



4-H Flower Gardening Project

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4-H Flower Gardening Project Guide

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INTRODUCTION

Growing flowers outdoors is just one of the many horticultural activities enjoyed by millions of gardeners in the United States. Horticulture is commonly divided into four different specialities: vegetables, flowers, fruits, and ornamentals. Each of these areas is further divided into the smaller groups listed below, with examples for each group.

In the 4-H flower gardening project, you are involved in the flower, or floriculture specialty in horticulture. You will deal specifically with the cultivation of herbaceous ornamental plants, which die down at the end of every year. The Department of Horticulture at Michigan State University offers both 2-year and 4-year programs in floriculture. If you would like additional information about these programs, write to the Department of Horticulture, Michigan State University, East Lansing, MI 48824.

VEGETABLES		
Cool Season Carrots Lettuce Onions	Warm Season Squash Tomatoes	Herbs Chives Dill Parsley Sage
FLOWERS		
Outdoor Annuals (zinnia) Biennials (hollyhock) Perennials (peony) Bulbs (tulip) Ferns Wildflowers Herbs (often part of a vegetable project)	Indoor House plants (philodendron) Dish gardens (peperomia) Plant science Terrariums (fern) Forcing bulbs (amaryllis) Flower arranging and corsages Plant preparation Gift flowering plants (poinsettia)	
FRUITS Tree fruit (apple) Small fruit (strawberry)	ORNAMENTALS Trees (pine, oak) Shrubs (lilac) Vines (Boston ivy) Ground covers (Japanese spurge)	

Why Grow Flowers?

People grow flowers for a variety of reasons:

- For personal enjoyment
- As a recreational hobby
- To enhance the appearance of home grounds
- For cut flowers (bouquets, arrangements, corsages)
- For nostalgic reasons (because their friends and relatives did)
- To make winters seem shorter by growing plants that bloom very early in the season (e.g., crocus) or very late in the season (e.g., chrysanthemum)
- To learn how to use a combination of different types of plants in one landscape (e.g., annuals, perennials, and bulbs)
- For competition in shows and fairs
- To learn the names of new plants and how to identify them
- For experiments

What Should 4-H Members Do?

New or inexperienced members should:

- Grow four to seven different kinds of annual flowers each year.
- Identify an additional 10 kinds of flowers each year.

Members who re-enroll or who have grown at least seven different kinds of flowers before and can identify 20 or more kinds of flowers should:

- Plan a flower garden using annuals and bulbs.
- Grow at least four to seven new and different kinds of plants (including bulbs and perennials) each year.
- Identify an additional 10 kinds of flowers each year.

During each year that you are enrolled in a flower garden project, you should grow four to seven different kinds of flowers and learn to identify 10 others. If you grow only one variety of each kind of flower, then you should grow seven different kinds of flowers. If two or more varieties of each kind of flower are grown, then four kinds of flowers are enough.

A first-year member might grow and identify the following:

GROW	IDENTIFY
1. Cockscomb	1. Ageratum
2. Bachelor button	2. Annual phlox
3. Cosmos	3. Calliopsis
4. Marigold	4. Coleus
5. Petunia	5. Geranium
6. Portulaca	6. Impatiens
7. Zinnia	7. Nasturtium
	8. Spider flower
	9. Sweet alyssum
	10. Wax begonia

If two or more varieties of each kind of flower are grown, then a member might grow from the following, or any other kind:

1. Cockscomb
2. Marigold
3. Petunia
4. Zinnia

A second-year or more advanced member might want to grow four to seven new and different flowers in addition to some of those grown previously. For example:

GROW	IDENTIFY
1. Columbine	1. Chives
2. Dahlia	2. Goldenrod
3. Grape hyacinth	3. Lavender
4. Iris	4. Marsh marigold
5. Oriental poppy	5. Mayapple
6. Peony	6. Ornamental kale
7. Salvia	7. Sage
	8. Spring beauty
	9. Trillium
	10. Verbena

Some popular annuals, perennials, and bulbs are listed below. Most new members will already know some of them. You should learn at least 10 new kinds of flowers each year. Once you learn all the plants listed here during a 4-year maximum participation, additional plants can be found in the *Horticulture Contest* list on page 29, or in seed catalogs, Cooperative Extension Service bulletins, and books.

