



Foods of the PACIFIC NORTHWEST

Project 2

Leader Guide

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Foods of the Pacific Northwest

An Intermediate Level 4-H Food and Nutrition Project

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Introduction

As a volunteer leader for “Foods of the Pacific Northwest - Unit 2,” a 4-H Food and Nutrition project, you have an important role. You can help the middle school youth who enroll in the project learn more about the foods produced in the Pacific Northwest including the cultural influences, where the food is produced, and selected ways to prepare and store the food safely.

This guide will help you plan and conduct at least ten activity-filled meetings for the 4-Hers in your group. Each unit contains a list of foods needed, key points, and a suggested organizational plan for the meeting including a time schedule.

Foods of the Pacific Northwest - Unit 2 is the second project in this series. You may want to use Foods of the Pacific Northwest - Unit 1 as a reference.

4-H Philosophy

4-H is based on the philosophy of learning by doing. 4-H members learn life skills such as decision-making, responsibility, self-evaluation, and leadership. This project offers many opportunities for youth to learn important life skills.

Getting Help

You are responsible for providing educational experiences for youth enrolled in your project group. However, there are many other people who can assist. Parents of club members are generally expected to provide transportation, a meeting place, or help pay for ingredients used in recipes. Parents or friends may come to a meeting to demonstrate a specific skill.

Teen members may like to coach younger members while they are learning a new skill, assist them in preparing demonstrations, or suggest some fun activities.

There may be other resources in your community, such as restaurants, fast-food establishments, bakeries, catering services, meat shops, that would welcome you and your group. You could learn about food service careers, business practices, and food safety concerns from these tours.

Working with Middle School Boys and Girls

In general, youth ages 12 to 15 experience enormous and rapid physical change. Puberty begins sometime between ages 10 and 15. Even though your 4-Hers may be the same chronological age, they will probably look and act very different from one another.

Adolescents are very concerned about their weight and appearance. This project contains a supplemental unit on body image and weight control titled “Food, Exercise, and Heredity” that can be used at any time. Perhaps you will want to schedule a special meeting to cover the topic.

At this age, youth want and need relationships with adults. They need to feel accepted by some adults, perhaps because this is a period when they need to express their independence from their parents. You can be an adult friend. The time you spend with teens will be valued.

Adolescents sometimes want to be treated as adults. Socially and emotionally most adolescents still have a lot of growing up to do. A need for peer acceptance is strong. Acknowledging that every teen has something to contribute to the group will help them all learn a valuable lesson.

You can help by being supportive of any positive adult behavior you see. Make a special effort to share the leadership of and responsibility for the group with every member.

Girl/Boy Differences

In general, boys enter puberty later than girls. Boys who haven't started puberty are still shorter and smaller than their peers. This situation may make boys feel less than positive about their body images. Boys usually do not develop fine muscle coordination as soon as girls, so they may be more awkward in handling kitchen equipment. Some youth this age may function better in a same-sex group, especially when learning new skills. Boys may want to relate socially to girls but may feel intimidated. Some mixed-sex social contact is usually appropriate for this age.

You can help members have positive learning experiences. Many of the activities in this project will help 4-H members gain a sense of accomplishment and foster a positive self-image.

How This Leader Guide is Organized

The Member Manual is organized into ten units. The Leader Guide contains supporting materials for the units, plus a supplemental unit. Each unit provides a brief overview of that particular unit, followed by a detailed plan for organizing the meeting. Activities are suggested for your meetings, but you may use your own creative ideas. Add or substitute activities appropriate for your group. Plan the number of meetings that best meets the needs of group members.

The time required to do all activities in the units is between 1 1/2 and 2 hours. If you have less time available, you can either leave out some of the activities or have two meetings to cover the activities suggested in the unit.

Some units have several recipes. You can choose which of these recipes you would like to prepare or substitute similar recipes.

The skill level of your 4-H members will affect the amount of time needed for the food preparation section. If the 4-H'ers in your club are inexperienced cooks, you may need to allow a little more time for some of the food preparation steps.

Foods needed for each unit are divided into staple foods (which you are likely to have in your kitchen) and non-staple foods. Table 1 lists staple foods needed for each unit. Non-staple foods needed are listed in each unit. Equipment and materials needed for each unit are listed in Table 2.

Herbs, spices, and other seasonings make food interesting and flavorful. Herbs and spices are particularly useful to season low-salt foods. The seasonings used in the recipes in this project are:

dry mustard, Worcestershire sauce, thyme, basil, ginger (ground or fresh), and prepared mustard. An optional ingredient in several recipes is ground cumin. If you do not use the cumin, the dishes will be less flavorful.

How to Organize Your Meetings

Information on planning and organizing meetings—such as where to hold the meetings, how to prepare for each lesson, how to emphasize skills, and how to make sure you have all the equipment and supplies you need—is included in the Leader Guide for Unit 1. If you are a new volunteer leader or if you have some specific questions, contact your county Extension agent for a copy of the guide.

Because the makeup of each club is different and the skill levels of members vary, you must carefully plan and evaluate activities for club members. Evaluate activities to consider what went well and what you might change in the future.

Make evaluation a learning experience for the youth by including them in discussion with you, a teen leader, another member, or a parent. If your group is small, a discussion can involve the whole group. Refer to the sections "Check Your Product" and "Check What You Learned" for each unit in the Member Manual for ideas.

You may also want to evaluate the entire meeting. Consider the following questions:

- Were the key points of the meeting clear?
- Did I give each member a chance to participate?
- Did I recognize and/or encourage each member?
- Did I consider differences in abilities and interests of youth?
- Did I consider age-level differences?
- Did I involve the parents?
- Did I give members a chance to take responsibility when it was appropriate?
- And, most important of all, did I enjoy working with the young people?

We hope that your experience as a 4-H leader for the intermediate level Foods of the Pacific Northwest will be a good one for you and that you will want to lead a 4-H food/nutrition project again next year. A senior level Foods of the Pacific Northwest project is available should you wish to continue working on this particular area of foods.

Table 1

STAPLE FOODS USED FOR EACH LESSON

	1	2	3	4	5	6	7	8
all-purpose flour		x				x		x
baking powder						x		
baking soda						x		
brown sugar						x		
butter or margarine	x	x			x			
cornmeal								x
cornstarch	x			x			x	x
eggs	x					x		
garlic				x			x	
milk	x	x				x		
oil						x	x	x
onion			x					
pepper		x	x		x			x
salt	x	x	x			x		x
shortening						x		x
sugar	x					x		x
vanilla	x							

For Units 9 and 10 the staple foods will vary with the activities selected. Determine the activities you will use with your group.

Table 2

EQUIPMENT AND MATERIALS NEEDED FOR EACH LESSON

	1	2	3	4	5	6	7	8
baking dish, 9" × 13"				x	x			
bread loaf pan						x		
cake pan, 9" square				x				x
covered casserole dish			x					
cutting boards				x		x		
measuring spoons and cups	x	x	x					
meat hammer								x
mixing bowl	x			x	x	x	x	
mixing/stirring spoon	x	x				x		
pie pan								x
rolling pin								x
saucepan	x	x	x	x		x		x
sharp knives				x	x	x		
sieve	x						x	
skillet, large							x	x
wire whip	x							
newsprint	x	x						
colored pens	x							

For Units 9 and 10, the equipment and materials will vary with the activities selected.

UNIT 1

THE PACIFIC NORTHWEST: A FRUIT-LOVER'S PARADISE

FOODS TO BE PREPARED

Berry Sauce, Vanilla Pudding

TIME NEEDED

One hour, 35 minutes for basic lesson; 2 hours if food experiment is done. (Allow more time for beginning cooks.)

FOODS NEEDED(other than staples)

One package (10 oz.) frozen, sweetened raspberries or strawberries or 1 1/2 cups fresh berries. For optional food experiment: 1/2 cup fresh strawberries or 1/2 cup fresh, ripe peaches.

OVERVIEW

This unit introduces the idea that many types of foods are grown in the Pacific Northwest. Encourage group members to take more notice of locally grown foods when they are in the supermarket and as they travel in the region. The foods to be prepared in this Unit are low-fat and quite low in sugar, in accordance with the Dietary Guidelines.

KEY POINTS

Introduction

A wide variety of fruits is grown in the Pacific Northwest. The local climate determines which fruits are suitable for a locality. Locally grown fruits purchased in season are the highest quality available.

Food Preparation

Cornstarch-thickened sauces and puddings need to be stirred during cooking. To prevent eggs from curdling, stir some of hot pudding into the beaten egg. Puddings and sauces cooked in a microwave oven need less stirring.

Planning Meals

The Dietary Guidelines focus on modifications to the American diet which will reduce the risk of chronic diseases such as heart disease and cancer. Food Group Plans are designed to help people select foods which supply a wide variety of nutrients. Plan meals which follow the Dietary Guidelines, include foods from all food groups, and choose foods which provide a variety of textures and colors.

