Teacher's Guide

Oregon Edition

NUTRITION IN A BOX

Nutrition In A Box: Teacher's Guide

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Nutrition In A Box: Teacher's Guide

Welcome to Nutrition In A Box

Nutrition In A Box is designed as a self-contained curriculum to provide food, nutrition and physical activity knowledge and skills sets for students in middle school grades. All materials are available for free in digital format. The curriculum includes this teaching guide, as well as handouts, worksheets, games, posters and vocabulary lists for each lesson. There are four lesson sets in Nutrition In A Box.

Lesson 1: Power Foods — Vegetables, Fruits & Grains

Lesson 2: Build Foods — Protein & Dairy

Lesson 3: The Balance Game — Portions, Sugars & Fats

Lesson 4: Taking Charge of Choices

The Importance of Nutrition

Nutrition In A Box addresses the need to integrate nutrition into the curriculum for children ages 10-14. Today's students face an increasing number of nutrition challenges, including fragmented eating habits, marketing of unhealthy food products, poor food choices, obesity, food insecurity and disordered eating. Students require skills to navigate an unhealthy food environment that features an abundance of food and beverage products that are high in calories, but lacking in nutrients.

Education is one key factor for creating a new culture of health that promotes intake of healthy, whole foods and enjoyable physical activity. Perhaps the best case for educating students about healthy eating behavior through such programs as Nutrition In A Box is the immediate effect it has on learning and development.

A student who is hungry or poorly nourished is not ready to learn. Practicing healthy nutrition habits helps students become better learners of all subjects.

Nutrition In A Box Objectives

The nutrition principles taught in this curriculum mirror the current USDA Dietary Guidelines. A strong research basis exists for using the Dietary Guidelines for Americans (DGA) and the MyPlate food guidance system in schools. The DGA and MyPlate are evidence-based and reviewed/revised every five years by a scientific panel. The DGA and MyPlate are also the widely accepted foundation for health education standards in U.S. schools. Nutrition In A Box also is structured to support many of the Health Education Standards in the Food, Nutrition & Physical Activity strand.

Oregon Health Standards

Oregon Department of Education Health Education directs eight standards in K-12 schools. Nutrition In A Box (NIAB) focuses on Standard 4: Food, Nutrition & Physical Activity. NIAB is designed for students in sixth through eigth grade, as well as high school, to supplement their health education curriculum.

Oregon Health Standards for Middle School (Grade 6 - 8)

Nutrition In A Box supports the following grades 6 - 8 standards shown in **bold.**

Middle School Grade 6 Health Standard #4: Food, Nutrition, and Physical Activity (FNP)

6.FNP.1 Compare and contrast foods grown and produced in the United States and other countries.

6.FNP.2 Explain why it is important to respect different nutrition choices based on culture, needs, and preferences.

6.FNP.3 Analyze how internal and external influences can affect decisions about eating and physical activity.

6.FNP.4 Identify the six categories of nutrients and explain why each of them are important to the body.

6.FNP.5 Discuss the physical and mental impacts of missing, skipping meals, or 'fad' dieting.

6.FNP.6 Identify intuitive eating practices that can increase a person's healthy relationship with food, and lower the risk for restrictive, excessive and compulsive food intake.

6.FNP.7 Analyze benefits of regular physical activity to promote health.

6.FNP.8 Describe safe food handling to prevent illness.

Oregon Department of Education

QUICK LINK:

Oregon Education Resources: https://www.oregon.gov/ode/educator-resources/standards/health/Pages/default.aspx

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Oregon Health Standards for High School (Grades 9-12)

Nutrition In A Box supports the following high school standards shown in **bold.**

High School Health Standard #4: Food, Nutrition, and Physical Activity (FNP)

HS.FNP.1 Analyze the political, economic, social, and environmental factors that influence our current food system.

HS.FNP.2 Plan or prepare a balanced meal with nutrient-rich basic ingredients.

HS.FNP.3 Evaluate the physical, emotional, and mental impacts of missing or skipping meals and "fad" dieting.

HS.FNP.4 Explain the importance of drinking water and limiting sugar sweetened beverages and its effect on health.

HS.FNP.5 Create a personal short- and long-term goal that incorporates nutritious eating, hydration, and physical activity as a daily part of life based on personal, cultural, and community influences.

HS.FNP.6 Describe how to make nutritious food and beverage choices at home, school, and when dining out.

HS.FNP.7 Analyze how people from all cultures and backgrounds are connected by their use of and shared experiences around food.

HS.FNP.8 Analyze the influences of family, peers, school, community, culture, and social norms on personal values and beliefs about food choices and physical activity.

HS.FNP.9 Describe the requirements necessary for obtaining a food-handlers card.

HS.FNP.10 Identify policies, practices, and resources that support access to nutritious food, clean water, and accessible places for physical activity.

Flexible Teaching Modules

- **Full classroom teaching sessions:** present materials on a screen and conduct class discussions
- **Small breakout groups:** organize students in small groups to explore the information and activities together.
- **Themed Activity Stations:** present the hands-on activities in designated areas for students to visit and engage.
- **Individual Instruction:** print out the activity sheets and other materials for individual and graded assignments.

About the Nutrition In A Box Content Creators

OHSU Moore Institute for Nutrition & Wellness

The OHSU Bob and Charlee Moore Institute for Nutrition & Wellness works to reduce the prevalence of chronic diseases across the lifespan in current and future generations by promoting healthy, nutrient-rich diets based on wholesome foods. The scientific cornerstone of the Moore Institute is a field of science known as the Developmental Origins of Health and Disease, or DOHaD. This research illuminates the vital relationship between maternal prenatal diet, fetal heath and adult onset disease. In simple terms, the nutrition we receive during development in the womb and the first years of life has a direct impact on our lifelong risk of developing chronic diseases like obesity, diabetes and heart disease.

The Moore Institute believes that educating children and young adults about the importance of eating healthy foods will have a direct impact on the health of this generation and the next. Curriculum development and the promotion of nutrition education is one way the Moore Institute works to translate the science of DOHaD and spread the message of the importance of nutrition throughout life.

More information about the OHSU Moore Institute can be found at: **www.ohsu.edu/mooreinstitute.**

Connie Liakos Evers, MS, RDN, CSSD

Connie is a registered dietitian nutritionist and a board-certified sports science dietitian. She works as a nutrition education consultant to schools, universities and USDA child nutrition programs. She makes frequent media appearances, is a popular speaker and is active in social media. For more information about Connie's work, visit: **https://nutritionforkids.com/.**

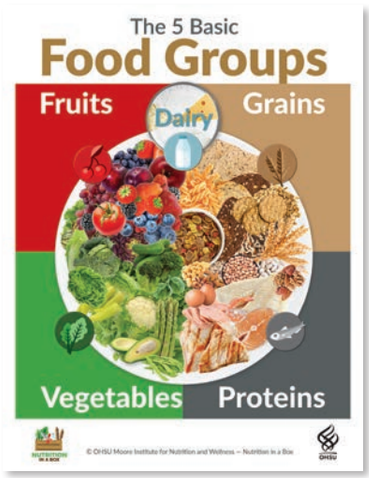
MIKE Program

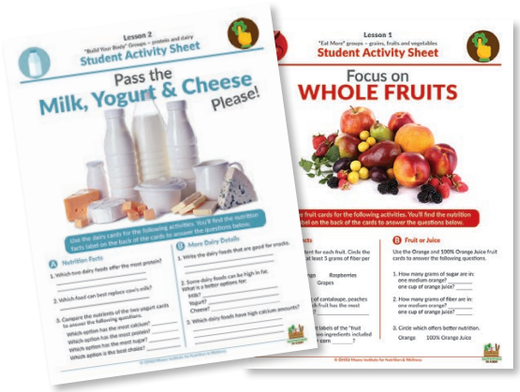
MIKE Program is a nonprofit organization which provides mentored health education to youth, especially in underserved communities. MIKE provides opportunities for youth to increase their potential to be healthier, expand their options for careers in healthcare, and advocate for themselves and their communities. MIKE partners with schools and other social entities to expand the opportunities for youth to succeed, by collaborating with teachers and counselors at schools to develop relevant and beneficiary programming and experiences that enhance student performance, attendance and their mental health. MIKE also provides activities for youth to connect with healthcare and other professionals in their communities to help them explore new career opportunities. For more information about MIKE, visit: **https://www.mikeprogram.org/**.

What's in the Curriculum?

Besides this guide, the curriculum contains materials including:

- Lesson Activity Sheets
- Lesson Worksheets
- Lesson Handouts
- Lesson Tablecards
- 2 Flip-Top Card Games
- Nutrition Facts Cards





Materials Listing

The following items can be used with lesson modules or as optional hands-on activity stations, depending upon your classroom capacity.

- Measuring spoons
- Dry-item and/or liquid measuring cups
- Plastic bowls
- Set of Nutrition Facts Cards
- PDF of all printable materials
- Grain grinder
- Food scale
- Electronic version of all printable materials
- Teacher's Guide

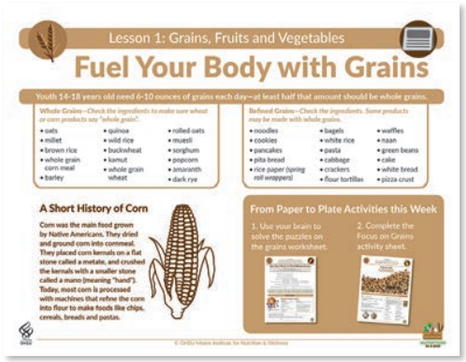
Nutrition In A Box: Teacher's Guide

How to Use the Materials in Lesson Plans

1

Present the "5 Food Groups" poster to the class. If you have printed hand-out versions (letter-size), hand those out to the students.

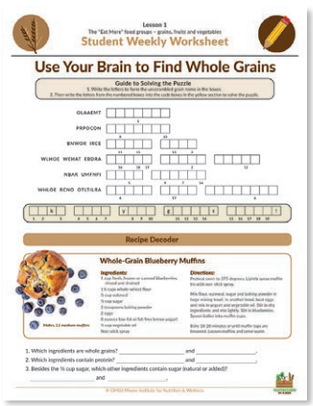
2 Introduce the module with the lesson module tablecard. Use the printed version on a table or show the digital version on a screen.



3 Introduce the lesson module handout (some are printed on two sides). Direct discussions about the information on the front, then proceed with the back.

4 Direct your students to work on the activity sheet in groups or individually.

5 If there's class time, direct students to the worksheet (some are single pages, and others are front-back). Or, use the worksheet for a homework or extra-credit assignment.



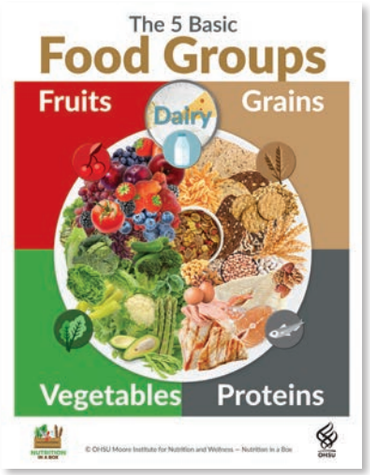
6 Depending on student access to the internet, introduce students to the designated section on the MyPlate website:

https://www.myplate.gov/

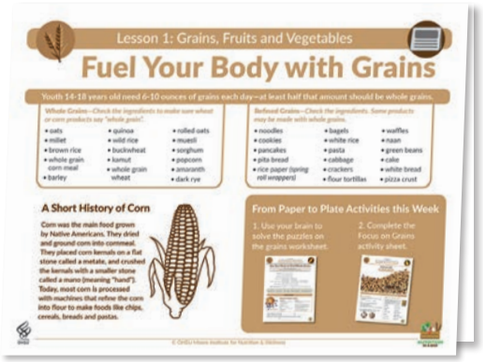
Nutrition In A Box: Teacher's Guide

How to Use the Materials in Activity Stations

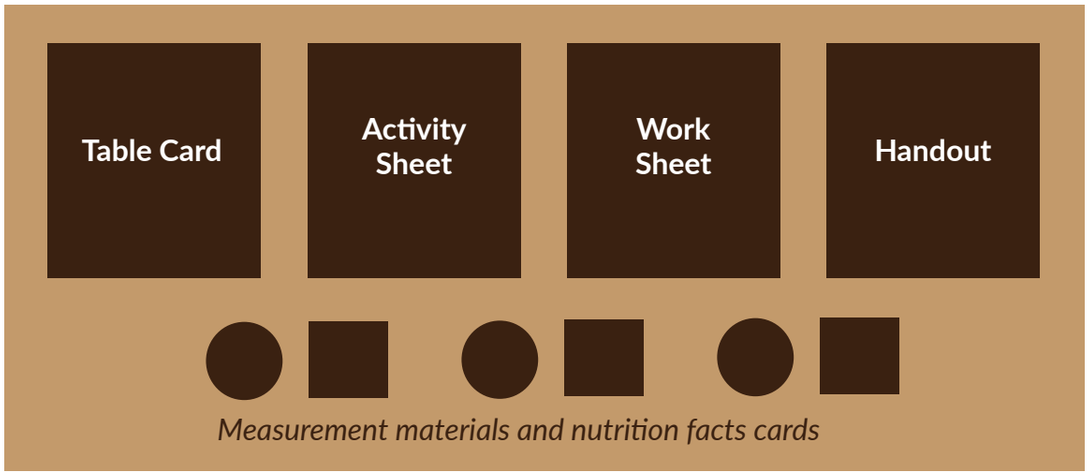
1 Place the "5 Food Groups" poster prominently in the classroom.



