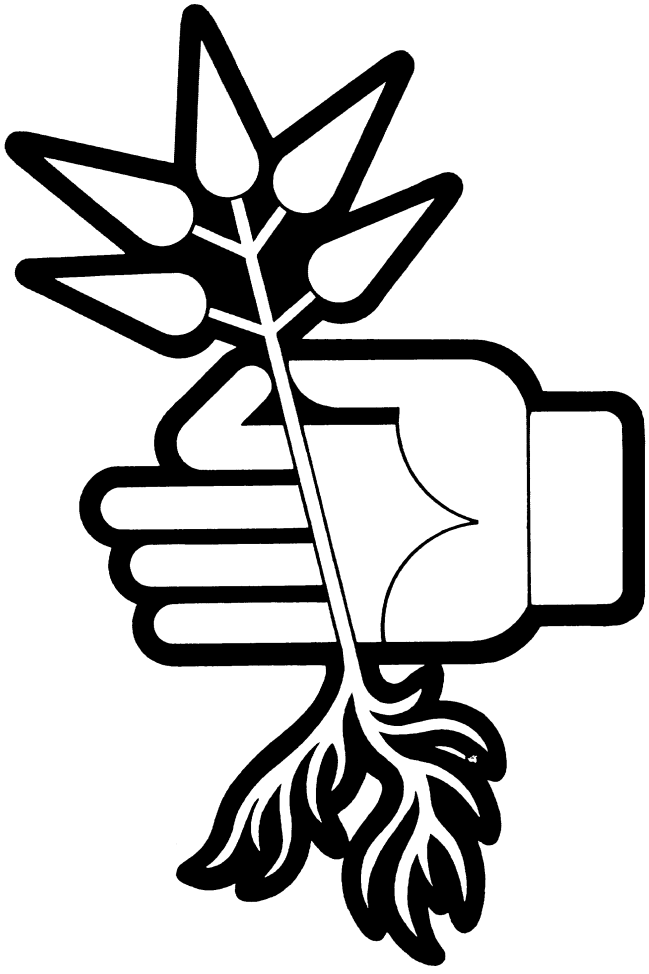
$3.00

Oregon 4-H

Horticultural Advancement Guide



4-H 2301R • Revised July 2001

OREGON STATE UNIVERSITY
EXTENSION SERVICE

Oregon 4-H Advancement Programs

An Introduction for Leaders, Parents, and Members

4-H Advancement programs consist of a series of steps that provide a framework for progressive learning within a specific project area. Advancement programs aid 4-H members to move at their own speed by encouraging self-learning that is based on their interests and abilities. Advancement programs are also self-paced, and age- and skill-level appropriate. Advancement programs can also be a tremendous help to members as they set their goals each year. In addition, advancement programs are useful to Junior leaders and more experienced 4-H members who wish to work with younger or less-experienced members.

Benefits of 4-H Advancement Programs

Advancement programs:

- Make projects more interesting
- Assist members in setting and achieving goals
- Encourage self-paced learning
- Help members learn more about their projects
- Encourage age-appropriate building of skill level
- Provide new, enjoyable experiences
- Help prepare members for participation in certain activities and events
- Provide recognition for work well done
- Provide incentive to members to stay in a project over a longer time period

Life Skill Development and 4-H Advancement Programs

Participation in 4-H Advancement programs is instrumental in the development of life skills, a major emphasis of 4-H programming. Young people who participate in 4-H are not just gaining knowledge about their project area, they are also developing skills that will be useful throughout their life. Specifically, the 4-H Advancement programs are designed to develop life skills in:

- Learning to learn
- Making decisions
- Keeping records
- Planning and organizing
- Achieving goals
- Completing a project or task
- Communicating
- Being responsible
- Developing self-esteem

About the Advancement Program Steps

The advancement steps are written to provide a learning sequence for all members. Although all members should start with step one, the advancement program is designed so a 4-H member may advance as fast as he or she desires based on interest, effort, and ability. A fourth- or fifth-grade 4-H member may take 2 or 3 years to complete step one; an eighth- or ninth-grade member may complete one or two steps in a year.

Members should work on one step at a time. There are, however, times when a member may accomplish an activity in another step before completing the step on which he or she is working. Recognize that if there is considerable difference in the level of skill within a group, members may be working on several levels of the program at one time. Much of the information leaders and members need to complete advancement steps can be found in project materials. In advanced steps, members will need to refer to other sources.

Recording Progress in the Advancement Program

Leaders should encourage members to keep the advancement program with their records. Doing so allows leaders and members to evaluate the 4-H experience, review progress, and establish goals for the future. Upon completing a step, the member fills in the date and has the leader initial the record.

