

“Green for Life” 4-H LANDSCAPE HORTICULTURE PROJECT

Perennial - Activity Guide





Learn to do by doing

4-H Pledge

I pledge:

My HEAD to clearer thinking,

My HEART to greater loyalty,

My HANDS to larger service,

My HEALTH to better living,

For my club, my community and my country

4-H Grace

(Tune of Auld Lang Syne)

We thank thee Lord, for blessings great

On this, our own fair land.

Teach us to serve thee joyfully,

With head, heart, health and hands.

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INTRODUCTION

How to Use the 4-H Landscape Horticulture Project Activity Guide

The 4-H Landscape Horticulture Project Activity Guide is divided into four themes. Each theme is identified with a box in the top left corner at the beginning of each activity. The activities are presented in a logical order of progression and should be presented in this order. You will find an alphabetical index of the activities at the end of the guide.

The 4-H Landscape Horticulture Project Activity Guide was designed with two age groups in mind:

- Junior: 8 to 10 years of age
- Intermediate: 11 to 14 years of age

Each activity has been designed for both age groups. These activities are meant for members to have an opportunity to help them learn, evaluate, make decisions, communicate and develop confidence.

Each activity has the following format:

Title

Topic

Learning Outcomes

Time

Materials / Resources

Instructions

Suggestions

Discussion / Comments

Processing Prompts

Each activity in the 4-H Landscape Horticulture Project has learning outcomes identified at the beginning of the activity, and processing prompts at the end. To gain a better understanding of why these were added to every activity, we have included the following section about experiential learning.

Experiential Learning

Experiential learning is a model that, simply put, consists of action and reflection. Research shows that learning is often best achieved when it is fun, active, interesting and easy to understand. Participating in fun activities creates a sense of togetherness within a group and help members relate to one another, as well as allows the group to relax, to feel safe and at ease. Through guided reflection and discussion, activities with meaning often help individuals understand concepts and skills more than if the same meaning was presented in a lecture format.

A leader can help 4-H members and groups learn by leading activities with meaning. These activities can then be processed to help the group find the meaning. These lessons can then be applied to other areas of the members' lives - helping them to transfer the meaning from the activity to the real world and every day life.

The following 4-H Landscape Horticulture Activity Guide includes learning outcomes at the beginning of each activity. Members will discuss and explore the meaning behind the activities and transfer these insights, through the help of the 4-H leader, into their every day lives whether it be in sports teams, school groups, community groups or at home with family. The 4-H leader can facilitate this by using the processing prompts listed at the end of each activity.

What is Processing?

Processing is when individuals reflect, describe, analyze and communicate what they have or will be experiencing in an activity.

Each activity has processing prompts. There will be a list of questions to ask regarding concept to focus on a group discussion. Some or all of the questions can be used to process the activity. Feel free to add your own processing prompts if you feel there is a specific topic that you would like to discuss.

When using the Activity Guide, processing is most easily done with the group when sitting or standing in a circle, and when the group is attentive and focused on the discussion.

When questions are designed properly and used thoughtfully, discussion questions can be an effective learning tool that promotes creativity, as well as generates meaningful interaction and understanding for the member. Processing can be fast or slow depending on the group and the activity.

Perennial Plant Primer

What's In a Name?

TOPIC Learning Horticultural Terms and Botanical Names

LEARNING OUTCOMES

To learn horticultural terms and botanical names related to herbaceous perennials

TIME 45 minutes

MATERIALS/RESOURCES

- Samples of perennial plants

INSTRUCTIONS

Show members one of the perennial plant samples. Ask them how long they think it will live in the garden. Does it come back and grow each year or does it die in the winter? Discuss the differences between annual, biennial, and perennial plants.

Have members look at the different samples of perennial plants. For each sample, have them make comments on what the stems, foliage, and flowers look like. Ask them to notice shape, colour, texture, and size for each part. Discuss with the group the differences and similarities between the plants. Discuss how when all of the parts of the plant are together, stem, foliage, and flowers, you can see the unique shape of each plant.

Ask members if they can name the plants. If they give common names, point out that each plant has a scientific binomial name.

