OREGON STATE UNIVERSITY EXTENSION SERVICE

4-H FOOD+FUN
NUTRITION
Activity Curriculum

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Photo: Asia-Pacific Images Studio/iStock

Oregon State University

4-H 9332
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Photo: Jamie Gibson, © Oregon State University

The Children Youth and Families at Risk program and curriculum development team included (from left) Jamie Gibson, Lisa Perrett, Lindsay Walker, Janna Batara and Emma Suzuki. Not pictured: Carolyn Ashton

This curriculum was created with funding from a Children Youth and Families at Risk federal grant and implemented through in-school and after-school 4-H programming as part of Oregon State University in Linn and Benton counties.

Our goal was to create fun, hands-on learning experiences to help youth cultivate tangible skills.

The program was developed for middle school youth but may be used with a variety of age groups. You may use the lessons individually or as a series. Make sure to adapt activities for students with special dietary needs. Use the activities relevant to your group's interests, space and time frame. We had about 1 hour and 15 minutes to complete our lesson, activities, recipes and cleanup, but would recommend at least 1½ hours to 2 hours.

Use best practicies while shopping, prepping, cooking and storing foods. Nutritional information in this curriculum was taken from USDA.gov, FDA.gov and other sources.

Lindsay Walker, former Latinx outreach coordinator and assistant professor of practice, Linn County; Carolyn Ashton, Extension 4-H Youth Development and associate professor, Benton County; and students Emma Suzuki, Janna Batara, Lisa Perrett and Jamie Gibson, all of Oregon State University.

CONTENTS

This curriculum was reviewed by Registered Dietician Joanne Lyford. The Spanish portions were edited by Monica Echeverri.

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Lesson 1

MINI-LESSON: Why should I care about what I eat?

Learning goal

Understand the importance of eating a well-balanced, appropriate diet to provide short-term energy and long-term health.

Photo: Janna Batara, © Oregon State University

What you need

- Pencils
- Two different colors of paper, cut into quarters

Mini-lesson how-to

1. Ask the group to stand in a circle.
2. Give each member one small piece of paper (use two different colors) and pencil.
3. Ask the youths to write one sentence answering the question "Why should I even care about what I eat?"
4. When done, ask them to crumple the paper.
5. On the count of three, throw papers in the middle of the circle.
6. Ask the youths to choose a paper of a different color than the paper they wrote on.
7. Ask for several volunteers to read what is on the papers.
8. Once some (or all) of the answers have been read, discuss any themes that arose or ask where we formulate our own beliefs about nutrition.
9. Share that the purpose of the program is to learn more about nutrition and cooking so that students may make healthy choices for themselves, which they can share with others.

ACTIVITY: Nutrition icebreaker

What you need

- Activity facilitator
- Beach ball with nutrition-related questions written on ball

Photo: Janna Batara, © Oregon State University

Activity how-to

Ahead of time:

1. Blow up a beach ball.
2. Use a permanent marker to write simple nutrition questions all over the surface of the beach ball. Some examples: *Name a fruit; What is a macronutrient? What is a source of protein?*

During program:

1. Ask the group of youths to form a circle.
2. Explain the game: When the ball is tossed, the person who catches it will attempt to answer the question that lands on their right pinkie finger.
3. Toss the beach ball to a random student.
4. The person who catches the beach ball will say their name and then try to answer the question.
5. After finishing, the student will gently toss the ball to another student.
6. Repeat until all students have participated.

ROUND IT OUT

Prepare a sticker survey about students' first impressions. Provide stickers and a poster with the title "Rate your experience today" and several emojis. Give each student a sticker as they leave and ask them to place it by the emoji that best matches their experience.

PAIR LESSON WITH THIS RECIPE:

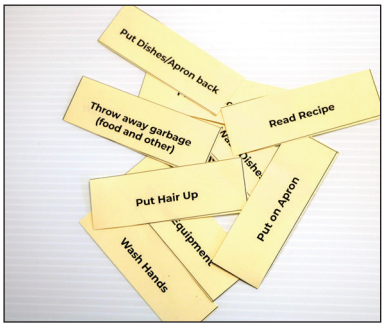
Chicken Avocado Roll-Ups, delish.com/cooking/recipes/a52540/chicken-avocado-roll-ups/

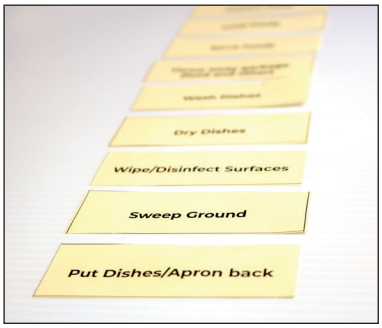
Lesson 2

MINI-LESSON: Meal preparation

Learning goal

Discuss the process of full meal preparation from start to finish and teach youth the importance of time management in the kitchen.





Photos: Janna Batara and Lisa Perrett
© Oregon State University

What you need

Four sets of cards (each with different meal prep steps), shuffled (page 5)

Mini-lesson how-to

1. Ask the youths to assemble into four groups.
2. Provide each group with a set of shuffled meal prep cards.
3. Ask students to organize the cards in order (to the best of their ability), from the start of meal prep to the end.
4. Ask youths to share their results with the group.
5. Ask: Which steps will take more time? Less time?

Post the results, so the youths can have a reminder of the process and can be aware of the time involved in each step.

ACTIVITY: Balloon match-up

Learning goal

This activity helps to teach the basics of kitchen hygiene, equipment handling and injury prevention.

Photos: Janna Batara and Lisa Perrett
© Oregon State University

What you need

- Nutrition questions and answers (pages 6 and 7)
- Activity facilitator
- Balloons

Activity how-to

Ahead of time:

1. Cut and separate the questions from the answers
2. Roll the pieces of paper up and insert into the balloons. Do not add air to balloons yet.

During program:

3. Give each youth a balloon to blow up and tie.
4. Ask youths to toss their balloons on the floor.
5. Explain that each balloon has either a question or an answer, and the goal is to match them correctly.
6. When the facilitator yells "Go," students may pop the balloons, take out the paper and find their match.
7. When they have found their match, ask students to line up next to each other.
8. When all matches are found, the pairs will read their questions and answers out loud.

ROUND IT OUT

What experiences or observations do you have from your own culture in meal preparation? How would you change meal preparation steps when in an outside setting, like a picnic? What could go wrong when you're cooking outdoors?"

PAIR LESSON WITH THIS RECIPE:

Grilled Cheese and Tomato Sammie, http://www.eatingwell.com/recipe/263485/grilled-cheese-and-tomato-sandwich/

Put on apron	**Serve foods**
Put hair up	**Throw away garbage (food and other)**
Wash hands	**Wash dishes**
Read recipe	**Dry dishes**
Gather equipment	**Wipe/disinfect surfaces**
Wash hands	**Sweep ground**
Prepare foods	**Put dishes/apron back**
Cook foods	

Johnny is wearing a bracelet and a ring while making dinner for his family. Why is this wrong?	Food and bacteria can get stuck in jewelry such as rings, bracelets and hair ties. Always make sure your hands are bare and washed!
When a knife is ready to be washed, where should you put it?	The knife should be placed NEXT to the sink. If the knife is in the sink and someone reaches inside, they could get cut!
When cooking on the stove, what direction should the handle of your pan be facing?	The pan handle should always be facing toward either the right or left side to make sure the pan doesn't get knocked off the stove.
Which of the following is NOT one of the five food groups? a. Grains b. Dairy c. Fats	c. Fats! Fat is important in our diets, but it is not one of the five food groups.
Name three reasons why you should wash your hands during cooking.	1. You touched raw meat. 2. You handled dirty dishes. 3. You touched your face.
How do you put out an oil fire?	Smother it with a lid or cover it with baking soda. Never use water to put out an oil fire!
How should you hold a knife when walking across the kitchen?	The knife should be pointed downwards and by your side. This way no one will get cut!

True or false: You should always wipe your hands on your apron when they are dirty.	False. Your apron is only to protect your clothes. You'll need to wash your hands if you wipe them on your apron!
Jane used the same cutting board to cut raw fish and to cut vegetables for a salad. Why is this wrong?	Raw fish has bacteria that are not safe for humans to eat. Using the same cutting board created cross-contamination, and now there is unhealthy bacteria in the salad.
When cutting foods, should your hand be flat or cupped?	Your hand should always be cupped. If your hand is flat, you could cut yourself!
In what shelf of the fridge should raw meat be kept?	Raw meat should always be kept on the bottom shelf to avoid juices dripping on the fruits and vegetables.
Do you need to wear gloves when touching food that is ready to eat?	Yes. Bacteria from your hands can get onto food and make people sick, so always use gloves when handling food that will not be cooked.
Hailey's mom finds a hair in her soup. What could Hailey have done differently to avoid this?	Hailey should have tied her hair back into a ponytail or hair bun.
If you see a spill, what is the first thing you should do?	Clean it up! Don't wait to tell someone, or else people could slip and hurt themselves.
Name two types of produce that are allowed to be kept at room temperature.	1. Onions 2. Bananas
Should you cook a meal for your friends and family if you are sick?	No. If you are sick, don't cook for anyone, or else your germs could contaminate the food and make other people sick, too!

Lesson 3

MINI-LESSON: Handwashing

Learning goal
To understand the importance of proper hand-washing.

Mini-lesson how-to
1. Ask students what they already know about handwashing.
2. Ask them why they think handwashing is important.
   - Why is it important to wash your hands with soap?
   - Why is it important to use warm water?
   - Why is it important to turn the faucet off with a paper towel?
3. Explain the consequences of not properly washing hands: illness, cross-contamination of bacteria (such as from raw chicken or fish), or general poor hygiene.

ACTIVITY: Hand-washing

What you need
- Glo Germ Gel (available online)
- Blacklight flashlight
- Handwashing handout (page 9)

Photos: Lisa Perrett, © Oregon State University

Activity how-to
1. Ask students to apply the Glo Germ to their hands according to the directions.
2. Shine the black light on their hands and explain that bacteria like to hide in these areas of their hands.
3. Instruct youths to wash their hands, following proper hand-washing guidelines.
4. Shine the black light again so they can see how well they washed their hands.
5. Repeat if necessary, so youth know how well to wash their hands to get rid of bacteria.

ROUND IT OUT

Reflect on the importance of washing hands and how it can help reduce cross-contamination and the spread of illness. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:
Chicken Chili with Sweet Potatoes, http://www.eatingwell.com/recipe/255168/chicken-chili-with-sweet-potatoes/

Wash Your Hands!

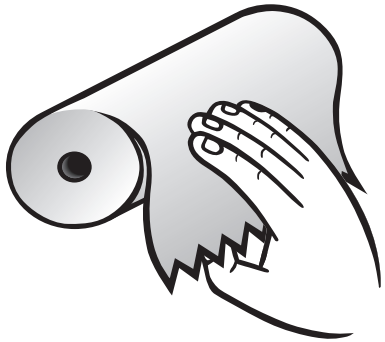
¡Lávese Las Manos!

1 Wet Hands
Mójese las manos

2 Soap
Enjabónese

3 Wash for 20 seconds
Lávese las manos por 20 segundos

4 Rinse
Enjuáguese



5 Dry
Séquese las manos

6 Turn Off Water with Paper Towel
Cierre el grifo usando una toalla de papel

University of Nebraska Lincoln EXTENSION

Provided by University of Nebraska-Lincoln Extension in Lancaster County
and the Lincoln-Lancaster County Health Department

Lincoln Lancaster County Health Department

Photo: Janna Batara and Lisa Perrett, © Oregon State University

Lesson 4

MINI-LESSON: Knife skills

Learning goal

To learn how to properly use knives

What you need

Knife skills and safety handout (page 11)

Mini-lesson how-to

1. Give each student the knife skills handout.
2. Briefly explain each knife and what it does.

ACTIVITY: Knife skills

What you need

Access to short video:
youtube.com/watch?v=G-Fg7l7G1zw [0:45-1:35]

Activity how-to

1. Show video clip of knife-holding basics.
2. Demonstrate how to hold and cut ingredients properly.

Key points

- Holding the knife properly
- Cupping your guiding hand
- Using the right knives for each cut or task (page 11)

ROUND IT OUT

Reflect on what the youths found interesting or useful today. Do they feel more confident using a knife at home to help prepare meals? What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

Taco Salad, http://chocolatewithgrace.com/big-picnic-taco-salad/

KNIFE SKILLS: Handout

THE RIGHT KNIFE FOR THE RIGHT PURPOSE

Chef's knife

- Meats
- Fruits
- Vegetables

Serrated bread knife

- Bread
- Cheese
- Tomatoes

Paring knife

- Peeling
- Garnishes

KNIFE SAFETY

When carrying a knife, point it toward the ground with the blade facing backwards

Cup your hand while cutting, or shape your hand into a claw.