Throughout this project, recipes have been chosen to teach cooking principles and to promote eating in a healthy way. For each recipe included in the project manual, there are many other recipes which can be substituted which will teach the same Units. Encourage 4-H'ers to look for recipes which follow the Dietary Guidelines.

Safety and Storage

Bacteria, molds, and yeasts will grow rapidly in foods which are warm, moist, and low in acid. Puddings need to be refrigerated and used in a few days. Puddings left at room temperature spoil rapidly because the conditions are ideal for bacterial growth.

Be a Wise Consumer

Locally grown fruits usually taste better if they are picked when ripe.

Food Activity

Sugar causes water to be drawn out of fruits.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to the Unit (15 minutes)

This meeting will set the stage for the entire project. Introduce yourself and have the 4-H'ers

introduce themselves. Give an overview of the Foods of the Pacific Northwest Project. Then get the 4-H'ers involved and thinking about foods grown in the region.

Prepare two large sheets of paper or newsprint. Across the top of one sheet, write "Fruits grown in the Pacific Northwest." Across the top of the other sheet, write "Fruits which do not grow in the Pacific Northwest." Encourage the youth to think about all the fruits they eat. Let them decide which fruits are grown in this region and which come from other regions or countries.

Give each 4-H'er a colored pen or crayon. As the 4-H'ers are writing the names of fruits on the two sheets, ask them which of the fruits are grown in your area. If there are any local commercial fruit farms, you could mention the farm name and the fruits they sell. Talk about the superior quality of locally-grown fruits harvested in season.

Fruits Grown in the Pacific Northwest:

- Apples
- Apricots
- Cherries, sweet and tart
- Grapes
- Nectarines
- Peaches
- Pears
- Plums
- Prunes
- Blackberries
- Blueberries
- Cranberries
- Raspberries
- Strawberries
- Cantaloupe
- Watermelon

B. Optional Food Experiment (15 minutes)

Start the "Experiment on Water Changes in Fruit." You may want to set a timer as a reminder to look at liquid loss after 30 minutes and 1 hour.

C. Food Preparation (30 minutes)

Divide the group in half. Have one team make Berry Sauce while the other team prepares Vanilla Pudding. Put food in the refrigerator to cool. (A teen leader or a co-leader would be very useful to help teach members the food preparation skills.)

Optional: Check "Experiment on Water Changes in Fruit." (5 minutes) Observe changes, discuss why the changes occurred.

D. Fitting in Fitness (10 minutes)

Two keys to good health are diet and exercise. Encourage your 4-H'ers to develop an exercise program of sports, walking, swimming, or running. Include a short fitness activity in each meeting. Take a brisk 5-10 minute walk or do the exercises described in this Guide. Exercise illustrations are at the end of this Guide.

Chair Twist: (for flexibility) Sitting in a chair, cross your left leg over your right leg, put your right elbow on your left knee, twist and look over your left shoulder as far as you comfortably can. Hold 1 minute, then reverse directions and turn to look over your right shoulder. Hold 1 minute. The chair twist increases flexibility of the spine and torso.

E. Eat/Evaluate/Discuss (20 minutes)

Eat the berry sauce and pudding. Evaluate the foods by discussing the questions in "Check Your Product" in the Member Manual.

Discuss "Meal Planning and Food Safety." Highlight use of the Dietary Guidelines in meal planning. If you have extra time, ask 4-H'ers to plan several menus which include fruit sauce over pudding. Remind youth that puddings spoil rapidly and must be kept refrigerated. Try involving the youth in a discussion rather than lecturing them on these topics. Ask the questions in the "Check What You Learned" section of the Member Manual to see if the 4-H'ers understand the key points of the Unit.

F. Clean Up (10 minutes)

Be sure everyone participates in washing dishes and cleaning up the kitchen. Dishwashing may seem like a routine task, but it is important to prevent spread of disease from one person to another. Dishes washed by hand should be washed in hot, soapy water, rinsed in hot water, and allowed to air dry. If using a dishwasher, teach the 4-H members to load it correctly.

G. Closing and Planning Ahead (10 minutes)

Point out the "Ideas to Explore" section which the 4-H'ers may wish to do at home. These ideas may be developed into exhibits and demonstrations.

Encourage 4-H members to plan and prepare a meal for their family which includes a pudding. Have them report their experience next week.

Make plans for the next meeting. The 4-H'ers will learn more from this unit if they read the material in the Member Manual before the meeting. You may want to request that the 4-H members read Unit 2 so they will be prepared to discuss the information at the next meeting.

UNIT 2

FOOD UNDER OUR FEET: POTATOES & ONIONS

FOODS TO BE PREPARED

Potato Soup or Clam Chowder

TIME NEEDED

One hour, 35 minutes

FOODS NEEDED (other than staples)

One-half pound potatoes, 1 onion, 1 stalk celery.

Optional ingredients: 1 can clams, red wine or cider vinegar.

OVERVIEW:

This unit will help 4-H members learn about root crops grown in the region and ways to use potatoes and onions in meals.

KEY POINTS

Introduction

Potatoes and onions are widely grown in dry, inland areas of the Pacific Northwest.

Food Preparation

White sauce is made by adding flour to melted fat, then mixing in the liquid.

Planning Meals

Soup is versatile and preparation and serving can be adapted to fit the situation.

Correct storage conditions for potatoes and onions increase their shelf life.

Foods flavored with onion and garlic need less salt.

Low-fat dairy products can be substituted for higher fat dairy products.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'ers may arrive at the meeting tired after a long day at school. A short exercise session will help them unwind. Begin with a repeat of the Chair Twist from Unit 1 for flexibility. Then do an exercise for muscular endurance, the Overhead Press.

Overhead Press (for muscular strength): Sitting in a chair, hold a book, a can of food, or other weighted object in each hand. Starting with elbows bent and hands at shoulder level, extend your arms over head. Repeat ten times.

B. Introduction to Unit 2 (15 minutes)

Begin the discussion by asking the 4-H members about the information in the Member Manual on growing potatoes and onions. Ask questions such as the following:

“Where were potatoes first produced?”

“Who brought potatoes to North America?”

“Where are potatoes and onions grown in the Pacific Northwest?”

Ask the 4-H'ers which root crops they have seen growing in gardens or fields. List their answers on a newsprint sheet. Foods they might list include: potatoes, onions, radishes, carrots, turnips, parsnips, rutabagas, beets, and garlic.

C. Food Preparation (30-40 minutes)

Divide the group in half. A teen leader, another adult leader, or a parent could assist each group. One team can prepare the vegetables for the chowder; the other team can make the white sauce.

D. Eat/Evaluate/Discuss (20 minutes)

Eat the clam chowder. Evaluate it using the criteria in the Member Manual.

Demonstrate and discuss ways to chop vegetables safely. Ask whether the 4-H'ers prefer to chop with a knife, blender, or food processor. Encourage members to try a new method.

Talk about cutting down on the amount of salt in foods by using other seasonings such as onion, garlic, lemon, and herbs.

Discuss the value of potatoes as a low-calorie source of nutrients.

F. Clean Up (10 minutes)

As the youth are cleaning up, tell them that one of the reasons to clean food spills from countertops is that food spills attract insects.

G. Closing/Future Plans (10 minutes)

During the meeting in which Unit 3 is covered, use the extra time while a casserole is cooking for sharing ideas. 4-H members may make short demonstrations, either individually or as part of a team.

If you would like to use the time for sharing, ask the 4-H'ers to investigate one of the "Ideas to Share" or "Food Experiments" in Units 1, 2, or 3 and share what they find with the group. Write down the topic each person or team chooses. The youth may need a reminder that they are to prepare a short presentation for the next meeting.

There will be 25 minutes for sharing during Unit 3. Divide the time up among the presenters and set a time limit for each presentation.

UNIT 3

A TASTY COMBINATION: LENTILS AND PORK

FOOD TO BE PREPARED

Polish Lentils

TIME NEEDED

One hour, 35 minutes

FOODS NEEDED (other than staples)

One cup lentils, 2 cups tomatoes (canned or fresh), 1 green pepper, dry mustard, Worcestershire sauce, thyme. Optional ingredient: 1 pound Polish sausage or other cured link sausage. Note: Other seasonings can be substituted for dry mustard, Worcestershire sauce, and thyme.

OVERVIEW

When the 4-H members complete this unit, they will have learned to cook lentils and pork and to use them in meals.

KEY POINTS

Introduction

The Pacific Northwest produces almost all of the lentils and dry peas grown in the United States. Legumes such as lentils and beans contain more protein than other plants. Some pork is also produced in the region.

Food Preparation

Lentils and split peas do not need to be soaked before cooking. Lentils and other legumes are cooked before they are used in casseroles.

Meal Planning

Casseroles require little preparation time, but a long cooking time. Serve crunchy, colorful foods with a lentil casserole.

