



---

# **Foods of the Pacific Northwest**

---

## **Project 1—Member's Manual**



4-H 9311

Reprinted October 2005

\$6.00

**Oregon State** | Extension  
UNIVERSITY | Service

# Everyone Likes To Eat

*Learn to make good things to eat that are good for you*

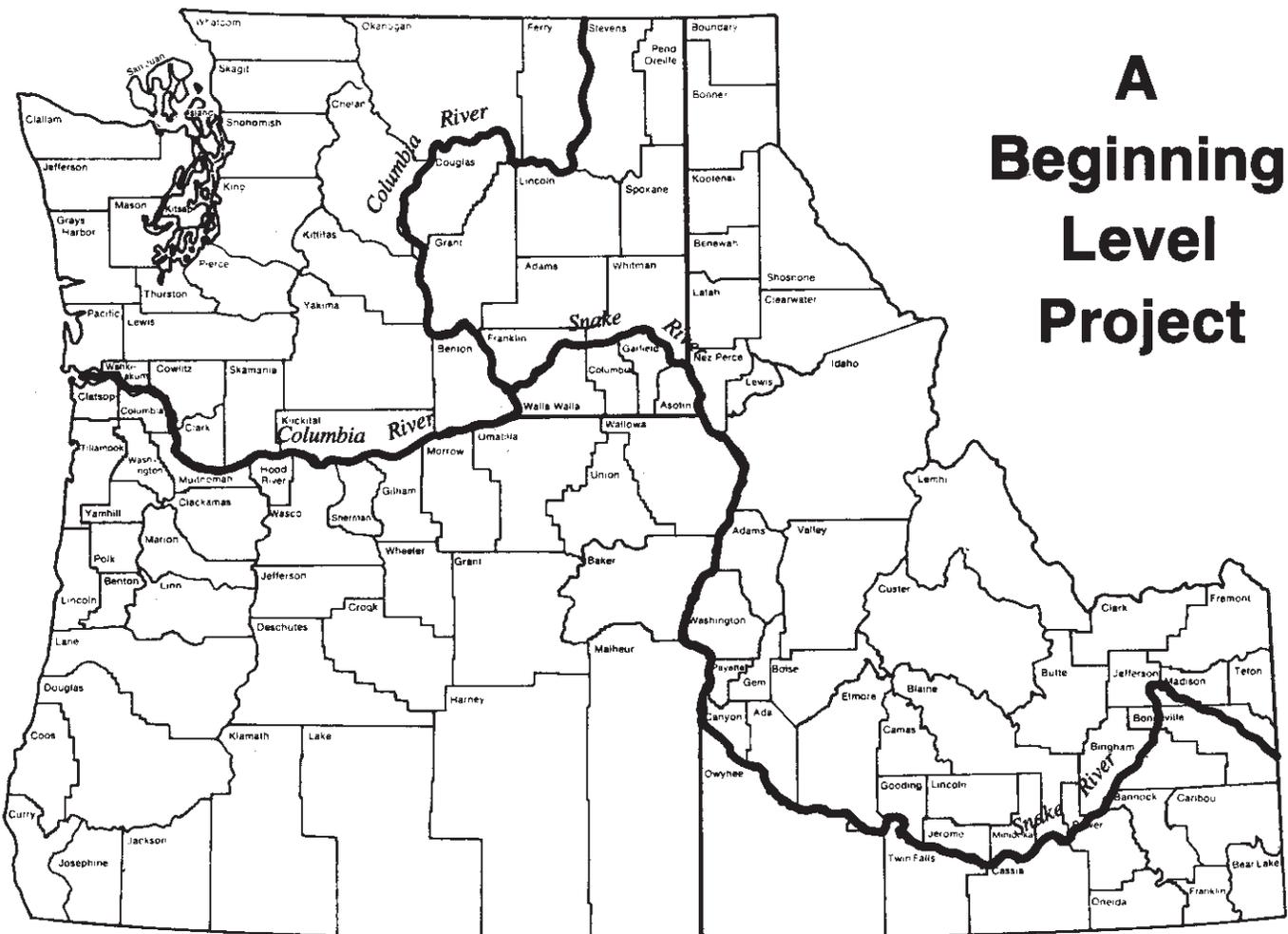
# FOODS OF THE PACIFIC NORTHWEST

Some of the food you eat is grown by farmers near you. Learn to prepare good things to eat from the important food crops grown in the Northwest.

Fitness means looking your best and being able to do the things you want to do without getting too tired. It's not just for athletes. Learn how you can be fit also.

You will feel better and have more energy if you balance food choices and life style. Learn to choose food and activities that are right for you.

In 4-H you learn by doing. That's what this project is all about. Meet new friends and learn with them about foods of the Pacific Northwest.



## Acknowledgment

This beginning "Foods of the Pacific Northwest" project is 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 Idaho, Oregon and Washington, "Foods of the Pacific Northwest." Three projects, one each for beginning, intermediate and advanced levels, and an enrichment guide are part of that curriculum.

A primary resource used in this project was "The Changing Food Scene," developed by the National 4-H Food and Nutrition Developmental Committee

composed of representatives of the Extension Service, U.S. Department of Agriculture and the Cooperative Extension Service of the State Land-Grant Universities. The National Extension Staff Development workshop on updating 4-H Food and Nutrition programs further supported this resource.

A special thanks to the many leaders and Extension agents in the three states who reviewed the materials and provided helpful suggestions in the process of preparing the project manuals and leader's guide.

Acknowledgment and appreciation is expressed to the following committee members:

### **Idaho**

Lois Glenn  
Linda Hamilton  
Rosa Smith  
Mary Lee Wood  
Marilyn Swanson

### **Oregon**

Cheryl Carlson  
Sally Ishikawa  
Elaine Husted  
Barbara Boltes  
Margaret Lewis

### **Washington**

Alice Weber  
Esther McLatchy  
Bonnie Brown  
Jan Hiller  
Val Hillers

Consultant: Eleanor Wilson, 4-H Program Leader, ES-USDA

Publication Layout by: Jerald R. Adams, Production Supervisor, University of Idaho College of Agriculture

Graphic Design by: Kathleen Erin Old, Printing Graphic Artist; assisted by Mark Wardle, Printing Graphic Artist, University of Idaho College of Agriculture

Typeset by: LaVonne Getz, Printing Composition Specialist, University of Idaho College of Agriculture

## **Foods of the Pacific Northwest**

Written by: Marilyn Swanson, Food and Nutrition Specialist, and Mary Lee Wood, 4-H/Youth Specialist, University of Idaho, Cooperative Extension Service

Appreciation is expressed to Idaho committee members for assistance in content and concept: Frankie Marler and Rosa Smith, Extension Home Economists; Linda Hamilton and Lois Glenn, volunteers; and to Dennis Dolny, Department of Physical Education and Recreation, University of Idaho, for information on fitness.

# Contents

	<b>Page</b>
Unit 1: Fresh Fruit for Snacks —	
Make a “Fruit Kabob” .....	5
Unit 2: Wheat for Extra Good Cookies —	
Make “Old-Fashioned Cookies” .....	8
Unit 3: Potatoes with Pizzazz —	
Make “Baked Potatoes with Toppings” .....	13
Unit 4: Fruits Are Fabulous —	
Make “Fruit Crisp with Struesel Topping” .....	18
Unit 5: A Meaty Main Dish with Zest —	
Make “Ground Beef Sloppy Joes” .....	23
Unit 6: Milk: A Special Food a New Way —	
Make “Impossible Pie” .....	28
Unit 7: Bountiful Beans —	
Make “Beans Hot-Cha-Cha” .....	31
Unit 8: Vegetables for Variety —	
Make a “Fresh Vegetable Salad Bar” .....	36
Unit 9: Sharing What You Know —	
Plan and Do a “Show and Tell” .....	41
Results from Experiments — Units 1, 2, 3, 4 and 7 .....	44
Basic Food Groups .....	45



# Fresh Fruit for Snacks

## *Fruit Kabob*



### Key Points

Learn to:

- choose quality fruit
- arrange fruit attractively
- serve fresh fruit a new way
- keep sliced fruit fresh looking

### Introduction

Many different fruits are grown in the Pacific Northwest. Many people grow their own fruit; others rely on commercial fruit production. Exotic fruits from other countries and out-of-season fruits are now more available due to improved packaging and storage techniques.



### Background

Some tree fruits grown in the Northwest are apples, pears, peaches, nectarines, cherries and purple plums. Many Northwest fruits are available several months past the harvest season because of modern ways of storing them. Some tree fruits such as apricots, peaches, plums and most pears must be used soon after picking. Some fruits like apples and winter pears keep fresh a long time if stored properly.

The Pacific Northwest is famous for the production of apples and pears, among other fruits. Fruit is available in the grocery store, at roadside markets and at local orchards. Sometimes local orchards allow people to pick their own.

Many pioneers planted an apple tree on their homestead. Some of these apple trees are still producing today. Look around your community to see if you can find some old apple trees.



### Safety

Be safe, not sorry! String the food, not your fingers! Metal skewers have a sharp point on one end. This makes it easy to put the bite-size foods on the skewers. This also makes it easy to stick a finger while stringing! Be careful. Because skewers have sharp points, you should not serve kabobs on skewers to young children.



### Serving/Etiquette

You can prepare the kabobs ahead of time. Arrange them attractively on a large plate. Each person can take one or more. For a group or party it is fun to let everyone make their own kabobs! Arrange several bowls with different fruits from which to choose. Then pass out wooden skewers and plates.

Except for small kabobs or those served at a very casual party, slip the pieces of food from the skewer onto your plate before eating. Use a fork to eat soft or juicy food.



### Food Preparation Snack Time!

For a healthier, stronger, happier you! Everyone loves a snack! Do you? A snack is really a little meal. It should be light and nutritious. The best snack time for most people is about midway between two meals so that appetites won't be spoiled. Snacks can give you a good part of your daily food needs...if you choose them carefully.

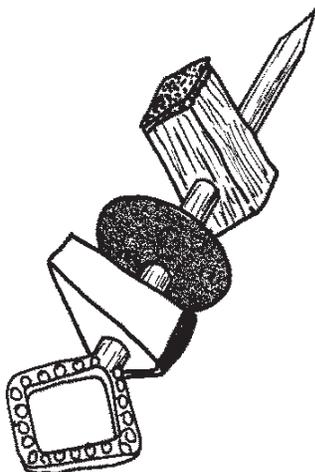
Have you ever had kabobs as a snack? They're fun to make and to eat. For really c-oo-l kabobs, choose fruits and other foods that need no cooking. Cut them in cubes or other small pieces...mix pleasing flavors and colors and string them on a

skewer. Your skewers might be of metal, wood or bamboo. Wood skewers are available in your local grocery store. For smaller-sized servings, try toothpicks! Think how quickly you could prepare this treat as a snack for your friends.

## Fruit Kabob

### Equipment Needed

Cutting board  
Knife  
Platter  
Skewers

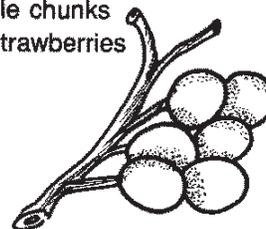


### Procedure

1. For each skewer choose at least two fresh, canned or dried fruits that have a nice contrast in color, flavor and texture. Avoid soft or messy fruits.
2. Cut large fruits into bite-sized pieces.
3. Drain canned fruits well and blot any extra juice on paper towels.
4. If you use light-colored fresh fruits that tend to darken, such as apples, apricots, bananas and pears, dip them in lemon juice. (You may wish to do the experiment on page 8 first, to decide if some other method is best.) Golden delicious apples are an exception. They retain their light color after slicing.

### Take your choice! These make good kabobs:

- Unpeeled apple wedges
- Fresh apricot halves
- Fresh peaches or nectarines
- Dried apricots, figs or prunes
- Banana sections
- Pitted dates
- Melon cubes
- Orange sections
- Chunks of canned fruit
- Fresh plum halves
- Pineapple chunks
- Whole strawberries



### Storage

**Fresh Fruits** — Store all fresh fruits except bananas in the refrigerator until you use them. Bananas ripen at room temperature after being picked and shipped. A ripe banana has a yellow shine with brown flecks. The skin of a banana that is refrigerated before ripening will turn black and soft and yet the fruit will not have developed the fully ripe flavor.

**Pears** — Pears must be picked green before they ripen on the tree. They can be stored cold for a month or more, then allowed to ripen on the kitchen counter. Pears are ripe when they are slightly soft at the stem end. They will be smooth, will have a buttery texture and be flavorful. Pears that ripen on the tree are gritty. Ripe pears should be refrigerated. They will keep 3 to 5 days.