Have members go to www.botany.com and click the tab "Latin Plant Name Dictionary". Have members find 10 Latin words relating to botany and ask them to share them with the group. This will help to get them familiar with Latin names.

On the same web site, have members click the tab "Botanical Words Alphabetical List". Have members choose 10 botanical words, find out their meanings, and share what they find with the other members. Give the members the names of the plants that were brought in and see if they can determine the Latin meanings of the names. Refer to the Resources List for links to plant databases.

DISCUSSION/COMMENTS

Annuals are plants that complete their life cycle in one year.

Biennials are plants that take two years to complete their life cycle, usually forming a cluster of leaves called a rosette the first year, then flowering the next.

Perennial plants are plants that live for at least three or more years. Trees and shrubs are perennials, but they are also woody plants. Herbaceous perennials are plants that have leaves and stems that die back to the ground each winter but grow back again each spring. These are the plants commonly planted in perennial gardens and are the perennials that will be the focus of this Activity Guide. The life span of herbaceous perennials varies depending on climate and soil conditions of the plant.

We are all familiar with the names of parts of the plant: stems, leaves, and flowers. All of these separate parts will have their own unique characteristics:

Stems: How thin or thick are they? Are they short or long? Are they smooth or textured? Are they round or square?

Foliage: Do the leaves feel rough or smooth? Are they fragrant? Are they large or small? Are they long and narrow or wide and round? Do they change colour through the season? Are the leaf edges (margins) smooth or serrated? Do they have an opposite (across from each other) or alternate attachment along the stem? Are they single or compound (arrangement of several leaves together)?

Flowers: What shape, size, and colour are they? Do they bloom singly or in clusters? Are the flowers scented? How long do they bloom?

When all of the different parts come together to form the plant, they create a unique style that is different for every type of plant. What is the plant's growing habit? How wide is the plant? How tall is it? What shape will it become? Does it reach up or creep along the ground? It is important to understand a plant's growing habit when deciding where to plant it in the garden. For example, tall perennials should be planted near the back of a perennial garden while low growing plants should be placed near the front edge.

Plants are named in Latin using two parts known as binomial naming. The first part is the genus followed by the species. By using a plant's Latin name, you will know that you are getting the right plant at the garden centre. Common names vary from gardener to gardener and region to region so they are often unreliable. Try not to be intimidated by the Latin names. By becoming comfortable using the Latin names, you will become more confident in choosing and identifying plants.

PROCESSING PROMPTS

1. What is the difference between annual, biennial, and perennial plants?
2. What features of a plant give it unique characteristics?
3. How are plants named?
4. Find the botanical name of your favourite herbaceous perennial.

Top 20

TOPIC Identify 20 Herbaceous Perennials

LEARNING OUTCOMES

To identify 20 selected herbaceous perennials in local 4-H regions

TIME 60 minutes

MATERIALS/RESOURCES

- Internet access to:
<http://sis.agr.gc.ca/cansis/nsdb/climate/hardiness/intro.html>
- Internet access to: www.perennials.com
- 10 copies of "Perennial I.D." sheets per member

INSTRUCTIONS

To find out what Plant Hardiness Zone your 4-H club is in, have members log on to <http://sis.agr.gc.ca/cansis/nsdb/climate/hardiness/intro.html> and click on "2000 Plant Hardiness Zones". Have members record their hardiness zone.

Have members log onto www.perennials.com to begin their perennial identification search. On the home page, have members type in the search word and hit the "advanced search" button to choose the correct hardiness zone for their region. For each perennial listed below, have members search for a plant from the group that is hardy to their zone. Ask members to complete a "Perennial I.D." sheet for each plant.

- Coneflower
- Coral Bells
- Hosta
- Peony
- Black-eyed Susan
- Dianthus
- Yarrow
- Iris
- Day Lily
- Salvia
- Bleeding Heart
- Delphinium
- Shasta Daisy
- Geranium

- Sage
- Sedum
- Ligularia
- Hellebore
- Solomon's Seal

DISCUSSION/COMMENTS

The **Plant Hardiness Zones** map delineates different climate zones across Canada indicating where different types of plants will likely survive. The map is based on the average climate conditions including minimum winter temperature, snow cover, January rainfall, length of frost-free period, summer rainfall, maximum summer temperature, elevation and wind speed for each area.