Meats are cured by adding a nitrite salt. The nitrite salt is responsible for the flavor and color of cured meats. Nitrites also help prevent growth of bacteria.

Cook fresh pork to 160°F. or until no pink areas remain in any part of the meat.

Nutrition and Health

Legumes are high-protein, low-fat foods.

Polish Lentils has a high nutrient density which means that it is low in calories, but supplies many nutrients.

Trim visible fat from pork and other meats.

IDEAS FOR ORGANIZING THE MEETING

A. Food Preparation (20 minutes)

Begin cooking the lentils. Chop the onion and green pepper. Slice the Polish sausage. Add additional ingredients to cooked lentils. Put casserole in oven to bake.

B. Introduction to Unit 3 (10 minutes)

Pin a map of the Pacific Northwest on the wall. A line drawn from Spokane, Washington, to Walla Walla, Washington, and from Walla Walla, Washington, to Grangeville, Idaho, then back to Spokane includes the area which grows almost all of the lentils and dry peas in the United States.

Discuss the key points of the Unit. Use the questions in the "Check What You Learned" section of the Member Manual as discussion starters. This is a much more effective teaching method than if you just read off the key points.

C. Fitting in Fitness (10 minutes)

Bent Leg (for flexibility): Sitting in a chair, with both hands under one knee, pull the knee as close to your chest as you comfortably can. Hold for one minute; switch legs. Now do both legs together.

Overhead Press (for muscular strength): Directions in Unit 2.

Ask group members what kind of physical activity they participate in regularly. Encourage them to develop a fitness plan. Leaders are role models for their 4-H groups. If you have a fitness plan, share what you do with the group. Perhaps the group would like to investigate the fitness classes and establishments in your community.

D. Presentations or Meal Preparation (25 minutes/choose one)

1) Use the rest of the time while the casserole is cooking for the youth to make brief presentations on the topics they chose last meeting. These presentations will help the 4-H'ers learn to organize their thoughts and make reports. Be sure to keep each individual or team presentation within the allotted time so that all have an opportunity to present their information.

2) Prepare accompanying items to serve with Polish Lentils. (See suggested menu in Member Manual.) Eat a simple meal together.

E. Eat/Evaluate (10 minutes)

Eat the Polish Lentils. Evaluate by the criteria in the Member Manual. Discuss what members would serve if they prepared Polish Lentils for their family.

F. Planning Ahead (10 minutes)

The youth are now one-third of the way finished with this unit. Ask them what they have enjoyed most so far and what they want to cover in the rest of the unit.

Ask for a volunteer(s) to plan a ten-minute exercise session for the next meeting. Possibilities include jumping rope, dance, yoga, stretching, and aerobic exercises.

G. Clean Up (10 minutes)

UNIT 4

SAY CHEESE, PLEASE

FOOD TO BE PREPARED

Cheese Enchiladas

TIME NEEDED

One hour, 30 minutes

FOODS NEEDED (other than staples)

One quart tomato juice, chili powder, 1/2 pound Monterey Jack or Cheddar cheese, 8 green onions, 1 can green chilies, 1 dozen 8" flour tortillas.
Optional ingredient: ground cumin.

OVERVIEW

In this Unit, 4-H'ers will learn about cheese production in the Pacific Northwest and about cooking with cheese, storage of cheese, and the nutritional value of cheese.

KEY POINTS

Introduction

About one-third of the milk produced in the Pacific Northwest is manufactured into cheese. Although there are many varieties of cheese, all are formed by action of an enzyme and acid on milk.

Food Preparation

A well-seasoned sauce is essential for good tasting enchiladas. Cheese should be cooked quickly at a low temperature to prevent development of a tough, stringy texture.

Meal Management

Balance spicy and mild foods in a meal.

Safety and Storage

Proper packaging of cheese helps retain moisture and retards mold growth. Hard cheese will keep for several weeks when refrigerated. Cottage cheese should be used within a few days after purchase.

Remove moldy portion of hard cheeses by cutting away half an inch of cheese below the mold.

Nutrition and Health

People who do not use dairy products usually have low intakes of calcium and riboflavin.

Be a Wise Consumer

Cheese labeling indicates how the cheese was made. Processed cheeses melt easily to blend with other ingredients.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to Unit 4 (10 minutes)

Have the members take turns reading the key points listed at the beginning of Unit 4. Ask them to be prepared to discuss what they have learned about these key points at the end of the meeting.

B. Food Preparation (30 minutes)

1. Divide into two teams. Team A will prepare the sauce, and Team B will prepare the filling and heat the tortillas.
2. When sauce, filling, and tortillas are ready, assemble enchiladas. Let each 4-H'er practice wrapping one or two. If the group is large, set up two areas for assembling enchiladas to speed up the process.
3. Put enchiladas in oven to bake for 20 minutes.

C. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. If the 4-H'er(s) forgot to prepare the "Fitting in Fitness" segment, repeat some of the exercises which were done in the first three Units.

D. Prepare to Eat Enchiladas (10 minutes)

Clean up the preparation dishes and countertops. Set the table. The 4-H'ers may need some help in setting the table correctly. Knives are placed to the right of the plate, cutting edge toward the plate. Spoons are placed next to the knives with bowls up. Forks are placed tines up, to the left of the plate. The napkins are placed to the left of the forks. The water glasses are placed at the tip of the dinner knives.

Each time the 4-H'ers sit down to eat a food they have prepared, have them set the table correctly until they can do so easily. Encourage them to experiment with different types of table settings and a variety of ways of serving meals.

E. Eat/Evaluate/Discuss (15 minutes)

Eat the Cheese Enchiladas. Evaluate by the criteria in the Member Manual. Encourage table conversation to help the youth increase their social skills.

F. Closing/Future Plans (5 minutes)

Encourage the youth to prepare a meal for their family which includes cheese enchiladas or some other cheese dish. Ask them to share information about their meal and the response of their family at the next meeting.

Ask a volunteer to plan a ten minute exercise session for the next meeting.

Have the 4-H'ers summarize the key points of the Unit by asking them the evaluation questions at the end of the unit in the Member Manual.

G. Clean Up (10 minutes)

UNIT 5

POULTRY: FOOD WITH WINGS

FOOD TO BE PREPARED

Herbed Chicken Bites

TIME NEEDED

One hour, 45 minutes (1 hour, 55 minutes if food experiment is done)

FOODS NEEDED (other than staples)

One chicken breast, 2 chicken thighs, 1/4 pound saltine crackers, 1/4 cup Parmesan cheese, thyme, basil. Optional food experiment: 2 chicken legs.

OVERVIEW

The 4-H'ers will learn to prepare and store poultry and to use food handling guidelines when cooking with poultry. In addition, the Unit will help group members understand that a nutritious diet, regular exercise, and adequate sleep are essential parts of a healthy lifestyle.

KEY POINTS

Introduction

Most poultry sold in the United States comes from the southern states. Chicken produced in the Pacific Northwest may cost more than chicken from southern states because it costs more to raise chickens in a cooler climate.

Food Preparation/Food Handling

Chicken breasts and thighs are the only pieces which are meaty enough to cut into bite-size pieces.

A sharp knife and a cutting board are used to debone poultry. All equipment used to cut up poultry should be washed, sanitized with a bleach solution (two teaspoons chlorine bleach to four cups of lukewarm water), and then rinsed. If you feel that the 4-H members in your group cannot successfully bone the chicken, use whole fryer wings, thighs, or drumsticks and roll in the seasoned crackers. Bake at 375° F until browned, about 45-55 minutes, turning once.

Poultry is cooked until well done - until the juices run clear when the flesh is pricked with a fork, or to 180° F on a meat thermometer.

Nutrition and Health

A nutritious diet, regular exercise, and adequate sleep are needed for a healthy lifestyle.

High fat dishes have a low nutrient density. To reduce fat in meals, use low fat meats which are roasted, broiled, or boiled.

Be a Wise Consumer

Whole chicken is frequently a better buy per pound of meat than chicken pieces. When using a recipe which uses only some parts of the chicken, an additional meal should be planned to make use of the remaining chicken pieces.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. If you prefer to lead the fitness segment, teach the youth to do leg hops, an activity to measure endurance.

Leg Hops: Stand with left leg back and right leg forward and slightly bent. Clasp hands behind the neck. Jump up and change leg positions (right leg back and left forward), keeping forward leg slightly bent. Continue jumping and changing leg positions for as long as possible, up to 60 seconds. Count the number of times the right leg comes forward.

- Excellent endurance - 60 hops
- Good endurance - 50 hops
- Fair endurance - 40 hops
- Poor endurance - 30 hops or less

Endurance is the body's ability to work for a long time. Activities that build endurance are swimming, running, cross-country skiing, bicycling, soccer, ice hockey, racquetball, and tennis.