Reviewing Advancement Progress

Once a member has completed an advancement step, the leader should then arrange for a review of the experience. This review is often conducted through an interview process. If it is feasible, the interview can be conducted by someone other than the leader. It is a valuable experience for members to be interviewed by other people who have expertise in a particular area. Such interviews help prepare members for job interviews and other real-life experiences. Leaders may

also want to arrange for an advancement chairperson or committee to review each member soon after he or she has completed the step requirements.

The review is also an excellent opportunity to involve parents in club activities. Several parents can serve on the committee and two or three of them can conduct the interviews. The interviewers should be familiar with the 4-H program, its objectives, and the project area.

The advancement chairperson or committee should approve the advancement only when they are satisfied the member is ready to continue on to the next step.

How to Use the Advancement Program

The advancement program should be presented at the beginning of the 4-H year.

Review what was done last year.

Before deciding on specific things to include in the club program, leaders should review what the members and club did previously. A review will allow discussion on "What did we do?" "What did we like?" "What needs improvement or expansion?" and "Was everyone involved?"

Review the members' present interests.

Encourage members and parents to express their interests, needs, and goals. This allows them to feel important and committed to the final club program.

Share county/statewide special programs.

Tell your members about activities available to them through your county or the state. Share your special interests with members and parents. This allows members and parents to learn about new opportunities and helps determine whether the club should set specific goals related to them.

Develop your program.

If your group of 4-H participants is small, all the members should be involved in determining the group goals for the year. If the group is large, a special committee may identify the goals for the year's program. Goals should be based on the current-year members' range of grades, levels of achievement, and interests. Design the program to meet the needs and interests of each member. Establish goals to meet the interests and needs of youth, to provide for individual achievement for each member, and to be within range of accomplishment for each member.

If your club has a wide range of grades, interests, and abilities, divide the club into small groups to work with a junior leader. This enhances the learning and satisfaction of all members.

Recognizing Advancement

The National 4-H Recognition Model outlines five different ways in which 4-H members can be recognized:

Participation

This type of recognition program emphasizes the importance of acknowledging young people who have been involved in 4-H educational experiences. For some youth, participation in a 4-H learning experience is an accomplishment.

Progress Toward Self-Set Goals

Parents and other adults can help youth set realistic goals. Recognition for progress toward self-set goals, no matter how small, is an integral part of this type of recognition.

Achievement of Standards of Excellence

Standards of excellence are established by experts in a given area. By measuring personal progress against standards of excellence, youth can gain insight into their own efforts and abilities.

Peer Competition

Peer competition is a part of the model for recognition. This type of recognition subjectively identifies, in a concrete time and place, the best team or individual. It is a strong motivator for some youth but is inappropriate for youth under age eight.

Cooperation

Learning and working together promotes high achievement. Cooperation may take advantage of all the skills represented in the group, as well as the process by which the group approaches the learning task/goal. Everyone is rewarded.

Advancement Certificates

The 4-H Advancement Program is an excellent way to promote and recognize members' efforts in progressing toward self-set goals and achieving standards of excellence through learning. Advancement certificates that are customized for each project area are available from your county Extension office. Contact a county 4-H staff member to request advancement certificates in your project area.

Earning an advancement certificate deserves recognition. When members have completed a level of advancement, it should be recognized. This could be done at an achievement meeting or other community event. Extension 4-H staff members can also help leaders prepare pieces for newspaper and radio releases on the members' achievement.

Prepared by Mary Arnold, Extension 4-H specialist, Oregon State University.

Using the Advancement Program in the Horticulture Project

A Note to 4-H Members

Do you like to grow new and different plants? Do you like to try new horticulture techniques? Do you like to try a new idea and see what happens? Do you like to share your skills with others? Are you interested in the field of horticulture as a career?

Participating in the 4-H Horticulture Advancement program is a great way to get more involved in your horticulture project. Although the Horticulture Advancement program does not replace your project work, it can become an important part of your horticulture project. Using the series of steps outlined in this guide will allow you to set your own goals for learning and to progress in your project at your own pace.

The Horticulture Advancement Program consists of nine phases with activities in five learning areas:

- Climate and plants
- Propagation
- Crops
- Pests and pest management
- Individual development

Instructions for Using the Horticulture Advancement Guide

4-H members should progress through each of the steps in the order they appear. The steps have been created with developmental skill levels in mind. The phases progress from phase 1 (basic) to phase 9 (advanced). You can enter a phase at any time. However, you will want to choose the phase that is appropriate for your age and/or skill level, and have completed all the preceding phases.