**Apples** — Apples will usually stay fresh in the refrigerator a week or more.

**Stone Fruits** — The stone fruits include cherries, plums and fresh prunes, apricots, peaches and nectarines. These fruits can be stored in the refrigerator. Quality will last 3 to 5 days.

**Dried Fruit** — Unopened packages of dried fruit such as apricots, figs, prunes or raisins should be stored at room temperature. After opening, store them in the refrigerator in a tightly closed container.

**Canned Fruits** — Cover and store leftover home-canned fruit in the original jars in the refrigerator. If you have leftover commercially canned fruit, place it in a glass or plastic container, cover and store in the refrigerator.



## Nutrition/Health

Now it's checkup time. How well are you using the 4-4-3-2 formula for health and strength and happiness? Are you:

- Getting enough protein and whole-grain cereals?
- Drinking all the milk your body needs?
- Choosing foods rich in vitamins A and C?

How do you rate? Turn to page 45 to see! Compared to sweet desserts like cookies, cake and pie, most fruits are low in calories, fat and salt (sodium). Fruits are filling and add fiber to the diet. Fiber helps our digestion work properly.



## Food Activity

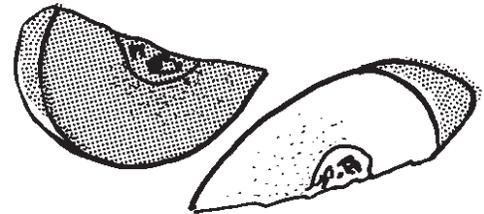
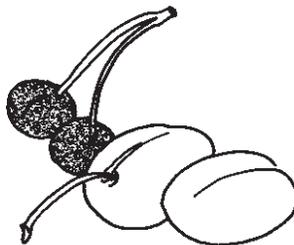
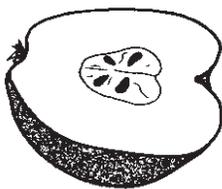
### Science Experiment On Darkening of Fruit

Can you explain why?

Can you prevent light-colored fresh fruits from browning after they've been peeled?

#### Supplies:

- |                             |                          |
|-----------------------------|--------------------------|
| 3 custard cups              | Salt                     |
| 4 saucers                   | Water                    |
| Apple, peach or ripe banana | Paring knife             |
| Lemon juice                 | Fork                     |
| Pineapple juice             | Crayon or marking pencil |



#### Procedure:

1. Pour lemon juice in one custard cup, pineapple juice in another and a salt solution ( $\frac{1}{4}$  tsp of salt to  $\frac{1}{4}$  cup water) in the third custard cup.
2. Peel the fruit and cut into four pieces.
3. Place one piece on a saucer and label C for "control."
4. Dip one piece in lemon juice. Drain, place on a saucer and mark the saucer LJ.
5. Dip one piece in pineapple juice. Drain, place in saucer and label PJ.
6. Dip the remaining piece in the salt solution. Drain, place on a saucer and label SS.
7. (Optional) Commercial anti-darkening agents are available. Substitute one of those for pineapple juice OR you could experiment with it in addition to the others.
8. Allow the pieces of fruit to stand at room temperature for 30 to 60 minutes.

#### Conclusions:

Compare the color of the pieces of the fruit. Which one has darkened the most? Did the salt or added juice change the flavor of the fruit. What do you conclude? If you're not sure, find the answer on page 44.

## How Did You Do?



X  Good    O  Need to improve

Are the fruit kabobs:

   Attractive when served?

- Pleasing in color, contrast, shape and flavor?
- Neither too skimpy nor too crowded for the amount of food on each?
- Bite-sized?

## Did You Learn?

Y  Yes    N  No

- To keep fruit bright and attractive without darkening?
- Proper ways to store fruit?
- To place fruit on the skewer so it did not fall off?

# Wheat for Extra Good Cookies

## Old-Fashioned Cookies



### Key Points

Learn to:

- operate a mixer
- use an oven
- read a recipe
- measure dry and liquid ingredients
- cream (a way to mix fat and sugar)
- use the 4-4-3-2 daily food plan
- recognize activities to keep fit
- leave your work area clean

### Introduction

Let's find out more about flour. Flour is made from wheat. We are going to use a Northwest food product to make a cookie that you can take to lunch or eat after school.



### Background

Bakers and consumers around the globe consider soft white wheat produced in the Pacific Northwest (PNW) as "world class" wheat. This is true because PNW soft white wheats bring excellent flavor, the softest texture and many other desirable qualities to the international marketplace. Millers are the people who make wheat into flour. They like wheat from the PNW because it produces high quality flour. The states of Idaho, Oregon and Washington account for about 90 percent of the U. S. production of soft white wheat. All purpose flour used in baking is a blend of soft and hard wheat.



### Safety

Get your operator's license! Learn to operate appliances safely. In this unit you will use a hand mixer and an oven.

**Tips on Safe Use of the Hand Mixer** — Insert each beater BEFORE plugging the mixer into the electrical outlet. (Refer to the use and care book if your mixer has one.) Most mixers have some type of lock to hold the beaters and a release to eject the beaters.

DO NOT handle the plug with wet hands. Practice using different speed settings so you know which one works best for your recipe. Use the lowest speed to mix in the flour. Increase the speed after blending in the liquid.

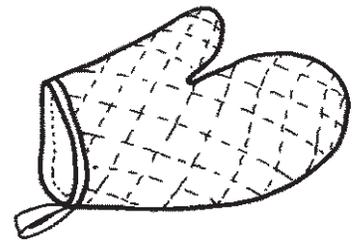
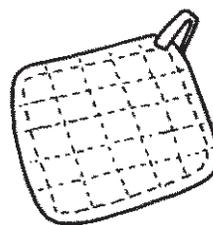
Turn the mixer off before using a spatula and before lifting the beaters from the bowl.

Show one of your parents or your 4-H leader how to use the mixer. Have them sign your operator's license before you operate it by yourself.

### OPERATOR'S LICENSE

\_\_\_\_\_ is licensed to operate a hand mixer.

Date \_\_\_\_\_ Signed \_\_\_\_\_



**Tips on Safe Use of the Oven** — Position the oven rack before turning the oven on and use pot holders to remove cookie sheets.



### Food Preparation

Read your recipe before you begin and be sure you have all the ingredients and equipment.

## Old-Fashioned Cookies

### Equipment Needed

For measuring:  
cups for dry ingredients  
cups for liquid ingredients  
measuring spoons  
knife or spatula for leveling  
Spoons for stirring

Saucepan  
Cookie sheets  
Cooling rack  
Rubber spatula  
Metal spatula  
Potholders  
Mixer  
Bowl

$\frac{1}{2}$  cup raisins  
 $\frac{1}{2}$  cup water  
 $\frac{1}{3}$  cup solid shortening  
 $\frac{3}{4}$  cup sugar  
1 egg  
 $\frac{1}{2}$  tsp vanilla  
 $1\frac{1}{4}$  cup flour

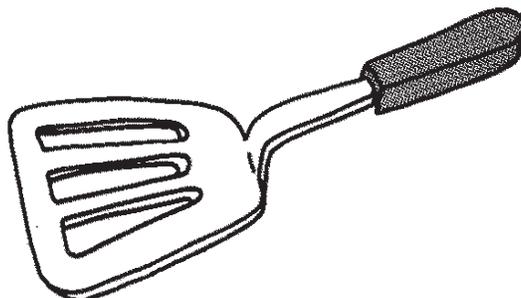
### Recipe

$\frac{1}{4}$  tsp baking powder  
 $\frac{1}{2}$  tsp soda  
 $\frac{1}{2}$  tsp salt  
 $\frac{1}{4}$  tsp cloves  
1 cup rolled oats  
 $\frac{1}{4}$  cup chopped nuts (optional)



### Procedure

1. Simmer raisins and water in saucepan over low heat 10 to 15 minutes until raisins are plump. Drain raisin liquid into measuring cup. Add enough water to make  $\frac{1}{2}$  cup.
2. Cream shortening and sugar with mixer in medium bowl. To cream begin with shortening in the bowl and add sugar gradually.
3. Add egg and vanilla to mixer bowl.
4. Stir in cooled raisin liquid. Continue to beat until fluffy.
5. Measure flour. In another bowl stir together flour, baking powder, soda, salt and spices; blend into creamed mixture.
6. Add rolled oats, raisins and nuts and mix in by hand.
7. Preheat oven to 400°F. (Make sure the oven is empty and the rack is in the center position.)
8. Drop rounded teaspoonsful of dough about 2 inches apart on ungreased baking sheet.
9. Bake 8 to 10 minutes, or until lightly browned. Makes 3 to 3½ dozen.
10. Carefully remove cookies immediately from the baking sheet using a metal spatula. Place on cooling rack to cool before storing.





## Management

How long will it take to make the Old-Fashioned Cookies?

## Preparation Time

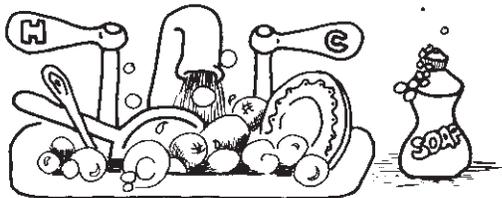
**Mixing Time** — It takes about ½ hour to mix cookies.

**Baking Time** — Develop a system. It will be faster if you have 2 cookie sheets. Bake 1 sheet at a time. Fill second sheet while first is baking. Remove first from oven, and place the second sheet in oven. Remove cookies from first sheet and place on cooling rack, allow sheet to cool and refill cooled baking sheet. Repeat until all cookies are baked. How long this takes will depend on the size of your cookie sheets.

## Clean-up Time

Leaving the kitchen work area clean is important. Put aside the utensils as they are used. It will make the clean-up chores easier. You can start to clean up while you're baking the last cookies. Remember, you have not finished making the cookies until you have cleaned up the kitchen.

**Washing Your Dishes by Hand** — Begin with hot soapy water in the pan. Rinse thoroughly in clear hot water. Dishes can be placed on a rack. Allow to drain and air dry. Only a few wet spots will need to be towel dried.



## Washing Your Dishes in the Dishwasher —

Have one of your parents or your leader show you how to operate the dishwasher. Place the dishes in the washer so the soiled surface will face the direction of the water flow. The cookie sheets and some of the utensils may still need to be washed by hand.

Time yourself. How long did it take you?

## Tips for Success

- Use a timer to remind you when cookies are baked. This will help prevent burned cookies!
- Don't plan to go out to play while you're baking cookies. You'll have more than one cookie sheet to bake.



## Storage

Old-Fashioned Cookies are soft. Store in an airtight container to keep cookies soft. Place plastic wrap or waxed paper between layers to keep them from sticking together. You may freeze cookies for later use.



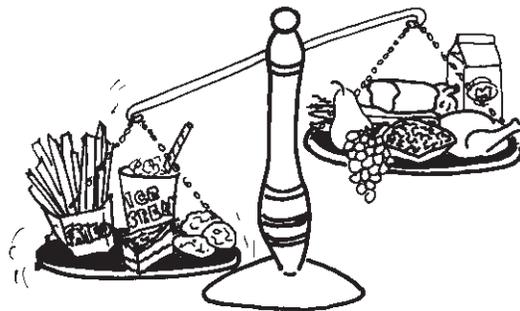
## Nutrition/Health

Are all cookies created equal? Why or why not? Did you use enriched flour? Enriched flour has the key nutrients lost in milling added back to the product. Check the label to be sure your flour is enriched. Oatmeal is an excellent ingredient to increase fiber. Fiber in the diet is important for good health. Raisins add fiber, too. Compare oatmeal cookies to chocolate chip cookies or fudge brownies. Which is more nutritious? Why?

Old-Fashioned Cookies are more nutritious than either chocolate chip cookies or fudge brownies because the oatmeal and raisins add fiber and sweetness. They also have less sugar and fat than most chocolate chip cookies or brownies.

When you come home from school, why are you hungry?

Your body needs fuel (energy) to keep it running well. Food supplies energy. Refer to the basic food groups (page 45) for food you need every day. The fifth food group is the "other" group which supplies extra energy and fat. Before you eat many foods from the "other" group, be sure you have eaten the right number of servings from the Basic Four Food Groups. Cookies are part of the "other" food group. Ingredients in Old-Fashioned Cookies make them a better nutritional choice than most of the "other" group.



Too little activity and too much energy-rich food equal surplus pounds.

