Name_____

Harvest of the Month

TEACHER GUIDE

5th GRADE

BROCCOLI
TASTY
BERRIES
DELICIOUS
SQUASH
APPLES
CRUNCHY
ORANGES
JUICY
CARROTS







Harvest of the Month

TEACHER GUIDE

Table of Contents

Introduction

This resource from the California Department of Public health contains 4th-6th grade lesson plans and workbook activities that support the goals of the Harvest of the Month program. The goals are to increase:

- access of fruits and vegetables
- participation in physical activity
- preferences for fruits and vegetables
- consumption of locally grown fruits and vegetables, and
- to expand familiarity with California grown fruits and vegetables.

Each lesson has a theme that addresses one of these goals directly while focusing on a California-grown fruit or vegetable of the month. The Harvest of Month are apples, winter squash, broccoli, oranges, carrots, and berries.

The curriculum integrates grade level-specific Nutrition Competencies, from the California Department of Education's Health Standards, as well as the Common Core Language Arts and Math Standards. Each lesson incorporates movement to reinforce the importance of physical activity, increase student engagement, and provide a useful context to understand the lesson content.

Using this Resource

There are six Harvest of the Month lesson plans per grade. They support matching activities in the student workbook. Each section in the lesson plan begins with a summary page that provides:

- the learning objectives
- the goals, competencies and standards addressed
- a list of materials, and
- a guide to the sections of the lessons

The lessons are 60 minutes in length. The Harvest It section is itself a separate lesson which may be taught before the main lesson to give background knowledge. The table below describes each section and the instructional time needed.

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	20 minutes
Link It	Guided Practice	10 minutes
Try It	Independent Practice	20 minutes
Digest It	Tasting, Reflection, and Informal Assessment	10 minutes

Each section begins with a name for the activity and descriptions about what the students and teacher will do. Pictures of what the student workbook looks like for that section are often included for reference.

Important Note: The Move It activity provides content necessary to conduct the Link It and Try It sections that follow. The instructions for leading the Move It activity are located in the lesson plan, not in the student workbook.

Nutrition Resources and Health Messages follow the Digest It section of each lesson plan. They explain MyPlate and the Nutrition Facts label. The materials for the lesson are located after the Nutrition Resources and Health Messages.

Harvest of the Month - Apples
Grade 5, Lesson 1

Summary

Learning Objectives

- Identify nutrition facts and the health benefits of apples.
- Discover where apples can be found in our community.
- Multiply fractions and whole numbers to increase the quantity size of a snack recipe.
- Set a goal to make and eat healthy snacks with apples.

Goals, Competencies, and Standards

- Harvest of the Month Goal

  Increase access to fruits and vegetables through school meal programs, farm-to-school programs, classrooms, school gardens, farmers' markets, grocery stores, community gardens, worksites, and other community-based locations.

- Health Standard: Nutrition Competency
  5.5. Use a decision-making process to identify healthy foods for meals and snacks.

- Common Core Standards
  CCSS.MATH.CONTENT.5.NF.B.4
  Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

Materials: Harvest of the Month Workbooks, apples quartered (one quarter per student), Nutrition and Health Messages sheet, Healthy and Smart Vocabulary visual aid, Educator Newsletter, Family Newsletters

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	15 minutes
Link It	Guided Practice	15 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

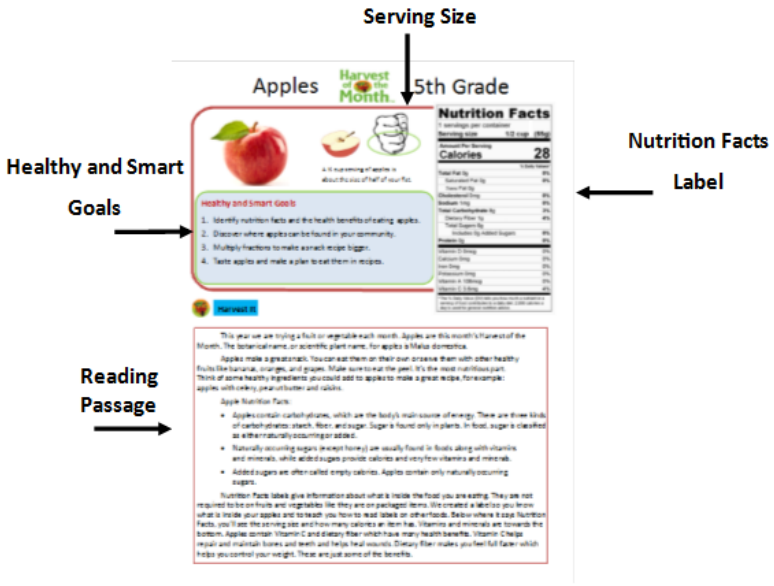
Procedures

Harvest It Reading about the Harvest of the Month

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about apples containing nutrition information.