2 Introduce the module with the lesson module tablecard. Place the printed table tent version on a table.



Example of a station setup



Student flow

3 Assign a student table captain or guide small groups of students through the station.

4 Depending on how you wish to use the materials as graded work, direct students to take each of the various printed sheets to work on the tasks and answers in groups or individually.

Lesson 1

Power Foods

NUTRITION
IN A BOX

Lesson 1: Power Foods — Vegetables, Fruits & Grains

Lesson 1 introduces three food groups that "power up" the body. Most Americans of all ages do not eat enough of the foods in these three groups. Nutrition In A Box emphasizes the nutrition facts about these foods, recommended daily amounts, and offers ways to include more of them in our daily diets.

Vegetables: categorized by MyPlate, the five subgroups include dark green vegetables, red & orange vegetables, legumes (dried beans and peas), starchy vegetables and all other vegetables. Vegetables are packed with many nutrients (and phytonutrients) that are important for good health such as vitamins A and C, folate, potassium, magnesium, iron and fiber. These subgroup classifications serve as a guide when choosing vegetables with different nutritional properties.

Fruits: categorized by MyPlate, the four subgroups include berries, melons, 100% fruit juices and all others. Fruits contain several important nutrients including vitamins A and C, folate, potassium and fiber. In addition to the variety of fruits available, you'll explore products that pose as fruit (fruit imposters), but actually contain very little fruit. See Lesson 3 for more in-depth exploration into sugar and other artificial ingredients.

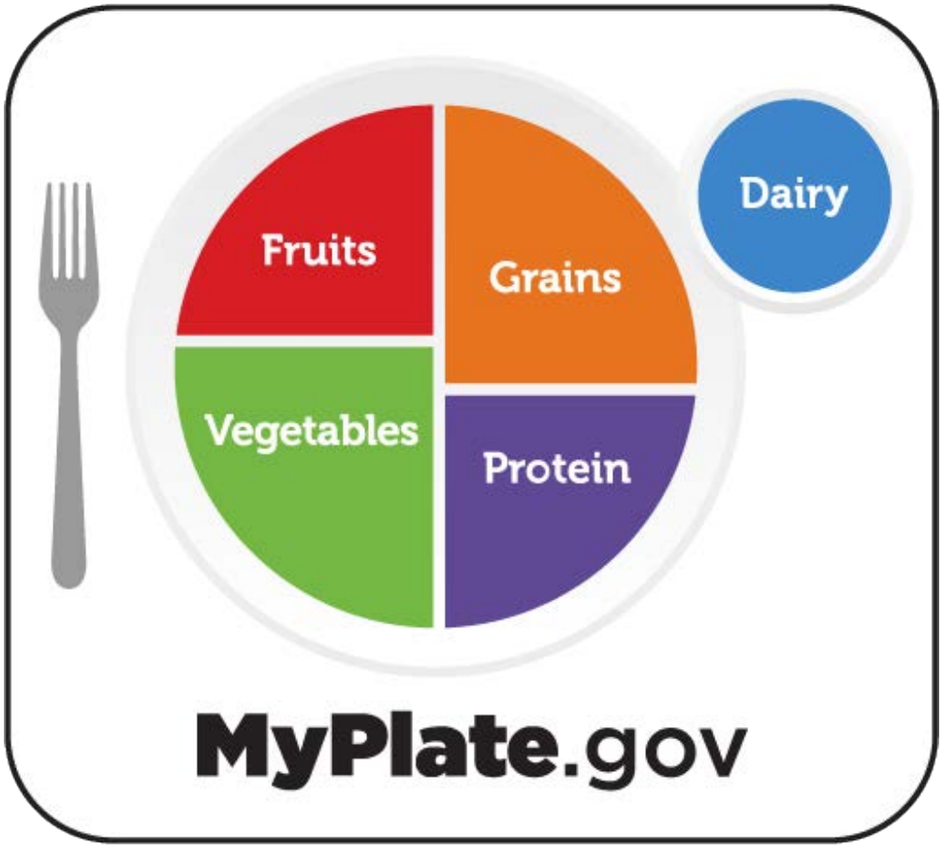
Grains: categorized by MyPlate, the two subgroups include whole grains and refined grains. Grains are loaded with carbohydrates, the body's main source of energy. Whole grains include the entire grain kernel, resulting in food that is more fiber and nutrient dense than refined grains. Important nutrients found in grains include fiber, B vitamins and iron.

Lesson 1 Objectives

With this lesson, students will be able to:

- Recognize the three food groups in the MyPlate guide: fruits, vegetables and grains.
- Identify the subgroups within fruits and vegetables.
- Identify the difference between a whole and refined grains.
- Explain some of the important nutrients in fruits, vegetables and grains.
- Evaluate the benefits of eating fruits and vegetables.
- Develop strategies for including more servings of fruits, vegetables and whole grains in a daily diet.

Link to the USDA MyPlate: https://www.myplate.gov/



Lesson 1 Table Cards

Table cards contain information about each designated food group to help students understand what makes up each food group. The table cards are designed to serve a number of objectives:

- Introduce the nutrition topic to students
- Help engage students in discussions
- Guide students in the materials provided for each food group.

How to use the table cards:

- Print out copies for students
- Present as an overhead slide
- Upload the PDF to a student resource portal
- The "print and folded" version can be used as a table prop for presenting some foods within the specific food group.

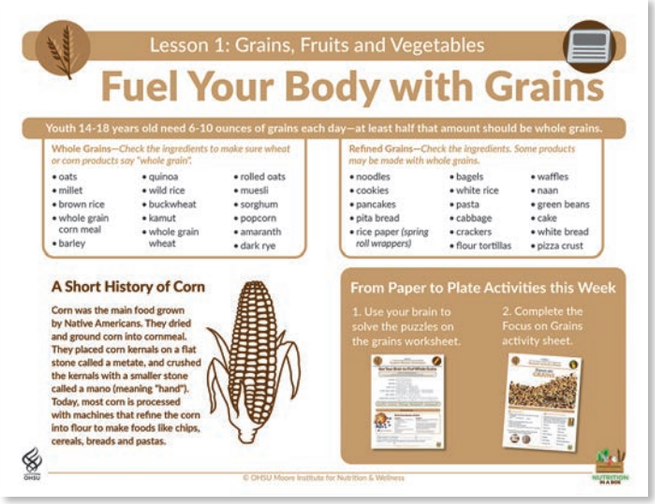
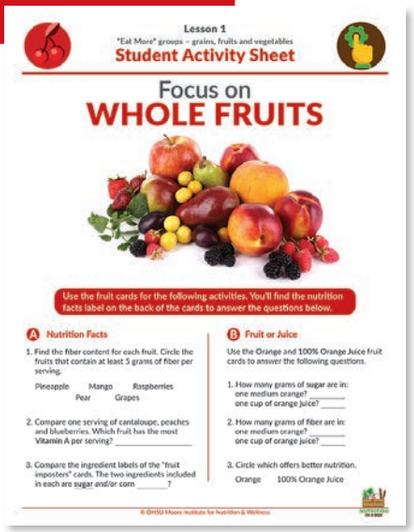


Table Card Prompts:

Guide discussions for the entire class or within student groups:

- **Discussion Question:** Survey the amount of foods students typically eat of each food group
- **Discussion Question:** What traditions or customs are used in selecting and preparing these foods?
- **Discussion Question:** Which foods from each food group do students typically eat? Which foods from each food group are unfamiliar? Where do you think they are popular?

Fruit Activity Sheet: Answers, Page 1


Lesson 1
"Eat More" groups – grains, fruits and vegetables
Student Activity Sheet
Focus on
WHOLE FRUITS
Use the fruit cards for the following activities. You'll find the nutrition facts label on the back of the cards to answer the questions below.
A Nutrition Facts
1. Find the fiber content for each fruit. Circle the fruits that contain at least 5 grams of fiber per serving.
Pineapple Mango Raspberries Pear Grapes
2. Compare one serving of cantaloupe, peaches and blueberries. Which fruit has the most Vitamin A per serving? _____
3. Compare the ingredient labels of the "fruit imposters" cards. The two ingredients included in each are sugar and/or corn _____?
B Fruit or Juice
Use the Orange and 100% Orange Juice fruit cards to answer the following questions.
1. How many grams of sugar are in: one medium orange? _____ one cup of orange juice? _____
2. How many grams of fiber are in: one medium orange? _____ one cup of orange juice? _____
3. Circle which offers better nutrition.
Orange 100% Orange Juice
© OHSU Moore Institute for Nutrition & Wellness

A Nutrition Facts

1. Find the **fiber** content for each fruit. Circle the fruits that contain at least 5 grams of fiber per serving.

Pineapple Mango Raspberries
Pear Grapes

2. Compare one serving of cantaloupe, peaches and blueberries. Which fruit has the most **Vitamin A** per serving? cantaloupe

3. Compare the ingredient labels of the "fruit imposters" cards. The two ingredients included in each are sugar *and/or* **corn** syrup?

B Fruit or Juice

Use the **Orange** and **100% Orange Juice** fruit cards to answer the following questions.

1. How many grams of **sugar** are in:
one medium orange? 12 grams
one cup of orange juice? 22 grams

2. How many grams of **fiber** are in:
one medium orange? 3 grams
one cup of orange juice? 0 grams

3. Circle which offers better nutrition.

Orange 100% Orange Juice

Other Lesson Ideas

- **Full classroom:** Discuss where fruits are grown in the community. Which fruits are grown in other countries? What seasons are best for fruit?
- **Small breakout groups:** organize students in groups to explore nutrition facts about one of the four fruit subgroups and report their findings back to the class.
- **Individual experiences:** Engage students in a discussion about a favorite or popular fruit in their family or home. What is its significance?

Nutrition In A Box: Teacher's Guide

Lesson 1 Module: Fruits

Fruit Handout: Answers, Page 2

Compare the nutrition labels of the fruit snacks, then answer the questions below.

Fruit Snack A

Nutrition Facts

Servings per Container 6
Serving Size **1 Pouch (22g)**

40 Servings Per Box
Calories **70**

	% Daily Value*
Total Fat 0g	17%
Saturated Fat 1.5g	8%
Cholesterol 0g	0%
Sodium 20mg	1%
Total Carbohydrate 17g	6%
Dietary Fiber <1g	0%
Total Sugars 10g	
Includes 8g Added Sugars	16%
Protein 1g	2%
Vitamin A 230mcg	25%
Vitamin C 23mg	25%
Vitamin E 3.68mg	25%

Not a significant source of saturated fat, trans fat, cholesterol, 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.*

Fruit Snack B

Nutrition Facts

Servings per Container 12
Serving Size **1 Pouch (8.5g)**

24 Servings Per Container
Calories **20**

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 1.5g	0%
Trans Fat 0g	0%
Cholesterol 0g	0%
Sodium 10mg	0%
Total Carbohydrate 6g	2%
Dietary Fiber <1g	3%
Total Sugars 5g	
Includes 0g Added Sugars	0%
Protein 0g	0%
Vitamin D 0mcg	0%
Calcium 1mg	0%
Iron 0mg	0%
Potassium 41mg	0%

Not a significant source of saturated fat, trans fat, cholesterol, 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.*

Fruit Snack C

Nutrition Facts

Servings per Container 12
Serving Size **1 Bar (40g)**

Servings Per Container 12
Calories **45**

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 1.5g	0%
Trans Fat 0g	0%
Polyunsaturated Fat 4g	
Monounsaturated Fat 7g	
Cholesterol 0g	0%
Sodium 0mg	0%
Total Carbohydrate 12g	4%
Dietary Fiber <1g	3%
Total Sugars 10g	
Includes 4g Added Sugars	8%
Protein 1g	4%
Vitamin D 0mcg	0%
Calcium 20mg	2%
Iron 0.2mg	6%
Potassium 90mg	2%

Not a significant source of saturated fat, trans fat, cholesterol, 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.*

1. Which nutrient found in fresh fruits is nearly missing in all three fruit snacks? Fiber

2. Which fact affects the calorie counts in each fruit snack? Serving size

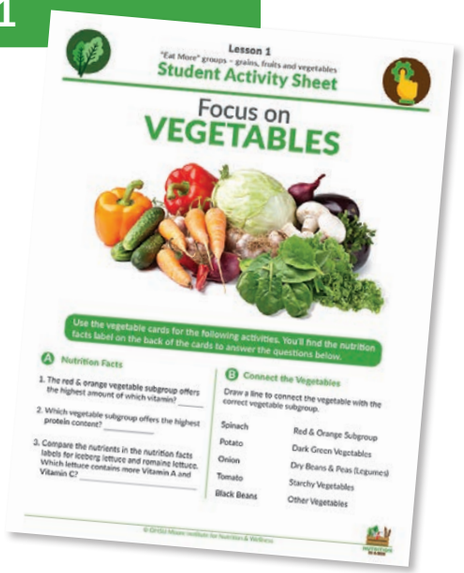
3. Which fruit snack has the most added sugar? Fruit Snack C

Fruit & Vegetable Weekly Tracker Sheet

1. Assign students the weekly tracker sheet.
2. Direct students to bring the tracker to class on your assignment day.
3. In class, direct students in conversation about challenges in tracking what they eat, availability of fruits and vegetables, how easy or difficult it was to get the recommended amounts, what they like and don't like and how the process helped them to focus on their intake of these foods. Ask students to offer ideas on how they would increase their intake of fruits and vegetables.