Begin by reading through all the activities. Then choose activities that you plan to complete in each section: climate and plants, propagation, crops, pests and pest management, and individual development. If there is a blank space, you also can make up your own activity.

As each activity is completed, fill in the date. When you have completed the suggested number of activities for a section, your leader can review your work and write their initials in the space provided. When you have completed all the activities in one phase, go on to the next phase and plan what you will do next.

A Note to Leaders and Parents

The *4-H Horticultural Advancement Guide is* a series of activities to support the 4-H horticulture curriculum. The phases are appropriate to the age and skill development of the 4-H members. With your help, 4-H members choose activities they want to complete in each phase. If 4-H members have ideas for an activity that would be appropriate for the learning area, there is a blank provided for them to fill in that activity. As they complete the activities, review their work and initial the effort.

The guide consists of nine phases with activities in five learning areas: climate and plants, propagation, crops, pests and pest management, and individual development.

We suggest that the 4-H members progress through the phases in the order they appear. The phases have been created with developmental skill levels in mind. The phases progress from phase 1 (beginning) to phase 9 (advanced). Members can enter a phase at any time; however, they will want to choose the phase that is appropriate for their age and/or skill level.

The *4-H Horticultural Advancement Guide* is valuable to youth because they:

- are asked to make choices that help them develop decision-making skills
- select learning activities in all five areas to expand their interests and develop an inquiring mind
- complete activities at their own pace and leaders and parents can assess their learning
- enrich their learning through discovery and gain a sense of accomplishment

This 4-H Horticultural Advancement Guide is just that—a guide that enriches the 4-H horticulture experience for young people. It is designed to assist in the planning and delivery of the 4-H horticulture project.

Prepared by Ross H. Penhallegon, Extension agent, Lane County; and Barbara V. Boltes, former Extension specialist; Oregon State University. Revised by Virginia Bourdeau, Extension 4-H specialist, Oregon State University.

Phase 1

Individual Development

	Plan to do	*Have done*	*Approved by*
Choose number 1 and one or more other options.			
1. Select two or more individual options from pages 26–27 of this guide. Write them below.			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
2. Teach a club member the 4-H pledge.	_____	_____	_____
3. Grow a flower and give the plant to a friend.	_____	_____	_____
4. _____	_____	_____	_____

Climate and Plants

Choose two or more options.			
1. Draw the life cycle of an annual, biennial, or perennial plant. Explain what each cycle means.	_____	_____	_____
2. Using a seed catalog, look up and list five different "dwarf" varieties of flowers, or five different "bush" varieties of vegetables.	_____	_____	_____
3. Find out what "climate" means. Which climate zone do you live in? Make a report at a club meeting.	_____	_____	_____
4. Plant five strawberry plants. Count the number of blossoms the first year.	_____	_____	_____

Propagation

Choose two or more options.			
1. Draw pictures of five different bulbs, tubers, or corms. Label each picture for its parts.	_____	_____	_____
2. How long do seeds that you buy each year last? Put seeds on a paper towel, moisten with water, and place somewhere warm. Record which seeds germinate first. What percent germinated?	_____	_____	_____
3. Draw a picture of a bean seed. Label your diagram showing the location of the seed coat, cotyledon, and embryo.	_____	_____	_____

Continued on next page

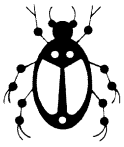
Propagation continued

	Plan to do	*Have done*	*Approved by*
4. Take a cutting of a "spider plant" and place the cutting in a jar or glass of water. Record how long it takes to form roots. Place a second spider plant in the dark. Record how long it takes to form roots. Was there a difference? If so, try to explain why.	_____	_____	_____
5. _____	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Draw pictures or collect pictures of 10 different annual vegetables than can be grown where you live.	_____	_____	_____
2. Make a list of the different vegetables in a grocery store that are not grown in your region.	_____	_____	_____
3. Plant four containers each with the same vegetable or flowers. Water each with different amounts of water. Measure the differences in plant growth in 1 month and in 2 months.	_____	_____	_____
4. Identify four different tree fruits.	_____	_____	_____



Pests and Pest Management

Choose one or more options.

1. Identify five garden or house pests.	_____	_____	_____
2. Learn about three garden or house plant diseases. Try to identify the diseases.	_____	_____	_____
3. Try four methods of weed control in your garden. Use a hoe on one row, hand pull the weeds in another, put newspaper mulch down on another, and sawdust on another row. Which weed control method worked best? Which involved the most work?	_____	_____	_____
4. Plant flowers or vegetables in four different containers. What pests were most common?	_____	_____	_____

Phase 2

Individual Development

	Plan to do	*Have done*	*Approved by*
Choose number 1 and one or more other options.			
1. Select two or more individual options from pages 26 and 27 of this guide. Write them below.	_____	_____	_____
2. Tell about a flower, vegetable, or fruit you would like to learn to grow. Use as a roll-call item in your 4-H club.	_____	_____	_____
3. Observe the public buildings and grounds in your area. Identify locations that may need attention.	_____	_____	_____
4. _____	_____	_____	_____

Climate and Plants

Choose two or more options.