The Plant Hardiness Zones map is divided into nine major zones. The harshest climate is rated "0" and the mildest is "8". There are local factors such as micro-topography, shelter, and variations in snow cover, that are not captured on the map but may affect the zone rating. Yearly variations in weather conditions and gardening activities will also have an impact on plant survival.

There are tens of thousands of different types of perennials. The list provided is a selection of 20 of the most common perennials that should be available in all parts of Canada in various hardiness zones.

PROCESSING PROMPTS

1. What is a plant hardiness zone?
2. What hardiness zone are you in?
3. Why is it important to know the hardiness of a plant?
4. What appearance and characteristics are important to know about a plant?
5. What growing conditions are important to know about a plant?

Perennial I.D. Sheet

COMMON NAME: _____

LATIN NAME: _____

APPEARANCE AND CHARACTERISTICS:

Blooming Time: _____

Flower Colour: _____

Foliage Colour: _____

Height: _____

Plant Uses: _____

GROWING CONDITIONS:

USDA Zone: _____

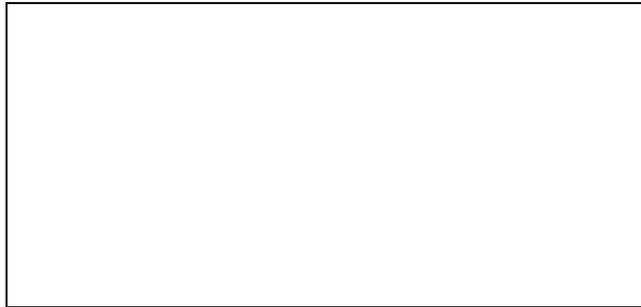
Sun Exposure: _____

Soil Type: _____

Soil Moisture: _____

Care Level: _____

SKETCH:



Perennial I.D. Sheet

COMMON NAME: _____

LATIN NAME: _____

APPEARANCE AND CHARACTERISTICS:

Blooming Time: _____

Flower Colour: _____

Foliage Colour: _____

Height: _____

Plant Uses: _____

GROWING CONDITIONS:

USDA Zone: _____

Sun Exposure: _____

Soil Type: _____

Soil Moisture: _____

Care Level: _____

SKETCH:



Planting Partners

TOPIC Perennial Planting Partners

LEARNING OUTCOMES

To learn about suitable perennial plant planting partners

TIME 45 minutes

MATERIALS/RESOURCES

- Internet access to: www.perennials.com
- If available, "The Perennial Gardener's Design Primer" by Stephanie Cohen and Nancy J. Ondra
- Copies of "Planting Partners and Planting Design" worksheet, one for each member
- Copies of Appendix A: "Planting Partners", one for each member
- pens

INSTRUCTIONS

Have members choose one of the "Planting Partner" groups in Appendix A. At www.perennials.com, have members type in each of the plant names and complete the information required on the "Planting Partners and Planting Plan Worksheet". This will summarize the characteristics of each plant and help the members become familiar with each plant. This information will be required for the next lesson, "Planting Plan", and is when the Planting Design Grid will be completed.

DISCUSSION/COMMENTS

Every perennial plant has its own ideal growing requirements. Some perennials are much easier to grow than others. The groups of "Planting Partners" in Appendix A contain perennial plants that are hardy and forgiving to the beginner gardener. These plants thrive in diverse garden conditions. They all have several things in common: they live well in moderately clay-like soils and survive hot and humid summers and cold winters.

PROCESSING PROMPTS

1. What characteristics do "Planting Partners" share?
2. What are the differences between "Planting Partners"?

Planting Partners and Planting Design Worksheet

Planting Partners Appendix A Group # _____:

PLANT NAME:	HEIGHT:	SPREAD:	FOLIAGE:	FLOWER:	BLOOM TIME:	SYMBOL*:

* Create a symbol such as a star, triangle, circle, or square for each plant.