A = Annual
B = Biennial
P = Perennial

TB = Tender Bulb
HB = Hardy Bulb

- | | |
|---------------------|-----------------------|
| Ageratum (A) | Nasturtium (A) |
| Bachelor button (A) | Oriental poppy (P) |
| Canna (TB) | Ornamental kale (A) |
| Chrysanthemum (P) | Pansy (A) |
| Cockscomb (A) | Peony (P) |
| Coleus (A) | Petunia (A) |
| Columbine (P) | Phlox (A & P) |
| Cosmos (A) | Portulaca (A) |
| Crocus (HB) | Rose (P) |
| Daffodil (HB) | Salvia (A) |
| Dahlia (TB) | Snapdragon (B) |
| Day lily (P) | Sunflower (A) |
| Delphinium (P) | Sweet alyssum (A) |
| Fuchsia (A) | Tuberous begonia (TB) |
| Geranium (A) | Tulip (HB) |
| Gladiolus (TB) | Verbena (A) |
| Grape hyacinth (HB) | Wax begonia (A) |
| Hollyhock (B) | Zinnia (A) |
| Hyacinth (HB) | |
| Impatiens (A) | |
| Iris (P) | |
| Marigold (A) | |
| Morning-glory (A) | |

These are general guidelines to help you determine your project's scope. Guidelines should be modified as necessary to ensure that you set realistic and attainable goals that result in a challenging project. Members who have special needs, disabilities, limited space, or other unique situations are encouraged to select projects geared to their needs and not necessarily identical to projects selected by others. Extremely talented members are encouraged to accomplish more than the expectations listed here. Members who set high goals rarely feel bored by their projects!

SPECIAL NOTE TO LEADERS

Getting Started

When to begin a gardening project depends on many factors. The ideal time is January or February so that members can decide what flowers they want to grow and select the seeds. New seed catalogs start to arrive near Thanksgiving and continue through January or later if requested. Normally, once seeds are ordered from a mail-order seed company, the customer is placed on the company's mailing list and will usually remain on it if seeds are ordered from the company at least every other year. Therefore, it may be wise to alternate the seed sources from year to year and remain on the mailing list of two or more companies.



The earliest time to start plants indoors for a flower project in central lower Michigan is March 1. In order to start plants at that time, the seeds must be already on hand—either retained from the previous year, purchased locally, or received by mail order placed in January or February. Start with new, fresh seeds. Some flower seeds can be stored for several years under good conditions (32° to 50°F, low relative humidity). Cosmos, marigold, pansy, petunia, sweet pea, and zinnia are examples of flower seeds that store well.

It is recommended that members order seeds from a mail-order seed company catalog. Reading about all the different flower varieties available and selecting from them provides a much better experience for members than buying seeds locally. Most local suppliers have a limited selection compared to seed catalogs. In addition, most catalogs contain considerably more useful information than what appears on a seed packet, and they are often nicely illustrated.

The names and addresses of many mail-order seed companies are listed on page 35. Most of the companies carry flowers as well as vegetables.

If you don't plan to have members start any of their plants indoors, then the group meeting need not start so early in the year. The earliest that seeds of annual plants can be sown outdoors in central lower Michigan is around April 1, and the majority should be planted by May 15. Members living in southern lower Michigan can plant a week earlier. Those people living in northern areas should delay planting one or two weeks, depending on their location. See the map (fig. 1) for more specific information. Remember that several kinds can be sown outdoors several weeks before the average date of last temperature of 32°F, or lower in the spring, as listed on page 14. Average date of last temperature of 32°F refers to the date when weather forecasts indicate a 50 percent chance of frost.

The best way to get started is to hold an organizational meeting as early in the year as possible (January, February, or March). Publicize the date, location, and purpose of the meeting at community clubs, other project meetings, schools, churches, and in local newspapers. Telephone prospective members or their parents and have former and current members and their parents relay the information to other prospective members. Radio and television announcements are other methods of publicizing the meeting.

Try to make sure that most young people in the geographic area served are aware that an organizational meeting will be held for those interested in participating in a flower garden project. If seeds will be ordered as part of the initial meeting, individuals should bring seed catalogs and money for seeds they plan to order. Usually \$2 or \$3 is sufficient if members share seeds, or if seeds are ordered in large quantities and divided among members. Members should bring pencil and paper if these will not be provided.