## How Fit Are You?

Do you ever watch or play team sports like baseball, football and basketball or individual sports like tennis, gymnastics or races? Athletes — professional and amateur — try to increase their fitness and play their sport better. Most important, fitness makes athletes healthier.

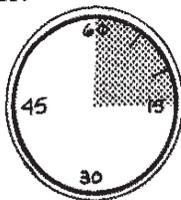
Many activities that you do every day help you to become more fit and healthier. Anytime you run during sports such as soccer, basketball, kickball or tag, you are building a stronger heart, muscles and lungs. The same conditioning happens when you swim, ski or ride your bike. You will feel your heart pump faster, and you will need to breathe faster.

It's easy to feel your heart beat. You can feel it by placing your hand over the left side of your chest, or by placing your fingers on the side of your neck or the underside of your wrist. Try it!



The movement you feel is your heart pumping blood throughout your entire body. Your lungs fill up with a lot of air every time you breathe. The harder you play, the faster your heart beats and the deeper you have to breathe. You are making your own personal engine run faster.

Before you exercise, count the number of times your heart beats for 15 seconds. Do the same thing immediately after you stop exercising.



Record the number of heart beats **after** exercising here: \_\_\_\_\_

Put the number of heart beats **before** exercising here: — \_\_\_\_\_

**Subtract** these two numbers: \_\_\_\_\_

The difference tells you how much faster your heart beats after exercise.

The more you exercise, the more fit you will become. Exercise can be fun, especially if you exercise with friends or with your family. Bike rides, hiking, a swimming pool party — these fun activities will help you become a healthier, more fit person. Getting enough sleep and eating nutritious foods are important for good health and fitness, too.



## Consumerism

Compare homemade cookies and purchased cookies. Now that you can make cookies, would you rather make your cookies or buy your cookies?

Why? What kind of cookies does your family prefer?

If you want to make cookies, do you have the ingredients at home or do you have to go to the store to buy some ingredients?

What are some substitutions? Up to ½ cup of whole wheat flour can be used. Instead of raisins, you can add other dried fruit chopped in small pieces. Make these cookies again and try a substitution. How do you like the results?



## Food Activity

- Use an oven thermometer to test to see if your oven is accurate.
- Visit a bakery to see how they make cookies.

- Why sift flour? Add 1 tablespoon cocoa to 1 cup flour and see how many times you have to sift for the color to be even.

## Science Experiment On Cookie Sheets

Can you explain why?

Why use a cookie sheet when baking cookies?



### Supplies:

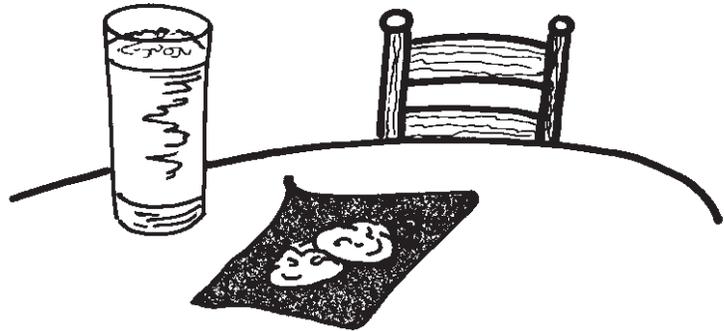
- |                                |                         |
|--------------------------------|-------------------------|
| Old-Fashioned Cookie dough     | Cookie sheet            |
| 2 teaspoons                    | Oven preheated to 400°F |
| 2 small deep metal baking pans | Potholders              |

### Procedure:

1. Drop 4 teaspoonsful of dough 2 inches apart on the ungreased cookie sheet. Use 1 teaspoon to measure the cookie dough, the second one to push the dough onto the cookie sheet.
2. Drop 4 teaspoonsful of dough 2 inches apart in one of the deep baking pans.
3. Turn the other baking pan upside down and drop 4 teaspoonsful of dough 2 inches apart on bottom.
4. Bake the three pans of cookies in the preheated oven about 8 to 10 minutes. Do not place pans on more than one rack of the oven.

### Conclusions:

Were all the samples evenly browned on the bottom, top and sides? Explain your results. If you're not sure find the answer on page 44.



## How Did You Do?

X  Good  O  Need to improve

Are your cookies:

- About the same size?
- Evenly browned, but not burned?
- Slightly rounded on top?
- Good tasting?

## Did You Learn?

Y  Yes  N  No

- About wheat grown in the Pacific Northwest?
- How to read a recipe?
- How to use a mixer?
- How to use an oven?
- To remove cookies from the cookie sheet?
- Why some cookies are more nutritious than others?
- How to count your heart beat?



# Potatoes with Pizzazz

## Baked Potatoes with Toppings



### Key Points

#### Learn to:

- plan a meal
- prepare and serve potatoes creatively
- recognize why potatoes are a good food
- use a microwave oven (optional)

### Introduction

Let's find out more about potatoes. Potatoes are an important crop in the Northwest. Fresh potatoes are readily available in stores throughout the year.



### Background

Did you know potatoes were first grown in Peru? The first potato growers in the Northwest were homesteaders from Scandinavia, Germany and Ireland. The very first grower was a Presbyterian missionary. In 1836 Henry Harmon Spalding taught the Nez Perce Indians to grow potatoes for food. The homesteaders grew potatoes to sell to the miners who came in search of gold and silver. Today, the Northwest grows potatoes to ship to many other states in the U.S.

Potatoes are a favorite food to fix many different ways. They are often a major part of the family food supply. Potatoes are suitable for quick meal preparation. Potatoes can be part of the main dish or served as a side dish.



### Storage

Store potatoes in a dark, cool place. Do not refrigerate. If they begin to sprout, cut out the entire core of the sprout and then peel the potato. If potatoes are green, cut away the green portion.



### Management

- Prepare toppings and set table while potatoes bake in conventional or portable oven.
- Prepare toppings first if baking in microwave. Set table while potatoes bake.
- Store any leftover food in the refrigerator.



### Food Preparation

A menu is a way to write the meal plan. A meal plan includes a variety of foods that help meet our daily nutritional requirements. Let's start with a meal plan. How does this menu sound?

	Ground Beef Patties*
Salad	Baked Potato/Choice of Topping
	Fruit                      Cookies
	Milk

\*If you select a main dish topping for the potatoes, the ground beef patties are optional.

Make potatoes an occasion. Here are the instructions for a "Potato Bar." With a potato bar you can choose your favorite topping for a baked potato.

## Potato Bar

### Prepare Potatoes for Baking

1. Scrub potatoes, dry and pierce skin in 3 or 4 places with a fork or tip of a knife.

#### Conventional Oven (or portable oven)

2. Place potatoes in oven on rack.
3. Set temperature at 400°F and turn oven on. (Make sure the oven is empty and the rack is in the center position.)
4. Test after 45 minutes. Potatoes are done if tender when pierced with a fork. If potatoes are not done, continue cooking 10 to 15 minutes and test again. For a true baked potato, wrapping potato in foil is not recommended. This steams rather than bakes the potato.

#### Microwave Method

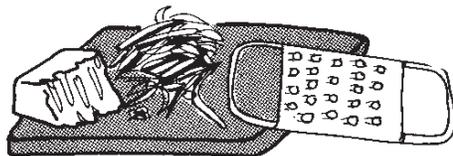
2. Place a paper towel in oven; add potato. Microwave on full power about 4 minutes for 1 average size potato. Turn potato over half way through cooking (after about 2 minutes). 2 potatoes will cook in 6 to 7 minutes, 4 potatoes in 9 to 11 minutes.
3. To soften potato, remove from microwave and wrap in paper towel. Let stand for a few minutes.

### Ideas for Toppings

Use a selection from these toppings or design your own.

#### Main Dish Toppings

Taco meat  
Hamburger stroganoff  
Creamed chicken or tuna  
Chili with grated cheese  
Grated cheese and  
chopped fresh or cooked broccoli



#### Side Dish Toppings

Sour cream or yogurt with bacon bits or chives  
Dill, onion and/or parsley  
Roasted sunflower seeds  
Bits of ham, sausage or hamburger  
Sliced olives  
Sliced fresh mushrooms  
Grated cheese

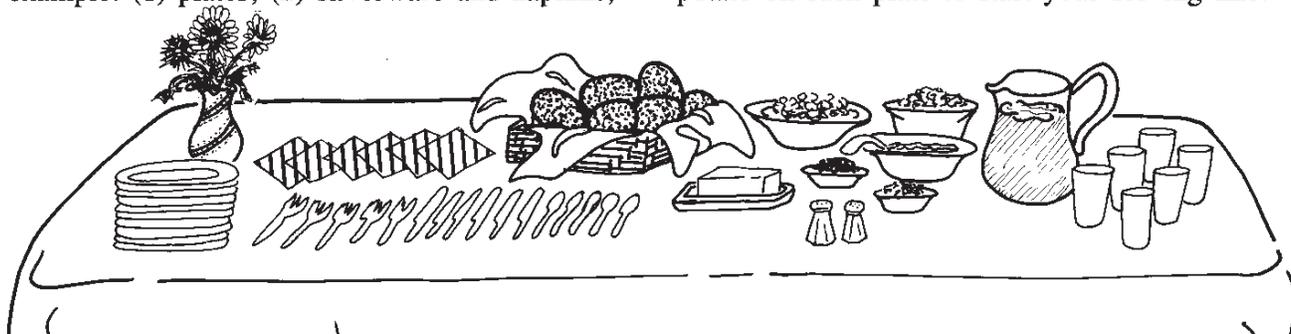


### Serving

A meal with baked potatoes and choices of toppings can be served buffet style. Set your buffet table so people serve themselves in order. For example: (1) plates, (2) silverware and napkins,

(3) potatoes, (4) salad, (5) toppings, (6) beverage. Your dessert — fruit and cookies — could be a centerpiece for the table. Pass them around after your main course.

An alternative way would be to place a baked potato on each plate to start your serving line.





## Safety

Save fingers from cuts and burns. Use a board for cutting. Always cut away from you. Keep knives in a protective sheath. Use a dry pot holder when handling hot food or dishes or removing items from the oven. Review safety tips you have already learned for using the conventional oven.

**Microwave** — Do not turn on the microwave unless there is food or liquid in it. Do you know how to set time and power level? Show your leader or parent how to set the time and power level. Have them sign your “Operator’s License.”

Open the door only when the microwave is off. (Most microwaves have built-in safety features that will not permit them to operate when the door is open.)

### OPERATOR'S LICENSE

\_\_\_\_\_ is licensed to operate a microwave.

Date \_\_\_\_\_ Signed \_\_\_\_\_



## Nutrition/Health

The potato is an excellent source of vitamin C and furnishes several B vitamins including thiamin, niacin and hard-to-get vitamin B<sub>6</sub>. Here is why these vitamins are important.

### Vitamin C

- Helps heal wounds
- Helps the body fight infection
- Promotes absorption of iron
- Maintains healthy gums

### B Vitamins

- Promote good appetite and digestion
- Keep nerves and skin in good condition
- Help cells use energy from food

Potatoes also contain such essential trace minerals as copper and magnesium and small amounts of iron.



Do you do any of the following daily?

- \_\_\_ walk
- \_\_\_ run
- \_\_\_ ride a bicycle

If you ride your bicycle at a moderate speed (5.5 mph) for 1 hour, you burn about 175 calories. The amount of calories burned depends on your body size and weight and how vigorous the exercise.

Three potatoes per pound are an average size. One average-size baked potato contains about 165 calories, so one potato will help you ride your bike for about 1 hour.

Remember! Toppings have calories, too! Some add only a few calories; others add lots. Make your choice, depending on your needs.

Be fit! Try it! Ride your bicycle for at least a half hour four times a week. To get the most benefit from the exercise, you need to ride continuously without taking any breaks during the half hour period.



## Consumerism

What could be more versatile than the potato? For your potato bar, choose potatoes without cuts, bruises, sprouts or green coloring.

Baking potatoes are graded for size and quality. What differences do you find in fresh potatoes at the grocery store? Are they different in color, size, price, packaging?

“New” potatoes are not a variety but simply potatoes that come to market directly from the field before the potatoes are mature. They are not placed in storage. They are generally smaller in size when harvested and have a unique skin texture. These are usually boiled rather than baked.

How many different ways do you find potatoes in the store?



## Food Activity

### Science Experiment On Baking Potatoes.

Can you explain why?

How does cooking method affect a baked potato?