Planting Design Grid:

Planting Plan

TOPIC Perennial Planting Design

LEARNING OUTCOMES

To learn about basic perennial garden design

TIME 60 minutes

MATERIALS/RESOURCES

- Copy of “Planting Partners and Planting Design” worksheet from previous meeting (with Planting Partners chart completed)
- Copies of books recommended in “Resources” showing various perennial gardens
- Gardening magazines or other books showing colour illustrations of gardens
- Pencils, coloured pencils

INSTRUCTIONS

Have members look at their Planting Partners chart. Ask them to rank the plants from tallest to shortest. Discuss with the members where it makes the most sense to plant the tallest plants if the garden is up against a wall. What if it is an island garden? Then discuss where the next tallest should be planted down to the shortest plants.

Ask members what they think a perennial garden would look like if the plants were all planted in straight rows? Show them examples from perennial garden design books or web sites. What do you notice about the plantings? Are the plants in groupings? Is there a pattern?

Have members create symbols for each of the plants on their “Planting Partners and Planting Design” worksheet. Then have members use what they now know about planting design to create their own perennial planting design. Show them the planting design in the Discussion/Comments for inspiration.

DISCUSSION/COMMENTS

Now that a planting list has been researched, a planting design can be created. The graph on the “Planting Partners and Planting Design Worksheet” represents an 8 foot by 12 foot garden with each square representing one square foot. The garden design that is created for this garden can be repeated over and over for a long continuous perennial garden.

There are important elements that make the Planting Partner combinations work:

Contrast: When choosing planting partners, there should be elements of contrast in colour, texture, and form. Colours that are opposite on the colour wheel will create visual interest. Contrast in texture is achieved by choosing plants that have bold, coarse foliage with those that have fine, narrow leaves (e.g. planting hostas with ferns). To achieve contrast in form, combine plants with different growing habits (e.g. ornamental grasses with plants that grow in mounds).

Texture: Plants with coarse foliage are those with large leaves or big gaps between leaves (e.g. hostas, irises) should be used less frequently and spaced out. Plants with fine foliage have small feathery or narrow leaves with few gaps between them (e.g. ferns, silver mound Artemisia) are less “weighty” and will compliment coarse textured plants.

Repetition: Colour and form repetition helps to pull the eye in and leads the observer through a space. Repetition unifies a space and prevents the look of randomness in a garden.

Balance: Balance refers to having symmetry of plantings. It can be achieved through plant size by planting equal sized plants on either side of a pathway for example.

Form: The size and shape of a plant or flower is its form. There are three forms: upright, mounding, or horizontal. All three forms should be used in a garden.

Size: The nicest gardens contain perennials of varying heights. Generally, the shortest plants should be planted near the front and the tallest near the back. When planning a garden against a fence or wall, place the tallest plants towards the back and the shortest towards the front. For an island bed, the tallest plants should go in the middle, with the shortest ones around the edges. To get a more natural look to the garden, avoid planting in straight rows. Instead, plant perennials in groupings of odd numbers, 3's, 5's, or 9's and break up the groups with some of the next sized plants to create a more sweeping and fluid design. For example:

Plant Symbols: Δ = tallest \diamond = second tallest O = second shortest \square = shortest

Planting Design:

Δ		Δ		\diamond	Δ	Δ		Δ	Δ	\diamond
	Δ		\diamond	Δ			Δ		\diamond	
		\diamond	\diamond		\diamond	O		Δ	Δ	\diamond
O	\diamond			\diamond		O	O	\square	\square	
	O		\diamond		O	O	\square	O	\square	\square
O	O	\diamond		\square		\square	\square		O	\square
	O	\square	O	\square	\square	\square	\square	\square	O	
	O	O	\square	O	\square	\square	\square	\square	\square	O

PROCESSING PROMPTS

1. What are the principles and elements of design
2. What are the basic design rules when designing a perennial garden that is against a wall or similar structure?
3. What are the basic design rules when designing a perennial garden that is an island?
4. What design techniques gives the design a more natural and relaxed look?

Road Trip

TOPIC Visit to a Local Garden Centre

LEARNING OUTCOMES

To explore the variety of perennial plants available at the local garden centre

TIME 1 hour (plus travel time); should be done in the spring

MATERIALS/RESOURCES

- Paper
- Pens
- Digital camera

INSTRUCTIONS

Visit a local garden centre and observe the wide variety of perennial plants available in your location.

