinched to form low, bushy materials.

Tropical plants with an upright habit of growth

Self-heading plants and plants that can be pinched
to remain bushy.

A dish garden
viewed from
all sides

Vining plants
LESSON 2
Assembling a Tropical Dish Garden

Assembling dish gardens and terrariums is most popular in the fall. September and October are good times to collect materials for native dish gardens and terrariums. If tropical materials are being used, plan the activity to avoid freezing weather.

This lesson describes materials and procedures for assembling a dish garden of tropical plant material in a rectangular container to be viewed from one side.

Materials

Leader

Work space – basement, heated garage, or other space that is easily swept
Table space – one 3-foot by 5-foot table for demonstrating and table work space for members attending, if possible.
Newspaper to cover tables

Soil – in urban and suburban areas, it is best to obtain a sterilized houseplant mix in the quantity needed from a greenhouse or garden center. Soilless mixes are excellent. Note sandy mix for cacti gardens.
Plant materials – purchase plants in quantity for interested members. One plant for each dish garden should be about 8 inches tall above its pot if the dish is 8 inches or more long. Four to 6 plants, in heights of 3 to 6 inches, are needed for planting to the right and toward the front edge of the container. Snake plants and dracaenas are good tall materials. Flat moss may or may not be used as soil cover.

Members

Container – a rectangular dish, at least 3 inches deep and 8 inches long. Subdued shades of green, brown, or grey are best.
Basket to carry materials to and from meeting
Money to cover cost of materials furnished by leader

Application

If possible, attend a local leader training session on this subject. Set up the training session for members so that they can be close to watch your demonstration. Have the members leave their materials on tables and then come together around your demonstration table.

Before beginning the demonstration, be sure the following points are clear:

- Because several plants are growing in a small area, a dish garden container must be fairly deep to provide enough growing medium for all.
- Plants that get along together are grouped in dish gardens – cacti, woods, tropical.
- Plants must not be crowded in the finished garden because they need room to grow.
- Dish gardens are replanted when plants become very crowded or start to decline.

Do a demonstration on assembling the dish garden, using the following steps as an outline. Explain why as you do each step.

1. Show the container and tell why it was selected – for its depth, color.
2. Show the plants and tell why they were selected – for their growth habits, appropriate heights, foliage interest, the form or color of the plants used as the center of interest.
3. Place ½ inch to ¼ inch of drainage material in the bottom of the container.
4. Pour soil mixture or soilless mix into the container. The soil should be ½ inch below the container edge when the dish garden is completed.
5. Plant the tallest plant at one side; balance with a vining form on the other.
6. Arrange other plants at one side; balance with a vining form on the other.
7. Place the center-of-interest plant at the front edge and center of the container.
8. Arrange plants for best appearance.
9. Add or remove medium so that it is ½ inch below container edge.
10. Add moss medium cover if it is being used.
11. Water the completed dish garden.
12. Explain where a dish garden should be placed to be viewed from one side.

Now ask members to return to their materials. You will need an assistant or two to handle the distribution of materials. Members can line up and bring containers to collect drainage material. A towel is helpful for transferring gravel from bucket to container. One of your assistants can dish out gravel. Then each member gets the approximate amount of soil mixture. The tall plant and vining plant are chosen, followed by 4 to 6 shorter plants. These can be gathered at one trip to the source of supply.

Containers of extra medium-size and short plants should be available to the members, either at the front of the room or on tables at the work area.

Now disassemble the dish garden that you demonstrated and reassemble it step by step. Wait until the members have completed each step before you proceed to the next step. If you have junior leaders, they can help those members who have difficulty with any particular step.

After the members have assembled their dish gardens, ask them to check for the following:

1. Is the tall plant correctly placed?
2. Are the plants firmly planted so that they do not lean over?
3. Are the center-of-interest plants correctly placed?
4. Is the center of the container?
5. Are the plants uncrowded?
6. Where will the dish garden be placed at home?

To avoid more cleanup, suggest that the members water the completed dish gardens after arriving home.
Summary

Plants with the same light, water, and growing media needs should be chosen for dish gardens. All plants need room to grow, even in dish gardens. A single dish garden is easier to care for than 1 to 6 plants in separate containers. Dish gardens assembled in the fall can be enjoyed all winter.

Assignment

Plan to visit a garden center or florist shop to identify good dish garden plants. Identify upright, self-heading, and vining forms.

If woods are accessible, plan a collecting tour. Check with a local authority on protected wild plants. If fields are nearby, assemble a meadows dish garden.

Assemble dish gardens as a project for senior citizens.
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