1. Cut open a tulip bulb and identify the different parts; choose a bulb, tuber, large seed, or corm and cut it open to identify its parts.	_____	_____	_____
2. Give an illustrated talk on plant or flower parts or some other topic that interests you.	_____	_____	_____
3. Determine the hardiness zone in your area. Describe how hardiness zone maps are used.	_____	_____	_____
4. _____	_____	_____	_____

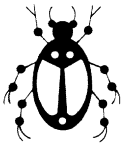
Propagation

Choose two or more options.

1. Start five different annual or perennial seeds indoors. Plant them outdoors when weather permits.	_____	_____	_____
2. Place five bean seeds in three separate jars with paper towels. Moisten the towels. Grow one of the jars in the dark, one in the refrigerator, and one in the sunlight. Record which one grows the best. Can you explain why?	_____	_____	_____
3. Grow a house plant from an avocado seed.	_____	_____	_____
4. Find out about air layering and try to air layer (or top layer) a house plant.	_____	_____	_____

Crops and Ornamentals

	Plan to do	*Have done*	*Approved by*
Choose one or more options (biennial and/or perennial).			
1. Make a list of the different fruit trees or flowering trees that are grown in the neighborhood.	_____	_____	_____
2. Plan a garden with five vegetables, three flowers, and two herbs in a space 10 feet by 5 feet, or in containers.	_____	_____	_____
3. Visit a nursery or greenhouse and find out what plant materials are most popular with customers.	_____	_____	_____
4. Record changes in the price of lettuce or tomatoes at the grocery store for 2 months. What did you discover?	_____	_____	_____



Pests and Pest Management

Choose one or more options.			
1. Leave one row of the garden not weeded and observe how the plants grow in comparison to the rows that are weeded.	_____	_____	_____
2. Record what insects are attracted to plants in the garden or in the house. Do you think they are the same or different?	_____	_____	_____
3. Identify weeds in the garden. Which insects are attracted to the weeds? What areas do the weeds grow in?	_____	_____	_____
4. Explain why spittle bugs are a problem on raspberries.	_____	_____	_____

Phase 3

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select two or more individual options from pages 26 and 27 of this guide. Write them below.

   _____ _____ _____ _____

   _____ _____ _____ _____

   _____ _____ _____ _____

2. Talk with one or two members of service organizations about a horticulture project for your community. Choose a project you feel is needed. _____ _____ _____

3. Make a horticulture decoration and share it with someone in a nursing or convalescent home. _____ _____ _____

4. Tell a friend about 4-H. See if any of their interests match with projects that may be available. _____ _____ _____

5. _____ _____ _____ _____

Climate and Plants

Choose two or more options.

1. Find out how many frost-free growing days there are in your area in an average year. _____ _____ _____

2. Find out median dates of last frost and first frost for your area. _____ _____ _____

3. Find out your area's average annual rainfall and make a chart or graph showing the average monthly rainfall. _____ _____ _____

4. Record the rainfall for 1 month. _____ _____ _____

5. _____ _____ _____ _____

Propagation

Choose two or more options

1. Put different vegetable seeds in separate self-sealing zip bags. Match the seeds with the empty vegetable packets. Have 4-H club members identify them. _____ _____ _____

2. Take a leaf cutting of an African violet. Place the cutting in a shallow jar or bowl of water covered

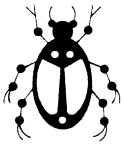
Continued on next page

Propagation continued	***Plan to do***	***Have done***	***Approved by***
with plastic wrap. How soon before there were enough roots to transplant? Where did the roots form on the cutting?	_____	_____	_____
3. Grow alfalfa, bean, or radish sprouts for sandwiches. Look in the grocery store and compare prices with purchased sprouts.	_____	_____	_____
4. Some tree fruits and berries are hard to propagate. Describe how to propagate a hazelnut tree or a dwarf apple.	_____	_____	_____
5. Plant four bean plants. Plant in clear containers and observe root structure. Put two in rocky soil and the other two in good garden soil. Record which plants grow better. Tell why one does better than the other.	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Count the number of TV commercials during the week that relate to plants and horticulture. Tell your club about them.	_____	_____	_____
2. Describe to one of your parents why earthworms are so important to gardening.	_____	_____	_____
3. Buy or grow an unusual new vegetable from the store and report to your 4-H club about it.	_____	_____	_____
4. Plant radishes in pots filled with different kinds of soils (topsoil, subsoil, clay, sand, and silt). Record how the radishes grew in each soil. Explain why.	_____	_____	_____



Pests and Pest Management

Choose one or more options.