Teacher guides students in reading and interpreting the Nutrition Facts Label.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the lesson's **Healthy and Smart Goals** with the class which can be found in their workbook.
    - Identify nutrition facts and the health benefits of eating apples.
    - Discover where apples can be found in your community.
    - Multiply fractions to make a snack recipe bigger.
    - Taste apples and make a plan to eat them in recipes.

3. Read the introductory passage with your students. Students will consider healthy snacking and identify the nutritional benefits of eating apples.

> *This year we are trying a fruit or vegetable each month. Apples are this month's Harvest of the Month. The botanical name, or scientific plant name, for apples is Malus domestica.*
>
> *Apples make a great snack. You can eat them on their own or serve them with other healthy fruits like bananas, oranges, and grapes. Make sure to eat the peel. It's the most nutritious part. Think of*

some healthy ingredients you could add to apples to make a great recipe, for example: apples with celery, peanut butter and raisins.

Apple Nutrition Facts:

- *Apples contain carbohydrates, which are the body's main source of energy. There are three kinds of carbohydrates: starch, fiber, and sugar. Sugar is found only in plants. In food, sugar is classified as either naturally occurring or added.*
- *Naturally occurring sugars (except honey) are usually found in foods along with vitamins and minerals, while added sugars provide calories and very few vitamins and minerals.*
- *Added sugars are often called empty calories. Apples contain only naturally occurring sugars.*

Nutrition Facts labels give information about what is inside the food you are eating. They are not required to be on fruits and vegetables like they are on packaged items. We created a label so you know what is inside your apples and to teach you how to read labels on other foods. Below where it says Nutrition Facts, you'll see the serving size and how many calories an item has. Vitamins and minerals are towards the bottom. Apples contain Vitamin C and dietary fiber which have many health benefits. Vitamin C helps repair and maintain bones and teeth and helps heal wounds. Dietary fiber makes you feel full faster which helps you control your weight. These are just some of the benefits.

Nutrition Facts

1 servings per container

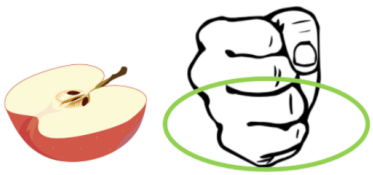
Serving size **1/2 cups (55g)**

Amount Per Serving

Calories **28**

	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 1mg	**0%**
Total Carbohydrate 8g	**3%**
Dietary Fiber 1g	**4%**
Total Sugars 6g	
Includes 0g Added Sugars	**0%**
Protein 0g	**0%**
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 0mg	0%
Vitamin A 108mcg	0%
Vitamin C 3.6mg	4%

*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.



A ½ cup serving of apples is about the size of half of your fist.

4. Guide students in interpreting the nutrition facts label in their workbook. Explain that they should strive to include a variety of nutrients from the food they eat. Five percent or less of a nutrient is low, while 20% or above is considered high.
5. Draw their attention to the % daily value on the nutrition facts label of Vitamin C and fiber. Ask them if a ½ cup serving of apples would be sufficient to supply the recommended daily value.

Move It Physical Activity

Activity Imagine Getting Apples Combined with Movement

Students will get a 5-minute workout while imagining they are visiting places to get apples.

Teacher will lead the physical activity about places where apples can be found.

Instructions

1. Explain that apples can be found in many locations. Tell them they will be doing some stretches in the classroom having to do with those places. Ask them to stand up and give themselves enough room to do some stretches.
2. Tell students they will first be visiting the *school garden* and collecting apples from apple trees for a healthy snack. Model the following stretch, and say:
   Stand with feet shoulder-length apart.
   Reach up with both hands as far as you can go. Grasp for apples and pull them off the branches.
   Touch your toes. Put apples in your basket.
   Lead them in the stretch a few times at normal speed and then increase the speed.
3. Tell students that now they will be visiting the *supermarket* and adding apples to their cart for a healthy snack. Model the following stretch, and say:
   Hold the handle of the shopping cart—fists at chest height.
   Jog in place.
   Reach to right and left, grab apples and put them in the cart.
   Stop grabbing apples. Keep jogging.
   Run in place.
   Reach to right and left, grab apples and put them in the cart.
   Lead them in the movement a few times, extending the length of the running.
4. Tell them they will fill their bags with apples at the *farmers' market*. Model the following stretch, and say:
   Pretend there are bags of apples on the ground next to your feet. Squat and grab the bags of apples. Stand up. Lift them onto the scale. Come back down into a squatting position. Repeat.