The Organizational Meeting

The organizational meeting is the most important of the year, so be sure to do some planning. Start planning well ahead of the meeting and determine several different

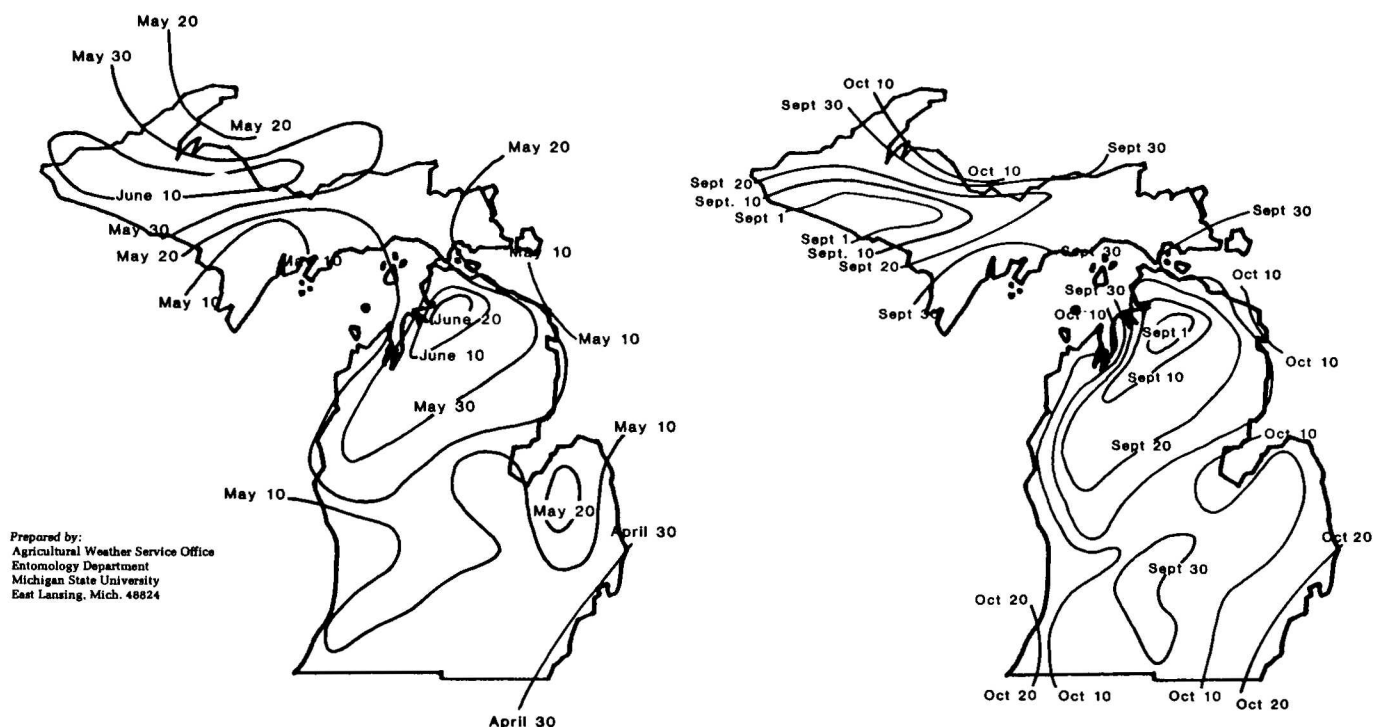


Figure 1 These maps show the average date of last temperature of 32°F or lower for Michigan, in spring and fall.

techniques for getting members involved in planning club goals and activities. The bulletin has a special form that each member should fill out, *My Own Personal Goals and Plans*. Review the horticulture section of the Michigan 4-H Project Resource Guide before the meeting to see which objectives and activities pertain to the group. Each county Cooperative Extension Service office has a copy of this guide available for use.

Possible Meeting Outline

I. Introductions

- A. Leader—"Who you are and how did you become involved in the project?" "Have you participated in other related activities?"
- B. Members and Teen Leaders—"Who are you, why are you interested in a flower garden project?" "How many different kinds of flowers have you grown on your own or helped to care for?"
- C. Others—Parents, Relatives

II. Purposes of the Meeting

- A. To get organized.
- B. To see who is interested.
- C. To find out what each member already knows about flower gardening. This could be done by having colored pictures of 10 to 20 flowers placed on tables for members to name as they come in.
- D. To set individual and group goals.
- E. To explain what a flower garden project involves and the gardening tools that are required.