#### Supplies:

3 baking potatoes	Aluminum foil
Oven preheated to 400°F	Potholders
Microwave (optional)	Fork

#### Procedure:

1. Scrub potatoes. Pierce skin in three or four places with a fork.
2. Wrap one potato in aluminum foil. Bake foil-wrapped potato and one unwrapped potato in a conventional oven. See instructions on page 14.
3. Place one unwrapped potato in the microwave (if available). See instructions on page 14.
4. Remove potatoes after baking and label.
5. Compare foil-wrapped potato with unwrapped potato.
6. Compare potato baked in microwave with unwrapped potato baked in conventional or portable oven.

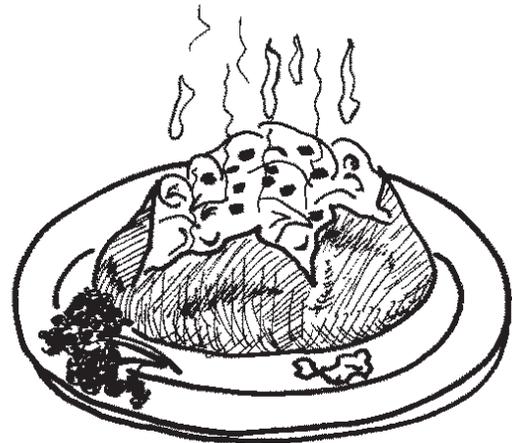
#### Conclusions:

Were there differences in appearance, texture and time of cooking? Which potato did you prefer? Why? If you're not sure of the difference, find the answer on page 44.

#### A Commentary on the Common Tater

Potatoes are funny things,  
Sometimes potatoes grow wings.  
They have weird little eyes,  
And sometimes people put them in pies.  
They're the color of brown,  
They seem to always frown!  
You can cook them many ways,  
Or you can store them for days and days.

from a poem by Angela Sasser  
10-year-old Ada County (Idaho) 4-H'er





## How Did You Do?

Did you prepare the potato bar as a main dish or a side dish or both?

What were your favorite toppings?

Good  Need to improve

Were the potatoes:

Ready to serve at the same time as the toppings?

Soft and fluffy?

Topped attractively?

## Did You Learn?

Yes  No

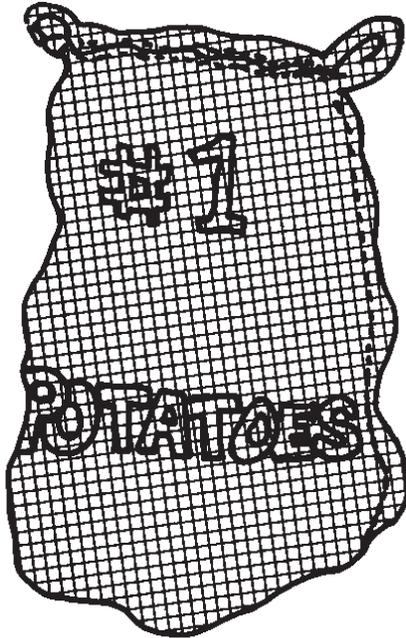
How to use a microwave oven?

To plan a simple meal?

How to store potatoes?

Different ways to bake potatoes?

What vitamins are found in potatoes?



## UNIT 4



# Fruits Are Fabulous

## *Fruit Crisp with Struesel Topping*



### Key Points

Learn to:

- make a fruit dessert
- know the value of fruit in the diet
- substitute one fruit for another
- use a pastry blender
- use a vegetable peeler
- store fruit properly
- rate your fitness



### Introduction

Fruits are good fresh, but we can use fruits other ways, too. Let's prepare a dessert with fruit. Find out how different fruits may be used in the same recipe.



### Background

Tree fruits grown in the Northwest include apples, apricots, cherries, nectarines, peaches, pears and purple plums. The Pacific Northwest also produces quantities of fruits picked from bushes and small plants. These include many different kinds of berries, cantaloupe and watermelons. These fruits are plentiful in local markets during the harvest season.

### Apples

One of the first apple trees planted in the Northwest survives today near the Columbia River in Vancouver, Washington. It was part of a small orchard planted in 1826.

The Red Delicious apple, well known today, was developed in Iowa in the late 1800's. About 1890 a nurseryman bit into this fruit, promptly drew a notebook from his pocket and jotted down "Delicious," the prospective name for the new variety.

The Red Delicious is best suited to eating fresh. It is not a cooking apple. On the other hand, the Golden Delicious is suitable for cooking as well as eating fresh.

Apples need to be stored in the refrigerator to maintain crispness.



### Safety

Peeling fruit with a vegetable and fruit peeler is safer than using a paring knife. But use a paring knife to core and slice the fruit. This is a small knife and easy to handle. Be careful not to cut yourself. Keep the knife sharp. A sharp knife is safer than a dull knife.

Be safe, not sorry! Adjust the oven racks if needed before you turn on the oven. Remember to use a potholder when you take your fruit crisp from the oven!

Let your fruit crisp cool before tasting or serving. Sugar and fruit can be very hot.



### Food Preparation

Fruits taste good and are colorful. We can serve them often. Here's a tasty dinner your family might like:

Baked Meat Loaf  
Baked Potatoes      Hot Vegetable or Salad  
Fruit Crisp  
Milk

A meal like this takes lots of preparation. This is an energy efficient meal. Most of the meal is baked in the oven at the same time. You could offer to make the dessert! The recipe on the next page is for fresh apple crisp. Let's make that now. Another time you might want to try one of the variations using other fruits. All of them are delicious!

## Fruit Crisp with Struesel Topping

### Equipment Needed

Medium sized mixing bowl  
Measuring cups and spoons  
Knife or spatula  
Pastry blender or fork  
Paring knife  
Vegetable peeler (optional)  
8x8x2 inch or 2 quart baking dish  
Potheolders



### Recipe

4 cups peeled, sliced, tart apples or other fruit (about 5 or 6 apples)  
1 cup rolled oats (quick cooking or regular)  
 $\frac{1}{2}$  cup enriched flour  
 $\frac{1}{2}$  cup brown sugar, firmly packed  
 $\frac{1}{4}$  tsp salt  
1 tsp cinnamon  
 $\frac{1}{2}$  cup (1 stick) butter or margarine

### Procedure

1. Arrange peeled, sliced apples in baking dish.
2. Place rolled oats, flour, sugar, salt and cinnamon in the bowl and mix to blend.
3. Add soft butter or margarine and blend well with pastry blender or fork.
4. Spread oatmeal mixture on top of apples and press down lightly.

*(continued on next card)*

### Conventional Oven (or portable oven)

5. Preheat oven to moderate (350°F). (Make sure the oven is empty and the rack is in the center position.)
6. Bake about 30 minutes or until topping is brown and apples are tender when tested with a fork.
7. Serve warm or cold with milk, cream or ice cream.

### Microwave Method\*

5. Place in microwave.
6. Bake on full power about 10 minutes. Rotate dish a quarter turn halfway through baking. Test for doneness at 9 minutes.
7. Serve warm or cold with milk, cream or ice cream.

\* Be sure to use glass or microwave safe baking dish.



### Variations

In place of the fresh apples, use 4 cups fresh apricots or peeled, sliced fresh peaches or cut rhubarb. These fruits may need more or less sugar. You can substitute home-canned fruit for the fresh fruit in the recipe. Reduce the sugar if your home-canned fruit is sweetened.



### Management

#### Measuring Regular Brown Sugar

— Use a  $\frac{1}{2}$  cup metal or plastic measuring cup. Pack the sugar in the cup before you level it off.

**Fruit** — Use 4 to 6 medium apples to make 4 cups of sliced apples. Apples may be measured in a 2 cup liquid measure. Other fruits can be measured in a similar way.

**Note:** When using apples in the recipe, you do not need to peel them. Try it both ways and see what your family likes.





## Storage

How do you store fruit after it is picked or purchased? Many fresh fruits remain at their best for only a few days. Other fruits may keep for months, if stored properly. All fruits require careful handling and storage to conserve quality.

Before storing fruits, sort them and either use or discard damaged fruits immediately.



## Serving

Your Fruit Crisp makes an attractive dessert. Serve it in dessert dishes. Make sure each person has a spoon.

The Fruit Crisp may be served warm or cool. For variety, top it with a dairy topping.



## Nutrition/Health

Fruits add fiber to our diet. This is important for good digestion. Some fruits have other nutrients such as vitamins A and C. Your dessert will have more fiber if you do not peel the apples.

### Are Your Heart and Lungs Fit?

There are several areas of fitness. Two of these important areas are how well your lungs and heart work. Your lungs bring oxygen into your body, because oxygen is needed to help produce energy to play and do work. Your heart is a very special muscle that pumps blood through your body, carrying the oxygen to your muscles. When you eat a meal, that food is converted into energy to make your heart and muscles work. So it is important to eat the right types of food so your body has the proper energy to exercise. This part of fitness is called "cardiorespiratory" (kard-e-o-res'-per-a-tory) fitness. Can you say that? Practice! Get your leader or parents to help you.

All activities should begin with a warmup, with stretching and easy movement exercises that let your muscles get ready for the exercise you have chosen. Remember, by keeping your heart and lungs strong, they will take care of you for a long time!

If you would like to find out how well your heart, lungs and muscles work, you can do a 1-mile run. A running track can be used for this test. You will need to run four times around most outdoor tracks. Run 1 mile and time how long it takes you. You may want to have another person time you. Use a watch with a second hand or a stopwatch.

How long did it take? \_\_\_\_\_ minutes. Compare your time with the results below:

	Girls Age 9 to 11	Boys Age 9 to 11
Excellent	7:55 or less	6:55 or less
Above average	7:56 to 10:09	6:56 to 8:48
Average	10:10 to 11:14	8:49 to 9:52
Less than average	11:15 to 12:52	9:53 to 11:00
Needs improvement	12:53 or more	11:01 or more

If you would like another test for your heart, lungs and muscles, you need to find a bench that is 12 inches high, and step up and down on the bench for 3 minutes, completing 24 step up-and-down movements each minute. Immediately



after you finish the test, count the number of times your heart beats for 1 minute. Remember you learned how to count your heart beats in Unit 2, page 11.

Compare your heart rate with the numbers below:

	Girls Age 9 to 11	Boys Age 9 to 11
Excellent	less than 90 beats	less than 95 beats
Above average	91 to 117 beats	96 to 116 beats
Average	118 to 135 beats	117 to 138 beats
Needs improvement	136 or more	139 or more

When your heart and lungs are strong and working well, you will have endurance. That means you will be able to keep going for long periods.



## Consumerism

Choose fruits that are inexpensive and in season.

**Buying Tips** — What kind of fruit did you use in the crisp? Which varieties did you find in the market? Always look for fruit that is firm and well shaped, a good color for the variety and free from rotten spots or bruises.

If you are buying apples, you will have many choices. Firm, tart apples are best for cooking. The Rome Beauty is noted as a baking apple and makes good apple crisp. Winesaps, MacIntosh, Jonathans and Golden Delicious also are good.

Would you rather have dessert at home or go out for dessert?

Which tastes better? What is the difference in cost?



## Food Activity

### Science Experiment On Sifting Flour

Can you explain why?

Why do some recipes state, "Sift flour before measuring?"

#### Supplies:

Flour, regular all purpose (do not use granular type which does not need sifting)

1 cup measuring cup (from a nested set)	Flour sifter
Set of measuring spoons	Tablespoon
	Spatula or knife
	Waxed paper

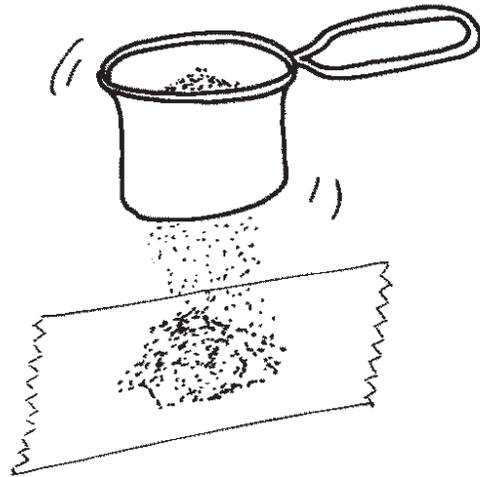
#### Procedure:

1. Spoon flour from the container directly into the 1 cup measuring cup and fill heaping full.
2. Level with the straight edge of knife or spatula.
3. Place flour sifter on a piece of waxed paper and dump the measured flour into sifter. Sift the flour onto the waxed paper.
4. Spoon the sifted flour into the measuring cup until the flour runs over the top. Level off.
5. Measure the extra flour on the waxed paper. Record the amount here:

\_\_\_\_\_ tsp.

#### Conclusions:

How much flour was left on the waxed paper when you completed the test? Why did it take less sifted flour than "spooned" flour to fill the cup? If you're not sure, find the answer on page 44.