NUTRITION IN A BOX

Vegetables Activity Sheet: Answers, Page 1


Lesson 1
"Eat More" groups – grains, fruits and vegetables
Student Activity Sheet
Focus on VEGETABLES
Use the vegetable cards for the following activities. You'll find the nutrition facts label on the back of the cards to answer the questions below.
A Nutrition Facts
1. The red & orange vegetable subgroup offers the highest amount of which vitamin?
2. Which vegetable subgroup offers the highest protein content?
3. Compare the nutrients in the nutrition facts labels for iceberg lettuce and romaine lettuce. Which lettuce contains more Vitamin A and Vitamin C?
B Connect the Vegetables
Draw a line to connect the vegetable with the correct vegetable subgroup.
Spinach
Potato
Onion
Tomato
Black Beans
Red & Orange Subgroup
Dark Green Vegetables
Dry Beans & Peas (Legumes)
Starchy Vegetables
Other Vegetables

A Nutrition Facts

1. The **red & orange vegetable subgroup** offers the highest amount of which vitamin? Vitamin C

2. Which vegetable subgroup offers the highest **protein** content? Beans, Peas & Lentils

3. Compare the nutrients in the nutrition facts labels for iceberg lettuce and romaine lettuce. Which lettuce contains more **Vitamin A** and **Vitamin C**? Romaine Lettuce

B Connect the Vegetables

Draw a line to connect the vegetable with the correct vegetable subgroup.

C Action Steps

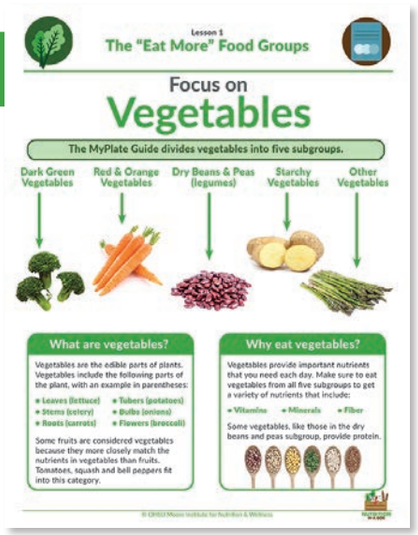
Student choice. Check for responses.

Other Lesson Ideas

- **Full classroom:** Discuss where vegetables are grown in the community. How do vegetables make it from farm to home?
- **Small breakout groups:** organize students in groups to explore nutrition facts about one of the five vegetable subgroups and report their findings back to the class.
- **Individual experiences:** Engage the class in a discussion about a favorite or popular vegetable in their family or home. What is its significance?

Lesson 1 Module: Vegetables

Vegetables Handout: Answers, Page 2



Green Leafy Vegetables:

- romaine lettuce
- spinach
- broccoli
- cilantro
- collard greens
- bok choy

Other Vegetables:

- cucumber
- celery
- avocado
- asparagus
- cauliflower
- onion
- cabbage

Starchy Vegetables:

- potato
- jicama
- corn

Red & Orange Vegetables:

- red bell pepper
- sweet potato
- pumpkin
- tomato

Beans, Peas & Lentils:

- pinto beans
- lentils
- chickpeas
- black-eyed peas

Fruit & Vegetable Weekly Tracker Sheet

1. Continue with the weekly tracker sheet introduced in the Fruit segment.
2. Direct students to bring the tracker to class on your assignment day.
3. In class, direct students in conversation about challenges in tracking what they eat, availability of fruits and vegetables, how easy or difficult it was to get the recommended amounts, what they like and don't like and how the process helped them to focus on their intake of these foods. Ask students to offer ideas on how they would increase their intake of fruits and vegetables.

Lesson 1 Module: Grains

Grains Activity Sheet: Answers, Page 1


Lesson 1
"Eat More" groups – grains, fruits and vegetables
Student Activity Sheet
Focus on GRAINS
Use the grain cards and poster for the following activities.
A Nutrition Facts
1. Which parts of the grain are removed to make it refined?
__Bran __Endosperm __Germ
2. What are ancient grains (check one)?
__Grains that are old
__Grains that began long ago
__Grains that are grown the same way for centuries
3. Compare the rice noodles and the buckwheat soba noodles. Which is whole grain?
B Whole Grain Connection
The Whole Grain Stamp (shown here) appears on food packages that are whole grains. Circle the foods below that you think will have the stamp.
Oatmeal, Brown rice, Quinoa, White Tortillas, Popcorn, Corn Flakes, Pancake Mix, Corn bread, Soba noodles, White rice, Toaster pastries, Tortilla chips, Whole wheat bread, Buckwheat, Whole wheat bread, Buckwheat

A Nutrition Facts

1. Which parts of the grain are removed to make it **refined**?
X Bran __Endosperm X Germ

2. What are **ancient grains** (check one)?
___ Grains that are old
___ Grains that began long ago
X Grains that are grown the same way for centuries

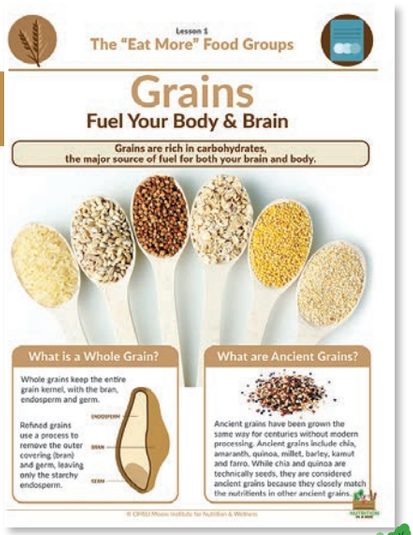
3. Compare the rice noodles and the buckwheat soba noodles. Which is **whole grain**? soba noodles

B Whole Grain Connection

The Whole Grain Stamp (shown here) appears on food packages that are whole grains. Circle the foods below that you think will have the stamp.

(Oatmeal)	(Popcorn)	Corn bread	Tortilla chips
(Brown rice)	Corn Flakes	(Soba noodles)	(Whole wheat bread)
(Quinoa)	Pancake mix	White rice	(Buckwheat)
White Tortillas		Toaster pastries	

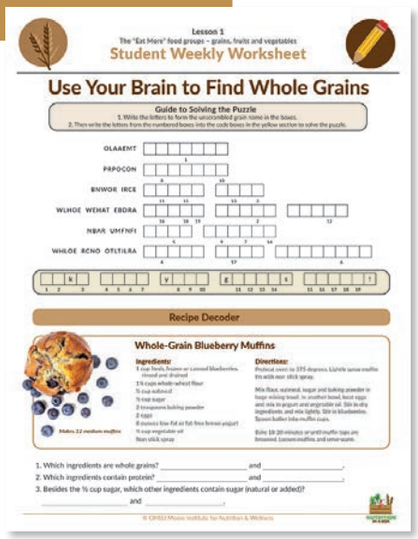
Grains Handout: Answers, Page 2


Lesson 1
The "Eat More" Food Groups
Grains
Fuel Your Body & Brain
Grains are rich in carbohydrates, the major source of fuel for both your brain and body.
What is a Whole Grain?
Whole grains keep the entire grain kernel, with the bran, endosperm and germ.
Refined grains use a process to remove the outer covering (bran) and germ, leaving only the starchy endosperm.
ENDOSPERM
BRAN
GERM
What are Ancient Grains?
Ancient grains have been grown the same way for centuries without modern processing. Ancient grains include chia, amaranth, quinoa, millet, barley, kamut and farro. While chia and quinoa are technically seeds, they are considered ancient grains because they closely match the nutritients in other ancient grains.

Circle the ingredients that are whole grains.

(Brown rice)	Durum wheat
(Oats)	(Whole wheat)
Bran	(Buckwheat)
Semolina	Degerminated Enriched flour

Grains Worksheet: Answers, Page 1


Lesson 1
The "Eat More" food groups – grains, fruits and vegetables
Student Weekly Worksheet

Use Your Brain to Find Whole Grains

Guide to Solving the Puzzle

Recipe Decoder

Whole-Grain Blueberry Muffins

Unscrambled Words

OLAAEMT = OATMEAL

PRPOCON = POPCORN

BNWOR IRCE = BROWN RICE

WLHOE WEHAT EBDRA = WHOLE WHEAT BREAD

NBAR UMFNFI = BRAN MUFFIN

WHLOE RCNO OTLTILRA = WHOLE CORN TORTILLA

Unscrambled Message

MAKE HALF YOUR GRAINS WHOLE!

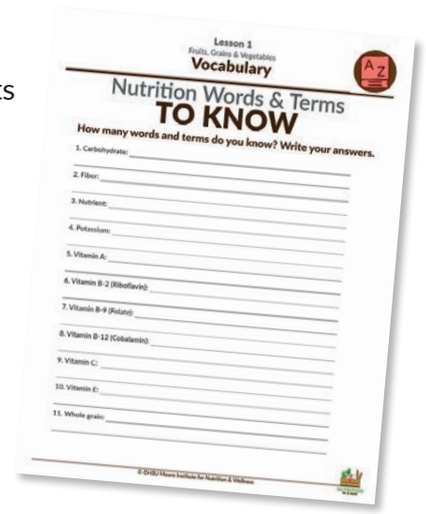
Recipe Decoder: Blueberry Muffins

1. **Which ingredients are whole grains?** whole wheat flour **and** oats**.**
2. **Which ingredients contain protein?** eggs **and** lemon yogurt**.**
3. **Besides the ½ cup sugar, which other ingredients contain sugar (natural or added)?**
   blueberries (natural sugar) **and** lemon yogurt (added sugar)**.**

Other Lesson Ideas

- **Full classroom:** Discuss where grains are grown in the community and/or state. Which grains are most popular in the U.S., and in other countries? Why are grains a "food staple" in many cultures?
- **Small breakout groups:** organize students in groups to explore nutrition facts about one type of grain and report their findings back to the class.
- **Individual experiences:** Engage students in a discussion about a favorite or popular grain in their family or home. What is its significance?

Lesson 1 Vocabulary


Lesson 1
Fruits, Grains & Vegetables
Vocabulary
Nutrition Words & Terms
TO KNOW
How many words and terms do you know? Write your answers.
1. Carbohydrate:
2. Fiber:
3. Nutrient:
4. Potassium:
5. Vitamin A:
6. Vitamin B-2 (Riboflavin):
7. Vitamin B-9 (Folate):
8. Vitamin B-12 (Cobalamin):
9. Vitamin C:
10. Vitamin E:
11. Whole grain:

A Student Vocabulary Lesson 1 sheet is provided for printing for students to complete individually, or refer to this list to quiz students in groups.

1. Carbohydrate: A macronutrient that is the body's major source of energy.

2. Fiber: An indigestible carbohydrate that promotes healthy digestion.

3. Nutrient: A substance the body needs to live, grow and stay healthy.

4. Potassium: A mineral that helps maintain heart beat, regulates body fluids and helps nerves and muscles function.

5. Vitamin A: The two main forms of Vitamin A are preformed retinol and proformed carotenoids. This vitamin supports vision, skin, immune system, organ function and reproduction.

6. Vitamin B-2 (Riboflavin): Riboflavin helps process carbohydrates into energy, and supports cell development and functions.

7. Vitamin B-9 (Folate): Folate (including folic acid) helps make DNA and other genetic material.

8. Vitamin B-12 (Cobalamin): Vitamin B-12 promotes healthy nerve and blood cells and helps makes DNA.

9. Vitamin C: Helps hold cells together, heals cuts and broken bones, processes protein, and helps fight infection.

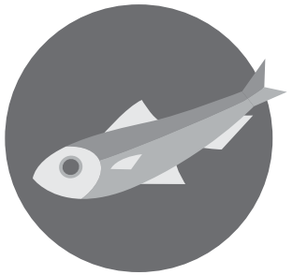
10. Vitamin E: Vitamin E is an antioxidant that supports immune functions, and limits the damage of free radicals in the body. It also helps keep blood from clotting inside blood vessels.

11. Whole grain: A food product made from the entire grain kernel or seed (including bran, germ and endosperm).

Lesson 2

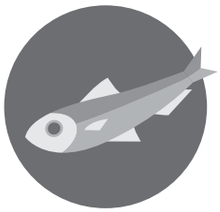
Build Foods

NUTRITION
IN A BOX



Lesson 2: Build Foods — Protein & Dairy

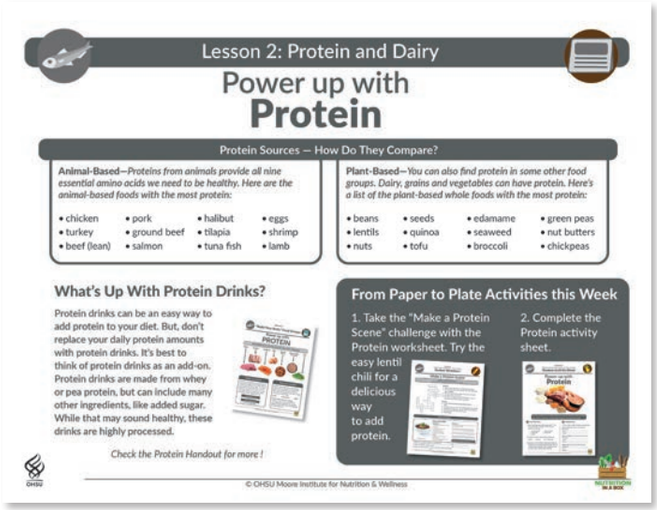
Lesson 2 introduces two food groups that "build" the body: protein and dairy. This lesson also highlights the importance of physical activity as part of a healthy routine. Nutrition In A Box emphasizes the nutrition facts about these foods, recommended daily amounts, and offers ways to include healthier options in a daily diet.



Protein: Categorized by MyPlate, protein is divided into seven subgroups: meats, poultry, seafood, eggs, soy, the nuts and seeds subgroup, and legumes (the beans, peas and lentils) subgroup. Protein is a macronutrient, made from 20 amino acids. The body can't store protein, so that's why it's important to get enough each day.