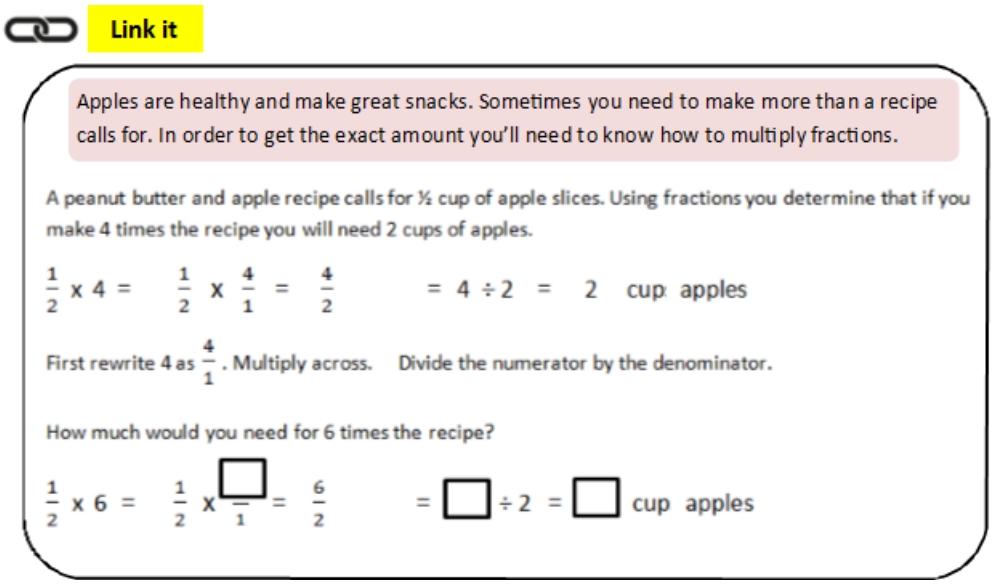
5. Tell students that now they will visit the food bank, where they will get some crisp, sweet apples. Model the following movement, and say:
   Pretend there is a bin of apples in front of you. You see some nice apples in the back of the box. Bend at the waist, lean forward, and reach for the apples. Stand back up and put them in the bag you are holding.
   Repeat.
6. Lead them in the movement a few times at normal speed and then increase the speed. Ask the class the names of the places they visited. Invite them to share additional places where they may find apples. Suggest these places: school meal programs, school gardens, community gardens, and food banks.

Link It

Activity Guided Practice Multiplying Fractions in a Recipe

Students will observe and practice how to multiply a proper fraction and a whole number.

Teacher will guide students in multiplication of a proper fraction and a whole number.



Instructions

1. Front load fraction vocabulary as needed. Use the vocabulary sheet located at the end of this lesson.
2. Tell students that before they go shopping for apples they should know how much they need. Explain that if they had a snack recipe with apples, the quantities may be written in fractions. Say they would need to multiply the fractions if they wanted to make the snack for a lot of people or for many days.
3. Draw their attention to the example problem in the Link It section of the workbook.
4. Model ½ x 4.
5. Guide students in completing ½ x 6.

Try It Independent Practice

Activity Independent Practice Multiplying Fractions

Students will practice multiplying fractions and whole numbers on their own.

Teacher will check for understanding and provide guidance.

Try it

An apple celery recipe calls for $\frac{1}{3}$ cup of diced apples. How many cups of apple will you need if you increase the recipe by 3 times?

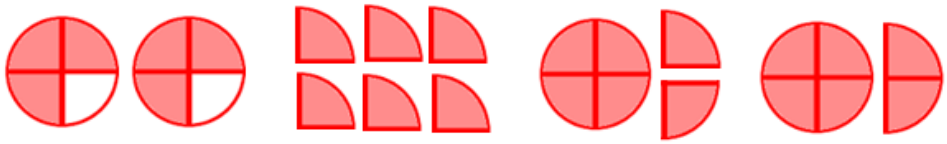
$3 \times \frac{1}{3} = \frac{\square}{1} \times \frac{1}{3} = \frac{\square}{3} = \square \div 3 = \square$ cup apples

Increase the recipe 6 times.

$6 \times \frac{1}{3} = \frac{\square}{1} \times \frac{1}{3} = \frac{\square}{3} = \square \div 3 = \square$ cup apples

Instructions

1. Instruct students to complete the first set of problems involving multiplying by 1/3.
2. Check for understanding.
3. Tell them to complete the apple celery recipe multiplying 1/2 and 1/4 by 12.
4. Ask students to brainstorm some other ingredients for an apple snack recipe and to place one in the blank found in the "Your Apple Recipe". Tell them to select either ½, ¼, or ⅛ as quantities and to multiply by 16.
5. Call on students to share their work.
6. Illustrate converting an improper fraction into a mixed number, if your students are ready for this skill and time permits. Use quartered pieces of apple as an opportunity to model this fraction concept. For example, show ¾ of an apple and a second ¾ of an apple to represent ¾ x 2. Then rearrange the quarters to show $\frac{6}{4}$ first, and then $1\frac{2}{4}$ and $1\frac{1}{2}$ apples.