B. Introduction to Unit 5 (10 minutes)

Very briefly, discuss climatic factors that make poultry production more costly in the Pacific Northwest than in southern states. Talk about each of the food handling guidelines listed under "Safety/Storage" and tell the 4-H'ers to be sure to follow these guidelines whenever they cook poultry or meats.

C. Food Experiment (optional, 5 minutes)

Prepare the chicken for the food experiment and put it in oven.

D. Food Preparation (30 minutes)

1. Show how to bone and cut chicken, then let each of the 4-H'ers practice. (You may want to borrow extra cutting boards and sharp knives.)
2. Crumb crackers with a rolling pin or a blender, add cheese and seasoning.
3. Melt butter or margarine.
4. Dip chicken in fat, roll in crumbs, put on baking dish.
5. Bake 20 minutes.

E. Clean Up Food Preparation Dishes and Countertops (10 minutes)

Review food handling guidelines for poultry and meats while the 4-H'ers are cleaning up.

F. Prepare to Eat (10 minutes)

Set the table. Discuss other foods which could be served with Herbed Chicken Bites.

G. Eat/Evaluate/Discuss (15 minutes)

Eat the Herbed Chicken Bites. Evaluate them by the criteria listed in the Member Manual.

Ask group members about measures they are taking to develop or maintain a healthy lifestyle. Are they choosing nutritious foods? Do they exercise regularly? Do they have regular sleep patterns?

If the food experiment has been part of this meeting, evaluate the results of the different cooking techniques.

H. Clean Up (10 minutes)

I. Closing and Planning Ahead (10 minutes)

Ask the 4-H'ers the evaluation questions at the end of the lesson in the Member Manual. If they can answer these questions, they have learned many of the important points of the lesson.

Instruct 4-H'ers to keep track of their exercise patterns for 3-5 days on the exercise record in their manual.

Ask for a volunteer to prepare a ten minute exercise session for the next meeting.

If possible, make plans for a field trip to investigate one or several of the topics listed under Ideas to Explore. If you go to the supermarket, you may want to look at all the foods you have studied in the first five units.

UNIT 6

WHEAT: THE WORLD'S MOST IMPORTANT GRAIN

FOODS TO BE PREPARED

Quick Wheat Bread, Cranberry-Walnut Bread, Tabbouli

TIME NEEDED

One and one-half to two hours

FOODS NEEDED (other than staples)

Quick Wheat Bread: whole wheat flour, yeast, honey.

Cranberry-Walnut Bread: orange juice, cranberries, walnuts.

Tabbouli: bulgur, tomatoes, green onions, parsley, fresh mint or dry mint flakes (optional), lemon juice, cumin (optional).

OVERVIEW

In this lesson the 4-H'ers will learn to use wheat in breads and as a main dish. They will also learn about regional production of wheat and the role of wheat foods in a healthy diet.

KEY POINTS

Introduction

Wheat is a staple food in many countries. The Pacific Northwest specializes in production of wheat which is used for steamed cakes, Asian noodles, and flat breads.

Preparation

Quick breads are lightly stirred so a minimum of gluten is formed. Yeast breads are kneaded until the dough is smooth and elastic to develop sufficient gluten for the bread to rise properly.

Wheat flour is essential for high-quality yeast breads. Yeast bread dough is doubled in size when the imprint remains from a finger pressed lightly into the dough.

Yeast breads are tested for doneness by tapping the top and listening for a hollow sound. Quick breads are tested for doneness by inserting a pick into the center of the loaf.

Bulgur is precooked, so it can be quickly prepared to eat. Tabbouli is a bulgur dish which is popular in Middle Eastern countries.

Safety and Storage

Whole wheat flour should be refrigerated if stored more than one month. White flour is stable at room temperature for a year.

Nutrition and Health

Breads made with whole wheat contain more fiber and more of some minerals and vitamins than breads made with white flour.

Sugar and fat are frequently high in desserts, but many recipes can be modified to reduce their sugar and fat content.

There are types of physical activity, such as walking, which are suitable for almost all people.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to Unit 6 (5 minutes)

Ask the 4-H'ers to list their ten favorite foods made with wheat. If only desserts are listed, remind the youth that breads are a major food for people around the world.

B. Food Preparation

Decide whether your group will make the yeast bread or quick bread. If the group will be making tabbouli (pronounced *ta boo' li*), mix the bulgur and boiling water about one hour before the meeting. Have the 4-H'ers compare unsoaked and soaked bulgur.

1. Prepare Bread (25-40 minutes)

After bread is mixed: If making yeast bread, allow to rise for 30-40 minutes. If making quick bread, put in oven to bake for 50-60 minutes.

2. Prepare Tabbouli (15 minutes)

Put in refrigerator to chill. (The Tabbouli should be prepared during the first 15-minute rising of the Honey Wheat Bread or during the baking period of quick bread.)

3. Clean Up Food Preparation Dishes and Countertops (5 minutes)

C. Bake Yeast Bread (20-30 minutes)

While the bread is baking, do "Fitting in Fitness" and discuss the "Exercise Record."

D. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment.

E. Discussion on Exercise and Energy (10-20 minutes)

Activity level, age, size, and rate of growth affect the amount of food energy (calories) needed by each of the members of your club. Energy needs will vary greatly because of differences in all of these factors. In this discussion, focus on the effect of activity on energy used. The information in the Supplemental Unit on Food, Exercise, and Heredity will be helpful to prepare for this discussion.

Key points to highlight:

- Every action takes energy.
- Energy in the body is measured in calories or kilocalories.
- The amount of energy required depends on the

number of muscles used for the activity whether large or small muscles are used and how fast, how hard, and how long the muscles are used

- The more muscles are used, the more energy is used.
- Large muscles require more energy than small muscles.
- The faster and more vigorously muscles are used, the more energy is used.
- The longer muscles are used, the more energy is used.
- Energy used in physical activity is replaced by energy from food.

Have the 4-H'ers look over their "Exercise Record." Ask them to think about the number and size of muscles used in several activities listed on their "Exercise Record." Encourage them to make a plan for building more activity into their daily schedule.

F. Eat/Evaluate/Closing (10 minutes)

Eat the foods you prepared. Evaluate them by the criteria listed in the Member Manual. Briefly summarize the major points of the lesson.

Ask for a volunteer to prepare a ten minute exercise session for the next meeting.

G. Clean Up (5 minutes)

You may want to use disposable plates and spoons for the foods so that clean-up time will be brief.

SUPPLEMENTAL INFORMATION FOR UNIT 6

Some supermarkets stock bulgur near the rice and dry beans, while others stock it with oatmeal and other cooked cereals. You may also find bulgur in bulk food bins. One brand name of bulgur sold in the Northwest is Ala. If you cannot buy bulgur in your area, you can make it.

Bulgur

- 1 cup whole wheat kernels
- 2 cups water

Clean wheat and place in large saucepan. Add water. Bring to a boil. Reduce heat, cover, and let boil for 30-60 minutes until wheat is tender.* Drain off water. Spread wheat on cookie sheet or dehydrator trays. Dry in 200 degree oven or dehydrator until wheat is dry. Crack the baked kernels in a food mill or grinder and store in refrigerator.

*Boiling time depends on the variety of wheat. Be sure to boil until wheat is tender.

If the 4-H'ers want to do a Middle Eastern meal, here's a recipe for a pocket bread filling:

Spiced Meat Filling

Makes 1 1/2 cups filling, enough for 10-12 pocket bread sandwiches.

- 1/2 pound ground beef, pork, or lamb
- 1 medium onion, chopped
- 1 clove garlic, minced
- 1/2 cup tomato sauce (1/2 of an 8-ounce can)
- 2 tablespoons parsley, snipped

- 2 tablespoons grated Parmesan cheese
- 1/4 teaspoon salt
- 1/4 teaspoon cinnamon
- 1/8 teaspoon pepper
- 1/8 teaspoon ground ginger

Cook ground meat, onion, and garlic in skillet until meat is brown and onion is tender. Drain off excess fat. Stir in tomato sauce and seasonings. Heat through. To serve, spoon filling into pocket bread. Sliced tomatoes and shredded lettuce may also be stuffed into the pocket.

UNIT 7

LOCALLY-PRODUCED VEGETABLES: GARDEN CROPS AND FARMERS' MARKETS

FOODS TO BE PREPARED

Vegetables & Beef Stir-Fry

TIME NEEDED

One hour, 30 minutes

FOODS NEEDED (other than staples)

One-half pound boneless round steak, soy sauce, ground ginger or fresh ginger root, 2 carrots, 2 small zucchini, 1/4 pound fresh mushrooms, green onions, fresh pea pods (optional)

OVERVIEW

The 4-H'ers will learn about production of vegetables and will be able to cook vegetables in a variety of ways. They will also have a basic understanding of the nutritional contributions of vegetables to the diet.

KEY POINTS

Introduction

Home gardeners grow their own food to save money and because they like the taste of home-grown food. The length of the growing season and the average temperature determine which crops are suitable for an area.