1. Grow a pumpkin from seed. What pest problems did you have? Any other problems?	_____	_____	_____
2. Using a net, walk around the garden, in the house, or at a nearby park and see how many insects can be caught in the morning and in the evening. At which time are there more insects?	_____	_____	_____
3. Use bark mulch as a mulch around tulips and daffodils to slow weed growth.	_____	_____	_____
4. _____	_____	_____	_____

Phase 4

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select two or more individual options from pages 26 and 27 of this guide. Write them below.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Help young children at a daycare facility plant flower seeds or small plants to take home. _____ _____ _____
3. Plant a "birthday tree" to celebrate the birth of a baby you know, or plant one for your own birthday! _____ _____ _____
4. Work with a community organization on a community horticulture project. _____ _____ _____

Climate and Plants

Choose two or more options.

1. Get a soil survey or soil map of your area from the Natural Resources Conservation Service. What kind of soil do you live on? Invite someone from the Natural Resources Conservation Service or a Master Gardener to talk at your club meeting. _____ _____ _____
2. Collect different topsoils from around the county. Identify the soils and note the differences. (Note: Digging on private or public lands could be a problem. The following option is another possibility.) _____ _____ _____
3. Describe two different soil types. What horticultural crops could be grown commercially on each type? _____ _____ _____
4. Record when lilacs, forsythia, and yellow crocus bloom. _____ _____ _____

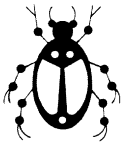
Propagation

	Plan to do	*Have done*	*Approved by*
Choose two or more options.			
1. Plant 10 irises, gladioli, or tulips. Keep a record of the planting date, first shoot emergence, and first bloom.	_____	_____	_____
2. Propagate a Christmas cactus.	_____	_____	_____
3. Watch someone do grafting and budding. What is the difference between the two methods of propagation?	_____	_____	_____
4. Arrange to help a nursery person transplant herbaceous cuttings.	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Plant five herbs in the ground, containers, or windowsill boxes, and learn about their use and qualities. _____ _____ _____
2. Choose a root crop and talk to your 4-H club about how to store the vegetable to preserve best nutritive value. _____ _____ _____
3. Take a soil sample. Put about 2 inches of soil in a jar and then add 2 inches of water. Shake the jar. Explain what happened. _____ _____ _____
4. Plant a raspberry bush and record how long it takes to produce raspberries. _____ _____ _____



Pests and Pest Management

Choose one or more options.

1. Identify five perennial weeds. _____ _____ _____
2. Look up "biological insect control" and see what is available in seed catalogs. List the different insects. _____ _____ _____
3. For 2 weeks, observe and record which insects are found on strawberries (or roses, or the lawn). _____ _____ _____
4. _____ _____ _____ _____

Phase 5

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select two or more individual options from pages 26 and 27 of this guide. Write them below.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Arrange a field trip to a nursery or greenhouse to observe the production of holiday crops (poinsettias, lilies, etc.). _____ _____ _____
3. Collect mistletoe or holly and sell it as a 4-H fundraising project. Explain what mistletoe is. _____ _____ _____
4. Offer to care for someone's yard or house plants while they are out of town. _____ _____ _____
5. _____ _____ _____ _____

Climate and Plants

Choose two or more options.

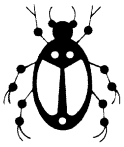
1. Visit local seed or garden stores and find out where they get their seeds. _____ _____ _____
2. Grow three herbs; cut, dry, and sieve into packages or jars, and use for gifts. Explain what the herbs can be used for. _____ _____ _____
3. Visit a greenhouse. Observe the type of material covering the house. Describe how the house is cooled and heated. _____ _____ _____
4. _____ _____ _____ _____

Propagation

	Plan to do	*Have done*	*Approved by*
Choose two or more options.			
1. Record how much time it takes from propagating a houseplant cutting to a finished transplant (start to finish). What plant did you propagate?	_____	_____	_____
2. Propagate an impatiens or coleus by stem cuttings.	_____	_____	_____
3. Grow a jade plant from a leaf/stem cutting.	_____	_____	_____
4. Grow a begonia from a leaf cutting. Record how long it took for the begonia to root. Record how long it took to produce shoots.	_____	_____	_____
5. _____	_____	_____	_____