## How Did You Do?

X Good    O Need to improve

Is your fruit crisp:

Tasty, appealing?

Topping slightly brown, pleasantly crunchy?

Size of fruit pieces even?

Was your fitness level:

Average or above?

## Did You Learn?

Y Yes    N No

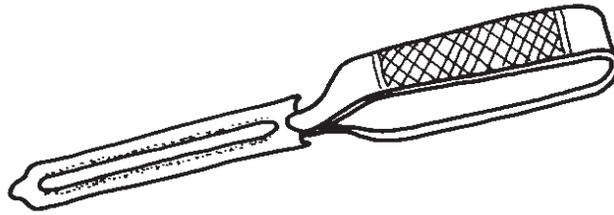
To make a fruit dessert?

To use a pastry blender?

How to use a vegetable peeler to peel apples?

Why we need fruit in our diet?

Two ways to evaluate your fitness?





# Meaty Main Dish with Zest

## Ground Beef Sloppy Joes



### Key Points

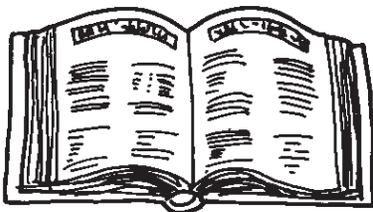
Learn to:

- purchase and store ground beef
- substitute other meat for ground beef
- use a food processor (optional)
- prepare a meal
- test muscle flexibility

### Introduction

Beef is a popular food for many families. Ground beef is especially popular because it is easy to prepare. It has many uses in a variety of dishes. Ground beef provides high quality protein at low cost.

Do you ever wonder how you can get all the food for a meal ready at the same time? You will prepare and serve a meal with a ground beef main dish.



### Background

The geography of the Northwest is well suited to beef cattle production, because cattle can convert grasses and grain efficiently into a protein food.

People often think hamburgers when they hear ground beef, yet ground beef is only one form of beef. About 48 percent of the beef consumed is in the form of ground beef. Ground beef can be used in many different main dish and snack foods, for example, casseroles, pizza and tacos. Other types of ground meat such as venison, elk or ground turkey, pork or lamb can be substituted in recipes.



### Safety

If ground beef is purchased fresh, use it within 2 to 3 days or freeze it. Store ground beef in the coldest part of the refrigerator.

If ground beef is frozen, plan ahead and defrost frozen meat in the refrigerator. If thawed on the counter, meat will get warm and this will allow potentially dangerous microorganisms to grow.

**Note:** If you forget to take your ground beef out of the freezer, you can thaw it quickly in a microwave. Check to see if your microwave has a defrost setting and follow the instructions. To defrost, place the ground beef in a microwave safe pan and cover loosely. Microwave on defrost for 3 minutes (for 1 pound of ground beef) or until you can separate the meat into chunks.

You may be able to use a food processor to chop the onion or prepare the coleslaw. Refer to Management on page 25. If you use a food processor, have your parent or leader show you how to use it safely. Have one of them sign your operator's license.

### OPERATOR'S LICENSE

\_\_\_\_\_ is licensed to operate a food processor.

Date \_\_\_\_\_ Signed \_\_\_\_\_



### Food Preparation

Let's make lunch or supper. Here is an easy menu:

- Sloppy Joes
- Coleslaw
- Bread or Buns
- Fresh or Canned Fruit
- Milk

## Sloppy Joes

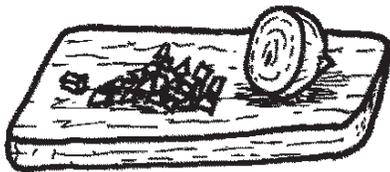
### Recipe (4 to 6 servings)

- 1 lb ground beef
- 1-10¼ oz can condensed tomato soup
- 2 Tbsp brown sugar
- 1 small onion, chopped
- 1 tsp mustard

### Conventional Method

#### Equipment Needed

- Skillet
- Wooden spoon or heat proof spatula
- Paring knife
- Cutting board
- Measuring spoons
- Can opener



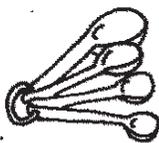
#### Procedure

1. Chop the onion. Have someone show you how to chop an onion safely.
2. Crumble ground beef into the skillet. Add onion.
3. Cook and stir with a wooden spoon over low to moderate heat until meat is lightly browned and onion is soft. Spoon or drain off the drippings before adding the other ingredients.
4. Add tomato soup, brown sugar and mustard. Stir, cover and simmer over low heat for about 10 to 15 minutes.
5. Variation: Increasing the mustard makes a spicier taste. Season according to your taste.

### Microwave Method

#### Equipment Needed

- Hard plastic colander, microwave safe
- 1½ qt microwave safe casserole
- Paring knife
- Cutting board
- Potholders
- Plastic wrap
- Paper towels
- Can opener
- Measuring spoons
- Wooden spoon



#### Procedure

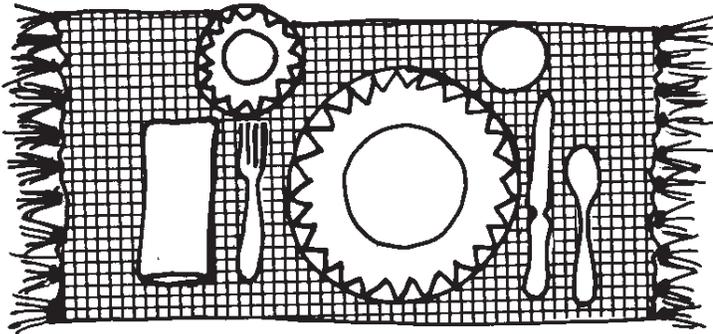
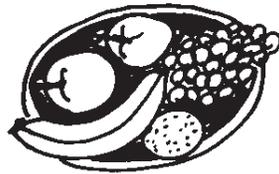
1. Rest hard plastic colander in casserole. Crumble the ground beef in the colander. Add onion.
2. Microwave on 100 percent power for 3 minutes. Break up the meat with a wooden spoon. Microwave for another 1½ to 3 minutes on 100 percent power. Stir again. If some meat is still not cooked, microwave for another minute on 100 percent power.
3. Remove the colander from the casserole, and carefully pour the fat from the casserole into an empty can or other suitable container.
4. Wipe the casserole with a paper towel to remove any leftover fat. Pour the browned, drained beef from the colander into the clean casserole.
5. Stir in the tomato soup, brown sugar and mustard. Cover with the lid or vented plastic wrap.
6. Microwave on 100 percent power for 2 to 3 minutes. Stir with a wooden spoon (use potholders and be very careful of steam while removing lid). Cover and microwave for another 2 to 3 minutes on 100 percent power or until hot. Let stand, covered, 5 minutes before serving.



## Management

Here are other ways to speed preparation. You can use a food processor to chop onions for the “Sloppy Joes” and to shred the cabbage for coleslaw. Follow this plan to get all foods on the menu ready at one time:

1. While your Sloppy Joe mixture cooks, set the table and prepare the vegetables, bread and fruit.
2. To set the table, set at each place all the dishes, glassware, silverware and napkins one person needs. Arrange each place setting like this:



3. For an easy meal, use a bowl of fresh fruit for a centerpiece and enjoy it for dessert. If you use canned fruit, place it in a bowl with a serving spoon. Remember to add sauce dishes and teaspoons at each place setting. Canned fruit can also be spooned into individual sauce dishes ahead of time.
4. Sloppy Joes are good served over hamburger buns or bread. Buns or bread may be toasted or warmed in the oven. Warm the buns last, just before you sit down to the meal.
5. You can dish up individual servings or allow each person to serve Sloppy Joes from the counter. Or place a bowl of Sloppy Joe mixture on the table and let people serve themselves. For a casual meal you may serve the food from the skillet. Be sure to protect your table with a trivet beneath the skillet. Serve the buns in a covered basket.



## Nutrition/Health

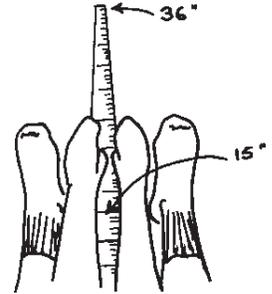
Every cell in your body contains protein. In fact every living cell — plant and animal — contains protein. Some foods contain more protein than others.

Animal sources supply high quality protein. Along with protein, animal sources of food supply important minerals such as iron and zinc. These help keep your blood healthy. Meat, fish and poultry are important sources of vitamin B<sub>12</sub> which is only found in animals. What are a few animal-source protein foods? Remember that milk comes from animals, too!

### Are Your Muscles Flexible?

Another area of fitness is flexibility. This is the ability to bend and stretch easily. How flexible are you? Let's find out.

To test yourself on flexibility, you need a rug or a small floor mat and a yardstick. Sit on the rug or mat with your legs slightly spread. Place the yardstick between your feet with the 1-inch mark toward you and your heels in line with the 15-inch mark. You may want to hold the yardstick in place with masking tape.



The test will have you bend over and reach out toward your toes as far as possible. Don't bend your knees! Have a friend watch how far along the ruler you reached. Try this three times. Compare your best score with the results below:

	Girls Age 9 to 11	Boys Age 9 to 11
Excellent	23.5 or more inches	21.0 or more inches
Above average	19.5 to 23.4 inches	17.5 to 20.9 inches
Average	17.5 to 19.4 inches	16.5 to 17.4 inches
Below average	16.0 to 17.4 inches	14.5 to 16.4 inches
Needs improvement	15.9 inches or less	14.4 inches or less

Dancers and gymnasts especially need to be flexible. Watch a dancer or a gymnast to see what kind of movements they make.

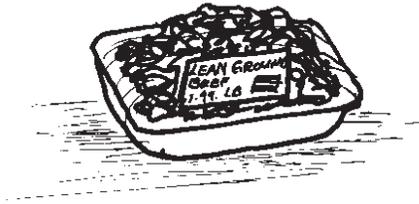


## Consumerism

Look at the ground beef label in the store. The meat might be labeled “regular,” “lean” or “extra lean.” What is the price per pound for each?

Hamburger or ground beef may contain up to 30 percent fat. Some ground beef has less. Lower-priced ground beef usually contains more fat than the higher-priced ground meat. You can reduce the amount of fat you eat by browning and draining off the fat as suggested in the recipe. Some fat is needed to make the cooked meat juicy and flavorful.

Check to see if there is a date label on the ground beef. This tells how fresh the meat is.



## Food Activity

Compare the cost of different forms of ground beef.

- Does the quantity in the package make any difference in the price per pound?
- If you buy in larger quantities, you must use the meat soon or repackage in smaller portions and freeze it.

How does your family buy ground beef? Why?

What foods made with ground beef are family favorites?



## How Did You Do?

X Good  O Need to improve

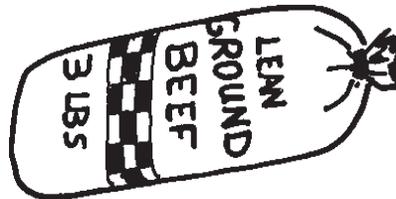
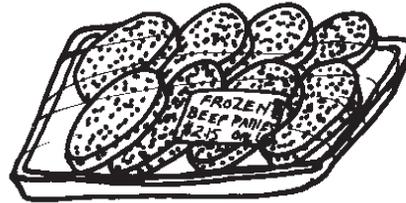
Do the Sloppy Joes:

- Look attractive?
- Seem moist enough, yet not too soupy?
- Have no extra fat?
- Have the right amount of Sloppy Joe mixture?

## Did You Learn?

Y Yes  N No

- To chop the onions?
- Some tips for buying ground beef?
- What foods contain protein?
- To use a food processor?
- To prepare and serve a meal?
- To prepare enough Sloppy Joes for your family?
- To measure your flexibility?





# Milk — A Special Food in a New Way

## *Impossible Pie*



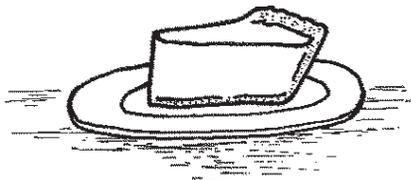
### Key Points

**Learn to**

- recognize the importance of milk in our daily diet
- use a blender
- make a dessert food

### Introduction

You need three 8-ounce glasses of milk every day. There are other ways to include milk in your diet. Let's learn to use milk in an "Impossible Pie." Solve the mystery. Find out what makes the crust.



### Background

Did you know that the production and processing of dairy products and sugar products are large industries in the Pacific Northwest? More people are employed in processing dairy products and sugar than are employed in producing these products.