3/4 x 2 | 6/4 | 1 2/4 | 1 1/2

Digest It Tasting, Reflection, and Informal Assessment

Activity Tasting Apples and Reflecting on Learning

Students will reflect upon their learning and taste apples.

Teacher will provide an apple tasting and lead a discussion on what the students have learned.

Digest it

You created a healthy and delicious snack recipe. Now it's time to taste some apples and reflect on what you have learned.

- What are some healthy nutrients in apples and why are they good for your health?
- Where are some places you can find apples in your community?
- Let's say your recipe calls for ⅛ cup of apples. If you multiplied the recipe times 24, how many cups of apples would you need?
- It is recommended that you eat 1 ½ cups of fruit each day. What is your plan to eat your recommended daily amount of fruit? Will you eat fruits and vegetables from the cafeteria each day?
- What is your plan to make snacks with apples?

Instructions

1. Tell students they will be trying some apples and reflecting on their learning.
2. Have students wash their hands. The Center for Disease Control [1] suggests:

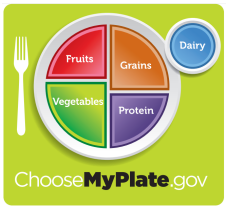
> Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
> Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
> Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
> Rinse your hands well under clean, running water.
> Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen apples in the cafeteria, and if they tried them.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the apples. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The apple is sweet, crisp, and pale yellow."
    c. Model respectful responses to not liking the tasting: "I appreciate being offered the apple. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time."
8. Guide a discussion about what they learned using the prompts below, which students can find in the Digest It section of their workbook.
    - What are some healthy nutrients in apples and why are they good for your health?
    - Where are some places you can find apples in your community?
    - Let's say your recipe calls for ⅛ cup of apples. If you multiplied the recipe times 24, how many cups of apples would you need?

- It is recommended that you eat 1½ cups of fruit each day. What is your plan to eat your recommended daily amount of fruit? Will you eat fruits and vegetables from the cafeteria each day?
- What is your plan to make snacks with apples?

9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.
10. Ask students to share more recipe ideas. Encourage the students to share their recipes with their parents and let them know the places where apples can be found.
11. Optional: Indicate your interest in having a healthy class party using their recipes.

Nutrition Resources and Health Messages



MyPlate

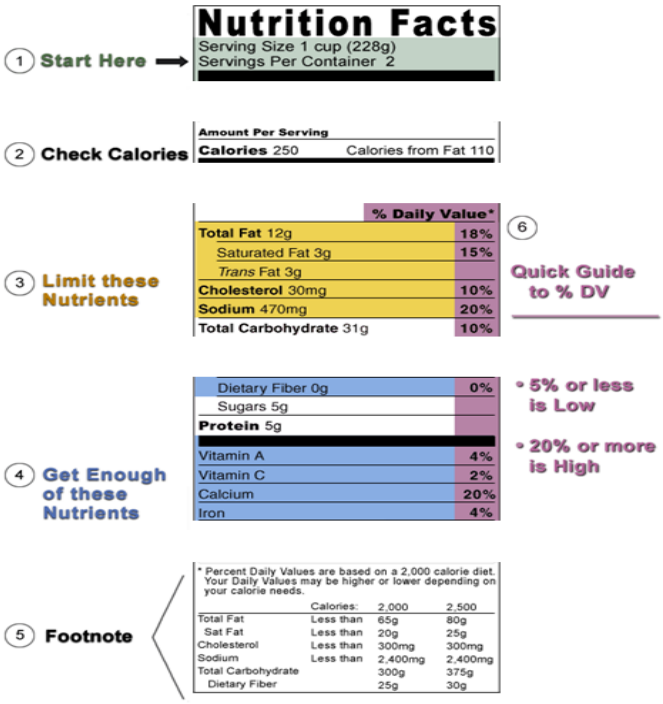
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

See the website for more information on fruit and vegetable consumption and physical activity.[2]

Nutrition Facts label

The Nutrition Facts label has been revised and is used in the workbook. The following excerpts from the FDA website [3] describe the components of the label:



1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
5. % DVs are based on a 2,000-calorie diet.
6. 5% DV or less is low and 20% DV or more is high.

References

1. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

2. How to Understand and Use the Nutrition Facts Label. (n.d.). Retrieved October 06, 2016, from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm#see1

3. Choose MyPlate. (n.d.). Retrieved October 06, 2016, from https://www.choosemyplate.gov/

Harvest of the Month

Apple

Healthy and Smart Vocabulary

In your workbook today, you are going to multiply fractions to increase the size of an apple recipe. Let's review the names of fractions and their parts so we can talk about them.