Have members create a list of plants they see that are good 'Buddy Plants' (plants that would be good 'planting partners" that could be planted together in their garden plan.) Place multiples of plants together and take photos of the groupings.

Discuss the lists of plants that members created. Have members show the photos of the groupings that were taken. What characteristics do the plants have that make the grouping a visually pleasing one? Are they "planting partners" and are they compatible with each other in the same garden?

DISCUSSION/COMMENTS

Contact the garden centre manager before the visit to see if they would be willing to give the members a tour of the facility. This will give the members an insider view of running a garden centre.

PROCESSING PROMPTS

1. What did you think about the variety of perennial plants at the garden centre?
2. Where there some plants that you had never seen before?
3. Were you able to find "Buddy Plants" from the list?
4. Were you able to find appropriate substitutes for plants from the "Planting Partners" list?

Divide and Conquer!

TOPIC Moving and dividing established perennials

LEARNING OUTCOMES

To learn the techniques to moving and dividing perennials

TIME 60 minutes

MATERIALS/RESOURCES

- An established perennial garden; early spring is the best season
- Garden shovels or spades
- Large gardening knives (eg. Hori hori knife) or large trowels
- Hose, water, watering can

INSTRUCTIONS

Have members look around at the perennial plants in the garden. Describe the three things to look for when deciding if a perennial needs dividing. Ask them if they think any of them look like they should be divided? Why? Ask members to look for any perennials they think could be divided into several new plants and replanted. Can they see any that have dead centres? Discuss with the members the best times, and the worst times, to divide and transplant perennials. As a group, decide on a few plants that should be divided and transplanted.

Dividing: Choose a few perennials that need dividing. Demonstrate the proper techniques of dividing different types of perennials. Have members divide a variety of perennials and properly re-plant the new divisions.

Transplanting: Choose a location for the transplanted perennials to be replanted. Demonstrate to members how to prepare the hole. Have members dig holes in preparation for transplanted perennials. Demonstrate to the members the proper techniques for digging up and re-planting perennials. Have members dig up and re-plant the selected perennials. Demonstrate proper watering techniques and have members water in the transplanted perennials.

DISCUSSION/COMMENTS

Find a willing gardener volunteer who has a perennial garden they are willing to have as the demonstration site for this activity.

When to divide and transplant: Perennials should be divided every few years. It is time to divide a perennial when: there is a bare spot in the centre of the clump, the flowers are smaller and less prolific than they were before, or it has overgrown its allotted space.

Dividing: Perennials can be divided as soon as they are large enough which may be as early as 1 year after initial planting. However, most perennials take a few years to get established and ready to be divided. Signs that the plant needs dividing include poor flowering, sprawling growth, dead centre of the plant clump. (EXPAND ON THIS INFO)

To divide the plant, lift them out as if you were going to simply transplant them. Shake or brush off as much loose soil from the root ball as you can. For some plants you can pull apart the plant into several new separate plants. Other plants may need more encouragement to come apart and will have to be separated with a shovel or a large knife such as a hori hori knife. Discard any dead or weak parts of the original plant. Re-plant the divisions right away. The larger the section of plant, the more likely it will re-establish in the garden so be careful not to divide the plant into too many small pieces that may not grow. Some low-spreading plants can be divided by digging out plugs with a trowel and re-planting them. Don't forget to back fill all the holes with soil left after removing the original plant material.

Transplanting: It is best to move perennials from one spot in the garden to another within a few weeks of its bloom period ending. Often this is in the fall. Moving them just before they bloom in early spring is also a good time. You want to avoid moving them then they are fully leafed out and when they are blooming.

The day before the transplant, water the garden well. Prepare the new hole ahead of time. Make it as deep and twice as wide as the plant that is going into it.

When digging up the plant, take as much soil with the plant as you can manage. Use a curved shovel and work around the perimeter of the plant and gently lift and carry the plant to the new hole. Add soil around the roots and water in to create a soupy texture. Let it drain off and add more soil. Press in firmly with your hands.

PROCESSING PROMPTS

1. When is the best time to divide and transplant perennials?
2. When should you avoid dividing and transplanting perennials?
3. What do you look for when determining if a plant should be divided?
4. How do you divide plants?