Crops and Ornamentals

Choose one or more options.			
1. Compare the price of individually packaged seeds with bulk seed prices for beans, corn, and peas.	_____	_____	_____
2. Find out about different varieties of apples and how they are stored.	_____	_____	_____
3. Keep a record of what fruits and vegetables you eat for 1 week.	_____	_____	_____
4. Describe the advantages and disadvantages of a raised bed garden.	_____	_____	_____
5. Demonstrate how to select, cut, and prepare flowers for floral arrangements.	_____	_____	_____



Pests and Pest Management

Choose one or more options.			
1. Demonstrate the safe use of garden tools.	_____	_____	_____
2. List some ways to protect blueberries from insects and birds.	_____	_____	_____
3. Identify five biennial weeds.	_____	_____	_____
4. _____	_____	_____	_____

Phase 6

Individual Development

	Plan to do	*Have done*	*Approved by*
Choose number 1 and one or more other options.			
1. Select two or more individual options from pages 26 and 27 of this guide. Write them below.			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
2. Find out what horticulture therapy is. How do people benefit from working with plants?	_____	_____	_____
3. Learn about ikebana, the art of Japanese flower arranging. How does the phrase "less is more" apply to this ancient art form?	_____	_____	_____
4. Plan a poster contest for classes in your local elementary school to celebrate Arbor Day. Display the posters at school or in a community location.	_____	_____	_____
5. Learn about a native plant and make a report to your club.	_____	_____	_____

Climate and Plants

Choose two or more options			
1. Plant three different varieties of the same vegetable family (for example, tomatoes: Italian, pear, and cherry) and compare them for production and quality.	_____	_____	_____
2. Show 4-H club members how to prepare vegetables for exhibit.	_____	_____	_____
3. Try growing blackberries, strawberries, or another berry crop that is suitable for your region.	_____	_____	_____
4. _____	_____	_____	_____

Propagation

Choose two or more options.			
1. Do a softwood or a hardwood cutting. What is the best time to do each of these cuttings?	_____	_____	_____
2. Use plant stimulants or retardants on a tomato plant and see how these growth regulators affect plants.	_____	_____	_____

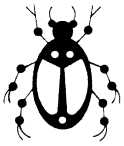
Continued on next page

Propagation continued	***Plan to do***	***Have done***	***Approved by***
3. Put together a basic flower-arranging kit. What did you include?	_____	_____	_____
4. Find out more about pruning or training plants. Choose a technique to try at home. Photograph or draw the changes.	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Plant three perennial bushes around the yard and care for them.	_____	_____	_____
2. Make a poster showing how to make a raised-bed garden. Describe what is needed.	_____	_____	_____
3. Use a computer to design a game related to gardening and/or garden planning.	_____	_____	_____
4. Plant pumpkins. Allow one vine to develop only one fruit and other vines, several fruits. Compare the results.	_____	_____	_____



Pests and Pest Management

Choose one or more options.

1. Look at advertisements for different types of insect and disease controls sold in the newspapers. Where are the best buys?	_____	_____	_____
2. Make a pesticide safety poster.	_____	_____	_____
3. Explain how diseases spread from plant to plant. Explain how people can prevent or help spread diseases.	_____	_____	_____
4. When purchasing tomato seeds or plants, explain why you would choose those that are VW-disease resistant.	_____	_____	_____
5. Explain why it is important to rotate vegetable crops in the home garden. Which crops should not be planted after other crops?	_____	_____	_____

Phase 7

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select three or more individual options from pages 26 and 27 of this guide. Write them below.

   _____ _____ _____ _____

   _____ _____ _____ _____

   _____ _____ _____ _____

2. Collect and donate canned food for a food drive. _____ _____ _____

3. Invite a person from another country to a 4-H club meeting. Ask your guest to tell about the food that they grow or how they obtain fresh fruits and vegetables. _____ _____ _____

4. Help your club or family purchase a Christmas tree and make decorations. Make arrangements to give the decorated tree to a needy family or elderly person. _____ _____ _____

5. _____ _____ _____ _____

Climate and Plants

Choose two or more options.

1. Visit a container-plant nursery operation. What ornamentals do they grow? How do they market their container plants? Where are they sold? _____ _____ _____

2. Plant bean seeds at weekly intervals in the spring. Describe how soil temperature affected seed germination. _____ _____ _____

3. Observe how plants set the mood in homes, offices, restaurants, and shopping centers. _____ _____ _____

4. What are the differences between fruit trees grown on standard, semi-dwarf, and dwarf rootstocks? _____ _____ _____

5. _____ _____ _____ _____

Propagation

Choose two or more options.