The number on the **top** of a fraction is called the **numerator**. The number on the **bottom** is the **denominator**.

$$\frac{numerator}{denominator}$$

In a **proper fraction**, the numerator (top) is *less than* the denominator (bottom) $\frac{2}{4}$

In an **improper fraction** the numerator (top) is *greater than* the denominator (bottom) $\frac{4}{2}$

A **mixed fraction** has a whole number and a proper fraction together $1\frac{2}{4}$

Harvest of the Month - Winter Squash
Grade 5, Lesson 2

Summary

Learning Objectives

- Identify nutrition facts and health benefits of winter squash.
- Write a paragraph describing the health benefits of eating winter squash and other vegetables using reasons and details.
- Make a personal goal for eating winter squash.
- Taste winter squash.

Goals, Competencies, and Standards

- Harvest of the Month Goal
  Increase participation in daily physical activity and an understanding of why it is important to our health.

- Health Standard: Nutrition Competency
  5-6.1f Explain how good health is influenced by healthy eating and being physically active.

- Common Core Standards
  CCSS.ELA-LITERACY.W.5.1
  Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

Materials: Harvest of the Month Workbooks, approximately 2 tablespoons of cooked squash or pumpkin seeds per student, What Winter Squash and Vegetables Can Do for Your Health visual aid, Healthy and Smart Vocabulary visual aid, Winter Squash Movement Prompt signs, Educator Newsletter, Family Newsletters

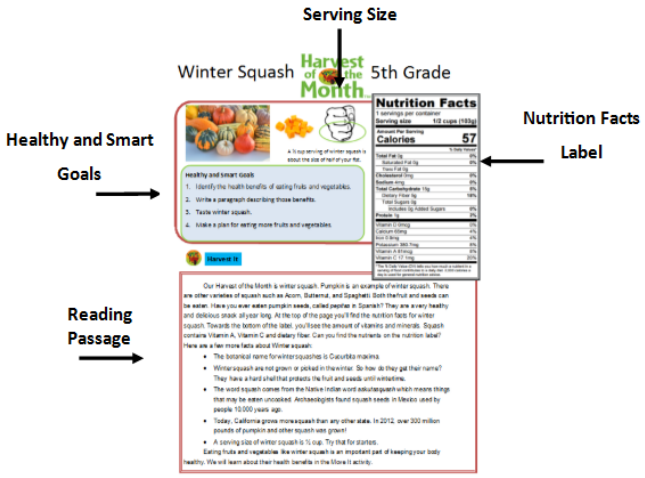
Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	10 minutes
Link It	Guided Practice	20 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

Procedures

Harvest It

Students will read in their workbook about nutrition facts and other interesting facts about winter squash.

Teacher will guide students in reading about nutrition facts and other interesting facts about winter squash.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the lesson's **Healthy and Smart Goals** with the class which can be found in their workbook.
    - Identify the health benefits of eating fruits and vegetables.
    - Write a paragraph describing those benefits.
    - Taste winter squash.
    - Make a plan for eating winter squash.
    -
3. Read this introductory passage with your students that can be found in their workbook:

    Our Harvest of the Month is winter squash. Pumpkin is an example of winter squash. There are other varieties of squash such as Acorn, Butternut, and Spaghetti. Both the fruit and seeds can be eaten. Have you ever eaten pumpkin seeds? These are also called pepitas in Spanish. They are a very healthy and delicious snack all year long. At the top of the page you'll find the nutrition facts for winter squash. Towards the bottom of the label, you'll see the amount of vitamins and minerals. Squash contains Vitamin A and Vitamin C. Can you find the nutrients on the nutrition label?

See the next page.

Nutrition Facts

1 servings per container

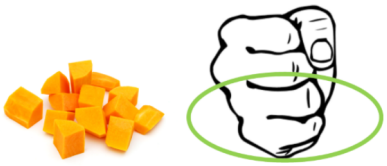
Serving size **1/2 cups (103g)**

Amount Per Serving

Calories **57**

	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 4mg	**0%**
Total Carbohydrate 15g	**5%**
Dietary Fiber 5g	**18%**
Total Sugars 0g	
Includes 0g Added Sugars	**0%**
Protein 1g	**2%**
Vitamin D 0mcg	0%
Calcium 65mg	4%
Iron 0.9mg	4%
Potassium 380.7mg	8%
Vitamin A 81mcg	8%
Vitamin C 17.1mg	20%

*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.



A ½ cup serving of winter squash is about the size of half of your fist.

4. Guide students in interpreting the nutrition facts label in their workbook. Explain that they should strive to include a variety of nutrients from the food they eat. Five percent or less of a nutrient is low, while 20% or above is considered high.
5. Draw their attention to the DV of Vitamin A for winter squash. Ask them if a ½ cup serving of winter squash would be sufficient to supply the recommended daily value. Continue the reading.

Here are a few more facts about winter squash:

- *The botanical name for winter squash is Cucurbita maxima.*
- *Winter squash are not grown or picked in the winter. So how do they get their name? They have a hard shell that protects the fruit and seeds until wintertime.*
- *The word squash comes from the Native Indian word askutasquash which means things that may be eaten uncooked. Archaeologists found squash seeds in Mexico used by people 10,000 years ago.*
- *Today, California grows more squash than any other state. In 2012, over 300 million pounds of pumpkin and other squash was grown!*
- *A serving size of winter squash is ½ cup. Try that for starters.*

Eating fruits and vegetables like winter squash is an important part of keeping your body healthy. We will learn about their health benefits in the Move It activity.