Cut Back

TOPIC Cutting Back Techniques

LEARNING OUTCOMES

To learn the techniques of cutting back perennial plants

TIME 45 - 60 minutes

MATERIALS/RESOURCES

- An established perennial garden; late fall or early spring
- Secateurs (hand pruners)
- Appendix B Plants for Winter Interest

INSTRUCTIONS

Have members look around the late fall or early spring perennial garden. Ask them what they notice? Do they see any signs of life? What do they think needs to be done to the plants? Discuss the pros and cons of doing this maintenance in the fall versus in the spring.

Demonstrate to the group the technique of cutting back perennials. Have members cut back various types of perennials.

DISCUSSION/COMMENTS

Find a willing gardener volunteer who has a perennial garden they are willing to have as the demonstration site for this activity.

Garden clean up can happen in the fall or it can wait until spring. If you decide on a fall clean up, you should wait until the perennials die back naturally to allow them to prepare themselves for winter. Clean up in the fall also removes leaves and debris that may be holding diseases and garden pests. However, you will also be removing overwintering places for beneficial insects and other animals. Removing all of the dead perennials in the fall can also leave a barren garden lacking any winter interest. Leave plants where dead flower heads still provide interest, such as Sedum, Astilbe, or ornamental grasses. Stems and foliage left on for the winter provide protection for ground-level buds and roots. Also, leaves and stems left on will naturally decompose and make compost for the garden.

Whenever you decide to cut off the dead perennials, there are some things to keep in mind. Always use a pair of secateurs with sharp blades and keep them clean and in good working order. When cutting off dead stems and leaves, snip them off 5 to 10 cm above the soil. This prevents accidental cutting of new emerging buds and you can still see the clump.

Perennials that are shrub-like with woody stems should be cut back only after you see new growth appearing in the spring. They should be cut back to about 10 - 15 cm. Plants in this group include heathers, sunroses, St. Johnswort, lavender, germander, and thymes which all tolerate being cutting back.

PROCESSING PROMPTS

1. What are the benefits to cutting back perennials in the fall? What are the disadvantages?
2. What are the benefits to cutting back perennials in the spring? What are the disadvantages?
3. How much plant material should you leave when cutting back stems?

Off With Their Heads

TOPIC Pinching and Deadheading Techniques

LEARNING OUTCOMES

To learn the techniques of pinching and deadheading perennial plants

TIME 45 -60 minutes

MATERIALS/RESOURCES

- An established perennial garden; late spring, summer, or fall
- Secateurs

INSTRUCTIONS

Have members look around the perennial garden for dead flower heads and seed heads. Ask members to explain where the seed heads came from. Discuss the energy required by the plant to form seed heads and the advantage of taking them off the plant before they form and the advantages of keeping them on. Demonstrate to the members how you pinch or cut off dead flowers and seed heads. Have members find dead flower heads and seed heads and remove them throughout the perennial garden.

Discuss with members what pinching back plants means and the effect that it has on the plant and its ability to produce flowers. Demonstrate to the members the location on a plant where you should pinch back. Have members find suitable perennials and practice pinching back the plants.

DISCUSSION/COMMENTS

Find a willing gardener volunteer who has a perennial garden they are willing to have as the demonstration site for this lesson.

Deadheading: Deadheading is the process of removing dead flower heads and seed heads from the perennial plants. The process helps to promote more flowers to grow as the plant puts less energy into creating seeds and more energy into creating more flowers. However, don't get too carried away with deadheading since plant seed heads are often beautiful to look at and can add more plants to next years' garden.

Only deadhead flowers that have no winter interest (spent flowers are unsightly or fall apart after flowering) or flowers that self seed and create a weeding problem the next season. Spent flowers are a great source of food for small mammals and birds, so keep them until they are no longer of use. To deadhead, use your fingers or a pair of secateurs and simply remove the spent flower or seed head. You can pinch it off right below the flower or back to a lateral stem. If there is a large clump of perennials with small flowers, wait until most of the flowers are dead, then use a pair of shears to cut off all of the flower heads at the same time.