III. Setting Goals

- A. Group Goals—Try to have older members take the lead in setting goals for the group.
- B. Member Goals—Have each member fill out *My Own Personal Goals and Plans* form. Then on the *Flower Identification List* (page 24) have members write down the names of all the annuals, perennials, bulbs, ferns, and wildflowers that they can identify and have them put a check mark after those that they have grown or cared for. They can use seed catalogs to help refresh their memories.

Try to review each member's goals and plans to gain a better understanding of what members want to do and learn. Check to see if they are planning to grow four to seven flowers and to identify 10 others. Adjust these numbers up or down so that each member will have a reasonable challenge. Review how they plan to learn to identify the plants on their lists. Cutting pictures out of seed catalogs and mounting them on index cards to make flash cards is one method of helping members learn to identify plants. Other methods include visiting gardens, taking pictures, and looking in books or bulletins.

IV. Other Things to Do

- A. Have members organize and elect officers. A few members should be appointed to call the others and remind them of the next meeting date, location, and what to bring.

- B. Have members decide where they will plant their flowers. Review the information on landscaping (page 6) to help them decide. Some members may want simply to plant flowers in rows in a garden for use as cut flowers or in floral arrangements. Others may want to have a raised bed or container garden.
- C. Have members decide which seeds or plants they will need to obtain.
- D. Have members look at current seed catalogs to determine prices and number of seeds included in packet.
- E. Members might like to hike through a local woodlands area to see some of the native plants as they start to flower. Wood violet, trillium, hepatica, and jack-in-the-pulpit are all attractive and are easy to identify since there are only a few plants in flower during early spring. Seeing native plants makes it much easier for members to learn plant names. Members don't feel overwhelmed if they visit the woods and fields every week or so and see only a few new plants on each visit. Encourage members to make a few simple drawings of each flower, so that they will be able to recognize the plant if they look it up in a book or bulletin. Picking leaves and flowers should be discouraged.
- F. To find other ideas for activities as well as a sample outline of meeting topics during the year, see the section on pages 33 and 34, *Ideas for Meetings*.

Ways of Stimulating Interest

It might be nice to stimulate interest in gardening or related activities while members are in the project planning stage. For example, force a few flowering branches, such as apple, forsythia, pussy willow, maple, quince, cherry, or other flowering shrubs or trees, and have them available to show to members. Branches of most flowering shrubs and trees can be forced after January 1. Simply cut branches having flower buds (flower buds are larger than leaf buds) and bring them indoors. Place them in a bucket of water. Buds open better and last longer if forced at cooler temperatures (45° to 60°F), but it will take a little longer for the buds to open. Try to mist the buds occasionally as they open. Some people put the bucket of twigs in a bathtub and shower them occasionally. Forced branches can be used in a spring bouquet or in a more elaborate arrangement. The flowers will last longer if kept cool (60°F or less) or on the windowsill of a warm room.

You might also try some indoor gardening projects, such as growing seedlings from orange, grapefruit, lemon, avocado, or other fruit seeds. Coleus, wax begonia, geranium, and other similar plants can be propagated for use outdoors when the weather warms up.

Meeting Suggestions

Many ideas for meetings, activities, demonstrations, and talks are listed on pages 33 and 34. A few of these ideas could be used as short-term projects, such as forcing flowering branches, propagating chrysanthemums by cuttings, making a leaf collection, or collecting native plant seeds.

PLANNING THE FLOWER GARDEN

Proper flower garden planning is very important and considerable thought should be given to its development. The garden location will depend on a number of factors: land available, slope, exposure (sunny or shaded), size and shape of the lot, presence of large shade trees, relationship of any buildings adjacent to the flower garden, drainage, and soil type (fig. 2).

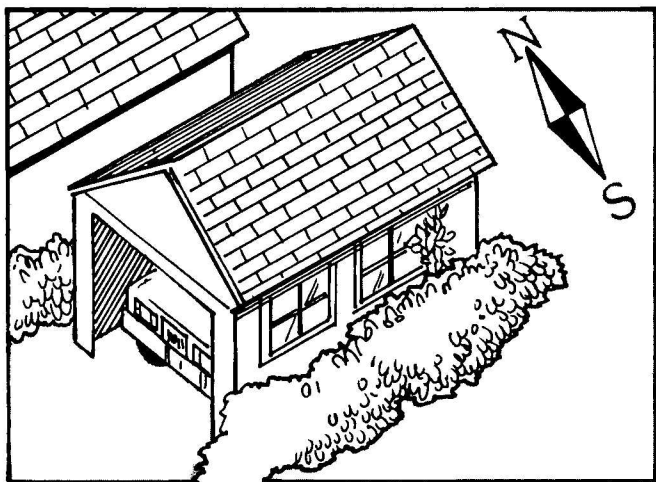


Figure 2 A good location for flower beds is on the south side of buildings, fences, or shrubs.