Use the correct knife for the task

Set the knife by the sink rather than in the sink

Wash knives by hand, with the sharp side away from you

Dry the knife and put it away in the proper place.

Photos: Lindsay Walker, © Oregon State University

Lesson 5

MINI-LESSON: Eat a rainbow

Learning goal

To understand the importance of eating a variety of foods and learn how to create a colorful meal or snack.

Mini-lesson how-to

1. Ask the youth and have a discussion about what they know about diet variety and colorful eating.
2. Explain that an important aspect of a healthy diet is creating meals and snacks with a variety of foods from the food groups to maximize nutrients.

ACTIVITY: MyPlate

What you need

- Access to tablets or personal computers for each youth
- MyPlate template handout for each youth (page 13)
- Wi-Fi access
- Pens/pencils

Activity how-to

1. Ask the youth to log on to MyPlate.gov. Scroll down to Explore MyPlate Food Groups.
2. Click on each food group to learn more about different types of foods to use to build a colorful plate.

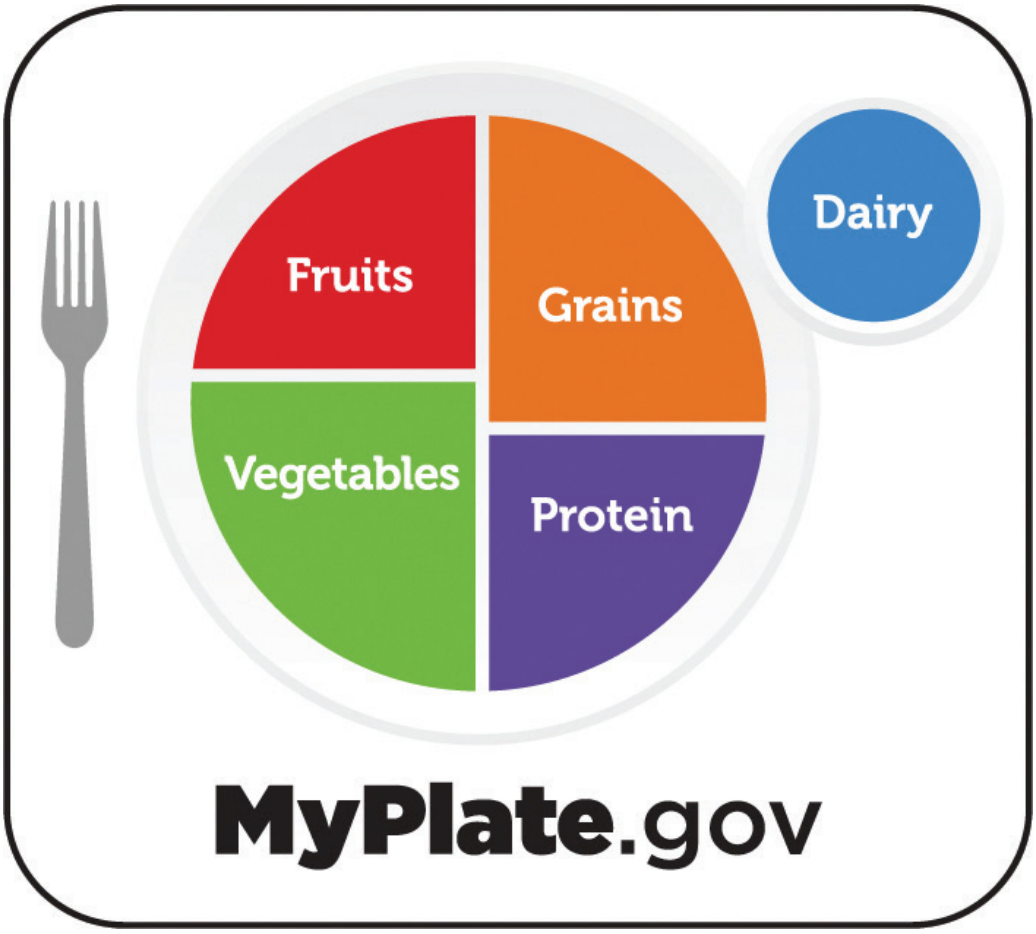
Photo: Nadine Primeau, Unsplash

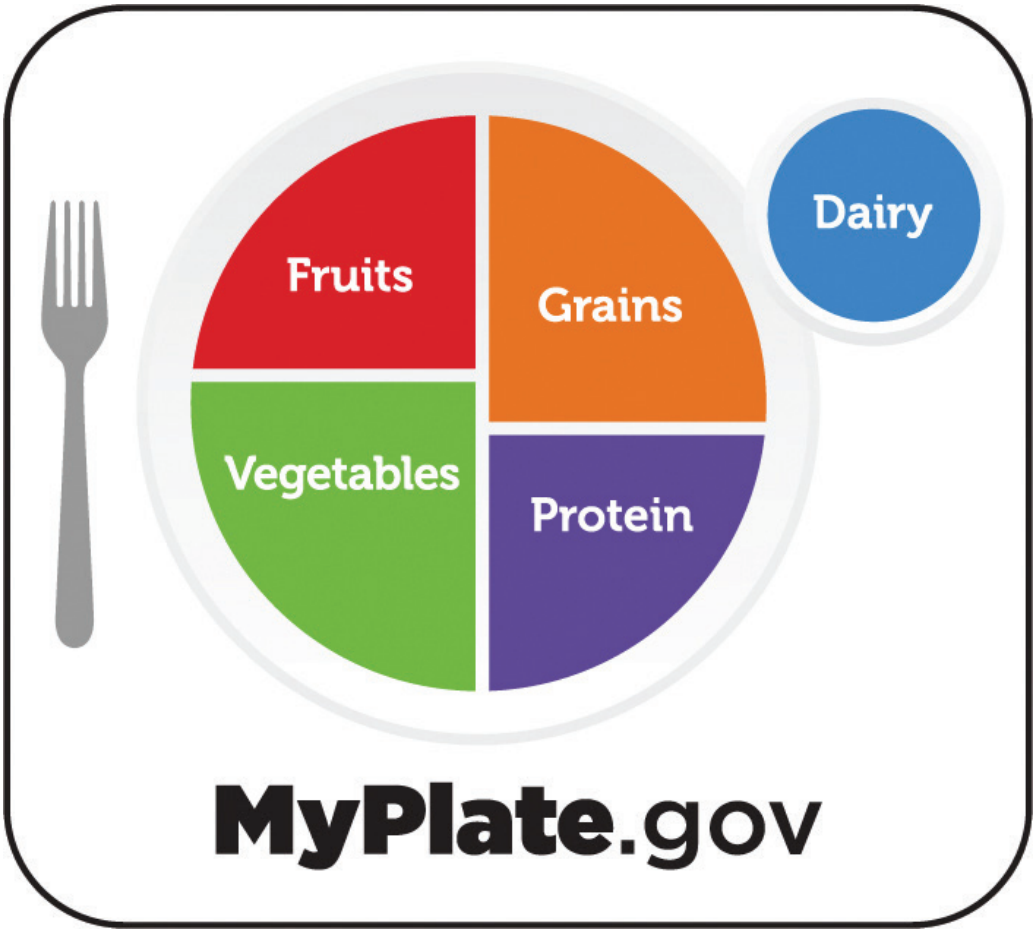
Eat a variety of colorful foods.

ROUND IT OUT

Ask students to reflect on why it is important to eat a variety of colors in their diets. What colors do they need more of? What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:
Turkey Tostadas with Pineapple Salsa,
https://sweetlifebake.com/2018/04/28/turkey-tostadas-with-pineapple-salsa/


Fruits
Grains
Dairy
Vegetables
Protein
MyPlate.gov


Fruits
Grains
Dairy
Vegetables
Protein
MyPlate.gov

Lesson 6

MINI-LESSON:
Reading nutrition labels

Learning goal

To help youth understand the importance of reading a nutrition label and have the skills to make an educated decision before purchasing or consuming a product.

Photo: Lisa Perrett, © Oregon State University

Mini-lesson how-to

1. Ask the youths if they have ever seen or read a nutrition label on a packaged food item. What did they notice, if anything?
2. Discuss the importance of knowing how to read food labels to be informed about the ingredients and nutrients in the food you eat.
3. List briefly the things you might find on a Nutrition Facts label (calories, fats, serving size, sugars, etc.). Mention the things to look out for on the ingredient label, such as hydrogenated oils and trans fats, sugar and salt or sodium.

ACTIVITY:
Reading nutrition labels

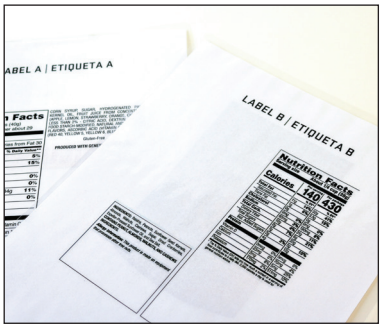


Photo: Lisa Perrett, © Oregon State University

What you need:

- Enough food labels (printed items, or on tablets or computers) to give to every two students: one healthy and one unhealthy (pages 17–19)
- Nutrition label reading tips (page 15)
- Label comparison worksheet (page 16)
- Pencils
- Tape (if you choose to hang labels or stick them to a table)

Activity how-to:

1. Split into groups of two to three youths.
2. Provide one unhealthy label (A) and one healthy label (B).
3. Give each youth a "Nutrition label reading tips" handout.
4. Ask students to fill out the worksheet to determine which snack is healthier.
5. After eight to 10 minutes, ask each group to present to the class why they believe their chosen label is healthier than the other one.

ROUND IT OUT

Ask youth when they can use their label-reading skills to eat healthier foods. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THESE RECIPES:

Lasagna Rolls, tasteofhome.com/recipes/lasagna-rolls/print/
Skillet Chicken Lasagna Roll-ups, kraftrecipes.com/recipe/179784/skillet-chicken-lasagna-roll-ups

HANDOUT:
Nutrition label reading tips

- Pay attention to serving size.
- Look for five or fewer ingredients.
- Minimize saturated fats and avoid trans fats.
- Look for foods low in fat, cholesterol, sodium and sugar.
- Choose foods high in fiber, protein and vitamins.
- Ingredients are listed in order of weight or quantity, so the first ingredient is what makes up the bulk of the food item.
- Look at Percent Daily Value. This number can help you determine if a serving of food is high or low in a nutrient. As a general guide, 5% DV or less is considered low. A high DV is 20% or more of a serving.
- Watch out for added sugars (high fructose corn syrup) and artificial sugars (aspartame, sucralose).

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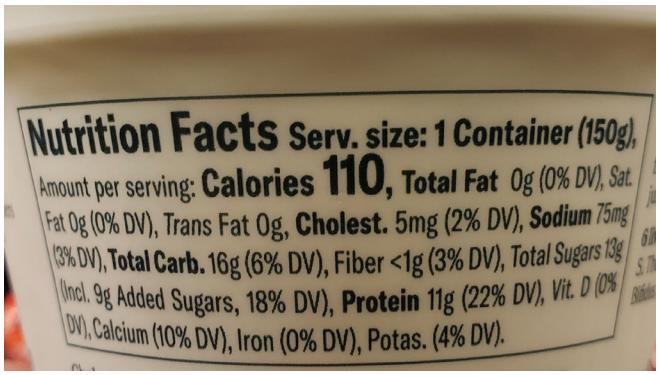
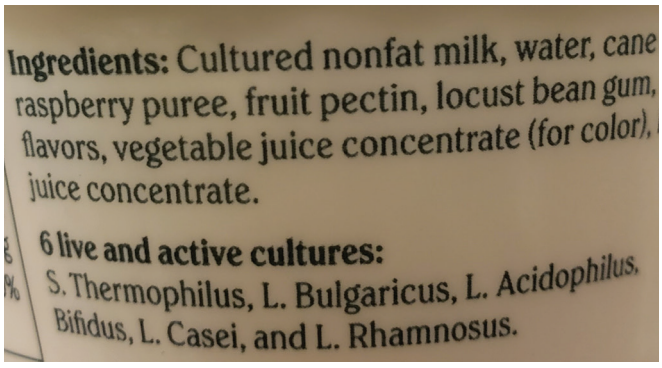
READING NUTRITION LABELS: ACTIVITY
ETIQUETA DE NUTRICIÓN: ACTIVIDAD DE LECTURA

Use the nutrition label reading tips to help you answer the questions below.
Para este ejercicio, usa la hoja de pistas de la etiqueta nutricional para ayudarte a contestar las preguntas de abajo.