Dairy: categorized by MyPlate, dairy is divided into four subgroups: milk, dairy alternatives, yogurt and cheese. Dairy provides important nutrients, including calcium. Many dairy foods and beverages are also included in the protein group, because they provide protein.

Lesson 2 Table Cards



Protein and Dairy Discussions:

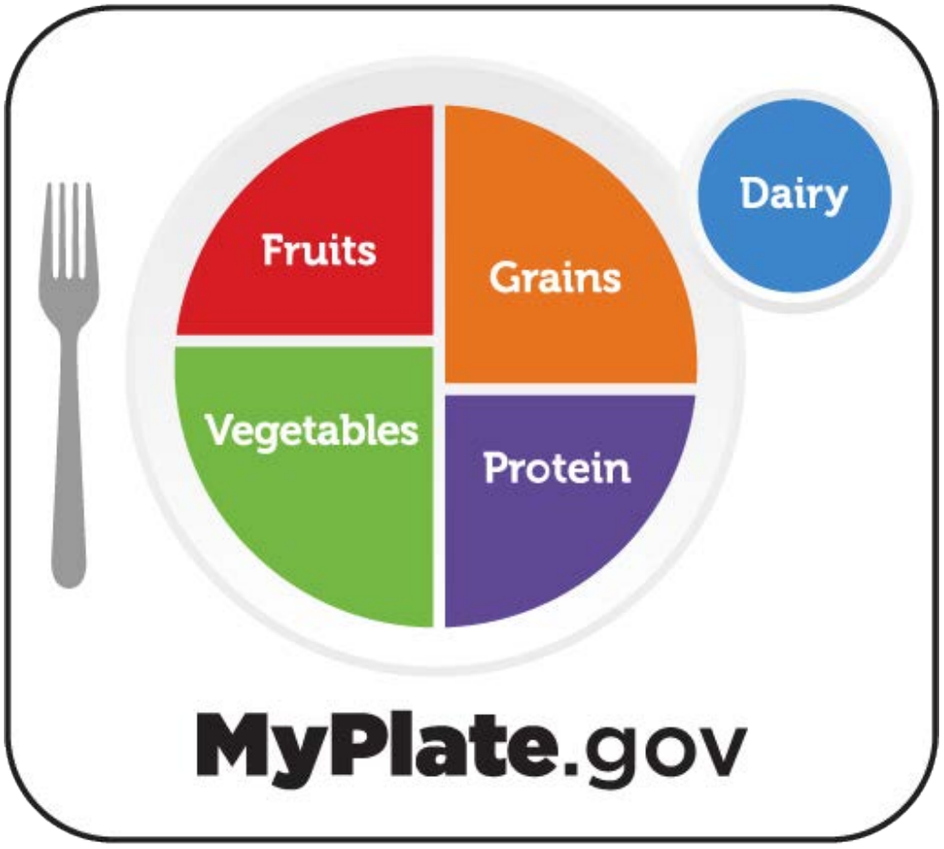
- Ask students how much protein and dairy they get from animal-based and plant-based foods. Post the results on the board and discuss why those sources are the top choices. What factors make these foods popular? Guide a discussion on how these foods fit into meals at home and outside the home.

Lesson 2 Objectives

With this lesson, students will be able to:

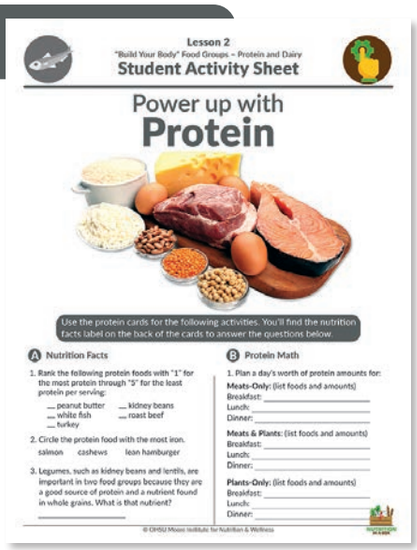
- Recognize the two food groups in the MyPlate guide: protein and dairy.
- Identify the subgroups within protein and dairy.
- Identify some influences of different cultures and backgrounds with proteins and dairy, and what types of foods are most popular in certain cultures.
- Explain some of the important nutrients in protein and dairy.
- Evaluate the benefits of eating protein and dairy, and how physical activity plays a role with these two food groups.
- Develop a strategy for including healthier options of protein and dairy in a daily diet.

Link to the USDA MyPlate: https://www.myplate.gov/



Lesson 2 Module: Protein

Protein Activity Sheet: Answers, Page 1


Lesson 2
"Build Your Body" Food Groups – Protein and Dairy
Student Activity Sheet
Power up with
Protein
Use the protein cards for the following activities. You'll find the nutrition facts label on the back of the cards to answer the questions below.
A Nutrition Facts
1. Rank the following protein foods with "1" for the most protein through "5" for the least protein per serving:
__ peanut butter __ kidney beans
__ white fish __ roast beef
__ turkey
2. Circle the protein food with the most iron.
salmon cashews lean hamburger
3. Legumes, such as kidney beans and lentils, are important in two food groups because they are a good source of protein and a nutrient found in whole grains. What is that nutrient?
B Protein Math
1. Plan a day's worth of protein amounts for:
Meats-Only: (list foods and amounts)
Breakfast:
Lunch:
Dinner:
Meats & Plants: (list foods and amounts)
Breakfast:
Lunch:
Dinner:
Plants-Only: (list foods and amounts)
Breakfast:
Lunch:
Dinner:
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A Nutrition Facts

1. Rank the following protein foods with "1" for the most protein through "5" for the least protein per serving:

5 peanut butter 4 kidney beans 3 white fish
2 roast beef 1 turkey

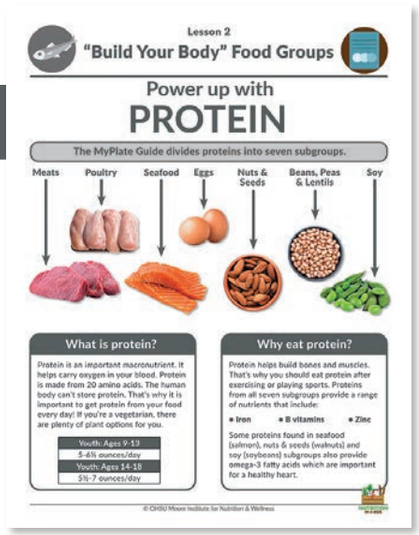
2. Circle the protein food with the most iron.

salmon cashews **lean hamburger**

3. Legumes, such as kidney beans and lentils, are important in two food groups because they are a good source of protein and a nutrient found in whole grains. What is that nutrient?

fiber

Protein Handout: Answers, Page 2


Lesson 2
"Build Your Body" Food Groups
Power up with
PROTEIN
The MyPlate Guide divides proteins into seven subgroups.
Meats
Poultry
Seafood
Eggs
Nuts & Seeds
Beans, Peas & Lentils
Soy
What is protein?
Protein is an important macronutrient. It helps carry oxygen in your blood. Protein is made from 20 amino acids. The human body can't store protein. That's why it is important to get protein from your food every day! If you're a vegetarian, there are plenty of plant options for you.
Youth: Ages 9-13
5-6½ ounces/day
Youth: Ages 14-18
5½-7 ounces/day
Why eat protein?
Protein helps build bones and muscles. That's why you should eat protein after exercising or playing sports. Proteins from all seven subgroups provide a range of nutrients that include:
• Iron • B vitamins • Zinc
Some proteins found in seafood (salmon), nuts & seeds (walnuts) and soy (soybeans) subgroups also provide omega-3 fatty acids which are important for a healthy heart.
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Meats:
- hamburger
- beef
- ham
- bacon
- lamb

Poultry:
- turkey
- chicken

Seafood:
- cod
- clams
- tuna
- shrimp
- salmon

Nuts & Seeds:
- almonds
- peanut butter
- peanuts
- pumpkin seeds
- walnuts

Beans, Peas & Lentils:
- pinto beans
- kidney beans
- lentils
- chickpeas
- black beans
- hummus

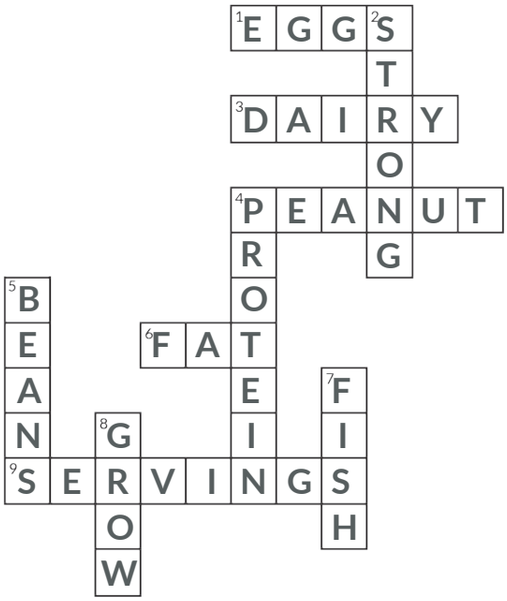
Eggs:
- eggs

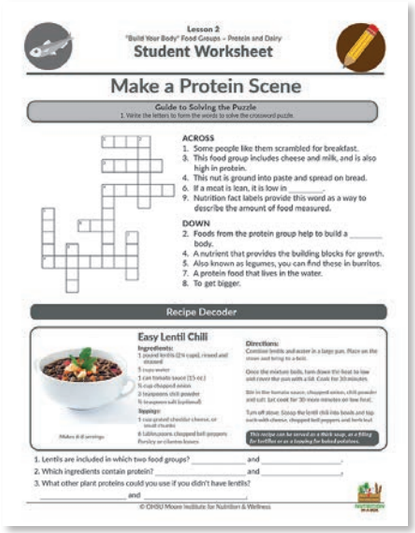
Soy:
- tempeh
- edamame
- tofu

BONUS → *Beans, Peas & Lentils are also part of which food group?*
Vegetable group.

NUTRITION IN A BOX

Protein Worksheet: Crossword Answers, Page 1




Lesson 2
"Build Your Body" Food Groups – Protein and Dairy
Student Worksheet
Make a Protein Scene
Guide to Solving the Puzzle
1. Write the letters to form the words to solve the crossword puzzle.
ACROSS
1. Some people like them scrambled for breakfast.
3. This food group includes cheese and milk, and is also high in protein.
4. This nut is ground into paste and spread on bread.
6. If a meat is lean, it is low in _____.
9. Nutrition fact labels provide this word as a way to describe the amount of food measured.
DOWN
2. Foods from the protein group help to build a _____ body.
4. A nutrient that provides the building blocks for growth.
5. Also known as legumes, you can find these in burritos.
7. A protein food that lives in the water.
8. To get bigger.
Recipe Decoder
Easy Lentil Chili
Ingredients:
Directions:
Toppings:
1. Lentils are included in which two food groups? _____ and _____.
2. Which ingredients contain protein? _____ and _____.
3. What other plant proteins could you use if you didn't have lentils?
_____ and _____
© OHSU Moore Institute for Nutrition & Wellness

Across

1. Some people like them scrambled for breakfast.

3. This food group includes cheese and milk, and is also high in protein.

4. This nut is ground into paste and spread on bread.

6. If a meat is lean, it is low in _____.

9. Nutrition fact labels provide this word as a way to describe the amount of food measured.

Down

2. Foods from the protein group help to build a _____ body.

4. A nutrient that provides the building blocks for growth.

5. Also known as legumes, you can find these in burritos.

7. A protein food that lives in the water.

8. To get bigger.

Protein Worksheet: Recipe Answers, Page 1

1. Lentils are included in which two food groups? protein and vegetables.

2. Which ingredients contain protein? lentils and cheddar cheese.

3. What other plant proteins could you use if you didn't have lentils?
beans and meat.

Lesson 2 Module: Dairy


Lesson 2
"Build Your Body" Groups – protein and dairy
Student Activity Sheet
Pass the
Milk, Yogurt & Cheese
Please!
Use the dairy cards for the following activities. You'll find the nutrition facts label on the back of the cards to answer the questions below.
A Nutrition Facts
1. Which two dairy foods offer the most protein?
2. Which food can best replace cow's milk?
3. Compare the nutrients of the two yogurt cards to answer the following questions.
Which option has the most calcium?
Which option has the most protein?
Which option has the most sugar?
Which option is the best choice?
B More Dairy Details
1. Write the dairy foods that are good for snacks.
2. Some dairy foods can be high in fat. What is a better options for:
Milk?
Yogurt?
Cheese?
3. Which dairy foods have high calcium amounts?

Dairy Activity Sheet: Answers, Page 1

A Nutrition Facts

1. Which two dairy foods offer the most protein?
   cottage cheese
   Greek yogurt

2. Which food can best replace cow's milk?
   soy milk

3. Compare the nutrients of the two yogurt cards to answer the following questions.

   Which option has the most calcium? plain
   Which option has the most protein? Greek
   Which option has the most sugar? plain
   Which option has more potassium? plain

B More Dairy Details

1. Write the dairy foods that are good for snacks.
   string cheese
   plain yogurt

2. Some dairy foods can be high in fat. What are better options for:
   Milk? fat-free milk
   Yogurt? low-fat yogurt
   Cheese? string cheese

3. Which dairy foods have high calcium amounts?
   Vanilla soy milk
   Low-fat plain yogurt
   1% milk

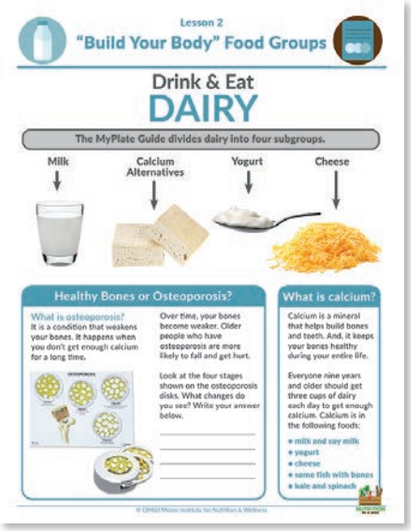
Other Lesson Ideas

Dairy Discussion: Take a survey of the different types of milk (from animals and from plants).

