



Food Preservation

PROJECT PLANNING GUIDE

OBJECTIVES OF THE 4-H FOOD PRESERVATION PROJECT

1. To learn how to prepare fruits and tomatoes for canning.
2. To learn how to operate a boiling water bath canner.
3. To learn how to prepare and process low-acid vegetables in a pressure canner.
4. To understand the basic scientific principles required for safe handling of foods to prevent spoilage before and after processing.
5. To learn how to can and freeze home and locally grown products.
6. To understand the importance and increase the use of fruits and vegetables in the diet.

EXTENSION RESOURCE MATERIALS

1. Canning Is Fun, 4H M-13-49
2. Canning II, 4H M-13-12
3. 4-H Frozen Foods Manual, 4H M-13-34

NOTE: This planning guide is based on information and activities described in the above three 4-H Food Preservation Manuals which are available from the County Extension Office. It is recommended that you begin your project work at the first level and continue in sequence.

LEVEL 1
(9- to 11-year-olds)

Things to Learn	Things to Do
	(Refer to Canning is Fun)
1. Why I am interested in the canning project	--List five reasons why completing a canning project would be helpful to you and/or your family. --List fruits and vegetables you would like to can.
2. Purpose of canning	--Tell a friend or family member the three types of organisms that cause food to spoil and how to prevent it (p. 2-3).
3. Terms used in canning	--Make certain you know the meaning of the following words: processing, precooking, headspace, hot pack, raw pack (p. 4-5).
4. Equipment needed for canning tomatoes	--Match the names of the equipment needed for canning with the correct picture (p. 6). --If you do not have a metal rack in your canner, make the one shown on p. 7. --Check all your canning jars to make sure they are not cracked, chipped or have sharp edges. Throw away any rusty rings you find.
5. How to prepare tomatoes for canning	--Remove skins from tomatoes by scalding. Cut out stem ends, remove cores and pack into jars (p. 8).
6. Principles of canning in a boiling water bath canner	--Be able to answer the following questions: a. What might happen if jars touch while in the boiling water bath canner? b. How can you tell if a jar is correctly sealed? c. Where and how should a jar be sealed?
7. How to use your canned products in family meals	--Look through a cookbook and record a recipe using tomatoes you would like to try on p. 11.
8. How to judge the quality of canned tomatoes	--Evaluate the quality of the tomatoes you canned using the evaluation form on p. 12.
9. How to plan and present a canning demonstration	--Give a demonstration or talk to your 4-H Club or group on some aspects of canning.
10. Other activities	--Match the names of equipment needed to make tomato juice with appropriate pictures (p. 14). --Prepare tomato juice and can in a boiling water bath canner (p. 14-15). --Copy your favorite recipe using tomato juice or find one in a cookbook you would like to try (p. 16).

Things to Learn	Things to Do
	--Can at least one type of fruit in the boiling water bath canner.
	--Can at least one kind of jam in the boiling water bath canner. Explain to a friend or family member the purposes of pectin, sugar and acid in making jam.
	--Enter the 4-H Pre-teen or Early-teen Canning Awards Program. Check with your 4-H leader or extension agent for information.

LEVEL 2
(12-to 14-year-olds)

Things to Learn	Things to Do
	(Refer to Canning II)
1. Principles of canning in a steam pressure canner	--Explain to a friend or family member the differences in canning in a boiling water bath canner and steam pressure canner. Explain the function of each part of the steam pressure canner and answer the eight questions on p. 2.
	--Prepare snap beans and can in a steam pressure canner following directions on p. 3.
	--Tell a friend or family member what special safety precautions should be followed when using a steam pressure canner.
	--Can other low-acid vegetables in a steam pressure canner (p. 4).
2. How to make jelly	--Prepare fruit for making jelly (p. 6).
	--Test your fruit juice to determine its pectin content (p. 5). This will tell you whether it is necessary to add commercial pectin.
	--Be able to answer the six questions on p. 7.
3. The savings (in dollars) of home canning and freezing	--Do a cost comparison study of home canned, commercially canned and commercially frozen vegetables (p. 7). Select four foods you canned and compare the cost of these (per quart) with an equal quantity of the same food commercially canned or frozen.
4. Other activities	--Give a demonstration to your 4-H Club on canning one or more low-acid vegetables in the steam pressure canner.
	--Assist your home economics extension agent in a workshop for testing pressure canners.

LEVEL 3
(15- to 19-year-olds)

Things to Learn	Things to Do
	(Refer to 4-H Frozen Foods Manual)
1. The steps involved in producing a frozen food of good quality	--Explain to a member of your family how the following five factors are responsible for loss of quality in frozen foods: enzymes, air, microorganisms, ice crystals and moisture evaporation. --Be able to answer the five questions on p. 5.
2. Equipment and materials needed for freezing	--Prepare a display of containers and materials that can be used in freezing food (p. 7-8). Prepare a list of "Tips for Freezing Food" that may be used as a handout or to accompany your display.
3. How to shop for frozen foods	--When shopping for many items, select frozen foods last to shorten the time food is out of the freezer. Ask the cashier to place frozen foods together in an insulated bag.
4. Storage life of frozen foods	--Read about the storage life of different types of food on p. 19. Explain to a family member or 4-H Club why factors which determine storage time cannot be completely controlled when freezing foods at home.
5. Other activities	--Visit a local grocery store and examine the frozen foods section. Look for evidence of thawed food. Are packages stacked in the cabinet below the line indicator on the inner side of the cabinet? Are packaging materials torn, crushed and/or juice stained? --Do a cost comparison study of home canned, commercially canned and commercially frozen vegetables. --Assist a younger 4-H'er in preparing a canning and/or freezing exhibit for 4-H Achievement Night.

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