Food Preparation

Tender-crisp cooked vegetables are higher in nutrients and flavor than vegetables which are cooked until they are soft. Vegetables are tested with a fork to determine whether they are tender-crisp.

Meal Management

All plant material used to garnish foods should be edible.

Nutrition and Health

Nutrient-dense foods such as vegetables are low in calories and high in nutrients. Locally grown foods, eaten soon after harvest, are high in nutrients.

Safety and Storage

Guidelines for use of pesticides include:

1. Do not use unless there is a definite need for insect control.
2. Use only on crops affected by the insect or disease.
3. Select pesticides that are least hazardous to bees, other beneficial insects, and humans.
4. Do not apply more than needed.
5. Do not flush surplus pesticides down the drain.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. Some exercises they may like to use follow.

1. **Arm Circles** (firms upper arm and chest muscles): Stand with feet about 12 inches apart and arms outstretched. Rotate arms in circles, backwards first, then forwards.
2. **Bent Knee Curl-ups** (strengthens abdominal muscles): Lie on back with knees bent, feet on floor. Clasp hands behind neck. Raise left knee and cross it over right. Using your abdominal muscles, slowly lift up head and shoulders, keeping back flat on floor as you lift shoulders. Hold for ten seconds; then relax. Repeat two more times. Switch legs and repeat.
3. **Side Leg Raise** (strengthens muscles on front of thighs): Lying on back, raise knees to chest; extend legs until perpendicular to floor. Slowly lower legs to the sides in a V position; raise legs until together again.
4. **Knee Push-ups** (strengthens arms, shoulders and chest muscles): Lie on floor, face down; hands on floor under shoulders, palms down. Push upper body off floor until arms are fully extended and body is in straight line from head to knees. Lower until chest touches the floor.
5. **Run and Hop** (cardiovascular endurance: strengthens heart muscles, legs, and hips): Run in place or around the room, lifting feet four inches high (left plus right is one count). After each 50 counts, jump up and down ten times lifting feet four inches off floor. To receive

maximum benefit from this exercise, it should be done for at least 15 minutes. Encourage the youth to increase their cardiovascular endurance through a fitness program.

6. **Cool Down:** With knees bent and back straight, sit cross-legged on floor. Extend arms in front of you. Bend forward from hips until you feel stretch in hips, buttocks, and lower back. Hold for 30 seconds. Relax; repeat.

B. Introduction to Unit 7 (15 minutes)

American families now purchase so much of their food supply from grocery stores that it is difficult for urban youth to feel any connection with the production of food. Begin the discussion by asking what foods each of the 4-H'ers' families produce for their own use. Contrast the current situation with that of 100 years ago when families purchased very little food. The "Food Supply: Then and Now" activity will help the 4-H'ers understand the idea that their own ancestors used to produce much more of their own food supply than most families now produce. Ask the youth to take the sheet home and discuss it with their parents as they fill it out. You could have each club member bring the sheet back next week so the group can compare answers. Perhaps one of the 4-H'ers would like to compile the information for a display on "Food Supply: Then and Now."

C. Food Preparation (40 minutes)

1. Cut beef into strips, put into marinade for 30 minutes.
2. Prepare vegetables for stir-fry.
3. Wash preparation dishes.
4. Stir-fry beef and vegetables.

D. Eat/Evaluate/Discuss (15 minutes)

Eat the foods prepared. Evaluate by the criteria listed in the Member Manual.

Review the key points of the lesson, including cooking vegetables until tender-crisp, garnishes, nutritional value of vegetables, use of locally-grown foods, and safe use of pesticides. The questions which end the Unit in the Member Manual can be used to help the youth summarize some of the key points.

Later in this unit, the youth will plan and prepare a meal. You may want to talk about different ways of serving foods in preparation for the meal. Three styles of service they could choose from are:

Family Service - All foods are ready when the diners are served. The food is placed in serving

dishes and placed on the table with serving spoons. The persons nearest each food serve themselves, then pass the food to the person on their right. The food is passed around the table and returned to its original place.

Plate Service - Food is placed on the plates in the kitchen and the filled plates are served to the guests. If many plates are to be filled, there is a problem of keeping the food the right temperature while serving. If the 4-H'ers choose this method, they will need one server for every 4-5 guests.

Buffet Service - Food is arranged on a table so that guests can walk by and serve themselves.

E. Clean Up (10 minutes)

F. Closing and Planning Ahead

Ask for a volunteer to plan a ten minute exercise session for next meeting. Ask who can bring some hunted or gathered foods to the next meeting such as wild game, fish, or berries.

UNIT 8

LIVING OFF THE LAND: HUNTED AND GATHERED FOODS

FOODS TO BE PREPARED

Braised Game Steaks, Pan-Fried Fish or Microwave Cooked Whole Fish, Fresh Huckleberry Pie

TIME NEEDED

One hour, 45 minutes

FOODS NEEDED (other than staples)

Braised Game Steaks: 1 pound wild game or beef round steaks

Pan-Fried Fish: 2 pounds small fish

Microwave-Cooked Whole Fish: 2 pounds small fish

Fresh Huckleberry Pie: 4 cups huckleberries or blueberries

OVERVIEW

The 4-H members will learn about use of wild, edible foods in the past and present time.

KEY POINTS

Introduction

The Pacific Northwest had a bountiful food supply before agriculture was introduced to the area.

Food Preparation

Tough meat can be tenderized by mechanical means (meat hammer), chemical means (powdered meat tenderizer), and braising (cooking by browning in fat, then simmering in a small quantity of liquid in a covered container).

Fish cooks quickly and is easily overcooked.

Fresh Huckleberry Pie uses cornstarch to thicken the filling.

Meal Management

When planning meals, decide the amount of time needed to prepare each dish and the time to begin preparation of each dish.

Safety and Storage

Hunted and gathered foods need to be carefully handled in the field to prevent spoilage.

Be sure wild plants are edible before eating them.

Nutrition and Health

Outdoor activities such as hunting, fishing, and gathering foods can reduce stress and develop physical fitness.

Be a Wise Consumer

Preservation of adequate numbers of breeding stock and habitat preservation or restoration are essential for wild plants and animals.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to plan the exercises should lead this session. Some of the exercises from Unit7 can be used if needed.

B. Introduction to Unit8 (15 minutes)

Ask the 4-H members what wild, edible foods they have eaten. Then ask if they have ever hunted game, gone fishing, or picked wild plants. Tell them that many thousands of people lived in the Pacific Northwest before any agriculture occurred here.

Activity: Pin a map of the Pacific Northwest states on the wall. Look at the rivers in the three states. Discuss very briefly the life cycle of salmon and steelhead which live as young fish in small inland streams, then enter the rivers and travel to the ocean where they live for several years until they return via the rivers to their birthplaces to reproduce by spawning. Until recent times, the rivers contained enormous numbers of salmon and steelhead during spawning season. Construction of dams on the rivers and overfishing have greatly reduced the fish runs.

Trace the path salmon and steelhead would have followed to come to your locality on the map. Do salmon and steelhead still come to the area, or is their route blocked by dams?

C. Food Preparation (50 minutes)

Decide which foods to prepare based on what "wild" foods are available to you. If you have none, substitute some purchased foods. There is not enough time to prepare a pie shell, make the pie, and cook meat and fish in one meeting. If you want to teach the 4-H'ers to make a pie shell, you should plan an additional meeting for making the pie. If you follow the food preparation schedule for this lesson, use a frozen, prepared pie shell or one you or a 4-H volunteer has made prior to the meeting. If you happen to have huckleberries, game, and fish, here is a time schedule for preparing all three recipes:

1. Prepare pie; put filling into cooled pie shell; put pie into refrigerator to chill. (15 minutes)
2. Prepare game steaks; brown, then simmer them for 20-30 minutes. (20 minutes to prepare)
3. Fix pan-fried fish. Fry the fish while the meat is braising. (15 minutes)

D. Eat /Evaluate/ Discuss (15 minutes)

Eat the foods you prepared. Evaluate them by the criteria listed in the Member Manual. Focus the discussion on the aspects of the Unit that will be of most interest to your club members.

If some members hunt and gather wild foods, you may want to discuss care of wild foods in the field to preserve quality and prevent spoilage. If any of the youth have parents who hunt or gather foods, invite them to talk to the group about care of wild game, fish, or plants. Get Cooperative Extension bulletins on care of fish and game to show to the 4-H'ers. If none of the youth use hunted and gathered foods at home, the discussion could focus on the value of outdoor recreation and ways to preserve recreation land.

E. Clean Up (10 minutes)

F. Closing/Planning Ahead (5 minutes)

The closing activity of this unit is to prepare a meal. You will need a planning meeting to decide the menu and to make other plans for the meal. Ask 4-H members to read Unit9 before the planning meeting.