Visual Concerns

Although many of you will not have much choice of where to locate flowers, some of you will; and it is important to plan before digging up a bed. The following ideas should help in choosing an appropriate location.

Unity—The bed should fit into the whole landscape and should not seem out of place. For example:

- Set the bed into an existing border or foundation, planting around the house.
- Continue a line of existing objects, such as walks, walls, or fences.
- Reflect the geometric or curvilinear patterns of the house, pavement, or existing plantings.
- Use massing, planting several plants of a single variety together, to make the bed large enough so that it does not look inconsequential or like an afterthought.

Variety—Make the bed different from the rest of the yard. The following techniques can be employed to achieve this:

- Use brightly colored flowers.
- Choose plants of different heights.
- Plant a bed that juts out slightly from an existing bed.
- Do not make a bed so different that it seems out of place.

Accent—Create focal points in the landscape by remembering to:

- Direct the viewer's eye to natural focal points in the yard, such as front door, birdbath, or an especially nice distant view.
- Consider how the garden will be viewed from windows. Beds planted near focal objects such as mailboxes, birdbaths, and landscape lights should be broad enough to provide a base and visual balance for the object.
- Direct the viewer's eye away from poor views. Beds should not be located near garage doors, sheds, compost piles, or unattractive neighboring lots.

Softening and screening—Plant large flowering plants to hide poor views such as garbage cans, well covers, or compost piles.

- Large flowering plants, vines, or tall flowers like hollyhocks, can soften a blank wall (such as the side of a house or garage).
- Plant low flowers in front of the nonflowering stems of tall flowers and vines.

Planning Steps

When planning a flower garden, you should:

1. Make a plan drawn to scale of your yard as it currently appears, as in figure 3.
2. Decide where the flower garden or beds will be. Review *Visual Concerns*.
3. Decide what color combinations to use. Although some people do not consider color important when planning a flower garden, you will probably achieve a more pleasing effect if you use colors that go well together. Some pleasing combinations are:

• pink, yellow, and blue	• violet and yellow
• red, yellow, and blue	• blue and orange
• red, pink, and white	• blue and white
• pink, rose, and crimson	• blue and yellow
• yellow, bronze, and orange	• yellow and orange
4. Decide what plants to use, keeping in mind that color, flowering period, and plant height are essential considerations (see fig. 4).
5. Decide if the garden is to be an annual, perennial, or combination garden. Most gardens are combination gardens containing annuals, perennials, and bulbs. Make sure you save space for bulbs and perennials that might be acquired and planted in the fall. You may want to select a few fragrant plants, such as sweet alyssum, sweet william, sweet peas, stocks, nicotiana, lily of the valley, lavender, and pinks.

6. Consider the correct spacing of plants. This information is available from seed packets or seed catalogs. Following are examples of the planting distances for a few plants:

6 Inches	12 Inches	
Dwarf marigold	Petunias	
Portulaca	Phlox	
Sweet alyssum	Nasturtiums	
	Snapdragons	
18 Inches	24 Inches	36 Inches
Calendulas	Cosmos	Peonies
Large zinnias	Rudbeckia	Bleedingheart
Delphinium	Daylily	Babysbreath
Spider flower		Sunflower

Planning Activity

When planning where to grow flowers, determine if the flowers are to be grown in rows, as in a garden, and used for cut flowers; in a yard and worked into the landscape with shrubs and trees; in a bed in the lawn or up next to a fence or building; or in containers such as hanging baskets, window boxes, large pots, or iron kettles. Know how tall each kind and variety of flower will grow, as well as its color in order to place it properly. Sunflowers, for example, are not suitable for hanging baskets or window boxes because they are too tall.