Question | Pregunta	**A**	**B**
Which one has more calories PER SERVING? ¿Cuál tiene más calorías por porción?		
What is the first ingredient listed on the label? ¿Cuál es el primer ingrediente enlistado en la etiqueta nutricional?		
Which one has less added sugar PER SERVING? ¿Cuál tiene menos azúcar por porción?		
Can you read most of the ingredients on the label? (YES OR NO) ¿Puedes leer la mayoría de los ingredientes en la etiqueta? (Sí o No)		
Do either of these have a vitamin or mineral more than 15%? (YES or NO) ¿Alguno de estos contiene una vitamina o mineral mayor del 15%? (Sí o No)		
Does it have trans fat? (YES or NO) (Hint: you want less of this) ¿Tiene grasas saturadas (Trans)? (Sí o No) (Pista: tú quieres menos de eso)		

1A


Nutrition Facts Serv. size: 1 Container (150g),
Amount per serving: Calories 110, Total Fat 0g (0% DV), Sat. Fat 0g (0% DV), Trans Fat 0g, Cholest. 5mg (2% DV), Sodium 75mg (3% DV), Total Carb. 16g (6% DV), Fiber <1g (3% DV), Total Sugars 13g (Incl. 9g Added Sugars, 18% DV), Protein 11g (22% DV), Vit. D (0% DV), Calcium (10% DV), Iron (0% DV), Potas. (4% DV).

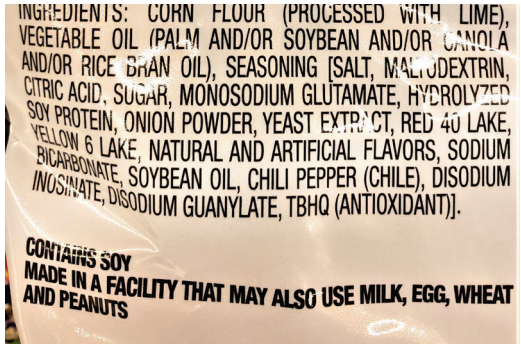

Ingredients: Cultured nonfat milk, water, cane
raspberry puree, fruit pectin, locust bean gum,
flavors, vegetable juice concentrate (for color),
juice concentrate.
6 live and active cultures:
S. Thermophilus, L. Bulgaricus, L. Acidophilus,
Bifidus, L. Casei, and L. Rhamnosus.

1B


INGREDIENTS: CULTURED GRADE A LOW FAT MILK, WATER, CANE SUGAR, FOOD STARCH, CONTAINS LESS THAN 1% OF NATURAL FLAVORS, FRUIT & VEGETABLE JUICE (FOR COLOR), LEMON JUICE CONCENTRATE, MILK MINERALS, VITAMIN D3.
Nutrition Facts
6 servings per container
Serving size 1 bottle (93mL)
Amount per serving
Calories 50
% Daily Value*
Total Fat 0g 0%
Saturated Fat 0g 0%
Trans Fat 0g
Cholesterol < 5mg 1%
Sodium 30mg 1%
Total Carbohydrate 11g 4%
Dietary Fiber 0g 0%
Total Sugars 9g
Incl. 7g Added Sugars 14%
Protein 2g 4%
Vit. D 2mcg 10% • Calcium 130mg 10%
Iron 0mg 0% • Potas. 100mg 2%

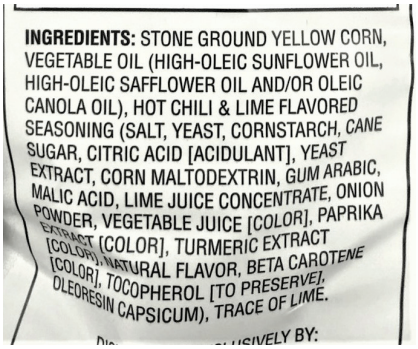
2A


Nutrition Facts
About 10 servings per container
Serving size 1 oz (28g/about 12 pieces)
Amount per serving
Calories 140
% Daily Value*
Total Fat 8g 10%
Saturated Fat 2g 10%
Trans Fat 0g
Polyunsaturated Fat 3g
Monounsaturated Fat 2.5g
Cholesterol 0mg 0%
Sodium 420mg 18%
Total Carbohydrate 16g 6%
Dietary Fiber 1g 4%
Total Sugars 1g
Includes 0g Added Sugars 0%
Protein 2g
Vitamin D 0mcg 0%
Calcium 15mg 2%
Iron 0mg 0%
Potassium 54mg 2%
* The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.


INGREDIENTS: CORN FLOUR (PROCESSED WITH LIME), VEGETABLE OIL (PALM AND/OR SOYBEAN AND/OR CANOLA AND/OR RICE BRAN OIL), SEASONING [SALT, MALTODEXTRIN, CITRIC ACID, SUGAR, MONOSODIUM GLUTAMATE, HYDROLYZED SOY PROTEIN, ONION POWDER, YEAST EXTRACT, RED 40 LAKE, YELLOW 6 LAKE, NATURAL AND ARTIFICIAL FLAVORS, SODIUM BICARBONATE, SOYBEAN OIL, CHILI PEPPER (CHILE), DISODIUM INOSINATE, DISODIUM GUANYLATE, TBHQ (ANTIOXIDANT)].
CONTAINS SOY
MADE IN A FACILITY THAT MAY ALSO USE MILK, EGG, WHEAT AND PEANUTS

2B


Nutrition Facts
9 servings per container
Serving size 1oz (28g/about 15 chips)
Amount per serving
Calories 150
% Daily Value*
Total Fat 8g 10%
Saturated Fat 0.5g 3%
Trans Fat 0g
Cholesterol 0mg 0%
Sodium 260mg 11%
Total Carbohydrate 17g 6%
Dietary Fiber 2g 7%
Total Sugars 0g
Includes 0g Added Sugars 0%
Protein 2g
Vitamin D 0mcg 0%
Calcium 20mg 2%
Iron 0.6mg 4%
Potassium 80mg 2%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.


INGREDIENTS: STONE GROUND YELLOW CORN, VEGETABLE OIL (HIGH-OLEIC SUNFLOWER OIL, HIGH-OLEIC SAFFLOWER OIL AND/OR OLEIC CANOLA OIL), HOT CHILI & LIME FLAVORED SEASONING (SALT, YEAST, CORNSTARCH, CANE SUGAR, CITRIC ACID [ACIDULANT], YEAST EXTRACT, CORN MALTODEXTRIN, GUM ARABIC, MALIC ACID, LIME JUICE CONCENTRATE, ONION POWDER, VEGETABLE JUICE [COLOR], PAPRIKA EXTRACT [COLOR], TURMERIC EXTRACT [COLOR], NATURAL FLAVOR, BETA CAROTENE [COLOR], TOCOPHEROL [TO PRESERVE], OLEORESIN CAPSICUM), TRACE OF LIME.

3A

Nutrition Facts

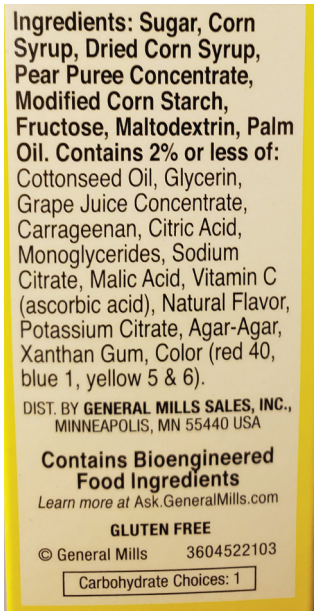
6 servings per container
Serving size 1 pouch (23g)

Amount per serving
Calories 80

	% Daily Value*
Total Fat 1g	**2%**
Saturated Fat 0.5g	**3%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 45mg	**2%**
Total Carbohydrate 18g	**7%**
Total Sugars 10g	
Includes 9g Added Sugars	**19%**
Protein 0g	
Vitamin C 9mg	10%

Not a significant source of dietary fiber, vitamin D, calcium, iron and potassium.

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



Ingredients: Sugar, Corn Syrup, Dried Corn Syrup, Pear Puree Concentrate, Modified Corn Starch, Fructose, Maltodextrin, Palm Oil. Contains 2% or less of: Cottonseed Oil, Glycerin, Grape Juice Concentrate, Carrageenan, Citric Acid, Monoglycerides, Sodium Citrate, Malic Acid, Vitamin C (ascorbic acid), Natural Flavor, Potassium Citrate, Agar-Agar, Xanthan Gum, Color (red 40, blue 1, yellow 5 & 6).

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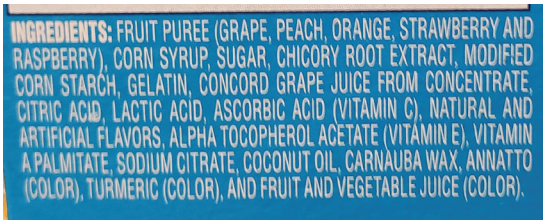
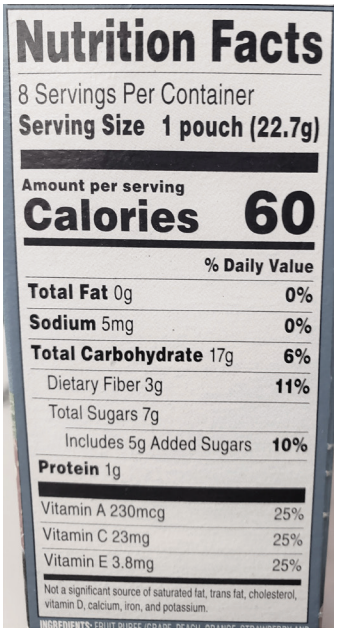
Carbohydrate Choices: 1

3B



INGREDIENTS: FRUIT PUREE (GRAPE, PEACH, ORANGE, STRAWBERRY AND RASPBERRY), CORN SYRUP, SUGAR, CHICORY ROOT EXTRACT, MODIFIED CORN STARCH, GELATIN, CONCORD GRAPE JUICE FROM CONCENTRATE, CITRIC ACID, LACTIC ACID, ASCORBIC ACID (VITAMIN C), NATURAL AND ARTIFICIAL FLAVORS, ALPHA TOCOPHEROL ACETATE (VITAMIN E), VITAMIN A PALMITATE, SODIUM CITRATE, COCONUT OIL, CARNAUBA WAX, ANNATTO (COLOR), TURMERIC (COLOR), AND FRUIT AND VEGETABLE JUICE (COLOR).



Nutrition Facts

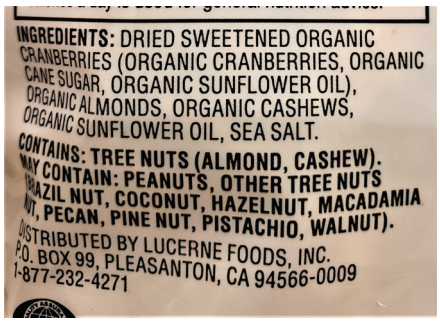
8 Servings Per Container
Serving Size 1 pouch (22.7g)

Amount per serving
Calories 60

	% Daily Value
Total Fat 0g	**0%**
Sodium 5mg	**0%**
Total Carbohydrate 17g	**6%**
Dietary Fiber 3g	**11%**
Total Sugars 7g	
Includes 5g Added Sugars	**10%**
Protein 1g	
Vitamin A 230mcg	25%
Vitamin C 23mg	25%
Vitamin E 3.8mg	25%

Not a significant source of saturated fat, trans fat, cholesterol, vitamin D, calcium, iron, and potassium.

4A



INGREDIENTS: DRIED SWEETENED ORGANIC CRANBERRIES (ORGANIC CRANBERRIES, ORGANIC CANE SUGAR, ORGANIC SUNFLOWER OIL), ORGANIC ALMONDS, ORGANIC CASHEWS, ORGANIC SUNFLOWER OIL, SEA SALT.