UNIT 9

PUT IT ALL TOGETHER

FOODS TO BE PREPARED

Planned by group.

TIME NEEDED

Planning session - 1 1/2 to 2 hours; Preparing and serving meal - about 3 hours (depends on meal chosen).

OVERVIEW

The 4-H club members will work as a team to plan and prepare a meal of Pacific Northwest foods.

The closing activity is an opportunity for your club to share what they have learned with others. Help the group plan this sharing time by carefully guiding them through the planning process.

Step 1 - Decide the type of event which would work well to show what has been learned. A meal is an excellent way to demonstrate the food preparation skills they have learned. Encourage the youth to also prepare some displays, posters, or demonstrations to share information about topics other than food preparation.

Ask the 4-H'ers about the "big ideas" from each lesson. Which of these ideas do they want to share?

Step 2 - Decide who to invite to this sharing time. Parents and friends will probably be suggested. Ask the youth if they would also like to invite some people who work in food-related jobs. What about other persons in your community who would be interested in what the 4-H'ers have to share? County Extension agents, senior citizens, home economics teachers, and food editors of newspapers might be persons the 4-H'ers would enjoy getting to know while they share what they have learned in the unit.

The meal could be a fundraiser for the group if they serve a catered meal.

Step 3 - Decide where the event will be held.

Step 4 - Decide when the event will be held.

Step 5 - Decide how to pay the costs of the event.

Step 6 - Develop detailed plans. Planning a group meal will help the youth put together many of the meal management principles they have learned. You may want to have available some cookbooks or other reference materials which cover meal planning basics. Your county Extension office may also have some bulletins which will be helpful in planning a meal.

As the 4-H'ers are planning the meal, they will need to think about the resources they have for the meal as well as thinking about how the foods go together. Questions they should consider are:

1. Do the tastes of the foods blend well together? Usually meals have several mild-flavored foods and a more highly seasoned food. A meal of all bland foods is unappealing. A meal with several different strong flavors is an overload of the taste buds.
2. Do the colors, shapes, and textures of the foods blend well together? Intensely colored foods need white and brown for contrast. Be cautious about serving several different red foods at the same meal because the colors may clash and look unattractive together. Liven up white foods with garnishes or colorful foods on the plate. Remember to consider the color of the plate.

A variety of shapes is more appealing than a meal with all shapes similar. To assure appealing texture variations in meals, check the foods for contrasts of soft and firm, pliable and crisp, smooth and rough, thin and thick, moist and dry. A contrast of hot and cold foods adds variety and interest to a meal.

3. Is the meal nutritionally balanced? Does it include a variety of foods, including fruits, vegetables, bread or cereal, meat or meat alternative, and a dairy product? Are the recipes relatively low in fat, sodium, and sugar? If a high-fat or sweet food is included, serve small portions of it.
4. Is the skill level of the cooks compatible with the foods selected to be cooked?
5. Can the foods be prepared in the time allotted? (Allow a little extra time for unexpected happenings.)
6. Can the foods be purchased within the planned budget? How will the group raise money to pay for the foods?
7. Can these foods be prepared, cooked, and served in the space available?

Guide the 4-H'ers as they plan their meal. Be sure the final meal plan is theirs, reflecting what they want to share with their guests. However, you also

want to be sure that their plan is feasible. If you think that the meal plan needs some changes, make gentle suggestions.

Step 7 - Decide how to carry out the plans. Tasks to be done before the meal include: making a grocery list, buying groceries, making up a time schedule for preparing the meal, and preparing and mailing invitations.

If the group plans to have some exhibits, posters, or demonstrations, decide who is responsible for these.

Make a detailed time schedule for preparing and serving the meal. If exhibits, posters, and demonstrations will be presented, plan time and space for them.

Close the planning meeting by reviewing the plans with the group. Check to be sure that all your bases are covered. A task chart may be helpful in planning who will do each task. A sample task chart is included. You may want to have some team captains (teen leaders and/or parents) to supervise or coordinate some parts of the meal.

TASKS (in order)	PEOPLE					PERSON(S) RESPONSIBLE
	Susan	Tom	Ken	Barb		
Buy Groceries	O	*	✓	*		Tom & Barb
Schedule the Building, Set Up	✓	✓	O	*		Barb
Invitations—Buy and Mail	*	✓	O	✓		Susan
Prepare the Main Dish	*	✓	*	✓		Susan & Ken
Prepare Salad	*	*	*	✓		Tom
Prepare Other Dishes	*	O	✓	*		Barb
Serve	✓	O	O	O		Tom & Ken
Clean Up	✓	✓	*	✓		All
Press Release	*	✓	O	O		Susan

* Like to do / do well

O Over my dead body

✓ Neutral about the task

People with asterisks do the task.

No one should have more than three tasks.

Everyone should participate in the meal preparations and cleanup.

UNIT 10

WORKING WITH FOOD: CAREERS AND HOBBIES

TIME NEEDED

One to one and one-half hours

OVERVIEW

This unit is designed to have the 4-H'ers evaluate their meal, learn about careers which involve working with food, and plan for the next year.

KEY POINTS

Evaluation is an important part of the learning process. Food-related careers are varied. The occupations described are dietitian, food processor, food buyer, food sanitarian, and chef. Meal preparation at home involves some of the tasks these persons do in their work.

IDEAS FOR ORGANIZING THE MEETING

A. Evaluate the Meal. (15 minutes)

Ask group members to evaluate the meal from Lesson 9 and their experience in sharing other information by exhibits, posters, and demonstrations.

Ask questions such as the evaluation questions in the Member Manual. What parts of the event were particularly pleasing to them? What changes would they make if they were to hold the same event again?

B. Discuss Food-Related Careers. (30-45 minutes)

Ask how many of the youth have a parent whose job involves working with food. Then ask about friends and other relatives who have food-related jobs. On a newsprint pad, write down all food-related careers that the youth list. The 4-H'ers will probably find that they know many people whose job involves food in some way.

Five occupations are highlighted in the Member Manual. Point out that some of the tasks these people do are also done at home. Look in the classified advertisement section of the newspapers to see what kinds of food-related jobs are available in your area.

C. Make Future Plans. (15 minutes)

Talk with the group about other 4-H projects that are available. You may want to get some project manuals from the County Extension office so the youth can see there are many other opportunities for learning and fun in 4-H.

SUPPLEMENTAL UNIT: FOOD, EXERCISE, AND HEREDITY

This unit is optional and may be included at any time during the project year. The member manual does not contain any material for this unit.

TIME NEEDED

40-60 minutes

OVERVIEW

This unit is designed to help the youth learn about the importance of food, exercise, and heredity in determining body size and shape.

Before leading this discussion, be sure to read the Supplemental Information on Food, Exercise, and Heredity.

KEY POINTS

Body type is determined by heredity. Body shape is determined by inherited body build, amount of energy consumed in food, and amount of energy used in physical activity.

IDEAS FOR ORGANIZING THE MEETING

A. Collect discarded popular magazines, scissors, and tape or glue.

Hand out the magazines and ask the youth to make collages of "Attractive Women" and "Attractive Men." Display the collages in front of the room while you discuss these questions:

1. Are most women satisfied with their bodies? What about men? Why or why not?
2. Where do we get our ideas about what an appealing body looks like?
3. Is the way we feel about our own bodies influenced by what the opposite sex finds appealing and attractive?

4. Are there parts of our bodies we can change?
5. What about the parts we can't change? Do parts of our bodies affect our humor, our intelligence, our friendliness, or our ability to love and be loved?
6. Are there things about our lives that are affected by our bodies? Give some examples.

Adapted from: Life Planning Education, The Center for Population Options, Washington, D.C., March 1985.

Points to emphasize during discussion:

Many people are unhappy with the way they look. Often things that some people feel are extremely noticeable flaws aren't even seen by others.

When a lot of people think a certain figure is good-looking, this type becomes the ideal figure.

Forty years ago in the United States, the ideal female figure was a rounded, full-busted figure. Ten years ago, a very thin figure was considered ideal. With an increased interest in physical fitness, a larger, more muscular body type is becoming the ideal female figure.

The ideal figure type for American males has not changed as dramatically; however, the recent swing is toward an increase in muscle development in the ideal male figure.

We inherit our body builds and cannot change them.

Some people have long, lean bodies with a light skeletal structure and small muscles. They can often eat large amounts of foods without gaining weight. The term used to describe these people is ectomorphic.

Mesomorphic people have large, heavy frames and heavy muscle development. Since mesomorphs have a large amount of bone and muscle, they may weigh more than their "ideal weight" without being overfat.

People who have round, soft body contours are called endomorphs. Endomorphic people may have trouble maintaining their ideal weight because their bodies easily store fat.

We cannot change our basic body build, but we can make the most of the body type we inherit by eating right and developing a lifestyle that keeps us fit.

Persons whose body types are quite different from the ideal figure may not like the way they look. For example, persons with round, full figures may starve themselves to develop a lean figure.