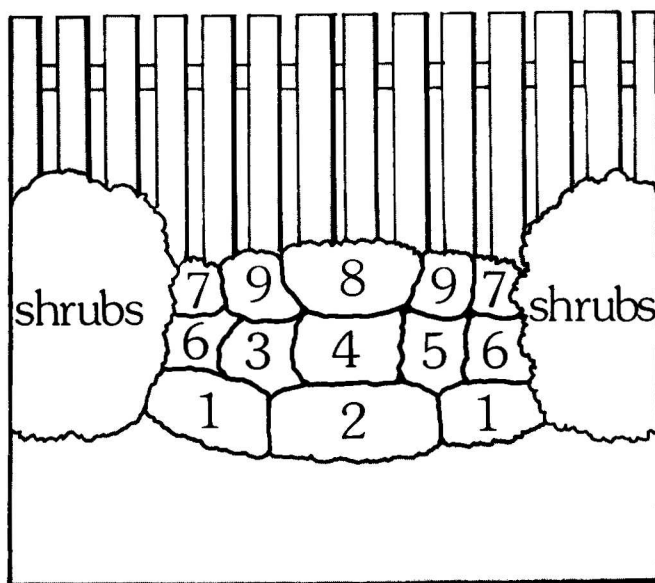


Figure 3 Here is a sample design of a flower garden to help you get started. You may want to use a scale of one-half inch to stand for one foot of actual length and width in your garden. Border flower beds like this one should be at least three feet wide. You may use other flower varieties and other arrangements. 1 dwarf ageratum (purple); 2 dwarf marigold (yellow or orange); 3 petunia (white); 4 lobelia, tall (blue) 5 petunia (red); 6 calliopsis (yellow); 7 asters (mixed); 8 cleome (white or pink), or cosmos (mixed); 9 zinnias (mixed).

It may be necessary to go through the short planning exercise to select suitable flowers for a project. If you plan a flower bed using seven different kinds of flowers, you would fill in a simple chart using at least three different heights of flowers, as shown in the sample chart on page 9.

A similar plan could be made for a window box, using only plants that are short to medium in height. Since most window boxes are rather narrow, only two rows of flowers could be used. The front row often includes trailing plants, such as ivy, petunias, or sweet alyssum to help tie the flowers visually with the window box.

A large container such as an iron kettle may be planted with only one kind of plant such as wax begonias, impatiens, or petunias, or it may have a taller plant in the center surrounded by shorter plants, often trailing types. Be sure to fill out the *Flower Garden Record* form on page 10, so that you have a good record of what you grow.

Container or Portable Gardening

Many flowers can be grown in containers like hanging baskets, window boxes, large pots, iron kettles, or laundry tubs. Container gardening is especially good if you live in an apartment or other place where gardening space is limited. Container gardens are also rewarding for members who have handicapper characteristics that make a ground bed impractical for them.

Containers can be located on a porch, patio, or other appropriate location where they can be appreciated and easily cared for. The plants most often grown in containers are annuals, which die at the season's end and are removed from the containers. Containers are emptied, cleaned, and stored over winter.

Although most smaller annuals and herbs can be grown in containers, it probably requires more effort to grow plants in containers than in the ground, due to limited root space. You must check pots every day once the plants have become established to see if watering is needed. Also, the soil is warmer in containers and some plants will not



Figure 4 Plant height is an important factor in garden planning.

tolerate the higher temperatures. Excess drainage water from pots may have to be collected if the pots are on a wooden surface such as a porch, or if uncollected extra water would cause a problem. Saucers for smaller pots can be made easily by cutting off the bases of plastic containers. Plants grown in containers may require more frequent fertilization.

It is usually best to use a new growing medium each year. Most containers, however, can be used over and over if they are emptied before freezing weather sets in, cleaned out, and properly stored—preferably in a location where the temperature does not go below freezing.

Raised Beds

Growing flowers in a raised bed is one method of cultivating plants that may have some advantages over growing them in a regular garden or bed. A raised bed (fig. 5) would be especially good if the soil is poor, low, or poorly drained; if only limited space is available; or if you cannot easily bend over to care for plants in ground beds.

Raised beds should be at least 8 inches high and should be no wider than can be easily reached from the outside—about 3 to 4 feet. Beds may be enclosed using wood, railroad ties, concrete blocks, or other materials. Some raised beds are simply hilled up with soil from the paths between the beds, but this method should only be used if the site has good garden soil. Beds can also be made by using artificial soil mixes composed of peat moss, vermiculite, and/or perlite, or by using a combination of materials such as soil, sand, peat moss, well-rotted manure, compost, leaves, grass clippings, and other organic matter.