CONTAINS: TREE NUTS (ALMOND, CASHEW).
MAY CONTAIN: PEANUTS, OTHER TREE NUTS (BRAZIL NUT, COCONUT, HAZELNUT, MACADAMIA NUT, PECAN, PINE NUT, PISTACHIO, WALNUT).

DISTRIBUTED BY LUCERNE FOODS, INC.
P.O. BOX 99, PLEASANTON, CA 94566-0009
1-877-232-4271

Nutrition Facts

About 9 servings per container
Serving size 1/4 cup (32g)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 10g	**13%**
Saturated Fat 1.5g	**7%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 55mg	**2%**
Total Carbohydrate 16g	**6%**
Dietary Fiber 2g	**7%**
Total Sugars 10g	
Includes 8g Added Sugars	**17%**
Protein 3g	

Vitamin D 0mcg 0% • Calcium 30mg 2%
Iron 1mg 6% • Potassium 130mg 2%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

4B

Nutrition Facts

3 servings per container
Serving size 1/3 box (29g)

Calories 140 per serving | 420 per box

	Per serving	% DV*	Per box	% DV*
Total Fat	6g	**8%**	17g	**22%**
Sat Fat	3.5g	**18%**	10g	**50%**
Trans Fat	0g		0g	
Cholesterol	<5mg	**0%**	5mg	**2%**
Sodium	20mg	**1%**	60mg	**3%**
Vitamin D	0mcg	0%	0mcg	0%
Calcium	30mg	2%	100mg	8%

	Per serving	% DV*	Per box	% DV*
Total Carb.	21g	**8%**	63g	**23%**
Dietary Fiber	<1g	**0%**	2g	**7%**
Total Sugars	19g		57g	
Incl. Added Sugars	18g	**36%**	53g	**106%**
Protein	1g		4g	
Iron	0mg	0%	1mg	6%
Potassium	0mg	0%	260mg	6%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

MILK CHOCOLATE (SUGAR, CHOCOLATE, SKIM MILK, COCOA BUTTER, LACTOSE, MILKFAT, SOY LECITHIN, SALT, ARTIFICIAL AND NATURAL FLAVORS), SUGAR, CORNSTARCH, LESS THAN 1% - CORN SYRUP, DEXTRIN, COLORING (INCLUDES BLUE 1 LAKE, YELLOW 6, RED 40, YELLOW 5, BLUE 1, YELLOW 6 LAKE, RED 40 LAKE, YELLOW 5 LAKE, BLUE 2 LAKE, BLUE 2), CARNAUBA WAX, GUM ACACIA.
ALLERGY INFORMATION: CONTAINS MILK AND SOY. MAY CONTAIN PEANUTS.
DISTRIBUTED BY MARS WRIGLEY CONFECTIONERY US, LLC, HACKETTSTOWN, NJ 07840-1503 USA
PARTIALLY PRODUCED WITH GENETIC ENGINEERING.

5A

CAFFEINE FREE

Nutrition Facts

12 servings per container

Serving size 1 Can

Amount per serving

Calories 160

% Daily Value

Total Fat 0g 0%

Sodium 70mg 3%

Total Carbohydrate 43g 16%

Total Sugars 43g

Includes 43g Added Sugars 85%

Protein 0g

CARBONATED WATER, HIGH FRUCTOSE CORN SYRUP, CITRIC ACID, SODIUM BENZOATE (PRESERVATIVE), NATURAL FLAVORS, MODIFIED CORN STARCH, ESTER GUM, YELLOW 6, SALT, RED 40.

5B

Nutrition Facts

About 7 servings per container

Serving Size 8 fl oz (240 mL)

Amount Per Serving

Calories 110

% Daily Value

Total Fat 0g 0%

Saturated Fat 0g 0%

Trans Fat 0g

Cholesterol 0mg 0%

Sodium 0mg 0%

Total Carbohydrate 26g 9%

Total Sugars 23g

Includes 0g Added Sugars 0%

Protein 2g Not a significant source of protein

Calcium 20mg 2% • Potassium 450mg 10%

Vitamin C 90% • Thiamin 8%

Niacin 2% • Vitamin B_6 4%

Folate 10% • Magnesium 6%

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Lesson 7

MINI-LESSON: Portion size

Learning goal

Discuss the importance of calories consumed per day and the distribution of those calories. Learn how understanding portion size can help.

What you need

Tablets or computers, open to MyPlate.gov

Mini-lesson how-to

1. Divide youths into groups of four to five. Give each group a tablet computer. Ask students to open a browser and find the MyPlate.gov shortcut.
2. Scroll down to Tools –> MyPlate Plan –> Get Your Plan –> START
3. Youths will need to enter their sex, average age, height, weight and activity level. This will help them calculate the number of calories they should aim to consume per day. Help them calculate group averages if needed.
4. Click on the calorie amount to get a detailed explanation of portion size per food group.
5. Click on view PDF in the upper right corner for easy reading.

ACTIVITY: Portion size

What you need

- Tablet computers (open to MyPlate.gov)
- Serving size guide (page 22)
- Food items for each food group (rice, cheese, peas, blueberries, tofu)
- Measuring devices (scale, measuring cups)

Photo: Lisa Perrett, © Oregon State University

Activity how-to

1. Now that the youths have figured out their calories and portion sizes, assign each group a food group.
2. Once assigned a food group, youth can start the worksheet (page 21) and portion out food using the measuring tools provided.
3. Once everyone is finished, each group presents their food group to the class.
4. Explain that all the food group portion sizes add up to what a healthy individual should try to eat in one day.

Bonus questions

- What can affect the amount of calories your body needs?
- Why might you need more or less?
- How can you still have variety while sticking to the serving size?

ROUND IT OUT

Ask the students why it is important to pay attention to serving and portion sizes at mealtime. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:
Tacos: thewholesomedish.com/the-best-homemade-tacos/

FOOD GROUP: Worksheet

Assigned food group:

According to your MyPlate calculation, how many servings of this food should you consume per day?

Head to the table and find a device to measure out the correct portion of your food group.

The amount measured out should be eaten... (circle one)

- **a.** In one meal
- **b.** The whole day
- **c.** Every hour

Using the portion sizes provided for the food groups, how can you figure out what one portion size is? (Assume you eat three meals a day.) *Hint: It's simple math.*

Take turns presenting your food group and its portion size to the class.

FOOD GROUP: Worksheet

Assigned food group:

According to your MyPlate calculation, how many servings of this food should you consume per day?

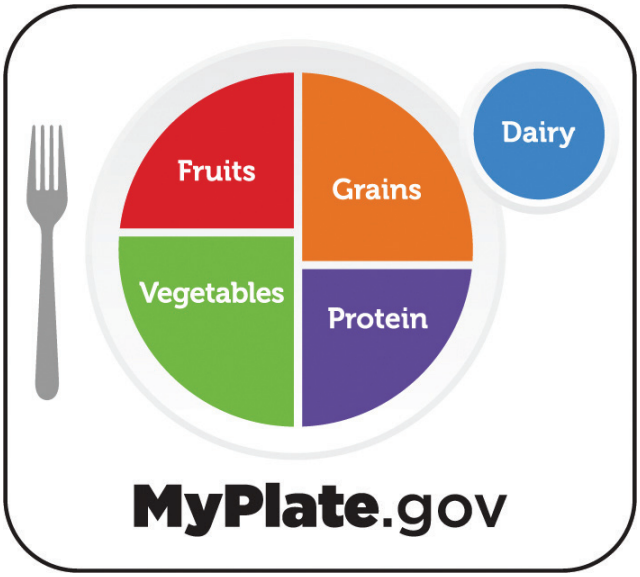
Head to the table and find a device to measure out the correct portion of your food group.

The amount measured out should be eaten... (circle one)

- **a.** In one meal
- **b.** The whole day
- **c.** Every hour

Using the portion sizes provided for the food groups, how can you figure out what one portion size is? (Assume you eat three meals a day.) *Hint: It's simple math.*

Take turns presenting your food group and its portion size to the class.



SERVING SIZE GUIDE

Girls: 5 ounces per day
Boys: 6 ounces per day

1 ounce of grains is equal to:

- 1 slice of bread
- 1 mini bagel
- 5 whole wheat crackers
- 1 packet of instant oatmeal
- 1 medium-sized pancake
- ½ cup cooked rice or pasta
- 1 small flour tortilla or corn tortilla

Girls: 2 cups per day
Boys: 2½ cups per day

1 cup vegetables is equal to:

- 12 baby carrots
- 1 red bell pepper
- 1 large sweet potato
- 1 large ear of corn
- 2 large stalks celery

Girls: 1½ cups per day
Boys: 1½ cups per day

1 cup of fruit is equal to:

- 1 small apple
- 2 snack containers of applesauce
- 1 large banana
- 32 grapes
- 1 large orange
- 1 large peach
- 8 large strawberries
- 1 cup of fruit juice

Girls: 3 cups per day
Boys: 3 cups per day

1 cup of dairy is equal to:

- 1 cup of milk
- 1 regular container of yogurt
- 2 slices of cheese
- 2 cups of cottage cheese

Girls: 5 ounces per day
Boys: 5 ounces per day

1 ounce of protein is equal to:

- 1 slice of sandwich turkey
- 1 egg
- 12 almonds
- 27 pistachios
- 1 Tbsp peanut butter

1 small hamburger is 3 ounces!

Lesson 8

MINI-LESSON: How much sugar?

Learning goal

Youths will be able to calculate the amount of sugar present in their food and beverage choices.

Mini-lesson how-to

1. Ask students to think back to the previous lesson about reading nutrition labels. Ask them to think about what things you can find on a label.
2. Remind students to pay attention the number of grams of added sugar. Many processed foods have added sugars. Consuming too much added sugars can make it difficult to meet nutrient needs while staying within calorie limits.
3. Ask the youths if they know how much sugar is in their processed foods and drinks.

ACTIVITY: How much sugar?

What you need

- Funnels
- Sugar
- Teaspoons
- Bowls
- Baggies
- Calculators or cellphones
- Measuring cups
- "Rethink your drink" worksheet (page 24) and drink labels (pages 25–27)

Activity how-to

1. Hand out the "Rethink your drink" worksheet and preprinted drink labels.
2. Ask students to fill out the worksheet for one beverage.

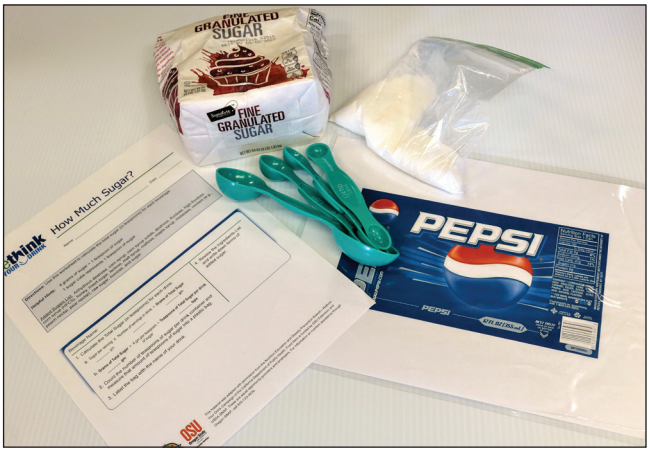


Photo: Janna Batara, © Oregon State University

3. Ask them to calculate the number of teaspoons in their beverage.
4. Ask them to measure out the amount of white sugar in their beverage in a plastic baggie to visualize the amount of sugar consumed.
5. Ask each group to present to the rest of the group.

BONUS ACTIVITY: Group video

What you need

- Camera phones or video cameras
- Group video instructions (page 28)
- Drink labels (pages 25–27)
- Sugar
- Teaspoons
- Bowls

Activity how-to

1. Divide students into small groups. Give each group a label and a recording device.
2. Ask them to make 30-second videos in which each member participates. The video will show how many teaspoons of sugar are in the drink.
3. Share the videos with other students and the students' families.

ROUND IT OUT

Talk about how you can reduce sugar in your diet by making your own drinks and treats. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:
No-Bake SunButter Energy Balls, feastingonfruit.com/no-bake-sunbutter-energy-balls/

How Much Sugar?

Name: _____ Date: _____

Directions: Use this worksheet to calculate the total sugar (in teaspoons) for each beverage.

Helpful Hints: 4 grams of sugar = 1 teaspoon of sugar
1 sugar cube represents 1 teaspoon of sugar

Added Sugars List: Anhydrous dextrose, corn syrup, corn syrup solids, dextrose, fructose, high-fructose corn syrup (HFCS), honey, invert sugar, lactose, malt syrup, maltose, maple syrup, molasses, nectars (e.g., peach nectar, pear nectar), raw sugar, sucrose, and sugar.