1. Plant cucumbers using different covers or mulches. _____ _____ _____

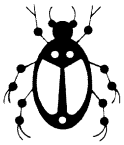
Continued on next page

Propagation continued	***Plan to do***	***Have done***	***Approved by***
2. What types of grasses are used in lawns in your area?	_____	_____	_____
3. Research the market and grow herbs for sale. Find recipes showing how to use the herbs.	_____	_____	_____
4. Dig and plant an asparagus or rhubarb bed for your family or a good friend. Take a series of pictures of the planning process for your record book.	_____	_____	_____
5. Dig and divide iris, peony, or lily plants.	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Talk with a Master Gardener or Extension agent about acid, saline, and alkaline soils. What amendments are used to correct soil problems?	_____	_____	_____
2. Identify three plants that like acid soils and three that prefer slightly acidic to neutral soils.	_____	_____	_____
3. Grow fall ornamental vegetables such as pumpkins, gourds, and Indian corn. Develop a sales plan for selling them for fall arrangements.	_____	_____	_____
4. Give a short demonstration at a club meeting about using motor-driven string trimmers for mowing and trimming jobs. Discuss proper maintenance, safety, and operation.	_____	_____	_____
5. _____	_____	_____	_____



Pests and Pest Management

Choose one or more options

1. Find five different biological controls at the local feed and seed store.	_____	_____	_____
2. Collect articles from the newspaper that relate to pest control. Present the articles at a club meeting.	_____	_____	_____
3. Explain the correct handling and storage of pesticides or fertilizer.	_____	_____	_____
4. Use Safer™ soap to control aphids on roses. Is it effective? Why or why not?	_____	_____	_____
5. _____	_____	_____	_____

Phase 8

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select three or more individual options from pages 26 and 27 of this guide. Write them below.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Make a spring flower arrangement for the living room or to give to someone. _____ _____ _____
3. The term "xeriscaping" means creating a beautiful landscape that is also functional, efficient, and water saving. Observe and make a list of landscapes in your area that appear to use this method of landscaping. _____ _____ _____
4. Investigate possible careers in the fertilizer industry: production, research and development, sales and service, etc. _____ _____ _____
5. Plant a "memory tree" in honor of someone you knew and respected. _____ _____ _____

Climate and Plants

Choose two or more options.

1. Identify drought-tolerant native plants that would be attractive yet functional in the home landscape. _____ _____ _____
2. Build a hot or cold frame and grow spring plants. Tell your club why a hot or cold frame might be useful. _____ _____ _____
3. Find out how plants can be "trained" to develop deep root systems. _____ _____ _____
4. Find out about the benefits of fertilizers as well as the environmental problems that can result from excess use. _____ _____ _____
5. _____ _____ _____ _____

Propagation

Choose two or more options.

1. Describe three kinds of apple rootstock. Chart the

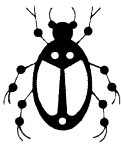
Continued on next page

Propagation continued	***Plan to do***	***Have done***	***Approved by***
differences between each rootstock. List characteristics of each.	_____	_____	_____
2. Using the plastic wrap method, take root cuttings of three household plants. You will need plastic wrap, sphagnum moss or peat, water, and string to tie the plastic.	_____	_____	_____
3. Make a drawing explaining how bulbs should be planted to create mass color and interest. Define the word "drift" in terms of planting bulbs.	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Make a list of ways you can reduce the use of water in a vegetable garden.	_____	_____	_____
2. Teach a horticulture lesson to younger 4-H members on proper irrigation and mulches for water conservation.	_____	_____	_____
3. Write a report discussing three methods for extending the growing season of vegetables (for example, hot cages, floating row covers, raised beds).	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____



Pests and Pest Management

Choose one or more options.

1. List four different biological controls that could be used in the garden greenhouse or home.	_____	_____	_____
2. List the different products that can be used in a garden that are available in your area. List their titles under the following categories: insecticides fungicides rodenticides molluscicides herbicides	_____	_____	_____
3. List some of the issues surrounding pesticide use in agriculture. What factors make this issue of protecting our food supply so complex?	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Phase 9

Individual Development

	Plan to do	*Have done*	*Approved by*

Choose number 1 and one or more other options.

1. Select three or more individual options from pages 26 and 27 of this guide. Write them below.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Help manage a booth at a farmers' market in the community. Identify marketing ideas that will help make your booth a success. _____ _____ _____
3. Arrange for Christmas poinsettias or Easter lilies for a church. _____ _____ _____
4. Volunteer to help a younger 4-H member with his or her horticulture project. _____ _____ _____
5. Plan and give a team demonstration on a horticulture topic in which you're interested. _____ _____ _____
6. _____ _____ _____ _____

Climate and Plants

Choose two or more options.