- Discuss why is each milk option popular?
- What health issues may cause people to opt for certain types of milks?
- What processes are used to create different types of milk?

Nutrition In A Box: Teacher's Guide

Dairy Handout: Answers, Page 1



Look at the four stages shown on the osteoporosis disks. What changes do you see? Write your answer below.

Stage 1: Healthy bones

Stage 2: Loss & thinning of bone

Stage 3: Loss & thinning of bone with increased risk of fracture

Stage 4: Fractures present

Dairy Handout: Answers, Page 2

Cheese

- parmesan
- feta
- cheddar
- cottage cheese
- ricotta
- mozarella
- Swiss
- queso

Calcium Alternatives

- tempeh
- tofu
- soy milk

Milk

- 1% milk
- whole milk
- ice cream

Yogurt

- Greek yogurt
- yogurt

Other

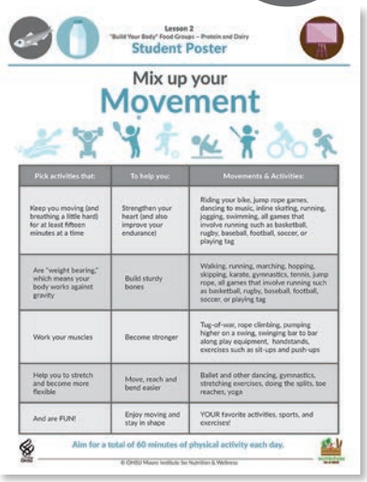
- kale
- spinach

Other Lesson Ideas

- **More Discussion:** Take a survey of which dairy foods are most consumed by the students and post the results on the board. Which dairy foods are the most popular? Why?

- **Create Your Own Nutrition Cards:** Provide students with a set of blank nutrition card sheets to create nutrition cards for at least 3-5 dairy foods in their home. Which nutrients are provided? Where did they find the nutrition information?

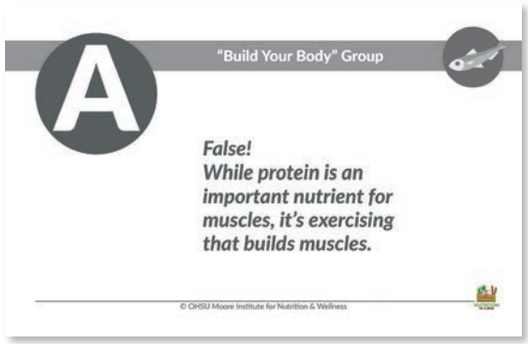
Mix up your Movement Student Poster



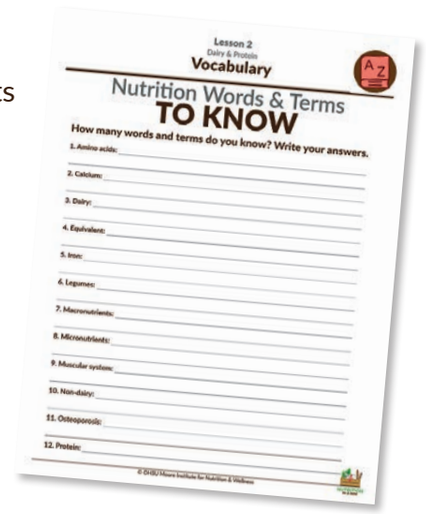
- Print out the document to post on an information board in your classroom.
- Print out a copy for each student.
- Upload the document to a student resource portal.
- Present the document as an overhead slide to engage students in conversation.

Protein Pursuit Game

- Use the booklet to engage a group of students with one student quizzing the others in the group.
- Use the questions to create a quiz for students.
- Present the document as overhead slides to engage students (full classroom or designated groups) in a fun competition about what they know about protein.

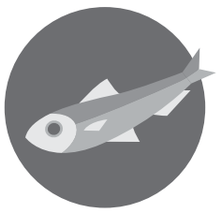


Lesson 2 Vocabulary


Lesson 2
Dairy & Protein
Vocabulary
Nutrition Words & Terms
TO KNOW
How many words and terms do you know? Write your answers.
1. Amino acids:
2. Calcium:
3. Dairy:
4. Equivalent:
5. Iron:
6. Legumes:
7. Macronutrients:
8. Micronutrients:
9. Muscular system:
10. Non-dairy:
11. Osteoporosis:
12. Protein:

A Student Vocabulary Lesson 2 sheet is provided for printing for students to complete individually, or refer to this list to quiz students in groups.

1. **Amino acids:** The 20 organic chemicals (carbon-hydrogen bonds) found in protein. There are nine essential amino acids.
2. **Calcium:** A mineral that builds and maintains strong bones and teeth.
3. **Dairy:** Foods made from milk, usually animal milk.
4. **Equivalent:** Equal in value or amount.
5. **Iron:** A mineral that carries oxygen in red blood cells and muscle cells.
6. **Legumes:** A seed, pod or other edible part of a plant.
7. **Macronutrients:** Nutrients that humans need in larger quantities. Fats, protein and carbohydrates are the three macronutrients.
8. **Micronutrients:** Nutrients (mostly vitamins and minerals that humans need in smaller quantities). The are six essential classes: Iron, Vitamin A, Vitamin D, Iodine, Folate and Zinc.
9. **Muscular system:** The fibers attached to bones, internal organs and blood cells responsible for movement.
10. **Non-dairy:** Foods that are similar in content to animal-based foods, but usually come from plants.
11. **Osteoporosis:** Bone disease from decrease in mineral density and bone mass.
12. **Protein:** Macronutrient of amino acids for growing and repairing cells, maintaining muscles.



Lesson 3

Winning the Balance Game

NUTRITION
IN A BOX

Lesson 3: Winning the Balance Game — Fats, Treats & Portion Sizes

Lesson 3 introduces dietary balance and moderation, especially with foods containing fats and sugars. Students will identify serving sizes from portion sizes. Students will analyze marketing and advertising techniques used to sell foods.

Fats: Although one of the three macronutrients, fats are not a separate food group. Fats are an essential nutrient that helps support brain development, maintains healthy cells and provides a source of stored energy in our body. Fat also regulates our body temperature and helps cushion vital organs. While getting enough healthy fat is important for overall health, getting too much fat, especially saturated fat, can contribute to conditions leading to chronic diseases.

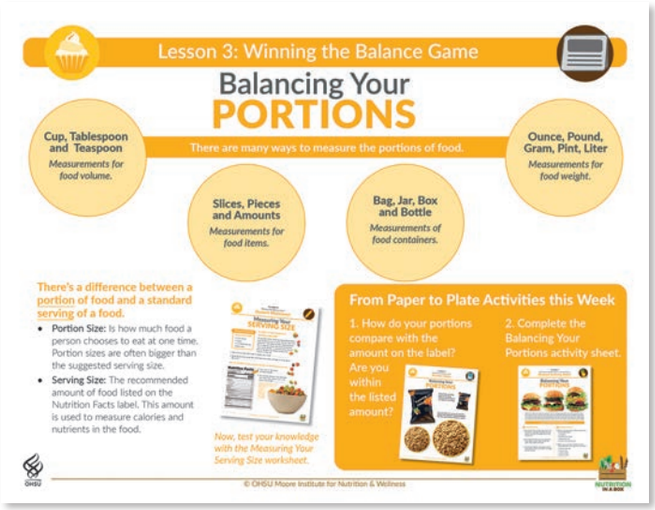
Treats: Most treats satisfy our need for a "food" reward. Our bodies respond to the quick energy spikes from consuming sugar. And our sugar intake activates the mesolimbic dopamine system in our brains, which provides us with that feeling of reward. It's the same function of many addictions. The best way to control our brains from increasing the need for sugar is to resist cravings and control our impulses.

Lesson 3 Table Cards

Use the table cards in Lesson 4 to introduce each sub-category.

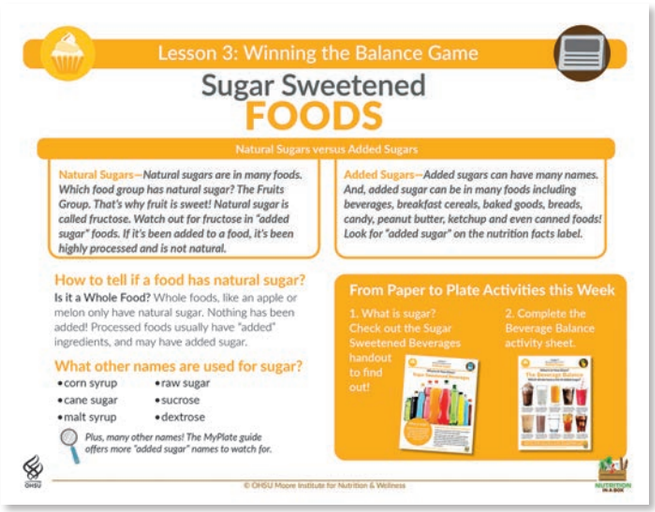
Fats: Guide discussions for the entire class or within student groups:

- **Discussion Question:** Describe what fats are in your home.
- **Discussion Question:** What traditions or customs are used in preparing foods with these fats?
- **Discussion Question:** Based on what you've learned from Nutrition in a Box, what fact could you introduce to your family or friends about fats?



Portions: Guide discussions for the entire class or within student groups:

- **Discussion Question:** Describe the definitions and differences of portion sizes and serving sizes.
- **Discussion Question:** Which measurements are typically used at home when selecting the food you eat?
- **Discussion Question:** What technique could you use to better measure serving sizes?



Sugar Sweetened Foods: Guide discussions for the entire class or within student groups:

- **Discussion Question:** Survey the class in the number of foods they typically eat with natural sugars and added sugars. Which foods are eaten the most?
- **Discussion Question:** What alternatives could students choose that contain less sugar?
- **Discussion Question:** What other names are really sugar in disguise?

Be An Ad-Buster: Guide discussions for the entire class or within student groups:

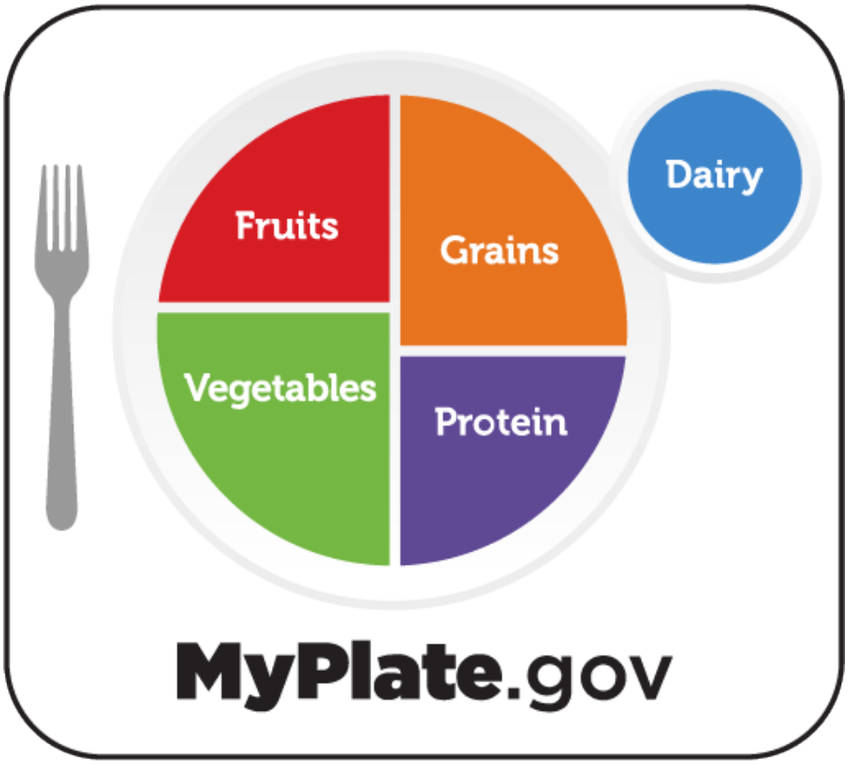
- **Discussion Question:** Discuss the definitions for advertising, marketing and sales.
- **Discussion Question:** Which advertising techniques are most effective?
- **Discussion Question:** Which techniques should be a warning sign that the information may not be correct?

Lesson 3 Objectives

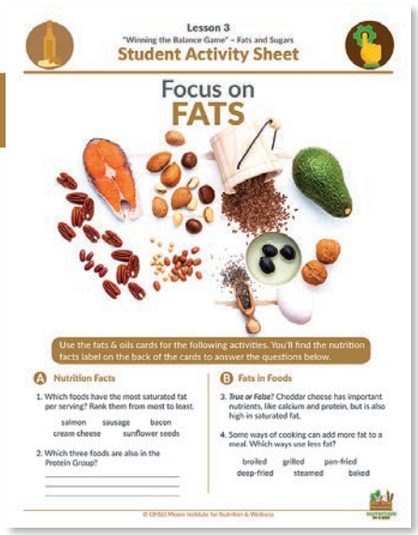
With this lesson, students will be able to:

- Recognize that fats/oils are nutrients that are essential to good health while identifying the health risks of overconsumption of fats, particularly trans and saturated fats.
- Identify hidden sources of sugars in foods and beverages.
- Describe "empty calorie" or "extra" foods as those foods that contribute calories but few other essential nutrients.
- Compare the sugar and nutrient content in a variety of beverages and use this information to make informed choices about beverage intake.
- Develop media literacy skills by employing critical thinking when evaluating hypothetical food and beverage advertisements.
- Identify portion sizes consistent with the serving sizes suggested by the MyPlate food guidance system.
- Develop a strategy for choosing a balanced diet with adequate foods from the five major food groups and appropriate amounts of healthy fats and added sugars.