Pinching: Pinching back plants encourage the plant to produce side shoots. The side shoots produce blooms so the more shoots you have, the more flowers you will get. Pinch or snip just above a flower bud that is lower down the stem. If you don't see any flower buds, cut or pinch just above a leaf or pair of leaves. If there are not leaves on the flowering stem, cut off the entire stem at its base.

Pinching can also be used to help keep plants in bounds, to prevent plants from growing tall and straggly, and to stagger the bloom period. Pinched plants will produce more, smaller flowers than plants that aren't pinched.

PROCESSING PROMPTS

1. What is deadheading?
2. What is the purpose of deadheading perennial plants?
3. What is pinching back plants?
4. What effect does pinching the plant have on the plant growth?

High Stakes

TOPIC Staking and Supporting Techniques

LEARNING OUTCOMES

To learn the techniques of staking and supporting perennial plants

TIME 45 - 60 minutes

MATERIALS/RESOURCES

- An established perennial garden; late spring, summer, or fall
- String
- Bamboo stakes
- Tomato cages (1 for each member)
- Wire cutters
- Chicken wire (enough to cover the bottom of each tomato cage)
- Linking stakes
- Secateurs
- Natural branches/twigs

INSTRUCTIONS

Making a Chicken Wire Perennial Support:

Have members take a tomato cage and cut off the smallest ring. At the other larger end, have members cover the circle with chicken wire by carefully bending the wire over the largest circle. This is the top of the support. The other end will go over the perennial and into the ground. ADD DRAWING.

In the early spring, have members look for clumps of perennials that have started to grow. Have members place the Chicken Wire Support over the clump. Discuss how the plant will grow up through the chicken wire and be supported by the structure. In the summer and fall, have members look around the perennial garden for any plants or flower heads that look like they have toppled over. Demonstrate different techniques and materials that can be used to support clumps of perennials and individual stems. Have members use a variety of different materials and techniques to create supports for various perennials and flowers in the garden.

DISCUSSION/COMMENTS

There are several perennials that tend to fall over instead of growing upwards. Often it is the weight of the heavy buds and flowers that cause the stems to fall over with the added weight. To help these perennials to grow in a vertical manner, there are several types and ways to add support to the stems by staking.

Putting supports in place before the plants need them is the best plan. Then the plants can grow up through the supports and their foliage will cover the supports. This method is also easier on the plants since you don't have to manipulate the tender stems into different positions. Grow-through supports are around 45 - 75 cm tall with several support legs that stick into the ground. Many are circular in shape, but supports can be any shape and made out of many materials including string, bamboo, and wire. Pea staking, or the use of fine twiggy branches, is useful with light plants (e.g. ground clematis), is easy to do, and is visually pleasing. Cut branches for this use when they are dormant to prevent them from rooting and sprouting. The branches should be 10 cm shorter than the plant they are holding up. Linking stakes and Y-stakes are good for holding up leaning stems or larger bushier clumps. Bamboo stakes or tripods can be used to hold up single blooms. At the end of each season be sure to remove and clean off any supports and store them away for next season.

PROCESSING PROMPTS

1. Why do you add supports to perennial plants?
2. Name materials that supports can be made from.
3. When should supports be placed in the perennial garden?

Appendices

Appendix A: Planting Partners

- Group 1: *Achillea x hybrida* "Walter Funcke"
Salvia x sylvestris "East Friesland"
Coreopsis verticillata "Golden Showers"
Stachys officinalis "Hummelo"
- Group 2: *Nepeta x faassenii*
Penstemon digitalis "Huster's Red"
Echinacea purpurea "Rubin Glow"
Perovskia atriplicifolia
Hemerocallis x hybrida "Happy Returns"
- Group 3: *Stachys officinalis* "Hummelo"
Geranium sanguineum "Ankum's Pride"
Nepeta x faassenii
Allium schoenoprasum "Forescate"
- Group 4: *Sedum x "Bertram Anderson"*
Nepeta x faassenii
Penstemon digitalis "Huster's Red"
Kalimeris incisa "Blue Star"
Echinacea purpurea "Rubin Glow"