1. Learn how to force spring branches (forsythia, quince) for a showy bouquet. _____ _____ _____
2. Try forcing spring flowering bulbs for Valentine or Easter gifts. _____ _____ _____
3. What is the greenhouse effect and how does it affect the environment? _____ _____ _____
4. Explain some reasons why trickle irrigation is better than overhead sprinklers. How does wind affect water usage? _____ _____ _____
5. _____ _____ _____ _____

Propagation

Choose two or more options.

1. Help someone plant a container-grown landscape tree, bareroot tree, or shrub. _____ _____ _____

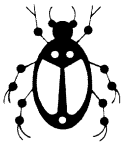
Continued on next page

Propagation continued	***Plan to do***	***Have done***	***Approved by***
2. Compare the prices of a bareroot, container-grown, and balled and burlapped tree of the same caliper (size).	_____	_____	_____
3. Describe what tissue culture is and how it is used to improve crop productivity.	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Crops and Ornamentals

Choose one or more options.

1. Using a number of seed catalogs, design an annual flower garden consisting of only red flowers. Consider height, flowering times, and cultural requirements.	_____	_____	_____
2. Learn the techniques of laying sod by talking with or working with a sod-laying professional.	_____	_____	_____
3. Describe the value of ground covers and name some ground covers recommended in your area.	_____	_____	_____
4. Collect and save seeds of annual flowers and grow them next year.	_____	_____	_____
5. _____	_____	_____	_____



Pests and Pest Management

Choose one or more options.

1. Find out what integrated pest management means. How was it developed? Who uses it? Give a report to your club or create a poster about this topic.	_____	_____	_____
2. Plant and conduct a demonstration showing safe use of garden pesticides.	_____	_____	_____
3. Define metamorphosis to your club.	_____	_____	_____
4. Learn to identify five beneficial insects in your garden and yard.	_____	_____	_____
5. Learn to identify three chewing, three sucking, and two boring types of insects.	_____	_____	_____

Individual Development Options

Options are listed in order from simple to more difficult as you gain experience and confidence. All these options can be repeated.

1. Lead the Pledge of Allegiance and 4-H pledge at a 4-H meeting.
2. Lead a song or recreational activity at a 4-H meeting.
3. Preside at a club meeting; suggest a roll-call with a horticulture theme.
4. Write a news story for a local newspaper.
5. Participate in a radio or television program.
6. Present a demonstration or illustrated talk to the club.
7. Present a demonstration or illustrated talk to a group other than the 4-H club.
8. Serve as a host for a 4-H meeting. See that everyone is welcomed and made comfortable.
9. Participate in a community service project.
10. Serve as chairperson of a club committee.
11. Participate in a judging contest.
12. Serve as a junior or teen leader.
13. Attend 4-H summer camp or serve as a camp counselor.
14. Develop and exhibit a horticulture display.
15. Attend 4-H Summer Conference at Oregon State University.
16. Make arrangements for a horticulture tour for the club.
17. Arrange for a video or slide presentation to be shown at the club meeting.
18. Contact a speaker to talk to the club about horticulture.
19. Get a friend to visit the 4-H club.
20. Participate in a leadership role in the county and state 4-H program.
21. Volunteer to serve on committees where there is a limited youth involvement.
22. Assist in evaluating 4-H programs and activities so they can be more meaningful for others.

Horticulture-Related Individual Development Options

1. Serve as a superintendent, assistant superintendent, clerk, or show secretary at a fair.
2. Help prepare and work with the club leader on a horticulture demonstration for the club.
3. Work with some younger members of the club to improve their gardening skills.
4. Teach a horticulture subject at a club meeting.
5. Participate in State Fair with a horticulture exhibit.
6. Participate in a flower arranging contest.
7. Prepare and present a presentation, demonstration, illustrated talk, or slide or video program on one of the following subjects:
   - Growing cacti and succulents
   - Proper pruning techniques, pruning tools, and types of pruning cuts
   - All about growing strawberries (blueberries, raspberries, etc.)
   - Gardening in the shade
   - How roses are grown commercially
   - Landscaping with wildflowers and native plants
   - How to grow healthy house plants
   - How to grow vegetable transplants
   - Career profiles: select a career in horticulture you are interested in and describe employment opportunities, training or schooling, earnings, and what the job is all about
   - Introduction to plant identification
   - Introduction to integrated pest management
   - How to design and plant your hanging baskets

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