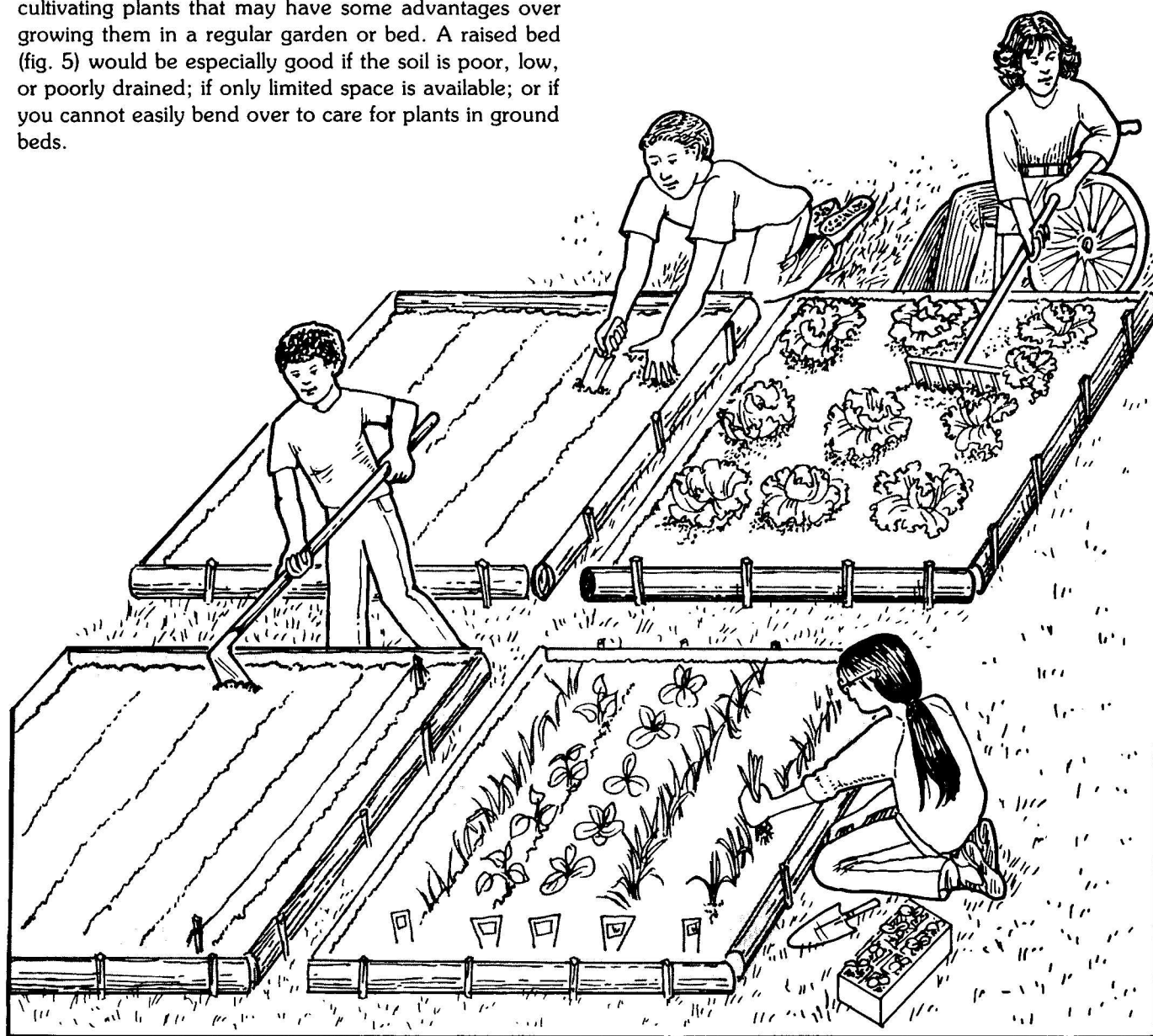
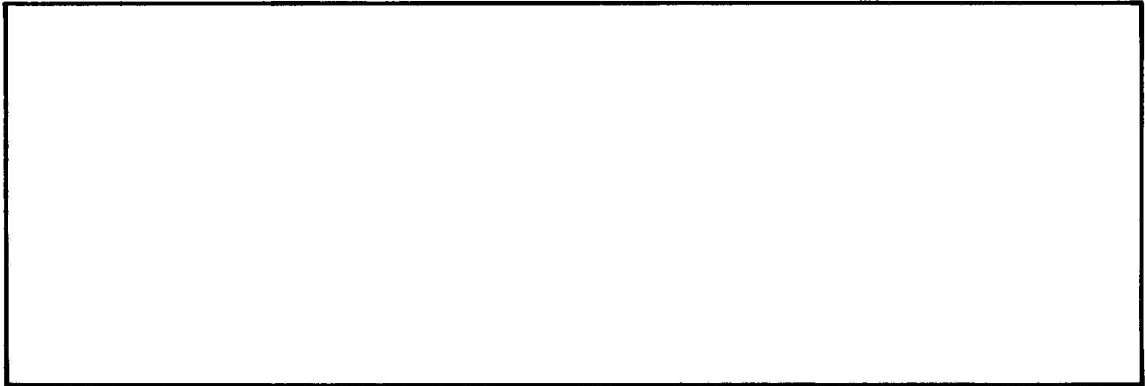