Move It Physical Activity, Content for Link It

Activities Learning about the Benefits of Winter Squash through Movement

Students will engage in calisthenics with the benefits of eating winter squash serving as prompts.

Teacher will lead students in playing the physical activity.

Move it

In the Move It squash activity, you will while learn why fruits and vegetables are good for your health.

What Fruits and Vegetables Can Do for Your Health

- **Supplies your body with necessary nutrients.**
- **Keep you at a healthy weight.**
- **Reduce your chances of diseases like obesity, and type 2 diabetes**

Movement Prompts

#1	#2	#3	#4
Vitamin A, Vitamin C, and dietary fiber all support your blood functioning. Let's get our blood flowing with twenty jumping jacks. 	Vitamin C, and Potassium are important for your muscles. Flex your biceps. Now touch your HEAD, SHOULDERS, KNEES, and TOES five times. Vitamin A is important for your eyesight and cell growth throughout your body. Let's take a look around.	Vegetables like winter squash help us keep a healthy weight. Pretend you have just eaten some unhealthy food drop down into a squat.  Now you have just eaten some healthy winter squash. Jump up. Okay, now repeat that four more times. Squat. Jump. 3 more...	*Winter squash and other vegetables along with physical activity can help prevent obesity and Type-2 diabetes.*  *Eat some winter squash and jog in place for 30 seconds.*

Instructions

1. Designate three students who will share leading the class in movement. Hand them each a copy of the Winter Squash Movement Prompts handout.
2. Tell the class they will be hearing about some benefits of eating winter squash. They will be writing in the next two sections of their workbook. Explain that the three leaders will take turns reading about those benefits and leading them in calisthenics.
3. Model reading the prompt #1 and leading the first movement:

   Vitamin A, Vitamin C, and dietary fiber all support your blood in some way. Let's get our blood flowing with twenty jumping jacks.
4. Tell your first student leader to read about the benefits of the nutrients found in winter squash. Have them read prompt #2:

   Vitamin C, and Potassium are important for your muscles. Touch your head, shoulders, knees and toes five times.

   Vitamin A is important for your eyesight and cell growth throughout your body. Let's take a look around.
5. Tell your second student leader to read about how vegetables help us keep a healthy weight. Have them read prompt #3:

   Vegetables like winter squash help us keep a healthy weight. Pretend you have just eaten some unhealthy food. Drop down into a squat. Now you have just eaten some healthy winter squash. Jump up. Okay, repeat that four more times. Squat. Jump. 3 more...
6. Tell your third student leader to read prompt #4 about how winter squash and other vegetables can help prevent diseases like obesity and type 2 diabetes:

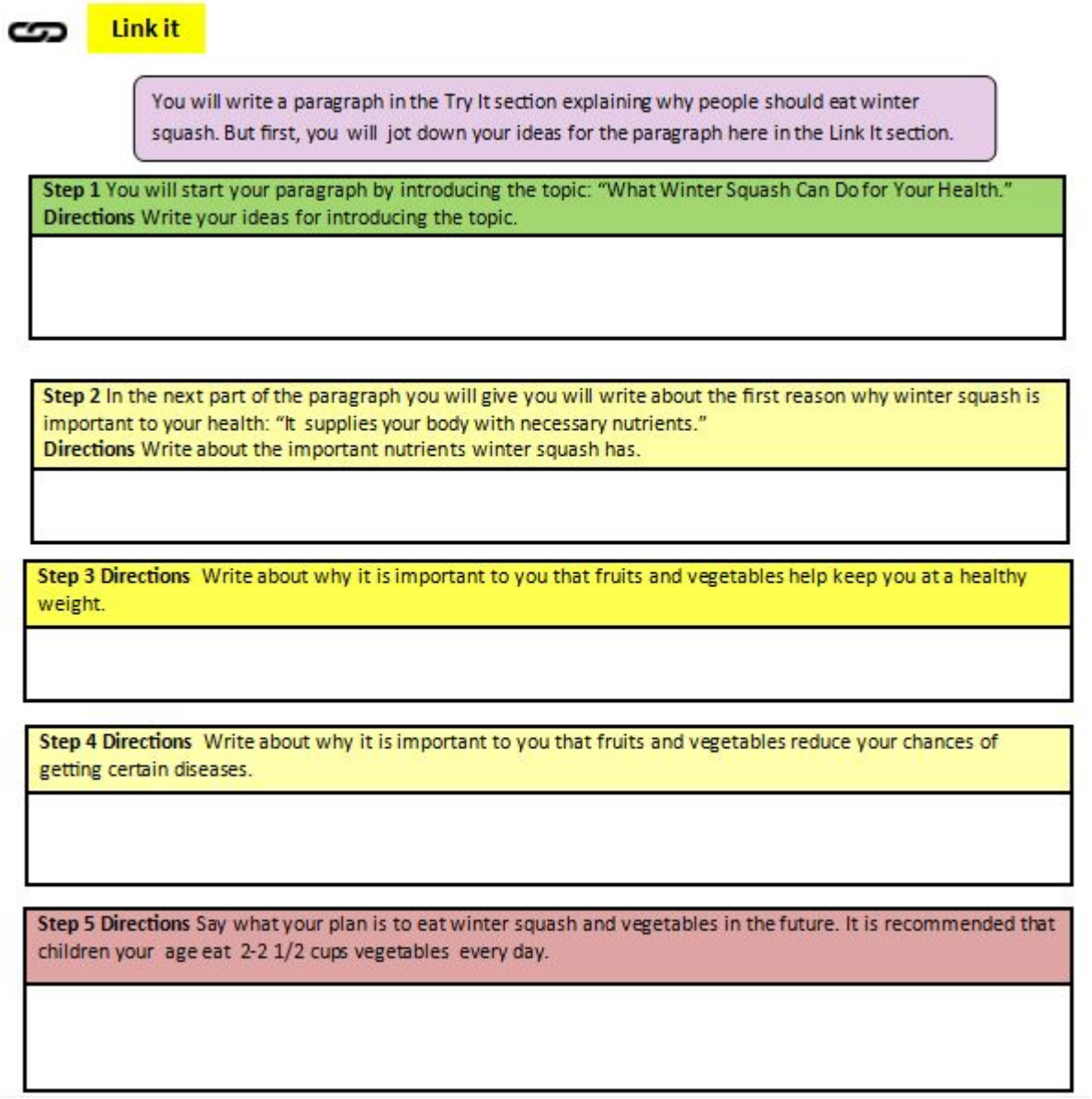
   Winter squash and other vegetables along with physical activity can help prevent obesity and type 2 diabetes. Eat some winter squash and jog in place for 30 seconds.

Link It

Activity Brainstorm Why Physical Activity Is Important

Students will generate ideas in a graphic organizer for writing a paragraph on the importance of eating winter squash and other vegetables. They will record the ideas in the Link It section of their workbook.

Teacher will guide students in completing the graphic organizer.



Link it

You will write a paragraph in the Try It section explaining why people should eat winter squash. But first, you will jot down your ideas for the paragraph here in the Link It section.

Step 1 You will start your paragraph by introducing the topic: "What Winter Squash Can Do for Your Health."
Directions Write your ideas for introducing the topic.

Step 2 In the next part of the paragraph you will give you will write about the first reason why winter squash is important to your health: "It supplies your body with necessary nutrients."
Directions Write about the important nutrients winter squash has.

Step 3 Directions Write about why it is important to you that fruits and vegetables help keep you at a healthy weight.

Step 4 Directions Write about why it is important to you that fruits and vegetables reduce your chances of getting certain diseases.

Step 5 Directions Say what your plan is to eat winter squash and vegetables in the future. It is recommended that children your age eat 2-2 1/2 cups vegetables every day.

Instructions

1. Tell students that they will be using the reasons for eating winter squash identified in the Move It activity for writing about why winter squash is good for them.

2. Say that in the Link It section they will generate examples and details that they later will use in writing their paragraph in the Try It section.
3. Explain that their writing will have four components:
    a. Introducing the topic
    b. Stating their reasons
    c. Providing examples, facts, and details that support the reasons
    d. Writing a conclusion that includes a plan for eating winter squash
4. Model developing an introduction to the paragraph. For example, *"Why should we eat fruits and vegetables? Winter squash and other vegetables are good for our health. I am going to share three reasons that explain why."* Ask students to put their ideas for their introduction in the space for step 1 in their workbook.
5. In steps 2-4 in their workbooks, students will give examples and details that support the three reasons they are writing about. Lead students in a Think-Pair-Share exercise to help them generate ideas for these three steps. Here are the reasons from the Center for Disease Control [1] they will use that they can find in the Move It section of their workbook.

    What Fruits and Winter Squash and Vegetables Can Do for Your Health

    - Supply your body with necessary nutrients.
    - Help keep you at a healthy weight.
    - Reduce your chances of diseases like obesity, and type 2 diabetes.

6. In step 5 students are asked to share a plan they will carry out to eat winter squash and other vegetables. Let them know that children their age should be eating 2-2½ cup of vegetables a day. Model making a plan to eat winter squash and other vegetables. For example, *"Men and women should eat 2½-3 cup of vegetables a day. I plan on eating at least 2 ½ cups of vegetables for lunch and dinner each day and winter squash at least once a week."* Tell students to put their plan for eating vegetables and winter squash in the space provided for step 5 in the Link It section of their workbook.