Milk is the first food we consume. We never outgrow our need for the valuable nutrients milk contains. Cows were usually part of the wagon trains that brought pioneers to the West. The milk you drink may be produced hundreds of miles from where you live. Today, large dairies and ultra-modern processing plants deliver fresh milk daily to your local supermarkets.

Sugar comes from two sources — sugarbeets and sugar cane. Sugarbeets are raised in the Pacific Northwest. Sugar cane is found primarily in tropical climates. Pioneers did not have sugar as we know it today. They carried it with them in the form of sorghum, molasses or honey. Sugar was a valuable commodity.



### Safety

Review the oven safety tips in Unit 2, "Wheat for Extra Good Cookies." In this activity you will learn how to use the blender. Have your leader or a parent show you how to operate a blender. When you are sure you understand, have one of them sign your operator's license. Be safe. Be sure the blender is on the "off" position before adding ingredients. Always put on the lid securely before turning on the blender.

#### OPERATOR'S LICENSE

\_\_\_\_\_ is licensed to operate a blender.

Date \_\_\_\_\_ Signed \_\_\_\_\_



### Food Preparation

How do you use Impossible Pie in a meal? You can use it as a dessert with a light menu, like this:

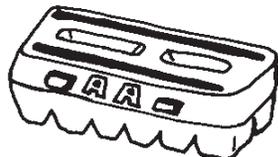
- Milk
- Tuna sandwich
- Carrot Sticks
- Impossible Pie

Or as refreshments for a special party with a favorite beverage.

## Impossible Pie

### Equipment Needed

Blender (food processor or mixer could be substituted)  
Measuring cups  
Measuring spoons  
Rubber spatula  
9- or 10-inch pie pan (glass or microwave safe for microwave)  
Potholders



### Recipe (Serves 8)

6 tbsp melted butter or margarine  
2 cups milk  
2 tsp vanilla  
1 cup sugar  
4 eggs  
½ cup flour  
¼ tsp salt  
1 cup flaked coconut (optional). Other ingredients such as nuts, raisins or other dried fruit may be substituted for coconut.



### Procedure

1. Preheat oven to 375°F. (Make sure the oven is empty and the rack is in the center position.)
2. Grease and flour a 9- or 10-inch pie pan. You can use the wrapper from butter or margarine to grease the pan. Using extra flour, add a few tablespoons to the pan. Shake to coat the pan with flour, and then shake out the excess.
3. Melt the butter or margarine.
4. Put all the ingredients in the blender in the order they are listed. Blend until mixed.
5. Using a potholder, carefully pull the center rack partially out of the oven. Put the greased and floured pie pan on the rack and pour the mixture into the pan. Again using the potholder, carefully slide the rack back into the oven and close the door.
6. Bake at 375°F for 40 to 50 minutes or until golden brown. It should not be jiggly. If you stick a knife in 1 to 2 inches from center, it should come out clean. Loosen edges before cutting into wedges.

### Microwave Method

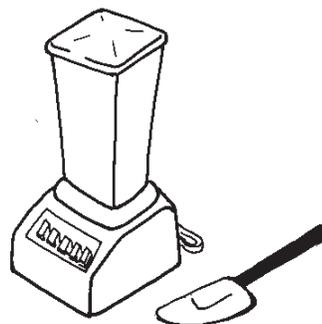
1. Use a 10-inch pie plate suitable for microwave oven (glass).
2. Microwave uncovered on full power for about 10 minutes.
3. Rotate a half turn every 3 minutes, until filling is firm. (Optional: Place pie under broiler until top is golden brown.)
4. Cool several hours or overnight.

Note: At room temperature products that contain milk can spoil rapidly. Refrigerate Impossible Pie after it cools to delay spoilage and keep it fresh and tasty.



### Tips for Success

- Use the right size pan.
- Remember glass bakes hotter than metal so when baking in glass lower the oven temperature 25°F.
- If you do not have a blender, you can use a mixer or a food processor.





## Management

What is the total preparation time for Impossible Pie? This recipe is easier to make and takes less time to prepare than a regular pie with crust.

Pie must have enough time to “set up.” This means the hot pie continues to cook and become slightly more firm after being removed from the oven. Impossible Pie can be made ahead of time and refrigerated after it has cooled.

This pie may be served after it has cooled to room temperature or it may be served chilled.

Conserve energy by planning a meal using the oven to bake other foods at the same time your Impossible Pie bakes.

Offer to help with setting the table while food in the oven bakes.



## Nutrition/Health

Desserts are considered part of the fifth or “other” food group. Foods from the fifth group should be eaten in small amounts. Be sure you have had foods from all the other food groups first. Many foods in the “other” group are high in calories and fat. Balance the foods eaten from this group with your activity level.

Impossible Pie contains food ingredients from three food groups:

- Flour from the bread and cereal group
- Eggs from the meat group
- Milk from the milk group

To include all four food groups in the Impossible Pie meal, serve it with sliced fresh fruit.

Can we lower the calories and still have a tasty dessert?

To cut down on the percentage of calories from fat you can substitute skim, 1 percent or 2 percent milk for whole milk. If you substitute skim milk for whole milk in this recipe and use less sugar, each piece of pie will have 40 fewer calories. Use  $\frac{3}{4}$  cup of sugar instead of 1 cup. Do you think there is a difference in taste when this pie is made with lowfat milk and less sugar? Why not try it and see? Then determine which pie you like best.

Compare this pie to a piece of peach pie:

- $\frac{1}{8}$  of a peach pie contains 420 calories.
- $\frac{1}{8}$  of an Impossible Pie (with skim milk and  $\frac{3}{4}$  cup of sugar) contains 270 calories.



## Food Activity

- Compare several types of milk for taste and cost.
- Tour a local dairy or milk processing plant.



## Consumerism

Milk comes in different forms — fresh milk, whole milk, 2 percent, 1 percent, skim milk, non-fat dry milk and evaporated milk.



## How Did You Do?

X  Good  O  Need to improve

Is your pie:

- Attractive and appetizing?
- Smooth and tender, center firm, not juicy?
- Crust evenly browned and tender?
- Served at the appropriate temperature?
- Appealing in taste, well-blended flavor?

## Did You Learn?

Y  Yes  N  No

- To lower calories and fat by substituting different forms of milk?
- How to use a blender?
- To use a food processor?
- To test custard for doneness?
- Different ways to include milk in your diet?



# Bountiful Beans

## Beans Hot-Cha-Cha



### Key Points

#### Learn to:

- prepare a food using beans
- grate cheese
- heat cheese properly
- use a food as a snack or main dish
- use canned beans for a quick meal when time is short
- rate your strength

### Introduction

Sometimes we need to prepare meals in a short time. Having food on hand is the key to preparing a quick and easy main dish or snack. Canned beans from the Northwest are favorite fast foods.



### Background

Beans were a staple food of miners. Since the earliest days of history, dry beans have filled an important role in human living and in keeping humans healthy. Preserving beans for later use was simply a matter of letting them dry. Beans become a year-round source of primary nutrients.

Dry beans are an important crop in Northwest agriculture. Dry beans are part of a group of foods known as legumes. These include chickpeas (garbanzos), dry peas and lentils.

Milk production and cheese-making are major industries in the Pacific Northwest. This region ranks high nationally in cheese production. Cheese is shipped to other states from the Pacific Northwest.



### Storage

Store chips in the bag in a cool, dry place to stay crisp. Store cheese in the refrigerator. Wrap tightly or place in an airtight container. If you grate cheese ahead of time, place it in a tightly covered container so it does not dry out.



### Safety

If you find mold on cheese, remove all mold and cut off a 1/2-inch piece around the area of the mold.

Cheese may be frozen to prevent mold, but it will be crumbly when thawed. It is still suitable to use for cooking and as a topping. It may be used where a recipe calls for grated cheese.



### Food Preparation

Make Hot-Cha-Cha as a main or snack dish. Which sounds best to you?

#### (As a meal)

Hot-Cha-Cha  
Fruit and Cookies  
Milk

#### (As a snack or appetizer)

Hot-Cha-Cha  
Milk

## Hot-Cha-Cha

### Equipment Needed

Grater or food processor to grate cheese  
Range or microwave  
Wooden spoon  
Sauce pan or microwave safe bowl or casserole with lid  
Cutting board  
Slicing knife



### Recipe (for 3 servings)

- 1 15-oz can of chili with beans, heated
- 1 small head of lettuce, shredded
- 1 tomato, chopped
- 1 cup grated Cheddar cheese
- 1 7- or 8-oz bag corn chips or tortilla chips

#### Optional toppings:

- 1/4 cup chopped green onions
- 1/4 cup sliced green pepper
- 1/4 cup sliced olives
- 1/2 cup sour cream

### Recipe (for 6 servings)

- 2 15- or 1 30-oz can of chili with beans, heated
- 1 large head of lettuce, shredded
- 2 tomatoes, chopped
- 2 cups grated Cheddar cheese
- 1 15- or 16-oz bag corn chips or tortilla chips

#### Optional toppings:

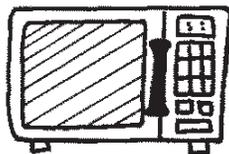
- 1/2 cup chopped green onions
- 1/2 cup sliced green pepper
- 1/2 cup sliced olives
- 1 cup sour cream

### Conventional Method

1. Heat chili in saucepan on range. Start with medium heat and lower heat when it begins to bubble. Stir frequently to keep it from sticking to the bottom of the pan.
2. Cut head lettuce in half. Place on cutting board. Shred each half by making thin, even slices lengthwise. You can also shred lettuce in a food processor. Refer to Unit 5, "A Meaty Main Dish with Zest," for using a food processor.
3. Grate cheese, chop toppings, set aside for serving.

### Microwave Method

1. Shred lettuce, grate cheese, prepare toppings, set aside for serving.
2. Place chili in 1 quart glass cup or microwave safe bowl. Cover with lid or vented plastic. Heat at full power 3 to 4 minutes for 1 15-oz can. Stop the microwave and stir once or twice while it is heating.



### Serving

To make one serving, place the ingredients on a plate in this order.

1. Place a layer of chips on plate
2. Spoon heated chili over chips
3. Add a layer of shredded lettuce
4. Add some diced/chopped tomatoes
5. Top with 1/3 cup shredded cheese
6. Add any or all optional toppings, if desired
7. Eat right away

You can demonstrate how to layer the Hot-Cha-Cha, then let people serve themselves.

Bottled hot sauce or salsa may be served as an accompaniment. Each person can add hot sauce if desired.



## Nutrition/Health

Beans and other legumes are part of the meat group. The protein in beans is low in one of the essential parts of protein and therefore is called an “incomplete” protein. The lack of this part is easily made up when beans are served with a food such as rice or corn that is high in this substance.

Thus, the proteins found in beans and rice or corn are said to be complementary proteins. Bean protein can also be made “complete” by serving beans with small amounts of meat, fish, cheese or egg.

The cheese and chips in the “Beans Hot-Cha-Cha” make this a complete protein.

What are you doing now that is keeping you physically fit?

- \_\_\_ dancing
- \_\_\_ gymnastics
- \_\_\_ school sports
- \_\_\_ walking



## Are Your Muscles Strong?

How strong and movable your muscles are is the third part of fitness. Strong muscles will let you do more types of sports. Weight lifters and football players are examples of athletes who must have strong muscles. Having flexible muscles lets you move in all directions with less chance of hurting yourself.

A good test to see how strong your stomach muscles are is the bent-knee situp test. Lie on your back and bend your knees so your feet are together and flat on the floor. Cross your arms over your chest. Starting from the ground, curl your upper body up so you reach a sitting position. Then lower yourself down. How many can you do in one minute?

Compare your score with the scores below:

	Girls Age 9 to 11	Boys Age 9 to 11
Excellent	45 or more	50 or more
Above average	37 to 44	40 to 49
Average	31 to 36	34 to 39
Below average	25 to 30	28 to 33
Needs improvement	Less than 25	Less than 27



For arm strength, see how many pullups you can do. All you need is a bar which is over your head. Grab the bar with both hands, and see how many times you can pull yourself up to the bar so your chin reaches above the bar. What are your results?

\_\_\_ times.

Check your results with the ones below:

	Girls Age 9 to 11	Boys Age 9 to 11
Excellent	3 or more	10 or more
Average	1 to 2	5 to 9
Needs improvement	0	Less than 4



## Consumerism

- Look at the date stamped on your bag of chips. Chips will be crisp and fresher tasting if eaten before this date.
- Compare cost per ounce for different sized cans of chili. If you wanted, you could make your own chili from dry beans.
- When you purchase your canned chili look for the other types like chili with beans only and chili without beans. Note: Chili also comes in a variety of flavors, typically labeled hot, medium or mild. This refers to the degree of spiciness. Try mild chili first. Find out how “hot” you and your family like it. Hot sauce can be added for additional spicy flavor.