Teens cannot change their body type, but they can learn to accept the type of body they have. Exercise and wise food choices help teens develop their own bodies to the optimum for the genetic potential.

Body shape is determined by inherited body build, amount of energy consumed in food, and amount of energy used in physical activity. Getting taller and gaining weight are a normal part of the teenage growth cycle.

Regardless of body build and weight, the best way to feel good about yourself is to:

1. Be physically fit.
2. Eat nutritious foods, avoid fad diets, and don't skip meals.
3. Get enough rest.

Pass out handouts on "My Self-Image" and "My Body Shape" to each 4-H member. Ask them to take them home and spend a few minutes completing the handouts. (Some teens are very sensitive about their body size, so it is best to have the members of your group complete the handouts at home rather than in the group.)

SUPPLEMENTAL INFORMATION ON FOOD, EXERCISE, HEREDITY

No health problem related to nutrition is of more interest or importance to teenagers than weight control. Youth want to be slender. Boys want a trim body with good muscle development and no extra fat. The feminine ideal has been the slim model — slim almost to the point of being skinny. Few young people really consider whether this body image is possible or even desirable for themselves.

Do-it-yourself dieting is a very prevalent practice among teenagers. In fact, one study showed that by the time adolescence is reached, a large percentage of teenagers have been, are, or intend to be on weight reduction diets. Yet few of these youths have taken the time to find out:

- If weight reduction is really necessary or desirable.
- How much weight should be lost.
- How fast weight loss should occur.
- Whether the necessary nutrients are eaten during weight reduction.
- How weight can be maintained at a lower level once that level is reached.

We usually think of diets as attempts to lose weight because far more people are overweight than underweight. Those who are painfully thin have an equally frustrating problem trying to obtain and maintain desirable weight. Small appetites coupled with an honest dislike for high calorie foods makes gaining weight a loathsome task which may be more difficult to accomplish than losing weight. Some teenagers become so obsessed with being thin that they starve themselves (anorexia) or binge and purge (bulimia).

THE OVERWEIGHT YOUTH

Many teenagers in American society are overweight. For some, the best advice is eat moderately, relax, and wait. Many adolescents go through a phase just before puberty when weight gain precedes growth in height. Formerly slender or average weight children now look definitely chubby. Fearing a lifetime of being "fat," they often begin a cycle of reduction diets. Such concern may not be warranted because this so-called transient obesity often disappears by mid-adolescence when linear growth is very rapid.

Other adolescents are not so lucky. For them, weight control will be a life-long problem. The chubby baby very often becomes a fat child, an overweight adolescent, and an obese adult. So to prevent going through life as a fat person, adolescence is the time to do something about it. During the teenage years, there's a good chance to achieve weight reduction and control because rapid growth and high energy requirements allow a reasonably high caloric intake even when on a restrictive diet.

Because nutritional needs are so high during adolescence, it is extremely important that obese teenagers practice intelligent food habits while they restrict energy intake. It's just common sense to know and practice good nutrition when considering something as vital as permanent control of body weight.

There is no lack of information about dieting. Unfortunately, many popular diet recommendations are not based on fact. A diet does not have to be wise to be popular, it just has to have publicity.

Teenagers' magazines often tell how some popular entertainer, athlete, or model keeps "fit not fat." Unfortunately, many of these articles ignore good nutrition while concentrating on weight loss. Much of the advertising for weight control products ignores the basic fact that weight control is a balance between energy taken in, in the form of food calories, and energy expended as exercise.

LEARN ABOUT CALORIES

Calories do count. The term "calorie" refers to the heat-producing potential of food. If burned, the food would give off a certain amount of heat, measured in units called calories.

Food energy is necessary for the body to function. If too much energy is taken in, the body thriftily stores the excess as body fat. It is true that some people require many more calories than others just to maintain body weight. Each person must find the level of intake that is right for himself/herself.

The National Research Council makes recommendations for teenagers and other age groups. These are average figures and may be too generous for some and not liberal enough for others. However, they are a good starting place to find out how many calories the body needs per day.

The following are the Recommended Daily Dietary Allowances for calories by the National Research Council. Individual needs vary. These are listed simply to give you an idea of calorie needs.

<i>Boys:</i>	Age 11 to 14	2700 calories/day
	Age 15 to 18	2800 calories/day
<i>Girls:</i>	Age 11 to 14	2200 calories/day
	Age 15 to 18	2100 calories/day

Knowledge about the caloric content of food enables teens to choose food wisely. Weight for weight, foods that have a high fat content have over twice the calorie content of foods that are predominantly carbohydrate or protein.

- Foods with a high water content have fewer calories than drier foods.
- Starchy foods (bread, spaghetti, etc.) do not cause a person to deposit more body fat than other foods with the same calorie level. The extra calories added by sauces, fat, and sugar give them their bad reputation.
- Cooking methods which do not add fat or which allow the fat to drain off significantly lower the calorie content of many foods.
- Skim and 1% milks are a good source of

nutrients but have significantly less calories than whole milk. Because milk furnishes most of the calcium in the American diet, teenage dieters should not cut calories by skimping on their milk intake.

LEARN ABOUT EXERCISE

Although Americans are busy, most do little vigorous exercise as a part of normal living. Teenagers drive or are driven from one activity to another. Automation has taken over many chores and youth must go out of their way to make sure physical activity is a part of daily living.

Regular exercise coupled with sensible food habits is the best way to control weight. The exercise need not be vigorous or tiring. Small changes in exercise patterns are important. Just walking up stairs instead of taking the elevator or walking to school rather than riding can, if continued regularly, make a difference in body weight.

Youths who have a weight problem and don't really enjoy physical exercise may have to choose between always being a little hungry or learning to enjoy and participate regularly in active physical exercise.

LEARN THE ROLE OF HEREDITY

A person's basic body build can be blamed on his or her ancestors. Body builds are divided into three basic types.

Ectomorphic

Individuals with a long, lean body build characterize this type. The skeletal structure is light and the degree of muscle development is small. Ectomorphs are seldom overweight but they may be overly lean. They can often eat seemingly unlimited amounts of food without gaining weight.

Mesomorphic

These are individuals with large, heavy frames and heavy muscle development. The "ideal" football player with broad muscular shoulders could be classified as having this type of body build. The scales may read high for mesomorphs because bone and muscle are heavy; however, they usually cannot be classed as overfat.

Endomorphic

Persons whose body contours are round and soft, well covered with fatpads, are of this type.

Endomorphs have trouble maintaining reasonable weight and because they easily store fat, they may quickly become obese.

Individuals may have different degrees of each of the body types, though combinations of mesomorph and endomorph are the most common. A sensible and happy person learns to accept the type of body build she or he has. Although a person can alter the amount of fat on his body, little can be done to change the amount of bone or muscle.

The correct weight for any one person must be judged in relation to body build. It is foolish to think that a girl with broad shoulders and heavy hip bones can ever weigh the same as her thin, light-boned friend. The goal for any weight control program is a reasonable weight for the particular person's height and body build.

SEEK PROFESSIONAL HELP

Teens who are more than a few pounds overweight should be encouraged to work with a physician or a dietitian if they want to lose weight. Teens who seem overly obsessed with keeping themselves thin may need professional help to prevent or treat eating disorders such as anorexia or bulimia.

MAKE A PLAN AND FOLLOW IT ALL THE WAY TO YOUR GOAL

Crash diets seem an easy, quick solution to losing weight. Unfortunately, they usually fail and then the dieter searches for a new magic diet that will quickly result in weight loss. It is much better to determine whether weight reduction is needed. Then, if it is, make a plan and follow it for slow, steady reduction that will last.

Most overweight adolescents gained their extra weight over a period of several years. It isn't unreasonable to spend a few months or even a year correcting the food habits and/or activity pattern that caused the problem in the first place. It is a long, slow process.

Many people can help the teenager who wants to achieve weight gain or loss. Physicians, nutritionists, parents, teachers, and 4-H leaders can each provide insight into whether weight gain or loss should be attempted and can make suggestions for healthy weight control. Friends can provide the motivation and encouragement. As a 4-H leader, you may be able to help some 4-H'ers achieve a realistic image of their ideal body weight and then help them work toward this ideal body weight.

Adapted from "It's Your Move - 4-H Teen Nutrition Education Program," by Susan Travis, Division of Nutritional Sciences, Cornell Cooperative Extension, Cornell University.

My Body Shape

AGE: _____ SEX: _____ WEIGHT: _____ HEIGHT: _____ <input type="checkbox"/> Short <input type="checkbox"/> Medium <input type="checkbox"/> Tall	BODY BUILD: <input type="checkbox"/> Endomorph [round & soft] <input type="checkbox"/> Mesomorph [muscular] <input type="checkbox"/> Ectomorph [slender] <input type="checkbox"/> Combination of _____ and _____	BODY CONDITION: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Poor
--	---	--




Do you wish you were ☐ lighter? ☐ heavier? ☐ the same?
 How do you feel about the way you look?