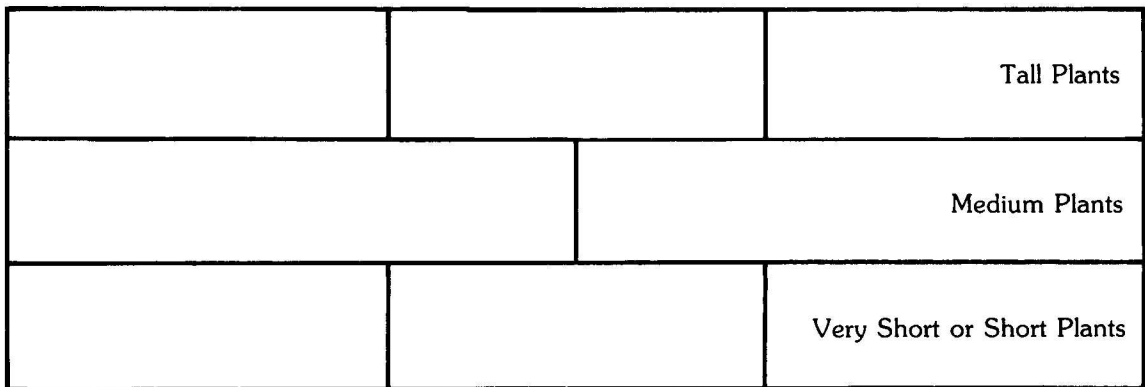
Figure 5 A raised bed can be an attractive alternative for gardeners with special needs.

Back of Flower Bed (Tall Plants)



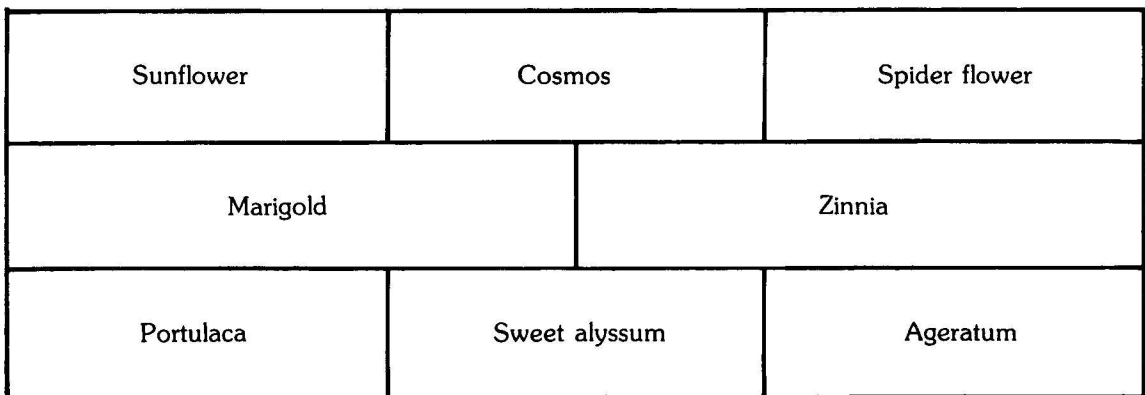
Front of Flower Bed (Short Plants)

BACK



FRONT

BACK



FRONT VIEW