Link to the USDA MyPlate: https://www.myplate.gov/



Lesson 3 Module: Fats



Fats Activity Sheet: Answers, Page 1

A Nutrition Facts

1. Which foods have the most saturated fat per serving? Rank them from most to least.

4 salmon 3 sausage 2 bacon
1 cream cheese 5 sunflower seeds

2. Which three foods are also in the Protein Group?

Salmon
Walnuts (or mixed nuts)
Sunflower seeds

B Fats in Foods

3. ***True*** *or* ***False?*** Cheddar cheese has important nutrients, like calcium and protein, but is also high in saturated fat.

4. Some ways of cooking can add more fat to a meal. Which ways use less fat?

broiled grilled pan-fried
deep-fried steamed baked

Fats Handout: Answers, Page 1

Circle the fats that are unsaturated.

shortening	lard
canola oil	margerine
butter	cream cheese
olive oil	coconut oil
sesame seed oil	ghee

Lesson 3 Module: Sugar

Sugar Activity Sheet: Answers, Page 1

Added Sugar: According to the Dietary Guidelines for Americans, 2020-2025, 24% of the daily average intake of sugar comes from sugar-sweetened beverages. With so many options available, it can be difficult to choose beverages without sugar. This sheet demonstrates how recognizable many sugar-sweetened beverages are to children and teens.

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ○ lots of added sugar
- ○ lots of natural sugar
- ● little to no sugar

- ○ lots of added sugar
- ● lots of natural sugar
- ○ little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ○ lots of added sugar
- ○ lots of natural sugar
- ● little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

- ● lots of added sugar
- ○ lots of natural sugar
- ○ little to no sugar

Sugar Activity Sheet: Answers, Page 2

How much added sugar is in your drinks?

BEVERAGE #1

The nutrition facts label shows that a glass of juice has 20g of sugar. If each sugar cube has 4g of sugar, how many sugar cubes are in this glass of juice? 5

Hint: divide the total sugar (20g) by 4 (4g per cube) to get the number of sugar cubes.

BEVERAGE #2

Which beverage has no sugar?

Water

How many cubes in each drink?

Write your answers in the boxes.

16	Cola = 64g
9.5	Bubble tea = 38g
8.25	Macchiato coffee = 33g
3.25	Whole milk = 13g
5	Berry smoothie = 20g
6	Orange juice = 24g
6	Chocolate milk = 24g
0	Water = 0g

If you have sugar cubes, stack up the the number of cubes in each drink.

Lesson 3 Module: Portions


Lesson 3
"Winning the Balance Game" – Fats and Sugars
Student Activity Sheet
Balancing Your PORTIONS

What's the difference between portions versus servings? A portion size is the amount of food you choose to eat. A serving size is the amount of the food measured for nutrition information. Try to eat the food amounts recommended for your age. If you eat more than your body needs, your body will store the excess amounts of food as fat. That means, you're likely to gain weight.

Answer the following questions below.

A Nutrition Facts

1. True or False? The nutrition label shows 2.5 servings on a package. To add up the total calories, you have to multiple the serving calories by 4.
2. True or False? Portions are most important when eating "empty calorie" foods, like candy, chips, donuts and soda.
3. True or False? Athletes and people who do active physical work may need to eat larger portions of food.

B Nutrition Sources

4. Where is the best place to find nutrition facts for packaged foods?
   a. Cookbook
   b. Nutrition facts label
   c. Restaurant menu
   d. Posters with food pictures
5. Which source provides nutrition facts for unpackaged foods, like vegetables and fruits?
   a. Grocery store ads
   b. Social media
   c. USDA website
   d. Doctor's office

Portions Activity Sheet: Answers, Page 1

A Nutrition Facts

1. *True or False?* The nutrition label shows 2.5 servings on a package. To add up the total calories, you have to multiple the serving calories by 4. **Multiply by the number of servings, 2.5.**

2. *True or False?* Portions are most important when eating "empty calorie" foods, like candy, chips, donuts and soda.

3. *True or False?* Athletes and people who do active physical work may need to eat larger portions of food.

B Nutrition Sources

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5. Which source provides nutrition facts for unpackaged foods, like vegetables and fruits?
   a. Grocery store ads
   b. Social media
   c. USDA website
   d. Doctor's office

Nutrition Resources

USDA Nutrition Database: fdc.nal.usda.gov

USDA MyPlate: myplate.gov

Oregon State University Food Hero: foodhero.org

OHSU Bob and Charlee Moore Institute for Nutrition & Wellness: ohsu.edu/mooreinstitute

Why Portion Sizes Matter

Managing portion sizes can help control calories. The recommended calories for:

Males, aged 11	**sedentary, 1,800/day**	**active, 2,200/day**
Females, aged 11	**sedentary, 1,600/day**	**active, 2,000/day**
Males, aged 16	**sedentary, 2,400/day**	**active, 3,200/day**
Females, aged 16	**sedentary, 1,800/day**	**active, 2,400/day**

USDA Dietary Guidelines for Americans, 2020-2025: https://www.dietaryguidelines.gov/

Portions Worksheet: Answers, Page 1


Lesson 3
"Winning the Balance Game"
Student Worksheet

Measuring Your
SERVING SIZE

Measure Mission #1

What You'll Need:
- Cereal bowl
- Cereal
- 1/4 measuring cup
- Extra bowl

Is your cereal amount a serving amount?

It's breakfast time. Grab your normal bowl. Pour your normal amount of cereal into the bowl. This is Bowl #1. Then place an extra bowl next to it. This is Bowl #2. Scoop out a level amount of your cereal with the ¼ cup measuring cup and pour it into Bowl #2. Repeat until all the cereal is in Bowl #2.

1. How many scoops did it take to empty your bowl? _____
2. Read the serving size on the cereal box. How many servings of cereal are in Bowl #2? _____

Use the Nutrition Facts label to answer the following questions.

Nutrition Facts

Serving Size	2/3 cup (55g)
Calories	230

3. How much is the actual serving amount? _____
4. The serving amount is less that one cup. How many calories are in full cup of this cereal? _____

Hint: divide the calorie amount in half to get the number of calories in a ½ cup, then multiply that number by 3 to get the total calories in a full cup.

Cereal: Answers to Questions 1 and 2 depend on student response.

1. How many scoops did it take to empty your bowl?

2. Read the serving size on the cereal box. How many servings of cereal are in Bowl #2?

3. How much is the actual serving amount?
2/3 cup

4. The serving amount is less that one cup. How many calories are in full cup of this cereal?
345 calories in 1 cup

Spaghetti: Answers to Questions 1, 2, 3 and 5 depend on student response.

1. How many **scoops** did it take to move your spaghetti into the extra bowl?

2. How many **cups** of spaghetti did you measure (example: 1 ½ cups)?

3. Which serving is larger? My plate amount The box amount

4. The nutrition label only shows the facts for the plain spaghetti.
How many calories are in one cup of plain spaghetti?
210 calories in 1 cup

Spaghetti plate: *Ask students to look for nutrition information on additional foods included in their spaghetti or other pasta, like sauce, vegetables, proteins and cheeses.*

Other Lesson Ideas

- **Collect Cereal Boxes:** Invite students to bring in empty, flattened cereal boxes for several weeks. Gather the boxes and divide into groups of 3-4 students and guide them through analyzing the calorie and other nutritional counts of each cereal, based on serving sizes.

- **A Note on Food Insecurity:** Due to a growing number of children and teens experiencing food insecurity and hunger, we do not recommend using actual cereal as measuring props for this activity. If you have access to other non-food materials of similar size to cereals, such as pebbles, those materials can provide a useful hands-on experience.

Lesson 3 Module: Ad-Buster


Lesson 3
"Winning the Balance Game" – Figuring Out Food Ads
Student Activity Sheet
Be An
AD-BUSTER
Advertising is Everywhere
Companies want as many people as possible to see and hear their advertisements—ads for short. They use a lot of ways to reach people.
You've seen ads on TV. Can you name at least five other places where you see and/or hear ads:
1.
2.
3.
4.
5.
Burger Busters
RESTAURANT
HOME DELIVERY!
TASTY!
BEST IN TOWN!
$2
Answer the following questions below.
A Nutrition Facts
1. True or False? If a food ad shows pictures of certain foods, it must contain those foods.
2. True or False? TV ads for children and youth must only be for healthy foods.
3. True or False? Some ways advertisers try to convince you to buy a product is to show that it will make you happy or trendy.
B Nutrition Sources
4. Look at the "Burger Busters" poster above. Which words or phrases are mostly just advertising and not really facts.
a. Burgers, Sandwiches, Hot Dogs, Pizza
b. Home Delivery!
c. Tasty!
d. Best in Town!
5. Based on the poster, do you think Burger Busters sells healthy foods? Yes No

Ad-Buster Activity Sheet: Answers, Page 1

Advertising is Everywhere

Use the first question on the activity sheet to guide a discussion with students about where they find adverstisements, from television to apps. Also, discuss "influencers" found on popular social media apps.

A Nutrition Facts

1. *True or False?* If a food ad shows pictures of certain foods, it must contain those foods.
2. *True or False?* TV ads for children and youth must only be for healthy foods.
3. *True or False?* Some ways advertisers try to convince you to buy a product is to show that it will make you happy or trendy.

B Nutrition Sources

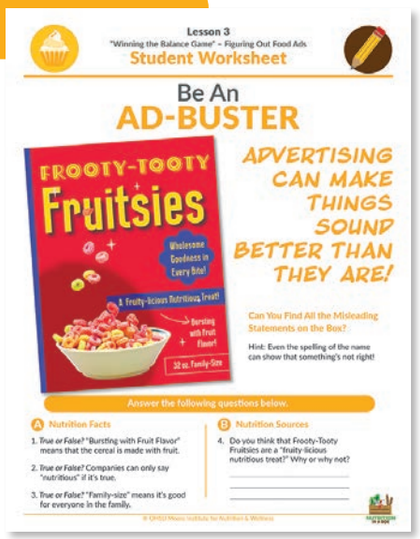
4. Look at the "Burger Busters" poster above. Which words or phrases are mostly just advertising and not really facts.
   a. Burgers, Sandwiches, Hot Dogs, Pizza
   b. Home Delivery!
   c. Tasty!
   d. Best in Town!
5. Based on the poster, do you think Burger Busters sells healthy foods? Yes No

How Many Ads Can You Find?

- **Print Examples:** Gather enough magazines that you can provide one for each group of 3-4 students. Guide them to count the number of ads they find in 2 minutes. For more analysis, guide them to categorize the types of ads: product features, discounts/sales, personal enrichment or product comparison.
- **Social Media:** Engage students about what their favorite app features in ads and "influencers." How many posts are actually ads that just look like regular posts? *(Example: showing what someone purchased or using a certain brand of makeup.)* Data point: kids who played featured advert games with unhealthy food brands linked on their apps consumed over 50% more calories from unhealthy foods than other kids. *(J. Harris, University of Connecticut, Rudd Center for Food Policy and Health)*

Nutrition In A Box: Teacher's Guide

Ad-Buster Worksheet: Answers, Page 1


Lesson 3
"Winning the Balance Game" – Figuring Out Food Ads
Student Worksheet
Be An
AD-BUSTER
FROOTY-TOOTY
Fruitsies
Wholesome Goodness in Every Bite!
A fruity-licious Nutritious Treat!
Bursting with Fruit Flavor!
32 oz. Family-Size
ADVERTISING CAN MAKE THINGS SOUND BETTER THAN THEY ARE!
Can You Find All the Misleading Statements on the Box?
Hint: Even the spelling of the name can show that something's not right!
Answer the following questions below.
A Nutrition Facts
1. True or False? "Bursting with Fruit Flavor" means that the cereal is made with fruit.
2. True or False? Companies can only say "nutritious" if it's true.
3. True or False? "Family-size" means it's good for everyone in the family.
B Nutrition Sources
4. Do you think that Frooty-Tooty Fruitsies are a "fruity-licious nutritious treat?" Why or why not?

A Nutrition Facts

1. *True or False?* "Bursting with Fruit Flavor" means that the cereal is made with fruit.

2. *True or False?* Companies can only say "nutritious" if it's true.

3. *True or False?* "Family-size" means it's good for everyone in the family.

B Nutrition Sources

4. Do you think that Frooty-Tooty Fruitsies are a "fruity-licious nutritious treat?" Why or why not?

The box messaging uses words that sound nutritious, but there's no actual fruit in the cereal.

Ad-Buster Worksheet: Answers, Page 2

1. Look at the ingredient label for Frooty-Tooty Fruitsies. Sugar is listed as the second ingredient (between the flours). What do you think that means?

   There's lots of sugar and no whole grains, both of which can be considered empty calories.

2. Look for real fruit in the ingredients list. Is there any real fruit in this cereal?

   yes (no)

3. Real fruit and 100% fruit juice contribute vitamins A and C. Are Frooty-Tooty Fruitsies a good source of either of these vitamins?

   yes (no) **Based on ingredient list**

4. Based on the labels, do you think this cereal is healthy?

   yes (no)

Ingredients List

Ingredients are listed in descending order by weight, as required by the U.S. Food and Drug Administration (FDA).