## Management

Using canned foods saves time in meal preparation. You can keep all the supplies for Hot-Cha-Cha on hand. This is a quick meal for busy times.

For extra time saving, serve your snacks on paper plates. This saves clean-up time.

Leave the kitchen counter cleaner than you found it. Cleaning up means cleaning all appliances you use. Clean the counter tops, tables and floors as well as spoons and pans.



## Food Activity

How many varieties of beans are on the supermarket shelf? Visit a supermarket and find out.

Visit a cheese factory and watch cheese being made.

Compare flavors of canned chili. Which do you like best?

## Science Experiment On Cooking Cheese

Can you explain why?

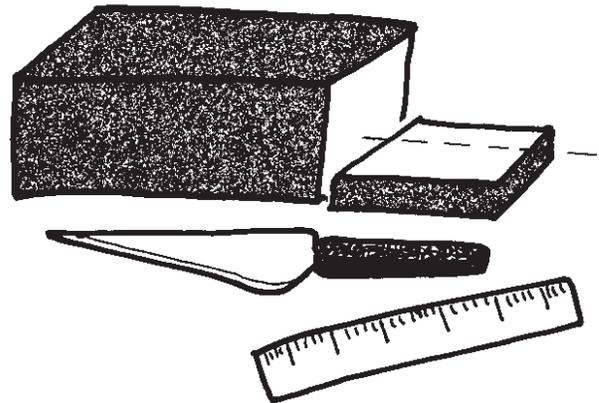
How do you prevent cooked cheese from becoming tough and rubbery?

### Supplies:

Natural Cheddar cheese  
Skillet  
Knife  
Aluminum foil



1. Cut a ½-inch thick slice of cheese. Then cut that slice in half.



2. Place the cheese on two pieces of foil in a skillet. Be sure the foil is flat against the bottom of the pan.
3. Heat slowly until cheese is softened.
4. Remove one slice.
5. Increase the heat and continue cooking the other piece of cheese for a few minutes.
6. Remove and examine both pieces.

### Conclusions:

Did you notice that one piece of cheese is rubbery? Which one? Can you explain why? If you're not sure, find the answer on page 44.



## How Did You Do?

Did you prepare the Hot-Cha-Cha as a main dish \_\_\_\_\_, a side dish \_\_\_\_\_ or both \_\_\_\_\_?

Good  Need to improve

Was your Hot-Cha-Cha:

Tasty and appealing?

Attractively served?

Is your strength:

Average or above?

## Did You Learn?

Yes

No

To prepare a quick snack or main dish?

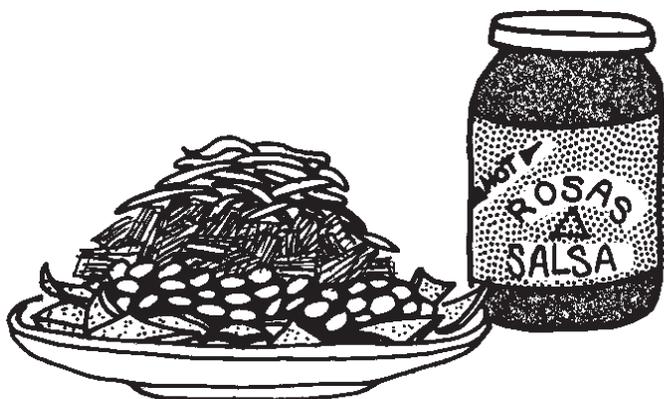
The advantage of using canned food?

To melt cheese at the proper temperature?

About beans in the Northwest?

Why beans are a good food to eat?

To measure your muscle strength?





# Vegetables for Variety

## Fresh Vegetable Salad Bar



### Key Points

#### Learn to:

- include vegetables to give meals variety, color, texture and flavor
- recognize important nutrients in vegetables
- buy and store vegetables — fresh, frozen and canned
- use a french knife
- balance eating and exercise for good health



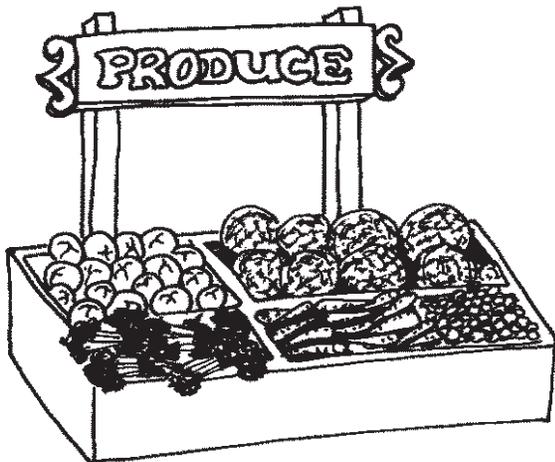
### Introduction and Background

The Northwest is an important producer of seeds for garden vegetables. Seed is certified to maintain quality.

Quality vegetable garden seeds are those that sprout successfully.

You may use vegetables from the family garden. If you don't have a garden, you may purchase fresh vegetables at a store or farmers market.

Researchers at your land-grant university help develop new and improved varieties of vegetables for home and commercial gardens.



### Food Preparation

Let's learn to make a salad bar. A salad bar allows you to be creative. Ingredients in a salad bar are limited only by your own imagination. Every one can make an individually perfect salad. A salad bar has several parts:

- base
- dressings
- additions
- toppings

**Bases** are lettuce (several kinds), spinach, cabbage and other greens. These can be used individually or several can be mixed together.

**Additions** are vegetables such as carrots, celery, cauliflower, etc. Only the imagination limits what you choose.

**Dressings** add and blend flavors. They can be simple like lemon juice or complex like Thousand Island.

**Toppings** add crunch and color. Examples are seeds or toasted bread cubes.

Design your salad bar by choosing a variety of vegetables or fruits for color and shape. Slice vegetables in different ways to change their shape.

**Guidelines** — Choose 1 or 2 items for a base, 3 to 5 for additions, 2 or 3 for toppings and offer a choice of 1 or 2 dressings. For a special occasion or a larger meal, you can offer more choices.

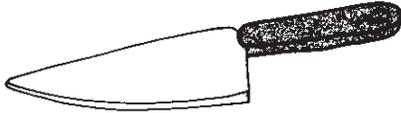
A salad bar can be a light main dish by adding meat, fish, cheese or other protein food.

Without the addition of protein foods for a topping, a salad bar can be a light side dish for any meal.

See the next page for a list of salad bar items.

## Preparation Tips

Learn to use a french knife for chopping vegetables such as onions, chives. A french knife is also useful for slicing vegetables thinly. Compare using a french knife with a regular slicing knife.



Another way to chop, grate or shape your vegetables differently is to use a food processor. Refer to Unit 5, "A Meaty Main Dish with Zest," for a review on the safety tips and methods for using a food processor.

**Hint:** If you make carrot curls or other fancy shapes, store them in ice water to set and maintain their shape.



## Safety

- With your leader, review safe handling of knives.
- Wash and drain raw vegetables before preparing.



## Serving

You can serve your salad bar several different ways. One way is to arrange base, additions, dressing and toppings on a counter. Let people serve themselves buffet style. A small side table or card table would be suitable for the salad bar.

People also can be served from a seated position if you can arrange the foods on a lazy susan.



## Management

Most raw vegetables can be prepared up to several hours ahead of meal time. For example, you can slice or make narrow matchlike strips from carrots, radishes and celery. If prepared ahead, store them in ice water in the refrigerator for extra crispness.

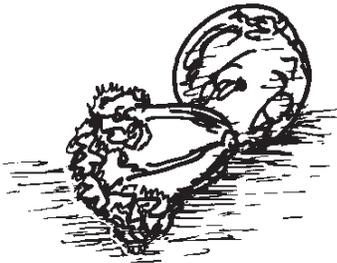
Vegetables such as mushrooms will become limp, shriveled and dry if sliced and prepared ahead of time. They cannot be stored in water. Prepare them shortly before serving.

## Salad Bar

Choose from the following list to make your salad bar according to the suggested guidelines.

### Base

lettuce  
spinach  
cabbage  
other leafy  
vegetables



### Additions

carrots  
onions  
peppers  
broccoli  
cauliflower  
sprouts  
marinated or cooked  
vegetables  
celery  
meat (cold/leftover)  
cheese  
beans, lentils, peas (canned  
or cooked ahead of time)  
mushrooms  
artichoke hearts  
chives  
fruit, fresh or canned  
what others can you think of?

### Toppings

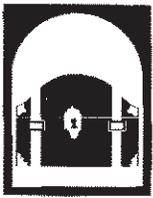
nuts  
raisins  
seeds  
seasoned bread  
cubes  
bacon bits



### Dressings

purchased  
regular  
low calorie  
make homemade  
vinegar  
lemon juice  
olive or salad oil





## Storage

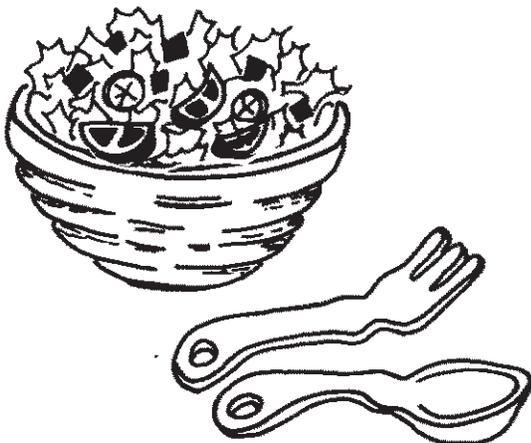
Fresh vegetables have a short storage life. Pick or purchase only what you plan to use soon. Different vegetables require different storage methods.

- Wash, drain and dry lettuce or greens and wrap them for storage in the vegetable keeper.
- Root vegetables such as carrots, radishes and turnips are best washed, drained dry and stored covered in the refrigerator.
- Store celery covered in the refrigerator. Wash only the amount to be used.
- Store and serve tomatoes at room temperature for best flavor.
- Cucumbers, summer squash and green pepper can be stored covered in the refrigerator. Wash before using.
- To store leftover canned vegetables, remove from can and place in a suitable plastic or glass container.
- Leftover vegetables from the salad bar can be stored in covered containers in the refrigerator. They will keep for about one day.



## Consumerism

When making your decisions about vegetables to include in your salad bar, check the produce section of your market. Which vegetables are lower in cost and higher in quality? For example, tomatoes purchased in January may not be as tasty and will be more expensive than those purchased at a farmers market in August.



## Nutrition/Health

Vegetables contain a variety of essential minerals and vitamins. The greater the variety of vegetables in your salad, the more likely you are to obtain the nutrients for good health.

Raw vegetables are low in calories and complement foods that are high in calories. Vegetables are also high in fiber.

**Beware:** A salad bar meal can contain more calories than you expect. Generally the greens and most fresh vegetables are low in calories. Toppings — and especially dressings — contain most of the calories. To limit calories, limit the amount of dressing or choose low calorie dressings. For example:

- 1 tablespoon of mayonnaise = 100 calories
- 5 carrot sticks ( $\frac{1}{4} \times 3$  inches) = 15 calories

Most of the fat (and calories) are found in the dressing:

- 1 tablespoon regular french = 85 calories
- 1 tablespoon thousand island = 60 calories
- 1 tablespoon low calorie french = 25 calories

## Exercise for Health

### What's Right for You?

In units 2, 4, 5 and 7 you learned about three types of fitness. Did you measure your fitness? How well did you do? You may have scored very well in some areas and may need improvement in others. With exercise you need a variety of activities to keep your endurance up and to build muscle strength and flexibility.

How much exercise is right for you? Here's an easy guide to follow. Try to earn at least 30 points each week based on the activities described. If you exceed this number, you are doing great! To keep score, turn the page.

Record your activities for a week. For example: If you walked a mile in the morning and evening on Monday write in 2, twice. Record the number

of points for activities each day. Think about activities such as walking or running that you do with friends.

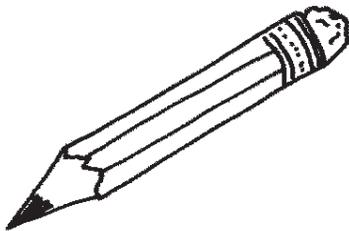
## What's Your Score?