Appendix B: Perennials for Winter Interest

Ajuga reptans
Amsonia Ciliata
Arum italicum ssp. *Italicum* "Marmoratum"
Carex buchananii
Carex morrowii "Ice Dance"
Deschampsia cespitosa "Goldgehänge"
Epimedium davidii
Gillenia stipulate
Helleborus foetidus
Helleborus orientalis
Heuchera "Chocolate Ruffles"
Heuchera "Plum Pudding"
Iris sanguinea "Snow Queen"
Kniphofia caulescens
Miscanthus sinensis "Gracillimus"
Miscanthus sinensis "Malepartus"
Panicum virgatum "Dallas Blues"
Perovskia atriplicifolia
Phlox divaricate
Polyystichum acrostichoides
Sedum "Herbstfreude" (autumn joy)
Veronica "Waterperry Blue"

Resources

Print

Cohen, Stephanie and Ondra, Nancy J.; The Perennial Gardener's Design Primer; Storey Publishing, North Adams, MN, 2005.

Diblik, Roy; Small Perennial Gardens: the Know Maintenance Approach; American Nurseryman Publishing Company, Chicago, IL, 2008.

DiSabato-Aust, Tracy; The Well-Tended Mixed Garden; Timber Press, Inc., Portland, OR, 2003.

DiSabato-Aust, Tracy; The Well-Tended Perennial Garden; Timber Press, Inc., Portland, Oregon, 2006.

Hodgson, Larry; Perennials for Every Purpose; Rodale Books, Emmaus, PA, 2000.

Ondra, Nancy J.; The Perennial Care Manual; Storey Publishing, North Adams, Maine, 2009.

Valleau, John M.; Heritage Perennials: Perennial Gardening Guide; Valleybrook International Ventures Inc., Abbotsford, BC, 2003.

Internet:

<http://sis.agr.gc.ca/cansis/nsdb/climate/hardiness/intro.html>

Off With Their Heads: Deadheading Perennials - Fine Gardening Article:

<http://www.finegardening.com/how-to/articles/off-with-their-heads.aspx>

<http://www.videojug.com/interview/dividing-perennials-2>

<http://www.youtube.com/watch?v=oMFfQpXMneg> (tried and true perennials)

<http://www.youtube.com/watch?v=36GSN0Xx07g> (unusual perennials)

<http://www.youtube.com/watch?v=nc7nBKXFzkk> (perennial garden designs)

<http://www.youtube.com/watch?v=FzZ8KksP0QY> (dividing and transplanting)

<http://www.youtube.com/watch?v=4JgFqjuuoqo> (dividing and transplanting)

http://www.youtube.com/watch?v=KVj9o2_VEx4 (cutting back)

<http://www.youtube.com/watch?v=JtE-P3mfQhI> (cutting back)

<http://www.youtube.com/watch?v=HeZ3FXmEjTQ> (deadheading)

<http://www.youtube.com/watch?v=-hiUgARjQSO> (staking)

Internet Plant Data Bases:

<http://www.perennials.com>

<http://www.canadaplants.ca>

Allan M. Armitage - Armitage's Photo Library:

http://allanarmitage.net/photo_library

Canadian Landscape Industry Associations:

Canadian Nursery Landscape Association: www.canadanursery.com

Quebec Nursery Association: www.aqpp.org

British Columbia Landscape & Nursery Association: www.bclna.com

Landscape Manitoba: www.landscapemanitoba.com

Landscape Alberta Nursery Association: www.landscape-alberta.com

Landscape New Brunswick Horticultural Trade Association: www.nbhta.ca

Landscape Newfoundland Labrador: www.landscapenl.org

Landscape Nova Scotia Horticultural Trades Association: www.landscapenovascotia.ca

Landscape Ontario: www.landscapeontario.com

Saskatchewan Nursery Landscape Association: www.snla.ca

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Landscape Alberta Nursery Association: www.landscape-alberta.com

Landscape New Brunswick Horticultural Trade Association: www.nbhta.ca

Landscape Newfoundland Labrador: www.landscapenl.org

Landscape Nova Scotia Horticultural Trades Association: www.landscapenovascotia.ca

Landscape Ontario: www.landscapeontario.com

Saskatchewan Nursery Landscape Association: www.snla.ca

Other:

Google search for your local Master Gardener, Horticultural Society or Garden Club who may have resource volunteers to assist in providing information or guest presentations at your member meeting.