Beverage Name:

1. Calculate the Total Sugar (in teaspoons) for each drink:

   a. Sugar per serving X Number of servings in drink = **Grams of Total Sugar**
   _____ gm _____ _____ **gm**

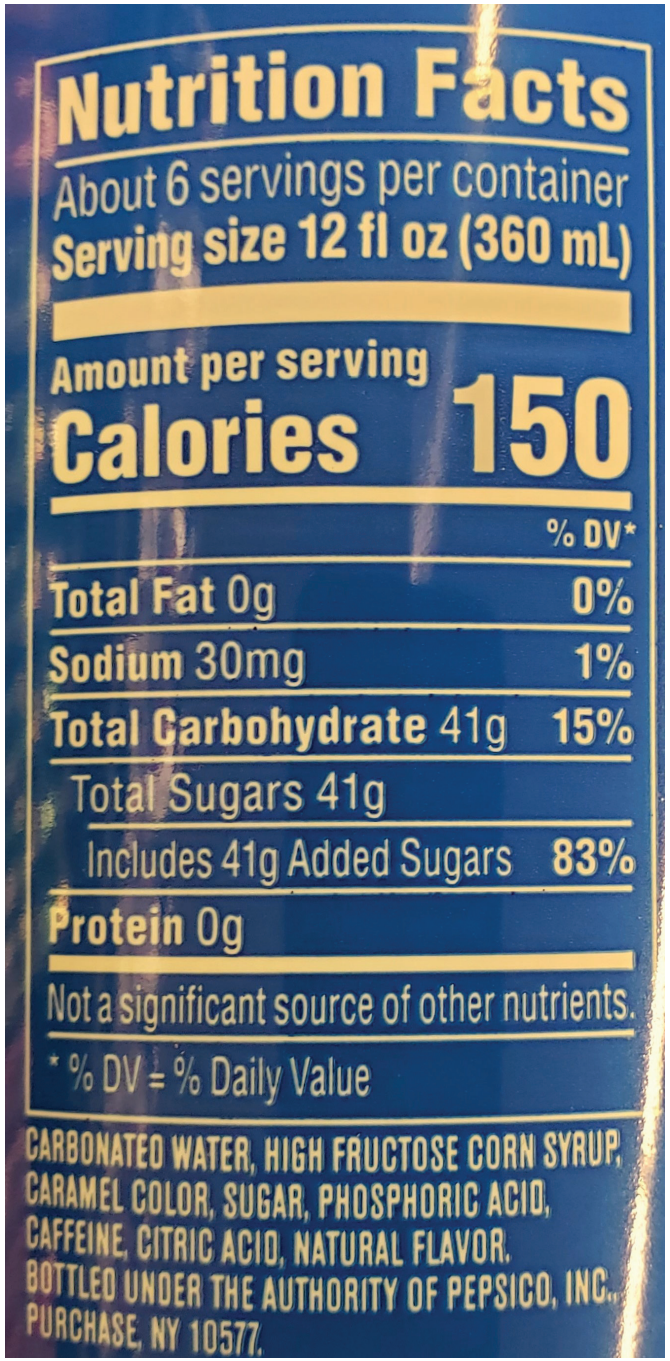
   b. **Grams of Total Sugar** ÷ 4 gm per teaspoon of sugar = **Teaspoons of Total Sugar per drink**
   _____ **gm** _____ **tsps**

2. Count the number of teaspoons of sugar per drink container and measure that amount of teaspoons of sugar into a plastic bag.

3. Label the bag with the name of your drink.

4. Review the Ingredients List and write down forms of added sugar:

This material was adapted with permission from the Nutrition Education and Obesity Prevention Branch—Rethink Your Drink Campaign of the California Department of Public Health. Food Hero is funded by OSU Extension and USDA SNAP. These are equal opportunity providers and employers. For information on nutrition assistance through Oregon SNAP, call 800-723-3638.


Nutrition Facts
About 6 servings per container
Serving size 12 fl oz (360 mL)
Amount per serving
Calories 150
% DV*
Total Fat 0g 0%
Sodium 30mg 1%
Total Carbohydrate 41g 15%
Total Sugars 41g
Includes 41g Added Sugars 83%
Protein 0g
Not a significant source of other nutrients.
* % DV = % Daily Value
CARBONATED WATER, HIGH FRUCTOSE CORN SYRUP, CARAMEL COLOR, SUGAR, PHOSPHORIC ACID, CAFFEINE, CITRIC ACID, NATURAL FLAVOR.
BOTTLED UNDER THE AUTHORITY OF PEPSICO, INC., PURCHASE, NY 10577.


CONTAINS NO FRUIT JUICE
Nutrition Facts
Serving Size 12 fl oz (355 mL)
Servings Per Container about 2.5
Amount Per Serving
Calories 80
% Daily Value*
Total Fat 0g 0%
Sodium 160mg 7%
Potassium 45mg 1%
Total Carbohydrate 21g 7%
Sugars 21g
Protein 0g
Not a significant source of calories from fat, saturated fat, trans fat, cholesterol, dietary fiber, vitamin A, vitamin C, calcium and iron.
* Percent Daily Values are based on a 2,000 calorie diet.
Water, sugar, dextrose, citric acid, natural flavor, salt, sodium citrate, monopotassium phosphate, gum arabic, sucrose acetate isobutyrate, glycerol ester of rosin, yellow 6.
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GLACÉAU
vitamin
120
Nutrition Facts
Serving Size 1 bottle
Amount Per Serving
Calories 120
% Daily Value*
Total Fat 0g 0%
Sodium 0mg 0%
Potassium †
Total Carbohydrate 32g 11%
Sugars 31g
Protein 0g
Vitamin C 100% • Vitamin B6 100%
Vitamin B12 100% • Pantothenic acid 100%
Magnesium †
† Not a significant source of calories from fat, saturated fat, trans fat, cholesterol, dietary fiber, vitamin A, calcium and iron.
*Percent Daily Values are based on a 2,000 calorie diet.
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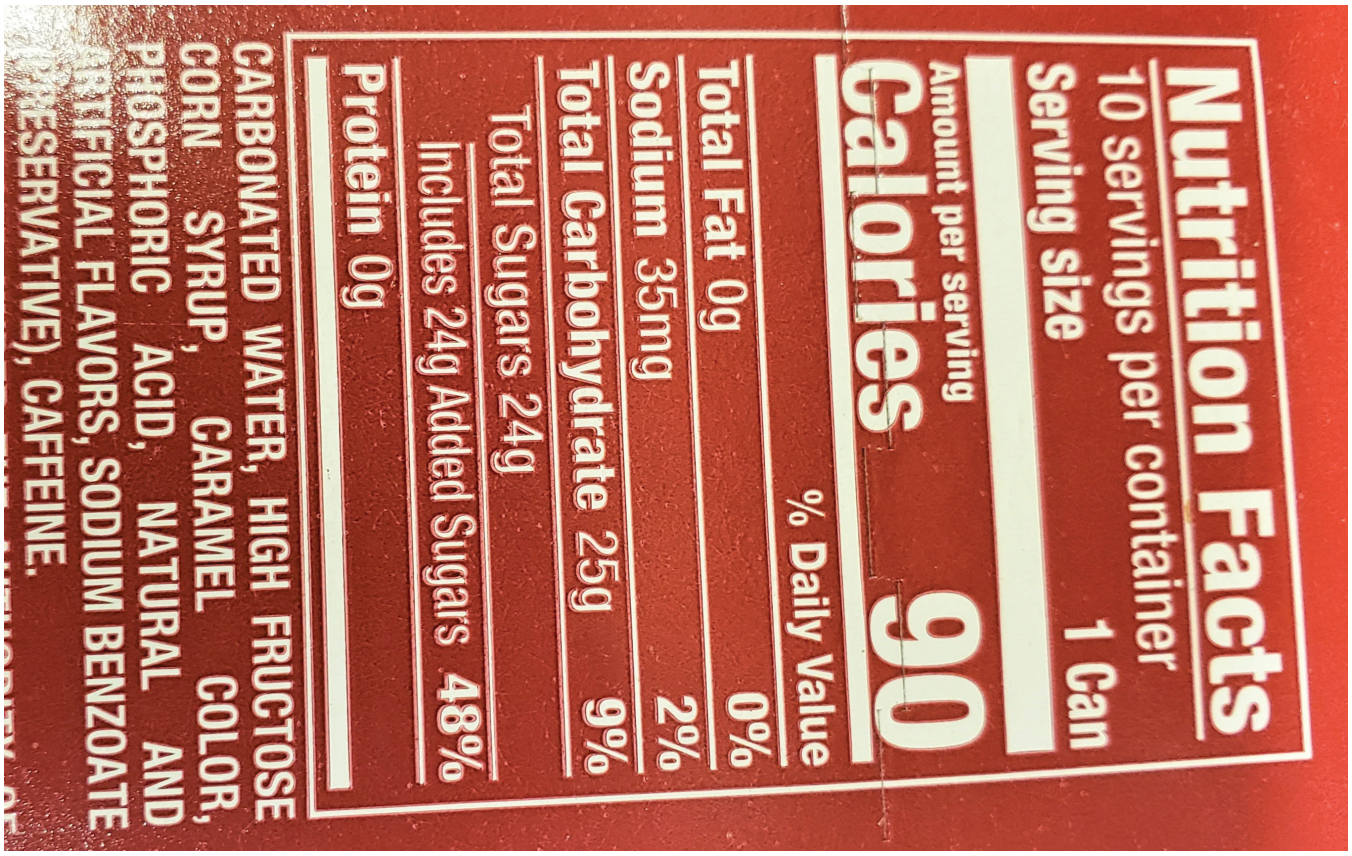
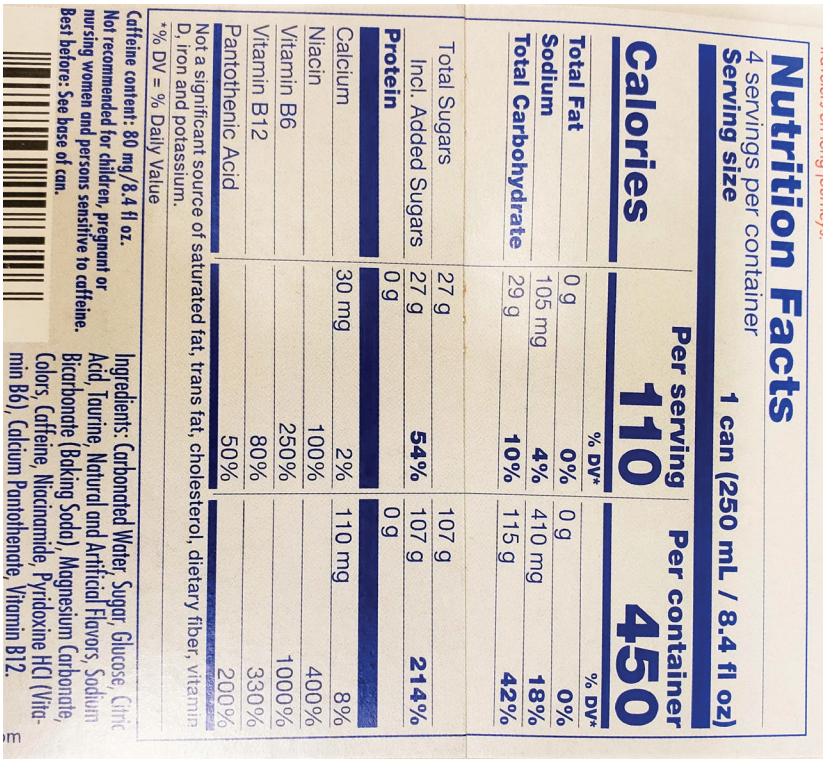

Nutrition Facts
10 servings per container
Serving size 1 Can
Amount per serving
Calories 90
% Daily Value
Total Fat 0g 0%
Sodium 35mg 2%
Total Carbohydrate 25g 9%
Total Sugars 24g
Includes 24g Added Sugars 48%
Protein 0g
CARBONATED WATER, HIGH FRUCTOSE CORN SYRUP, CARAMEL COLOR, PHOSPHORIC ACID, NATURAL AND ARTIFICIAL FLAVORS, SODIUM BENZOATE (PRESERVATIVE), CAFFEINE.