Activity	Time/Distance	Points	My record						
			M	T	W	T	F	S	S
Walking	1 mile	2							
Jogging	1 mile	3							
Biking	5 miles	3							
Swimming	500 yards	3							
Aerobic dance	30 minutes	5							
Soccer	30 minutes	4							
Cross-country ski	1 hour	18							
Downhill ski	1 hour	6							
Tennis	1 hour	4							
Ice or roller skate	1 hour	5							
Football	1 hour	6							
Volleyball	1 hour	4							

Add up your score for each day.  
Place those totals here:

- Monday \_\_\_\_\_
- Tuesday \_\_\_\_\_
- Wednesday \_\_\_\_\_
- Thursday \_\_\_\_\_
- Friday \_\_\_\_\_
- Saturday \_\_\_\_\_
- Sunday \_\_\_\_\_

Add these for your weekly score \_\_\_\_\_



How are you doing? \_\_\_\_\_

---



---



---



## Food Activity

- Visit a farmers market.
- Raise a vegetable in your home garden. Look into 4-H gardening projects.
- Visit a co-op garden or talk with someone who has experience gleaning food.
- Compare raw vegetables with cooked. Which way do you like them better?
- Sprout some seeds (such as alfalfa) for yourself. Remember to purchase seeds that are safe to eat.



## How Did You Do?

X  Good  O  Need to improve

Did your salad bar:

- Contain a pleasing variety of vegetables?
- Contain foods of different colors, textures and shapes?
- Have a good proportion of greens, additions, dressings and toppings?

## Did You Learn?

Y  Yes  N  No

- To wash and store vegetables properly?
- How to use a french knife?
- What ingredients in salads contain the most calories?
- How much exercise is right for you?



# Sharing What You Know

You've learned a lot in this project. Wouldn't it be fun to share with others something you've learned?

Plan a "Show and Tell" on some aspect you've learned. For example:

- Organize and plan a food fair that is a show and tell, not a party.
- Prepare a specific food
- Perform a science demonstration
- Show how to use a specific appliance or piece of equipment.

## Step 1 — Plan

Get together with your club members and leader and decide:

- Where you're going to have your activity and when. (For example, choose a leader's or member's home or use the meeting room at the county Extension office.)
- Who you will invite? (Show your parents or invite some non 4-H'ers. They might want to join when they see how much you've learned.)
- What you're going to share. (Have a variety of activities. It would be more interesting if everyone did something different.)

This could be a meal or end with sampling the food items you make for light refreshments. If you plan it well, you can have lots of fun things to eat.

## Step 2 — Develop Your Plan

Complete the planning guide:

Event or activity to share what we know will be:

Day \_\_\_\_\_ Date \_\_\_\_\_

Time \_\_\_\_\_ Place \_\_\_\_\_

Who will be invited? \_\_\_\_\_

**Program:** (Outline briefly what will take place. For example, welcome, introductions, exhibits, demonstrations, sampling, etc. List program in outline form in the space below).

---



---



---



---



---



---

Who will do what? (Use the form below to plan assignments. Be sure everyone is included in planning and helping with the event.)

## Program Events

(Some are listed. Add those you are planning in the blank space.)

	Who will prepare/give?	When, how or what is needed?
Invitations		
Welcome		
Exhibits		
Demonstrations		
Entertainment		
Other		

### Step 3 — Plan a Demonstration

Use this outline to help you plan a speech or presentation. (Pointers: One secret in planning a good outline is to make brief notes instead of writ-

ing down everything you will say. Talk in your own words, think about what you are doing, and tell about it as you go along. Be sure to SMILE and enjoy!)

#### Show and Tell Outline

**Title:** Be creative. Your title can be an attention-getter.

Your title: \_\_\_\_\_

##### The "Show" (What You Do)

List in order what you do. Use charts, posters or other visuals to help you explain.

**Introduction:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Main action:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

##### Show your results:

Show a finished product. You might pass out samples of the food you prepare. If you cannot complete a whole job in a short time, you can prepare a sample ahead of time. For example, if there isn't time to bake cookies, have some baked ahead to show.

##### Invite your audience to ask questions:

Ask "Are there any questions?" If you get a question the rest of the audience didn't hear, repeat it. If you don't know the answer, say so. You might ask if anyone in the audience knows the answer, so they could share.

##### A courteous ending:

Thank your audience for their attention. Use your own words that say how you feel about it.

##### The "Tell" (What You Will Tell)

Tell about an experience related to what you are showing. Tell why you chose this experience to show:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Sum Up:** Give the main points you want people to remember.

\_\_\_\_\_

\_\_\_\_\_

### Step 4 — Do It

Follow the steps and carry out your plan.



## How Did You Do?

X Good O Need to improve

Was your activity:

     Well planned?

     Carried out on schedule?

## Did You Learn?

Y Yes

N No

     To cooperate as part of a group?

     To show and tell others something you know?

What did you like about the "Share What You Know" activity?



# Experiment Results

## Experiment: Unit 1

### Why Do Cut Surfaces Of Light-colored Fresh Fruits Darken?

Foods contain substances called enzymes. When cut food is exposed to air, the enzymes cause a darkening. Some fruit juices, as well as a salt solution, prevent discoloration.

In the experiment, the fruit that had no treatment and was left exposed to the air has started to darken. However, the color of the pieces dipped in lemon or pineapple juice has changed very little and the color of the one dipped in the salt solution probably will not be changed. Light-colored peeled fruits that stand before serving should be protected from darkening by using one of the above treatments.

## Experiment: Unit 2

### Using Cookie Sheets For Baking Cookies

Cookies dropped 2 inches apart on a cookie sheet brown on top, bottom and sides. Cookies baked in a deep baking pan brown on the bottom but are lighter and do not brown as well on top.

If you have no cookie sheet and want cookies brown all over, turn a deep baking pan upside down and drop cookies on the bottom.

## Experiment: Unit 3

### Cooking Methods for Potatoes

When potatoes are wrapped in foil during baking, the natural moisture cannot escape. Both the inside and the skin will be moist. Unwrapped potatoes baked in a conventional oven will have a moist interior and a dry skin.

Baking in a microwave may be uneven because heat is not evenly distributed. The "standing time" after the potato is removed from the microwave helps complete the cooking.

## Experiment: Unit 4

### Measuring Flour

The fine particles of regular flour pack easily. Sifting helps separate these packed particles and makes it easier to get about the same amount of flour each time you measure it. Shaking the container or cup, or dipping the cup, compacts the flour. One pound of sifted flour measures 4 cups. But if unsifted flour is spooned into a measuring cup, one pound measures 3½ cups.

## Experiment: Unit 7

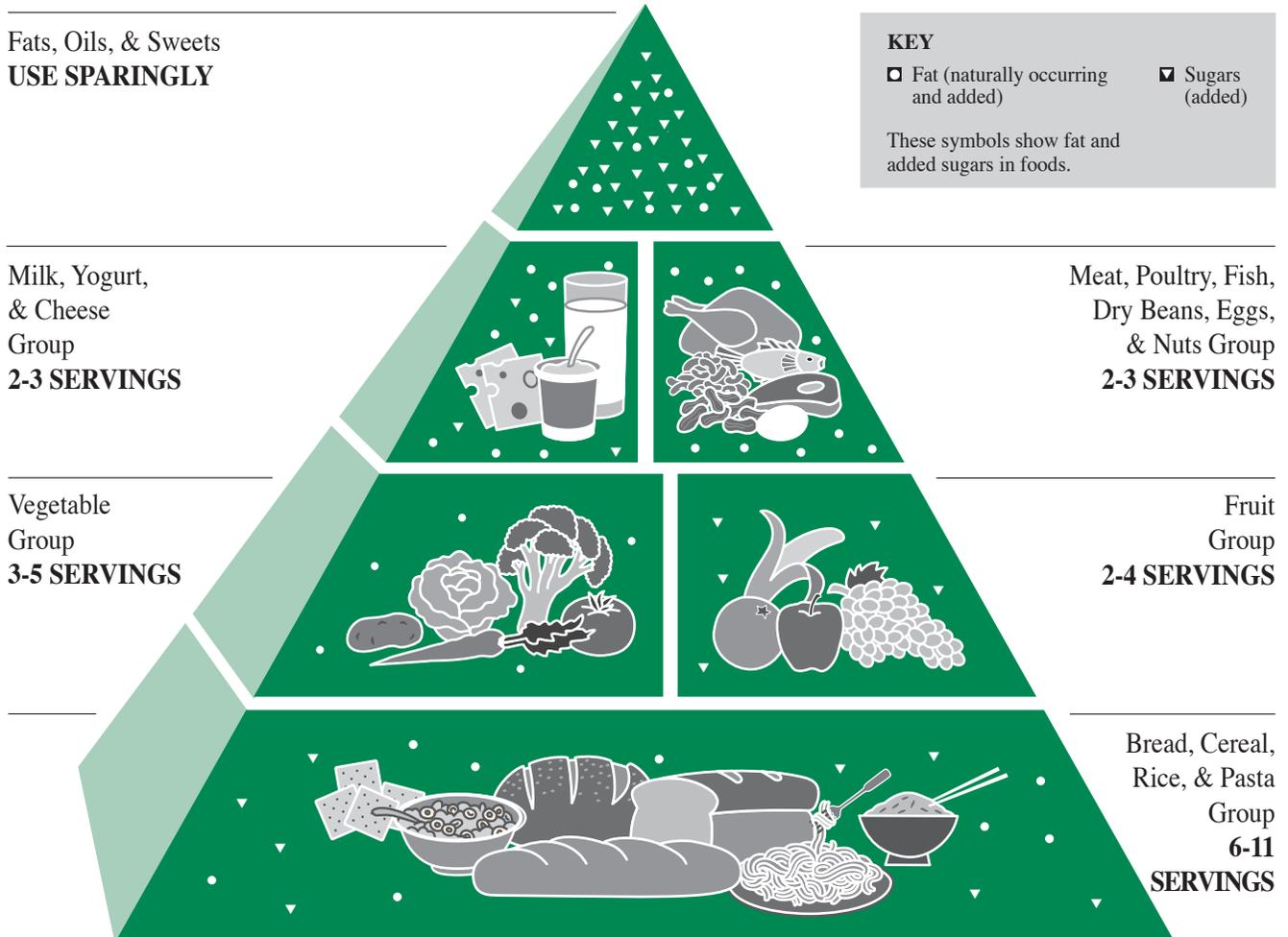
### Cooking Cheese

Cheese contains a large amount of protein. A high temperature and overcooking will cause the protein in cheese to get stringy and tough. When a recipe for a grilled cheese sandwich says cook slowly with low heat, you'll know why.



# Food Guide Pyramid

## A Guide to Daily Food Choices



Source: U.S. Department of Agriculture/U.S. Department of Health and Human Services

## The Food Guide Pyramid

The Food Guide Pyramid is an outline of what to eat each day based on the Dietary Guidelines for Americans. The pyramid was developed by the U.S. Department of Agriculture and replaces the earlier Basic Four Food Groups.

The major differences between the “basic four” and the pyramid are the number of major food groups—five instead of four—and their placement in a pyramid shape. In addition to the five major food groups, the pyramid adds a fats, oils, and sweets category at the top. This is not a major food group.

The pyramid shape is intended to convey the message that people should choose more servings

of foods in the bottom of the pyramid (which are rich in carbohydrates) and avoid too much fat and sugar (the tip of the pyramid).

The pyramid is the plan for each day. It is not a rigid prescription, but a tool that all people can use, allowing for differences in the amounts of food people need for good health.

### Numbers of servings

Foods from all of the food groups are important, but you need more of some foods than others.

The Food Guide Pyramid indicates a general range of servings from each group, with emphasis on the food groups in the lower level of the pyramid. The exact number of servings you need depends on your age, sex, size, and activity level.

### Number of food group servings for men, women, and children

	<b>Many women, older adults</b>	<b>Children, teen girls, active women, many men</b>	<b>Teen boys, active men</b>
Bread group	6 servings	9 servings	11 servings
Vegetable group	3 servings	4 servings	5 servings
Fruit group	2 servings	3 servings	4 servings
Milk group	2–3 servings	2–3 servings	2–3 servings
Meat group	1 (5 oz total)	2 (6 oz total)	3 (7 oz total)
Total fat grams	53	73	93
Calorie level	about 1,600	about 2,200	about 2,800

© 1998 Oregon State University. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials without discrimination based on age, color, disability, gender identity or expression, marital status, national origin, race, religion, sex, sexual orientation, or veteran’s status. Oregon State University Extension Service is an Equal Opportunity Employer.

Originally published as PNW 333, December 1998. Reprinted as 4-H 9311, October 2005.