Multi-component ingredients (like chocolate-coating) must include all the ingredients contained in that ingredient component in parentheses. Most ingredients cannot be grouped together.

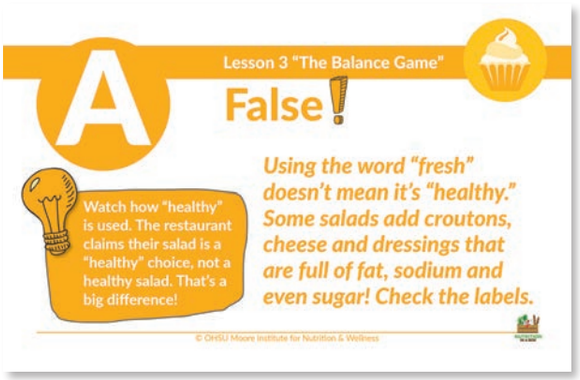
For more information on FDA food labeling requirements: https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-food-labeling-guide

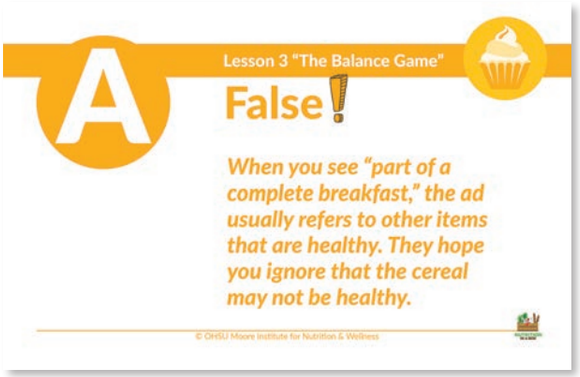
NUTRITION IN A BOX

Ad-Buster: All About Ads

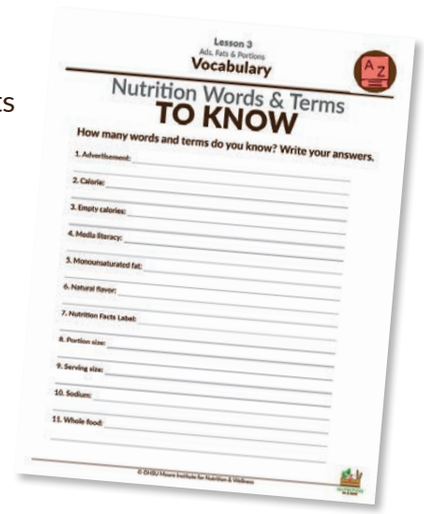
All About Ads is a Question and Answer booklet designed to engage students about advertising techniques.

- Use the booklet to engage a group of students with one student quizzing the others in the group.
- Use the questions to create a quiz for students.
- Present the document as overhead slides to engage students (full classroom or designated groups) in a fun competition about what they know about advertising.





Lesson 3 Vocabulary



A Student Vocabulary Lesson 3 sheet is provided for printing for students to complete individually, or refer to this list to quiz students in groups.

1. **Calorie:** a unit of heat required to raise the temperature of one gram of water.
2. **Empty calories:** Foods that contain a lot of calories, but low nutritional value.
3. **Media literacy:** The ability to access, analyze, evaluate and create media communications.
4. **Monounsaturated fat:** Monounsaturated fats are liquid at room temperature, and are mostly plant-based.
5. **Natural flavor:** Extracted oils, spices and other contents that are used to enhance foods. If the amounts are small enough, the FDA does not require listing the specific origins or ingredients.
6. **Nutrition Facts Label:** An information and data label required on most foods to inform consumers of the contents and ingredients.
7. **Portion size:** The amount/size of food a person eats.
8. **Saturated fat:** Saturated fats are solid at room temperature. Saturated fats can be plant-based or animal-based.
9. **Serving size:** The manufacturer recommended amount of food to eat for one person.
10. **Sodium:** An essential mineral that controls blood pressure and supports musle and nerve functions.
11. **Sugar:** A simple carbohydrate. Sugar can be plant-based or chemical-based.
12. **Whole food:** A non-processed food, that usually has one ingredient.

Lesson 4

Taking Charge of Your Choices

NUTRITION
IN A BOX

Lesson 4: Taking Charge of Your Choices — Eating In, Eating Out & Snacking

Lesson 4 introduces practical skills to manage eating healthy at home, at restaurants and other external eating establishments and ways to plan for healthy meals and snacks. Students will engage in practice-based activities to introduce and reinforce practical skills for healthy eating. There's a sample menu and grocery store activities to provide students with skills in meal planning both in the home and outside the home. These activities also encourage sharing of information and resources for students who may need help in accessing healthy foods.

Home Plate: Shared meals, especially if healthy, help improve academic skills, build stronger family and emotional bonds, help decrease risk-taking behaviors in teens, provide shared learning experiences, and improve overall nutrition. Studies have shown that children and teens who share family meals at least three times a week are more likely to maintain healthy weights and less likely to develop disordered eating habits.

Lesson 4 Table Cards

Use the table cards in Lesson 4 to introduce each sub-category.

Shared Plate: Guide discussions for the entire class or within student groups:

- **Discussion Question:** Describe what a typical main meal looks like at home.
- **Discussion Question:** What traditions or customs are used in selecting and preparing foods?
- **Discussion Question:** Based on what you've learned from Nutrition in a Box, what fact could you introduce to your family or friends about a food item?

Nutrition In A Box: Teacher's Guide

Healthy Choices: Guide discussions for the entire class or within student groups:

- **Discussion Question:** Describe what a typical main meal looks like outside the home: lunch at school, meal at a restaurant, food cart or other place.
- **Discussion Question:** What choices are you able to make? Can you opt for a healthier choice? If so, what would you choose?

Snack Plan: Guide discussions for the entire class or within student groups:

- **Discussion Question:** What's the first snack you choose? Where is it usually located? Are there other options available?
- **Discussion Question:** What nutrients are contained within your snack? How much of the snack would be considered "empty calories"?

Other Lesson Ideas

• **More Discussion:** Take a survey of which foods and snacks are most eaten by the students and post the results on the board. Which foods/snacks have the greatest numbers?

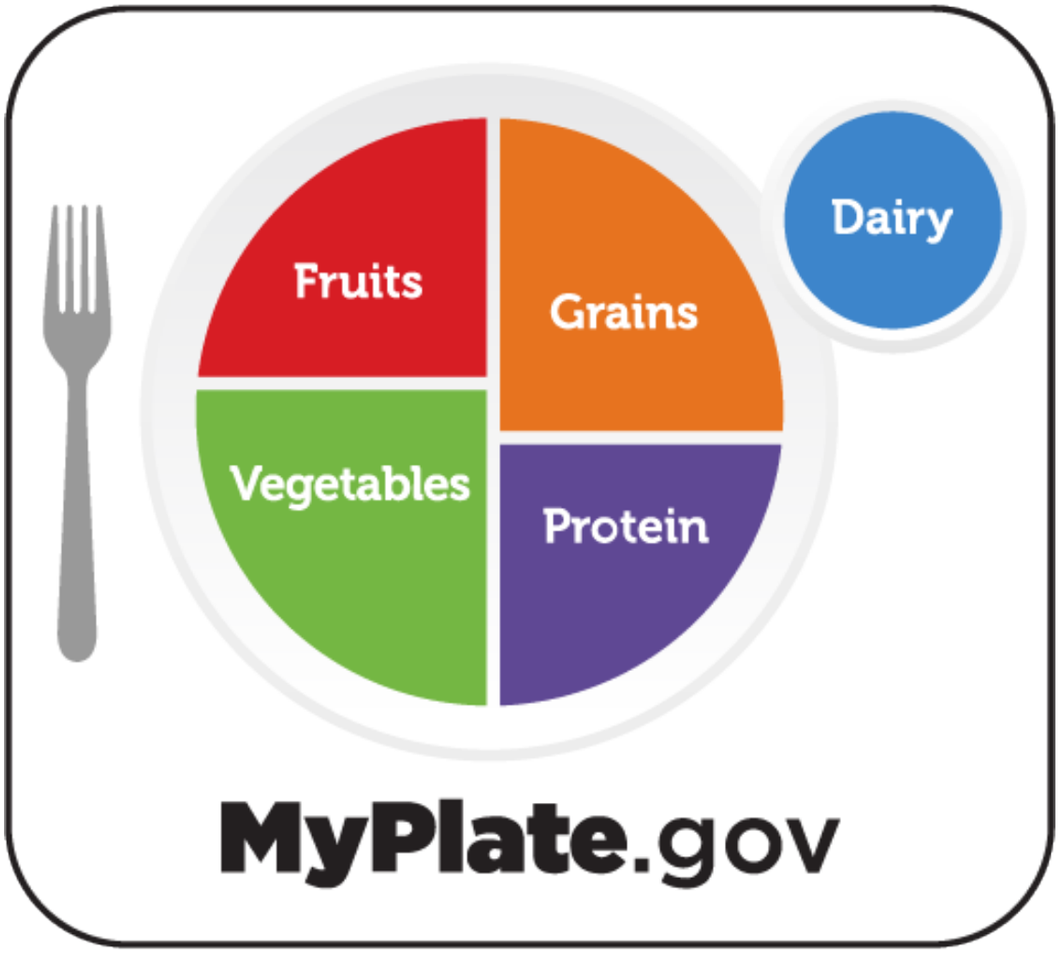
• **Do the math:** Guide students in gathering the nutritional values of the most popular foods/snacks. Which have the most calories? Which offer the most nutrients? Which nutrients are provided? How does the nutrient values of a popular snack compare with an entree or meal item?

Lesson 4 Objectives

With this lesson, students will be able to:

- Describe at least three advantages of shared and family meals.
- Identify the characteristics of healthy meals and snacks, i.e. a variety of food groups, balanced portions, and moderation in fat, sugar and sodium intake.
- Plan at least three balanced meals and three balanced snacks.
- Choose at least three balanced meal combinations from the sample Box-It-Up Café.

Link to the USDA MyPlate: https://www.myplate.gov/



Lesson 4 Module: Snacking

Snacking Activity Sheet: Answers, Page 1

A Nutrition Facts

1. *True or False?* Eating food with lots of sugar is the best way to get energy.

2. *True or False?* If you're active all day, it's better to eat regular healthy meals and snacks throughout the day.

3. *True or False?* High-sugar foods and beverages are the most popular snacks in the U.S.

4. *True or False?* It's okay to skip a meal if you eat a snack instead.

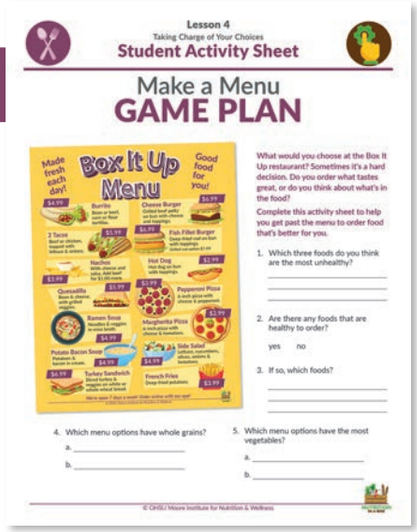
While it's okay to eat a healthy snack if you you can't access a regular meal, it's best to eat healthy meals on a regular basis.

Snacking Handouts and Worksheets

Use the other Snacking materials to expand student skills in analyzing, planning and eating healthier snacks. These materials can be used with the Nutrition Facts Cards to create snack combinations. Form small groups to compete for the healthiest snack combo.

You can also use the materials to explore additional foods for snacking and which snacks are the most viable for students at home.

Lesson 4 Module: Box It Up


Lesson 4
Taking Charge of Your Choices
Student Activity Sheet
Make a Menu
GAME PLAN
Box It Up Menu
What would you choose at the Box It Up restaurant? Sometimes it's a hard decision. Do you order what tastes great, or do you think about what's in the food?
Complete this activity sheet to help you get past the menu to order food that's better for you.
1. Which three foods do you think are the most unhealthy?
2. Are there any foods that are healthy to order?
yes no
3. If so, which foods?
4. Which menu options have whole grains?
5. Which menu options have the most vegetables?