Nutrition Facts

4 servings per container

Serving size **1 can (250 mL / 8.4 fl oz)**

	Per serving	% DV*	Per container	% DV*
Calories	**110**		**450**	
Total Fat	0 g	**0%**	0 g	**0%**
Sodium	105 mg	**4%**	410 mg	**18%**
Total Carbohydrate	29 g	**10%**	115 g	**42%**
Total Sugars	27 g		107 g	
Incl. Added Sugars	27 g	**54%**	107 g	**214%**
Protein	0 g		0 g	
Calcium	30 mg	2%	110 mg	8%
Niacin		100%		400%
Vitamin B6		250%		1000%
Vitamin B12		80%		330%
Pantothenic Acid		50%		200%

Not a significant source of saturated fat, trans fat, cholesterol, dietary fiber, vitamin D, iron and potassium.

*% DV = % Daily Value

Caffeine content: 80 mg/8.4 fl oz.

Not recommended for children, pregnant or nursing women and persons sensitive to caffeine.

Best before: See base of can.

Ingredients: Carbonated Water, Sugar, Glucose, Citric Acid, Taurine, Natural and Artificial Flavors, Sodium Bicarbonate (Baking Soda), Magnesium Carbonate, Colors, Caffeine, Niacinamide, Pyridoxine HCl (Vitamin B6), Calcium Pantothenate, Vitamin B12.

Nutrition Facts

4 servings per container
Serving size
1 bottle

Calories per serving **190**

Amount/serving	% DV*	Amount/serving	% DV*
Total Fat 3.5g	**4%**	**Total Carb.** 33g	**12%**
Sat. Fat 2g	**10%**	Fiber 0g	**0%**
Trans Fat 0g		Total Sugars 32g	
Cholesterol 15mg	**5%**	Incl. 22g Added Sugars	**44%**
Sodium 95mg	**4%**	**Protein** 7g	

Vitamin D 0% • Calcium 15% • Iron 0% • Potassium 10%

INGREDIENTS: BREWED STARBUCKS® COFFEE (WATER, COFFEE), REDUCED-FAT MILK, SUGAR, COCOA, PECTIN.

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KD

HOW MUCH SUGAR: GROUP VIDEO INSTRUCTIONS

You will be making videos, about 30 seconds long, about your sugary drink. Everyone needs to participate in a role.

Make sure to include:

- Name of drink product (show the picture).
- The number of grams of sugar in your drink product.
- Show how many teaspoons that is.
- One message to your family about how to reduce sugar intake and to improve their health!

Video tips:

- Speak clearly.
- No background noise.
- Include fun visuals.
- Look at the camera.
- Include appropriate humor.
- Choose an appropriate background.

HOW MUCH SUGAR: GROUP VIDEO INSTRUCTIONS

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Make sure to include:

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Video tips:

- Speak clearly.
- No background noise.
- Include fun visuals.
- Look at the camera.
- Include appropriate humor.
- Choose an appropriate background.

Lesson 9

MINI-LESSON:
Macronutrients

Learning goal

Learn about the three macronutrients, what types of foods are in each group, and how they help our health.

Mini-lesson how-to

1. Introduce macronutrients as the part of our diet that gives us energy. The three types are: carbohydrates, proteins and fats.
2. Briefly introduce each type, explaining what they do for our body. (Carbs are our main source of energy, protein builds muscle and DNA, and fats keep us warm and protect our organs.)
3. Explain, without giving away too many examples, what types of foods are in each group. Carbohydrates have sugars, proteins often come from animal products, and fats mostly come from nuts and seeds.

ACTIVITY:
Macronutrient matching

What you need

- 1 list of foods and 1 worksheet for each group (pages 30–31)
- Markers/ colored pencils

Photo: Lisa Perrett, © Oregon State University

Activity how-to

1. Give each group a paper with different foods and a worksheet divided into three sections: carbohydrates, proteins and fats.
2. Ask groups to work together to decide what foods go in each group. (If time allows, ask them to draw a picture of the food in the designated box.)
3. Discuss and review once everyone is finished. Talk about how some foods have more than one macronutrient. Best example: Dairy has all three!

ROUND IT OUT

Ask students to think of their favorite meal and how they can make it a complete macronutrient meal (if it isn't already). What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

Southwestern Chicken Pita Pockets,
sheknows.com/food-and-recipes/articles/1042527/southwestern-chicken-pita-pockets-recipe/

Pasta	Apple
Whole wheat bread	Crackers
Bananas	Oatmeal
Grapes	Carrots
Apricots	Bell peppers
Asparagus	Nectarine
Black beans	Tuna
Salmon	Chicken
Eggs	Turkey
Tofu	Hamburger patty
Avocado	Olive oil
Walnuts	Peanut butter
Olives	Dark chocolate
Sunflower seeds	Cheese

Carbohydrates	Proteins	Fats

Lesson 9A

MINI-LESSON: Carbohydrates

Learning goal

To understand what macronutrients are and how they relate to our diet, over three lessons; to learn about different types of grains and their components.

What you need

Grain diagram handout (page 33).

Mini-lesson how-to

1. Review, from the previous lesson, what a macronutrient is. Remind the youths that macronutrients are the part of our diets that give us energy. The three macronutrients are carbohydrates, proteins and fats.
2. Introduce carbohydrates as the macronutrient for this lesson. Explain to the youths that grains are a great way to get carbohydrates in the body. (Emphasize that this is not the only way to get carbohydrates).
3. Explain that there are two types of grains: whole grains and refined grains. Introduce whole grains as a healthier grain, and refined grains as something we should consume in moderation.
4. Give each youth a grain diagram handout. Talk through the diagram, briefly explaining each component of a grain. Tie this together with why whole grains are a healthier choice than refined grains.

ACTIVITY: Grains

What you need

Grain sample kit (these can be purchased as a set or you can create your own with grains from your local grocery store).

Photo: Lisa Perrett, © Oregon State University

Activity how-to

1. Ask the youths to name grains they have eaten as part of their diets.
2. Arrange grain samples on a table and ask the youths to form a line.
3. Allow each youth to touch, feel and observe the common grains they might find in their daily diets, and even unusual grains that they may have never heard of (buckwheat, millet, etc.).

ROUND IT OUT

Reflect on the importance of whole grains in our diet and how versatile they can be. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THESE RECIPES:

Mexican Quinoa,
damndelicious.net/2014/04/09/one-pan-mexican-quinoa
health.com/health/recipe/0,,10000001665265,00.html

ANATOMY OF A GRAIN

Common whole grains

- Wheat
- Millet
- Brown rice
- Barley
- Corn
- Rye
- Oats
- Amaranth
- Quinoa
- Sorghum

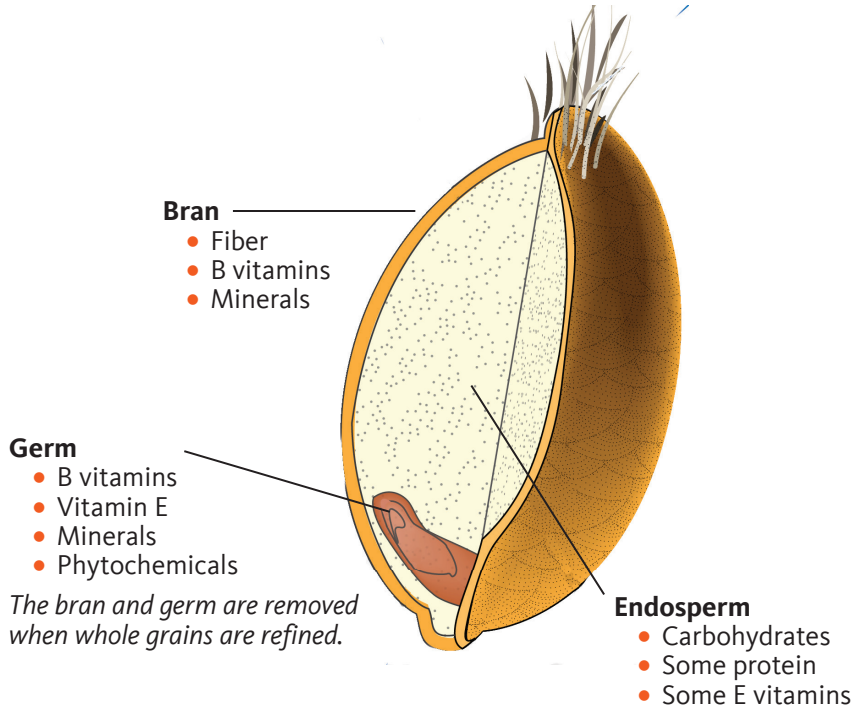

Illustration: Jkwchui, CC BY-SA 3.0

You should be getting 6 ounces of grains per day. Half of your daily grains should be whole grains, and half can be refined.

ANATOMY OF A GRAIN

Common whole grains

- Wheat
- Millet
- Brown rice
- Barley
- Corn
- Rye
- Oats
- Amaranth
- Quinoa
- Sorghum

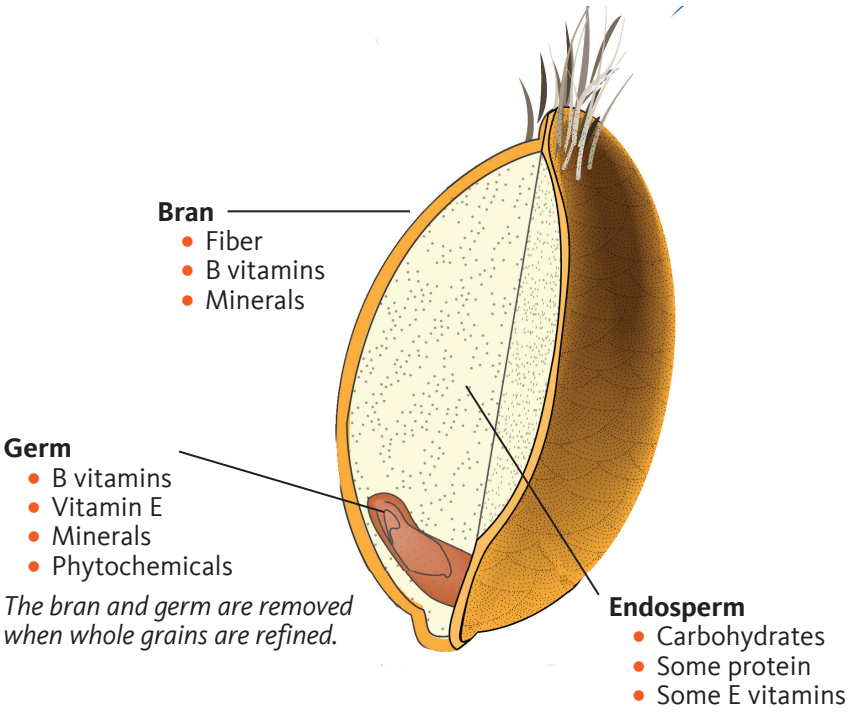

Illustration: Jkwchui, CC BY-SA 3.0

You should be getting 6 ounces of grains per day. Half of your daily grains should be whole grains, and half can be refined.

Lesson 9B

MINI-LESSON: Protein

Learning goal

Learn about the second component of macronutrients: proteins, and the dietary sources of protein.

Mini-lesson how-to

1. Remind students that they are learning about macronutrients. Briefly review that the first macronutrient they learned about — carbohydrates, our main source of energy.
2. Introduce the next macronutrient: protein. Ask the youths what they know about protein (what it is, where we get it, etc.).
3. Explain that proteins are made up of amino acids which are used to build our bodies and make our DNA. Give some examples of common, healthy proteins in our diets.

ACTIVITY: Protein posters

What you need

Photo: Lisa Perrett, © Oregon State University

- Word bank/ picture bank of protein examples (each printed on a different color)
- Large poster board or poster paper
- Tape/push pins for poster paper
- Tape/sticky tack for protein examples
- Scissors

Activity how-to

Ahead of time:

1. Write, in large, easy-to-read letters, one protein category on each poster board and poster paper. (Poultry, eggs, meat, seafood, fish, legumes, and one category for nuts/seeds).
2. Hang each category around your classroom or teaching space with tape or push pins.

During program:

3. Split the youths into four groups.
4. Provide each group with a list of protein examples, either words or pictures (page 35). Make sure each group has a different color of paper. Ask the youths to cut up their examples.
5. Give the youths five minutes to "race" and see which group can correctly identify and categorize the different proteins. They can stick their examples to the posters with either tape or sticky tack.
6. After five minutes, or after the first group finishes, ask each group to present a category and discuss what they learned.