In five years how do you want to look?

Are you trying to change the way you look? ☐ Yes ☐ No
 If yes, how?

What is your favorite way to exercise? How often do you do it?


Do you have enough coordination and strength to do and enjoy things? ☐ Yes ☐ No
 I would like to take better care of my body by:

 <p><i>Endomorphic</i>—the abdomen tends to be larger than the chest, and all parts of the body are soft and round; the hands and feet are comparatively small.</p>	 <p><i>Mesomorphic</i>—the chest is muscular and much larger than the abdomen; body muscles are well-developed and joints are prominent.</p>	 <p><i>Ectomorphic</i>—the whole body is long and lean; muscles are strong and bones are delicate. Hardly any ectomorphic people become obese, no matter how much they eat.</p>
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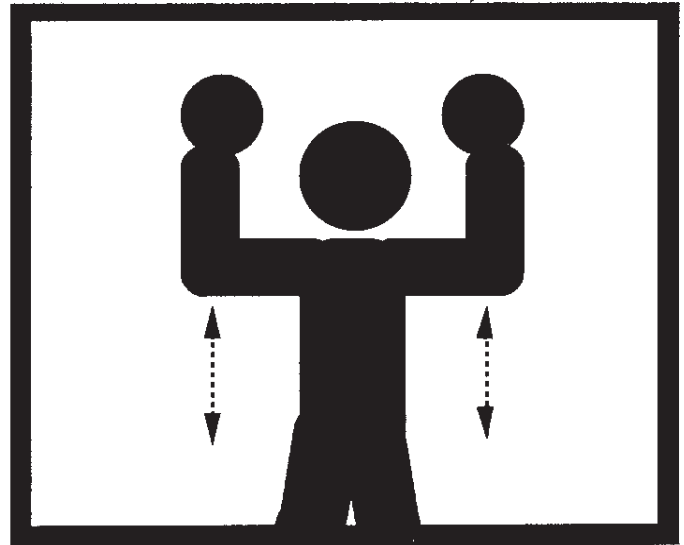
My Self Image

The form consists of six identical ladder-like structures arranged in a 3x2 grid. Each ladder has five steps. The top step is labeled 'Just Right'. The middle step is a larger box containing a question. The bottom step is split into two sections labeled 'Fat' (left) and 'Skinny' (right). The right column of ladders has an additional section on the far right labeled 'Too Tall'.

Row	Column	Central Question	Left End Label	Right End Label
1	Left	People at home think I'm...	Fat	Skinny
1	Right	People at home think I'm...	Too Short	Too Tall
2	Left	My friends think I'm...	Fat	Skinny
2	Right	My friends think I'm...	Too Short	Too Tall
3	Left	I think I'm...	Fat	Skinny
3	Right	I think I'm...	Too Short	Too Tall

Put a stick figure () on one step of each ladder that best describes your opinion of yourself. Are there differences in the way people at home, your friends, and you look at your body build?

Unit 2: Overhead Press



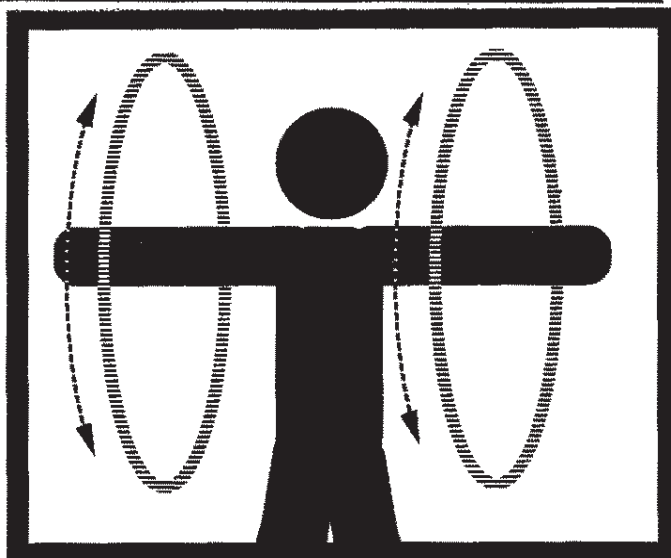
Unit 3: Bent Leg



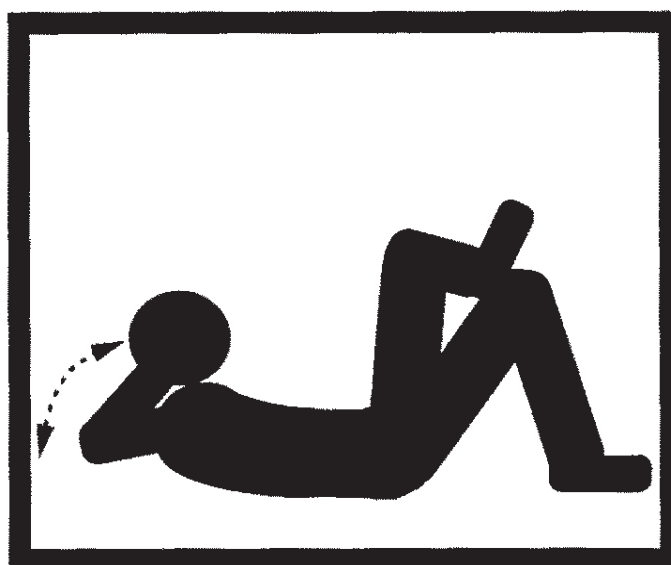
Unit 5: Leg Hops



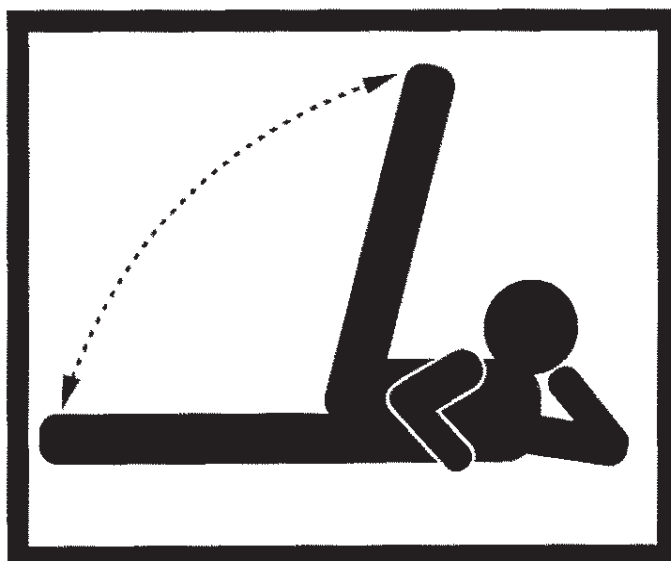
Unit 7: Arm Circles



Bent Knee Curl-ups



Side Leg Raise



Unit 7: Knee Push-ups



Cool Down



Foods of the Pacific Northwest

The intermediate materials for the Foods of the Pacific Northwest project are the work of the Tri-State Food/Nutrition Curriculum Committee. This committee developed the components, concepts, and objectives for an overall food and nutrition curriculum for the three states. Three projects, one each for beginning, intermediate, and advanced levels, and an enrichment guide are part of that curriculum.

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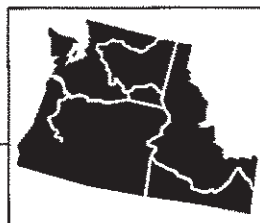
Washington

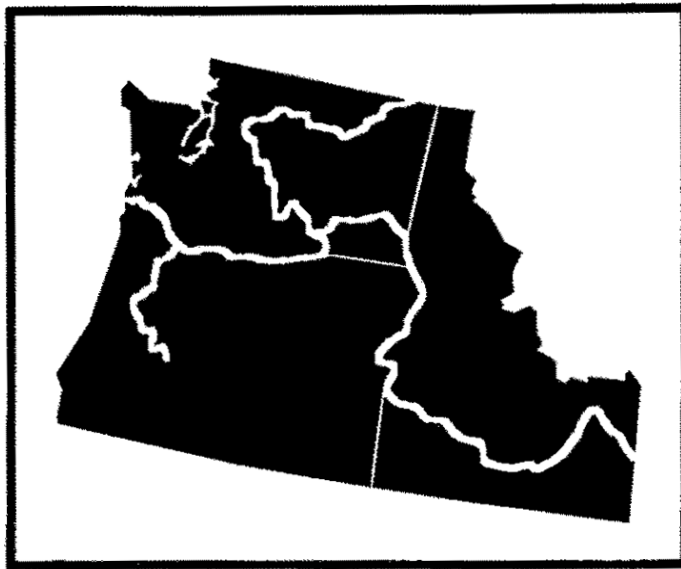
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More boys and girls belong to 4-H than any other youth group