Box It Up Activity Sheet: Answers, Page 1

1. Which three foods do you think are the most unhealthy?

quesadilla potato soup pepperoni pizza

High fat content, high sodium, high calories

2. Are there any foods that are healthy to order? (yes) no

3. If so, which foods? turkey sandwich on whole wheat

side salad grilled cod fish burger

4. Which menu options have whole grains?

turkey sandwich on whole wheat bean burrito on corn tortilla

5. Which menu options have the most vegetables?

turkey sandwich side salad ramen soup

Box It Up Activity Sheet: Answers, Page 2

Box It Up Menu	Calories	Fat	Sodium
Burrito (bean)	584	17g	1,605mg
Burrito (beef)	602	14g	1,097mg
Taco (one)	170	11g	236mg
Nachos (regular)	274	17g	250mg
Nachos (beef)	382	19g	541mg
Quesadilla	714	38g	1,305mg
Ramen Soup	384	15g	1,633mg
Potato Soup	570	28g	756mg
Turkey Sandwich	360	11g	417mg
Cheese Burger	350	14g	630mg
Fish Burger	561	29g	872mg
Fish Burger (grilled)	240	8g	270mg
Hot Dog	287	17g	860mg
Pepperoni Pizza	620	27g	1,540mg
Margherita Pizza	185	8g	440mg
Salad (plain)	54	1g	17mg
Salad (dressing)	252	19g	313mg
French Fries	274	14g	300mg

7. Which three menu items have the most **calories**?

quesadilla

pepperoni pizza

beef burrito

8. Which three menu items have the most **fat**?

quesadilla

deep-fried fish burger

potato soup

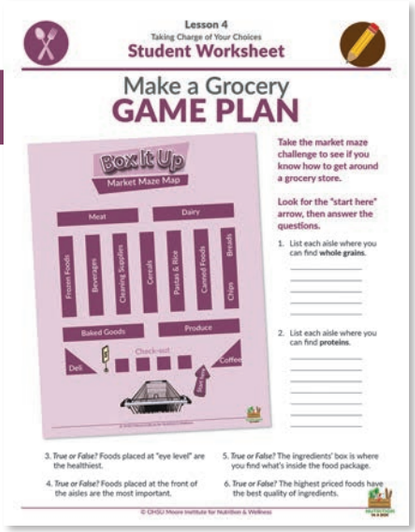
9. Which three menu items have the most **sodium**?

ramen soup

bean burrito

pepperoni pizza

Lesson 4 Module: Box It Up



Box It Up Worksheet: Answers, Page 1

1. List each aisle where you can find **whole grains**.

   Breads & Chips — Cereals

   Pasta & Rice — Baked Goods

2. List each aisle where you can find **proteins**.

   Frozen Foods — Meat — Deli

   Cereals — Dairy — Canned Foods

3. *True or False?* Foods placed at "eye level" are the healthiest.

4. *True or False?* Foods placed at the front of the aisles are the most important.

   Products located at the front of the aisle are called "leaders." Stores feature products in these locations for special sales. Companies can also pay stores extra to feature their products in these visable areas.

5. *True or False?* The ingredients' box is where you find what's inside the food package.

6. *True or False?* The highest priced foods have the best quality of ingredients.

   There are many factors influencing prices. While quality ingredients may be one factor, transportation, storage, manufacturing costs, marketing and branding also play a role in how products are priced.

Box It Up Worksheet: Answers, Page 1

7. *True or False?* You should go to the grocery store when you're hungry.

8. *True or False?* The nutrition facts label is the most important part of the packaging.

While the Nutrition Facts Label shares the nutrient information, the ingredients list shows what's actually in the food/package.

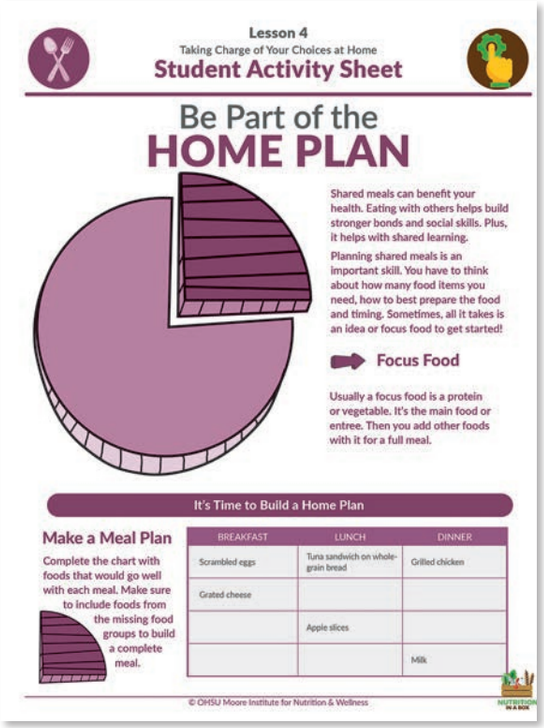
9. *True or False?* You should make a list of what you need before you go to the grocery store.

10. *True or False?* It can be helpful to use a nutrition app on your phone to check out foods before you buy them.

Though make sure it's from a reputable producer.

Lesson 4 Module: Home Plate

Home Plate Activities and Worksheets


Lesson 4
Taking Charge of Your Choices at Home
Student Activity Sheet

Be Part of the
HOME PLAN

Shared meals can benefit your health. Eating with others helps build stronger bonds and social skills. Plus, it helps with shared learning.

Planning shared meals is an important skill. You have to think about how many food items you need, how to best prepare the food and timing. Sometimes, all it takes is an idea or focus food to get started!

Focus Food

Usually a focus food is a protein or vegetable. It's the main food or entree. Then you add other foods with it for a full meal.

It's Time to Build a Home Plan

Make a Meal Plan

Complete the chart with foods that would go well with each meal. Make sure to include foods from the missing food groups to build a complete meal.

BREAKFAST	LUNCH	DINNER
Scrambled eggs	Tuna sandwich on whole-grain bread	Grilled chicken
Grated cheese		
	Apple slices	
		Milk

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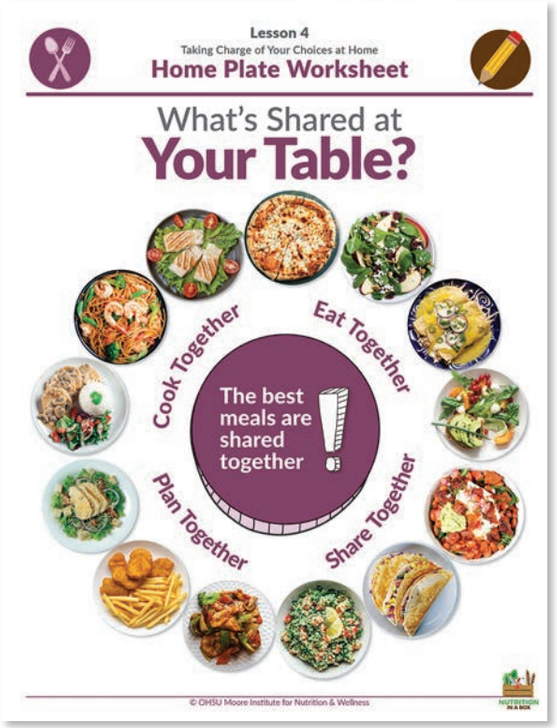
Lesson 4
Taking Charge of Your Choices at Home
Home Plate Worksheet

What's Shared at
Your Table?

Cook Together
Eat Together
Plan Together
Share Together
The best meals are shared together

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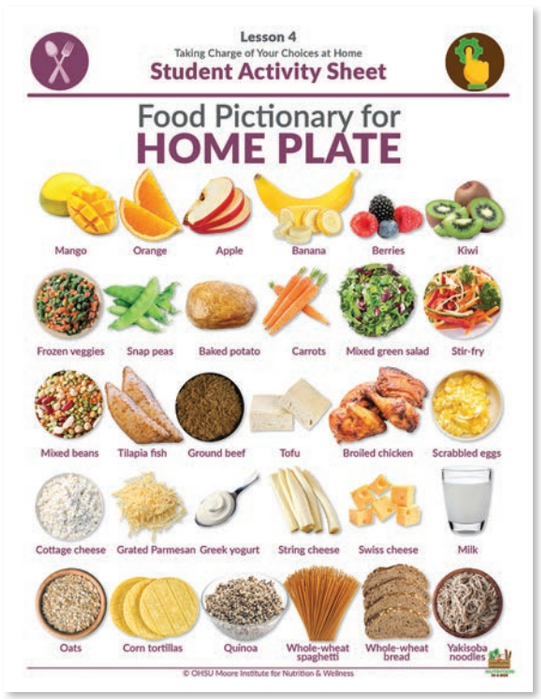

Lesson 4
Taking Charge of Your Choices at Home
Student Activity Sheet

Food Pictionary for
HOME PLATE

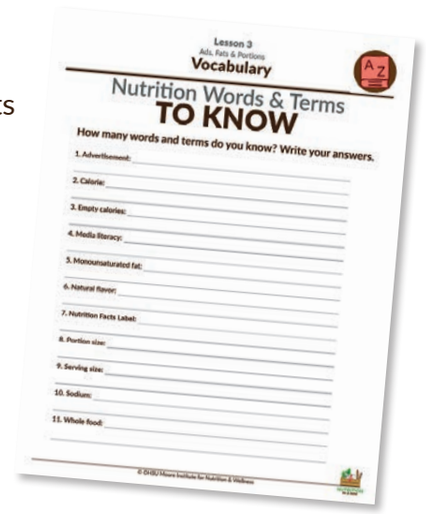
Mango, Orange, Apple, Banana, Berries, Kiwi
Frozen veggies, Snap peas, Baked potato, Carrots, Mixed green salad, Stir-fry
Mixed beans, Tilapia fish, Ground beef, Tofu, Broiled chicken, Scrabbled eggs
Cottage cheese, Grated Parmesan, Greek yogurt, String cheese, Swiss cheese, Milk
Oats, Corn tortillas, Quinoa, Whole-wheat spaghetti, Whole-wheat bread, Yakisoba noodles

© OHSU Moore Institute for Nutrition & Wellness

Use the Home Plate materials to discuss what foods make a meal at home, and which foods are most popular in different cultures.

Use the materials to provide students with experiences to build their own healthy meals.

Lesson 4 Vocabulary


Lesson 3
Ads, Fats & Portions
Vocabulary
Nutrition Words & Terms
TO KNOW
How many words and terms do you know? Write your answers.
1. Advertisement:
2. Calorie:
3. Empty calories:
4. Media literacy:
5. Monounsaturated fat:
6. Natural flavor:
7. Nutrition Facts Label:
8. Portion size:
9. Serving size:
10. Sodium:
11. Whole food:

A student Vocabulary Lesson 4 sheet is provided for printing for students to complete individually, or refer to this list to quiz students in groups.

1. **Beverage:** A liquid intended for human consumption.
2. **Broiled:** Intense heat applied to cook.
3. **Deep-fried:** Immersing into hot, nearly-boiled oils or other fats to cook.
4. **Entree:** A main course of a meal.
5. **Fresh:** Food that is not preserved or spoiled.
6. **Perishable:** Food that is likely to spoil if not preserved (canned, refrigerated, freeze-dried, frozen or other process.
7. **Produce:** Refers to farm-produced crops. The term is used in markets, grocery stores and other shops to refer to fruits and vegetables.
8. **Sauteed:** A cooking term for cooking food in a pan or on a grill.
9. **Side:** A term used to group foods that can be added to the main course or entree.
10. **Special:** A term used to highlight a temporary sale or offering.
11. **Traditions:** Customs, beliefs and actions passed on from generation to generation.
12. **Unit price:** The price based on a specific measurement, such as volume or weight.

Supplemental Materials

NUTRITION
IN A BOX

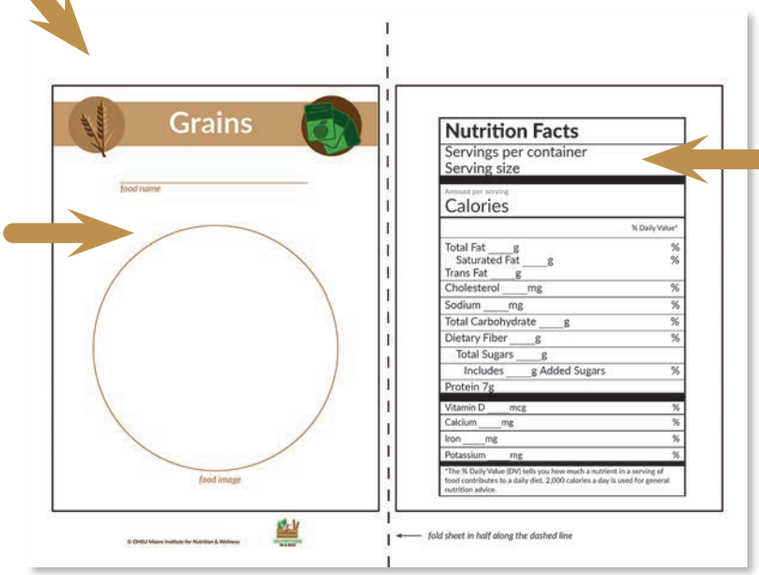
Nutrition Facts Cards

Nutrition Facts Cards introduce students to the Nutrition Fact Label required on most foods. While the cards do not offer the complete values per each food, they provide students with all the necessary information to analyze the serving size and many nutrients within foods. Use the cards to present a variety of lesson activities.

Student-made Nutrition Facts Cards: Expand the lesson with Nutrition Facts Cards by guiding students to create their own cards. Nutrition In A Box provides a blank template for each of the five food groups that can printed out for students. The sheets are letter-sized for easy printing You can choose to have students fill out a food group set, or multiple sheets of one food group to analyze different foods within that group.

1. Direct students to write their name or group name above the food group banner.

2. Simply fold the printed sheet in half along the dashed line. Guide students to print the food name on the front line, then either draw an image of the food or attach a photo or picture of the food within the circle area.



3. The back part of the sheet provides space for adding the nutrition information found in food nutrition fact labels.

Activity Ideas

- **Set for a Meal:** Guide students to create a card for each food item in their lunch or dinner.
- **Favorite Five:** Guide students to create a card for their favorite food in each food group.
- **Holiday Feast:** Guide students to create a card for at least five foods shared during a holiday.
- **Culture Plate:** Guide students to create a card for certain foods within a particular culture.

Resources

Here is a list of resources (including those listed in this guide) to explore more about nutrition.

FDA food labeling requirements: https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-food-labeling-guide

Oregon Education Resources: https://www.oregon.gov/ode/educator-resources/standards/health/Pages/default.aspx

Oregon State University Food Hero: https://foodhero.org/

OHSU Bob and Charlee Moore Institute for Nutrition & Wellness: https://www.ohsu.edu/mooreinstitute

USDA Nutrition Database: https://fdc.nal.usda.gov/

USDA MyPlate: https://www.myplate.gov/

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