ROUND IT OUT

Reflect on different ways we can get protein in our diets and why it is important. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

Spring Rolls: healthynibblesandbits.com/rainbow-vegetable-spring-rolls-vegan/
Provide different protein options to add in.

Chicken	**Peas**	**Red snapper**
Turkey	**Tempeh**	**Sunflower seeds**
Beef	**Walnuts**	**Chickpeas**
Lamb	**Pecans**	**Clams**
Goat	**Cashews**	**Snap peas**
Pork	**Halibut**	**Pumpkin seeds**
Edamame	**Trout**	**Elk**
Tofu	**Shrimp**	**Chicken eggs**
Black beans	**Peanuts**	**Duck eggs**
Lentils	**Scallops**	**Sesame seeds**

Lesson 9C

MINI-LESSON: Fats

Learning goal

To learn about the final macronutrient, fat. Learn the different types of fat and the health benefits and concerns of each.

What you need

Access to an online video (projector screen, tablet computers or personal computers)

Mini-lesson how-to

1. Remind students that they are learning about macronutrients. Briefly review carbohydrates and proteins as the two macronutrients they have learned so far.
2. Introduce fats as the final macronutrient. Explain that fats in the body store energy, keep us warm and protect our internal organs. Fat can also store certain vitamins for later use.
3. Describe three types of fats: saturated, unsaturated and trans fats. Briefly explain the health benefits or health concerns of each, and the types of foods that fall into each category. (Saturated fats are typically found in meats and cheese; unsaturated fats are typically found in nuts, seeds, and oils; trans fats are typically found in processed foods such as cookies, cakes and candies).
4. Show the TedEd video about fats, https://youtu.be/QhUrc4BnPgg
5. Ask three students to share something they learned from the video.

ACTIVITY: Fat taste test

What you need

- Sample foods for each type of fat
  - Unsaturated: Kalamata olive
  - Saturated: salami
  - Trans: processed cookie/cake
- Dot stickers (three different colors, preferably green, yellow and red)
- Three pieces of paper, each labeled with one of the types of food you will provide (pages 38–40)
- Blindfolds
- Serving platters or plates
- Fats handout

Activity how-to

Ahead of time

1. Prepare samples of each type of fat, enough for each youth. Arrange them on a serving platter or plate, covered.
2. Line up each platter or plate along a table in your teaching space. Place the three labeled papers at the end of the table.

Photo: Lisa Perrett, © Oregon State University

During the program

3. Depending on the number of facilitators, ask for youth volunteers to hand out samples in the activity (for those who do not want to try the foods).
4. Ask youths to form a line and put on a blindfold. Have them (slowly and carefully) walk down the line and try one sample of each type of food. See if they can identify the foods.
5. Once each participant has tried all three samples, ask the students to remove their blindfolds. Hand each youth three dot stickers (one of each color). Tell them that the green represents unsaturated fats, yellow is saturated fats, and red is trans fats.
6. Ask the youths to place stickers on each paper corresponding to the category they think the sample food belongs to.
7. Reveal the answers. Ask the youths what they noticed about the different samples, and what that might mean for the different fats.
8. Pass out the fats handout, page 37, and discuss.

ROUND IT OUT

Reflect on different types of fats and what types you should avoid or eat in moderation. Reiterate that fat is not bad for you! What cultural difference have you observed or experienced in this area?

ADDITIONAL RESOURCES

- Healthy Kids Association: healthy-kids.com.au/food-nutrition/nutrients-in-food/fats/
- KidsHealth: kidshealth.org/en/parents/fat.html
- Ted-Ed lesson by George Zaidan: youtu.be/QhUrc4BnPgg

FACTS ABOUT FATS

- Fats give us the most **energy** of any macronutrient!
- Fat **protects** our organs.
- Fat helps us **absorb** certain vitamins.
- Fat keeps us **warm**.
- Fats add **flavor** to foods.
- Having **body fat** is completely normal.
- Eating **too many foods** with saturated fat or trans fat can lead to heart disease.
- Added sugar or saturated fats should make up no more than 15% of your daily calorie intake.
- **You should get between 10 and 15 grams of good fats per day!**

Some science behind fats

- The scientific name for fat molecules is *lipids*.
- Chains of fat molecules are called *triglycerides*, and they can be short, medium, or long.
- The process of breaking down fats in the body is called *lipolysis*.

Photo: Bob Rost, © Oregon State University

★ UNSATURATED FATS

- Typically liquid at room temperature
- Found in nuts, oils, fish and avocados
- The best fat!

Photo: Pexels

✔ SATURATED FATS

- Solid at room temperature
- Considered a “bad fat,” but OK in moderation
- Found in red meat, milk, butter and cheese

Photo: U.S. Food and Drug Administration

✖ TRANS FATS

- Found in processed foods and snacks or fast food
- The worst fat; you should always try to avoid trans fat in large amounts.

KALAMATA OLIVES

Unsaturated fat	Saturated fat	Trans fat

SALAMI

Unsaturated fat	Saturated fat	Trans fat

COOKIE

Unsaturated fat	Saturated fat	Trans fat

Lesson 10

MINI-LESSON: Micronutrients

Learning goal

To learn about the three types of micronutrients and how to get them in your diet.

Photo: Lisa Perrett, © Oregon State University

Mini-lesson how-to

1. Remind the youth that previously they learned about macronutrients, which provide energy for our bodies.
2. Introduce micronutrients, which are vitamins and minerals.
3. Explain that vitamins support our immune system and assist in healthy growth and organ function. Give examples. (Vitamin A keeps our eyes healthy; Vitamin C strengthens our immune system. Minerals such as calcium build strong bones and help our brain and muscles work properly.)

ACTIVITY: Micronutrient search

What you need

- Food models or a paper bag with names of foods
- Pens
- Tablet computers or internet access
- Micronutrient worksheets (page 42)

Activity how-to

1. Split the youths into groups and give each group a handout, pens and a tablet or other device with internet access.
2. Ask each group to pick two food items from the bag.
3. Each group will use these websites to research their two foods, filling in the questions on their worksheets. (Have the youth start with one food, and do the second if time permits).
   - Website 1: https://mynutrition.wsu.edu/nutrition-basics/
   - Website 2: https://www.cdc.gov/nutrition/micronutrient-malnutrition/micronutrients/index.html
     (Note: this only contains a select few micronutrients)
   - Website 3: https://lpi.oregonstate.edu/mic/nutrient-index

ROUND IT OUT

Discuss how micronutrients are just as important as macronutrients even though they don't give us calories or energy. What did students learn about how to get micronutrients in their diets?

PAIR LESSON WITH THIS RECIPE:
Greek-Style Couscous, allrecipes.com/recipe/218225/greek-couscous/

MICRONUTRIENTS: Worksheet

Food 1

Look on the back of your chosen food. What are the micronutrients listed? Pick two micronutrients your food provides.

Micronutrient 1

What does it do for the body?

Micronutrient 2

What does it do for the body?

Food 2

Look on the back of your chosen food. What are the micronutrients listed? Pick two micronutrients your food provides.

Micronutrient 1

What does it do for the body?

Micronutrient 2

What does it do for the body?

Lesson 11

MINI-LESSON:
The five food groups

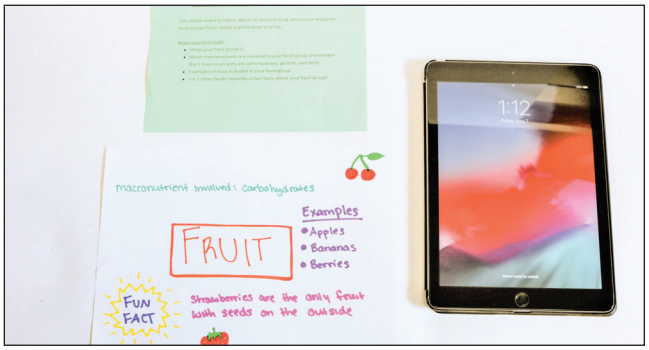

Photo: Lisa Perrett, © Oregon State University

Learning goal

To learn about each food group, the types of foods it includes, and their benefits.

Mini-lesson how-to

1. Ask students to name the five food groups.
2. Discuss the food groups and list examples of foods that are in each group.

ACTIVITY: Food group videos

What you need

- Video camera access/tablet computers
- Craft supplies (markers, paper, colored paper, etc.)
- Instruction sheet (page 44)

Activity how-to

1. Split youths into five groups.
2. Assign each group one of the five food groups.
3. Instruct each group to make a 20- to 30-second video about their food group. Videos should include the name of their food group, what macronutrients are included, examples of foods within the group and one to two fun facts. (See instruction sheet, page 44.)
4. Encourage youths to be creative! They can draw pictures of foods or make fun, small signs to hold while they talk about their food group.
5. Ask each group to share their videos at the end. Or, facilitators can edit them into one video to watch together on another day.

ROUND IT OUT

Discuss the five food groups and why each are important to a balanced diet. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

Frozen Fruit Smoothie
foodnetwork.com/recipes/food-network-kitchen/frozen-fruit-smoothies-recipe-1914927
Provide additional add-ins such as spinach and protein powder.

FIVE FOOD GROUPS VIDEO: Instructions

You will be making videos, about 30 seconds long, about your assigned food group.
Everyone needs to participate in a role.

Make sure to include:

- What your food group is.
- What macronutrients are involved in your food group. (Remember, the three macronutrients are carbohydrates, protein and fats.)
- Examples of food included in your food group.
- One or two other health benefits or fun facts about your food group.

FIVE FOOD GROUPS VIDEO: Instructions

You will be making videos, about 30 seconds long, about your assigned food group.
Everyone needs to participate in a role.

Make sure to include:

- What your food group is.
- What macronutrients are involved in your food group. (Remember, the three macronutrients are carbohydrates, protein and fats.)
- Examples of food included in your food group.
- One or two other health benefits or fun facts about your food group.

Lesson 12

Photo: Lance Cheung, USDA

MINI-LESSON: Meal planning

Learning goal

To apply nutrition knowledge to real-life experience by developing skills to plan meals.

Mini-lesson how-to

1. Begin by asking students if they have ever helped their caretakers go grocery shopping or plan meals. Ask a few youths to share what they have observed or learned from these experiences.
2. Ask: "How can planning meals and making a grocery list ahead of time help you to eat healthier and save money?"

ACTIVITY: Meal planning

What you need

- A variety of cookbooks or Internet access (tablets)
- Meal planning and grocery list handouts (pages 46, 47)
- Pens/pencils

Activity how-to

1. Split into groups of three or four students each.
2. Give each group the two handouts and writing utensils.
3. For the meal planning worksheet: Brainstorm or use cookbooks or the internet to find names of simple recipes they would make for each meal for a week. (Depending on time available, fill in a few days.)
4. Tell students to make sure their meals are healthy and include all of the food groups when creating their weekly menus. Tell them to consider using grocery items in more than one recipe, or for between-meal snacks.
5. Once they are done with writing names of recipes on their meal plan, ask them to write a list of the groceries necessary to make these dishes using the grocery list worksheet. Tell them to think about the recipes included in their meal planning sheet and write down the main ingredients. They do not need to include pantry staples such as salt, pepper, flour or sugar on their grocery list.
6. For the grocery list worksheet: Think about the recipes included in their meal planning sheet and write down the main ingredients under each category.
7. Ask youths to share some of their meal ideas and the thinking behind their choices.
8. Let the students keep their weekly menu and encourage them to use it at home. Allow them to take pictures of the recipes or write down recipe links from the internet.

ROUND IT OUT

Discuss why meal planning can help you feel organized about your food decisions, help you avoid unhealthy impulse purchases and help you stay on a budget. What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH A VEGETABLE STIR FRY RECIPE OF YOUR CHOICE

MEAL PLANNING: Worksheet

Monday

Breakfast	Lunch	Dinner	Snacks

Tuesday

Breakfast	Lunch	Dinner	Snacks

Wednesday

Breakfast	Lunch	Dinner	Snacks

Thursday

Breakfast	Lunch	Dinner	Snacks

Friday

Breakfast	Lunch	Dinner	Snacks

MEAL PLANNING: Grocery list

Produce (fresh fruits and vegetables)	**Meats**
Dairy	**Frozen**
Bulk	**Deli**

Other items

Lesson 13

Photo: Lisa Perrett, © Oregon State University

MINI-LESSON: Digestion

Learning goal

To learn the fundamental anatomy and functions of the digestive system.

What you need

- Access to online video: youtube.com/watch?v=Og5xAdC8EUI
- Tablet computer or digital viewing system for video

Mini-lesson how-to

Cue the movie to play for the youth once you have introduced the topic. An introduction may include something like: "The digestive system is a complex and necessary system for us to get energy, nutrients and enjoyment out of the food we eat. Let's take a closer look at the components that make up our digestive system. Play close attention to the names of the different anatomical parts, as you'll need them for the activity."

ACTIVITY: Play-Doh digestion model

What you need

- Play-Doh (at least three colors per group)
- Wax paper
- Printed digestive system diagram (page 49)

Activity how-to

1. Ask students to write the names of the anatomical features they learned in the digestive system video in the boxes provided on the diagram.
2. Once the anatomy is correctly written in and checked by a facilitator, they will put the wax paper over the diagram.
3. The final piece is to re-create the digestive system with Play-Doh. They will use the diagram under the wax paper as a guide.
4. The activity is complete when they have correctly named and molded the digestive system into a Play-Doh model.

ROUND IT OUT

Reflect on how different foods may affect our digestive system differently. For example, what may be easier for our bodies to digest: a fruit smoothie or trail mix? Why? What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

The Perfect 5-Minute Omelet
thespruceeats.com/perfect-quick-omlet-tips-995517

DIGESTION: Worksheet

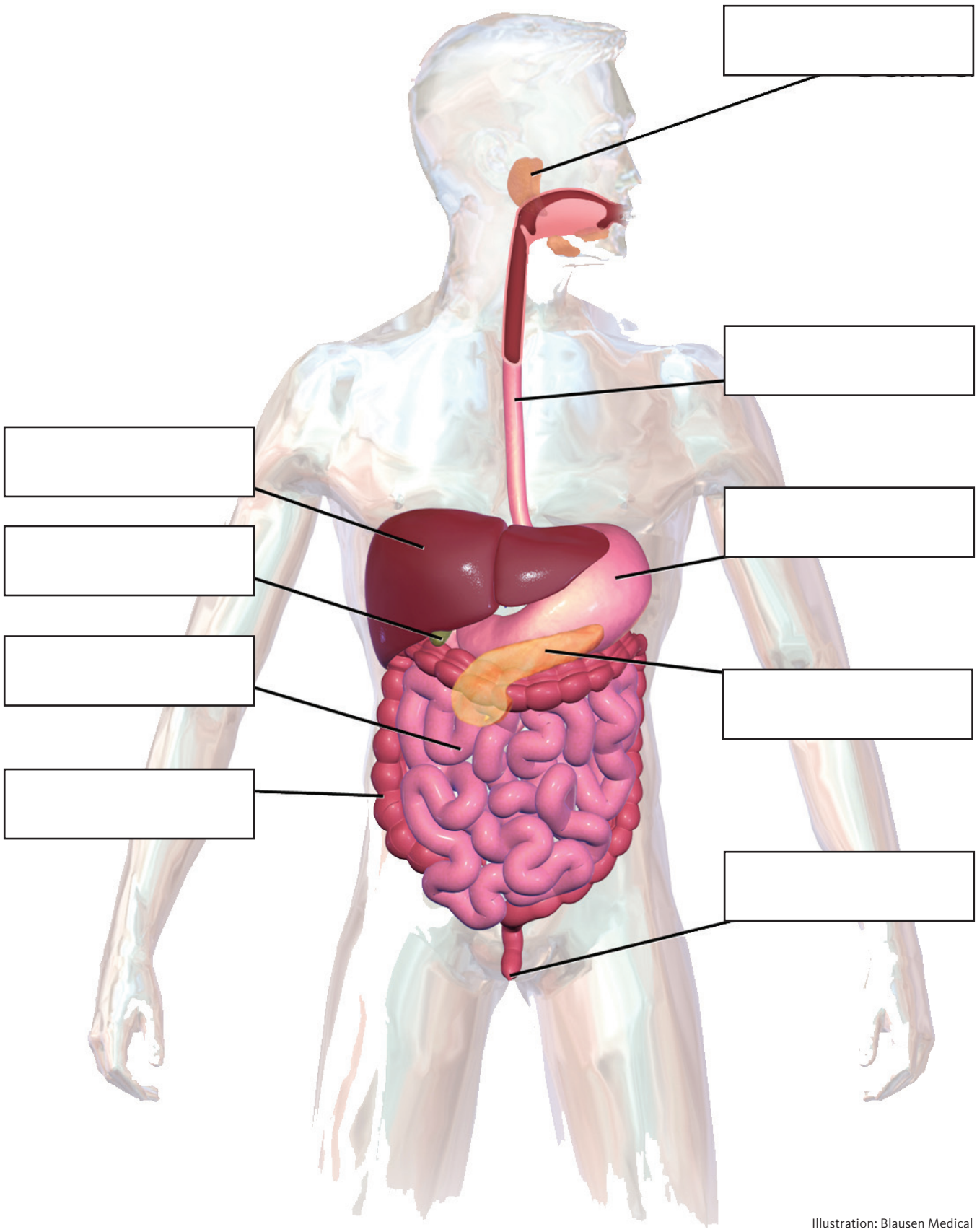

Illustration: Blausen Medical

DIGESTION: Worksheet answers

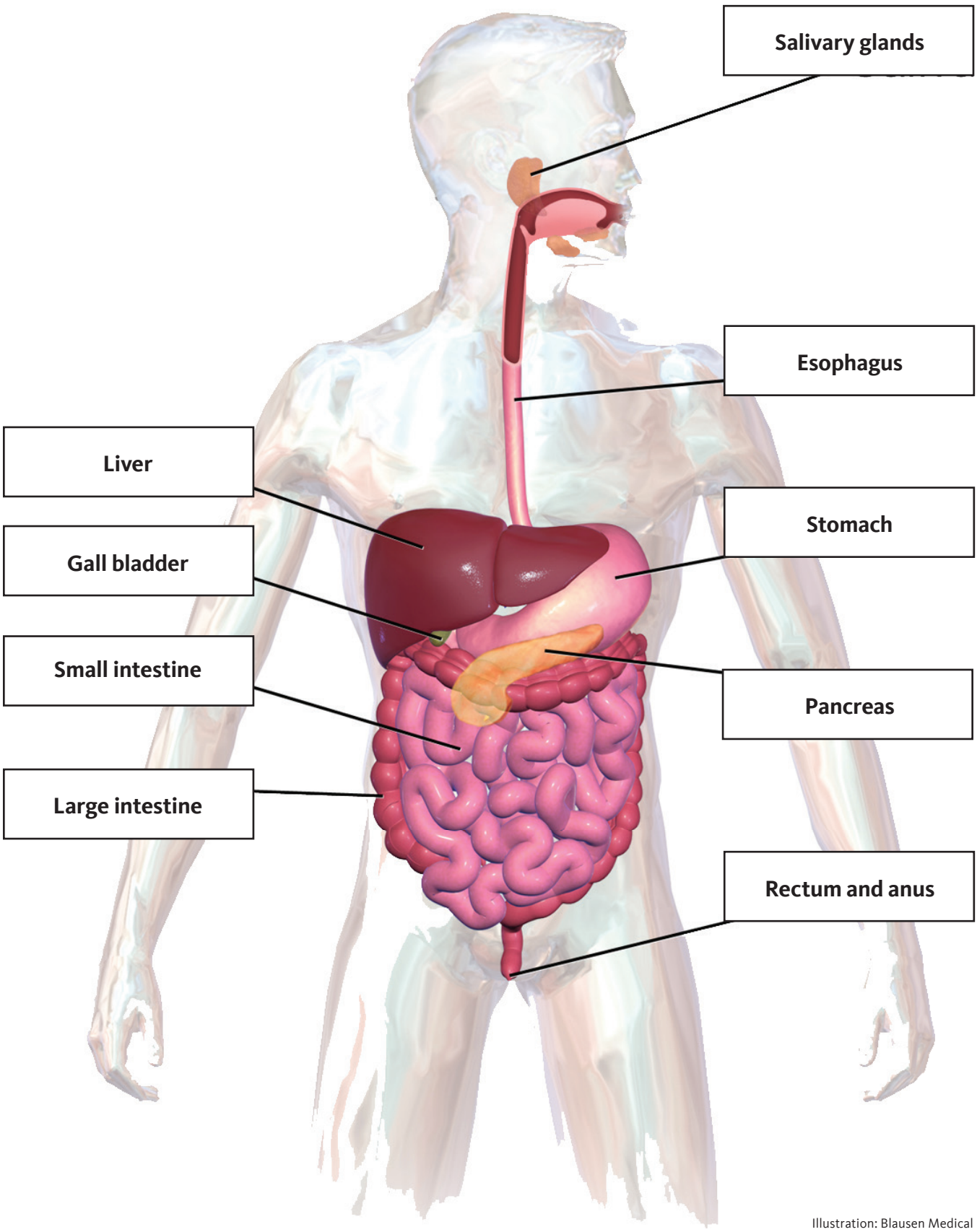

Illustration: Blausen Medical

Lesson 14

Photo: Meir Roth/Pexels

MINI-LESSON: Hydration

Learning goal

To think critically about importance of hydration. Students will be able to calculate how much water individuals should drink per day to provide hydration for daily activities.

What you need

- Hydration worksheets (page 52)
- Pens/pencils

Mini-lesson how-to

Provide the hydration worksheet to small groups of two to three students and ask them to find the missing words.

ACTIVITY: Hydration

What you need

- Water bottles (one 16.9 oz. bottle per student)
- Sharpies
- Calculators
- 9-oz. cups

Activity how-to

1. Using the hydration calculation on the worksheet: Youths enter the number of pounds they weigh (or an estimate) and then divide by 2 using calculators. Write that number down on their worksheet.
2. Students take that number and divide it by 8. Since there are 8 ounces of water in each cup, the answer is how many cups of water they should drink per day. Ask them to write that number on their cups. There are spaces for each person in the group.
3. Students use the water bottle to pour one 8-oz. cup of water into the cup and drink it. Refill the cup and drink it.

ROUND IT OUT

As a group, talk about why water is vital for living. Give specific examples. What happens when you don't stay hydrated? What cultural difference have you observed or experienced in this area?

PAIR LESSON WITH THIS RECIPE:

Asian-Style Chicken and Pineapple Lettuce Wraps,
sandraseasycooking.com/wp-json/mv-create/v1/creations/32/print?ajax=true

HYDRATION: Worksheet

Hydration **is the process of causing something to absorb water.**

Word bank
thirst
more than
dehydrated
60
transport

1. Water helps _____ nutrients into body cells.

2. Not drinking water causes you to become _____ , which leads to muscle fatigue, heat stroke, cramps and loss of coordination.

3. Water makes up _____ percent of your total body weight.

4. You can't live for _____ a week without water. You can live without food for several weeks.

5. An early sign of dehydration is _____ .

Circle all the symptoms of dehydration:

Sneezing	Elevated heart rate	Joint pain	Clammy skin
Stuffy nose	Shortness of breath	Coughing	Dry mouth
Chills	Itchiness	Dizziness	Shakiness
Nausea	Fatigue	Headache	

HYDRATION: Calculation

Person 1

_____ ÷ 2 = _____ ÷ 8 oz. = _____ # of cups of water you should drink a day
(weight in lbs)

Person 2

_____ ÷ 2 = _____ ÷ 8 oz. = _____ # of cups of water you should drink a day
(weight in lbs)

Person 3

_____ ÷ 2 = _____ ÷ 8 oz. = _____ # of cups of water you should drink a day
(weight in lbs)

HYDRATION: Worksheet answers

***Hydration* is the process of causing something to absorb water.**

Word bank
thirst
more than
dehydrated
60
transport

1. Water helps **transport** nutrients into body cells.
2. Not drinking water causes you to become **dehydrated**, which leads to muscle fatigue, heat stroke, cramps and loss of coordination.
3. Water makes up **60** percent of your total body weight.
4. You can't live for **more than a week** without water. You can live without food for several weeks.
5. An early sign of dehydration is **thirst**.

Circle all the symptoms of dehydration:

Sneezing	Elevated heart rate	Joint pain	Clammy skin
Stuffy nose	Shortness of breath	Coughing	Dry mouth
Chills	Itchiness	Dizziness	Shakiness
Nausea	Fatigue	Headache	