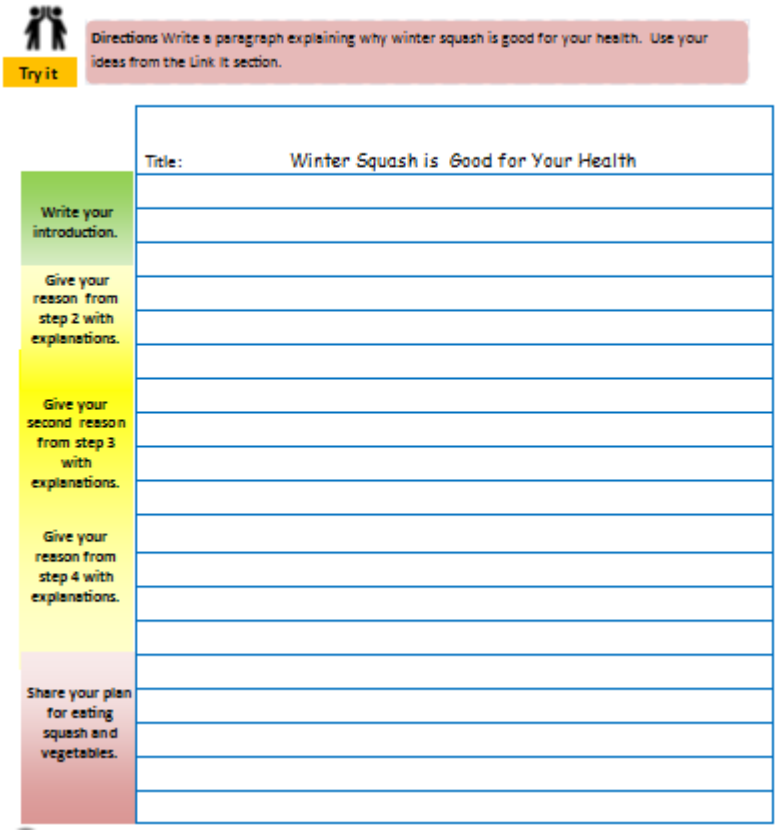
Try It

Activity Writing a Paragraph About Why Winter Squash is Good for Your Health

Students will use their brainstorm from the Link It section to write a paragraph about why winter squash is good for their health.

Teacher will model writing, including the use of transition words, and provide support.

See the next page.



Instructions

1. Explain they will be writing a paragraph using the ideas they developed in the Link It section.
2. Introduce the transition words contained on the Transition Words vocabulary visual aid at the back of the lesson plan. Show them how they can connect reasons, examples, and conclusions using these words. Write two sentences joined with a transition word. *"Winter squash reduces your chances of getting certain diseases. For instance, eating winter squash and other vegetables reduces the chances of you becoming obese."*
3. Tell them to form their paragraph using the ideas they generated in the Link It section. Let them know that the colored boxes in the Link It section correspond with the colors and prompts in the left-hand margin in the Try It section, with the intention of helping them put their ideas in the correct sequence.
4. Optional: Have students expand their writing by including additional information from the Nutrients and Health Benefits webpage at choosemyplate.gov and the "Reasons to Eat Winter Squash" section of the Educator Newsletter.

Digest It

Activity Taste Squash and Digest Ideas

Students will taste a piece of winter squash and share what they have learned about squash and vegetables.

Teacher will lead the tasting and discussion about how squash and vegetables are good for our health.

Note: The fruit of winter squash is generally prepared cooked. If you intend to cook the squash, consider cutting the squash into bite-sized cubes for easy serving. Serving pumpkin seeds is an easy alternative when cooking is impractical.

Digest it

It's time to eat some squash and digest what you've learned!

- What nutrients does winter squash have?
- Why are winter squash and vegetables good for your health?
- Share your plan for eating winter squash and vegetables.

Try all kinds of squashes, like pumpkin, butternut, and zucchini.

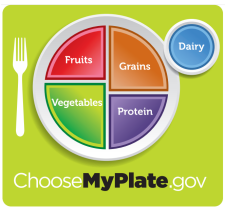
Instructions

1. Tell students they will be trying some winter squash and reflecting on their learning.
2. Have students wash their hands. The Center for Disease Control [2] suggests:

> Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
> Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
> Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
> Rinse your hands well under clean, running water.
> Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they have seen winter squash in the cafeteria, and if they tried it.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the winter squash. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The squash is sweet, squishy, and bright orange."
    c. Model respectful responses to not liking the tasting: "I appreciate being offered the winter squash. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time."
8. Guide a discussion about what they learned using the prompts below, which can also be found in the Digest It section of their workbook.
    - What nutrients does winter squash have?
    - Why do you think winter squash and vegetables are good for your health?
    - Share your plan for eating winter squash and vegetables.
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.

Nutrition Resources and Health Messages



MyPlate

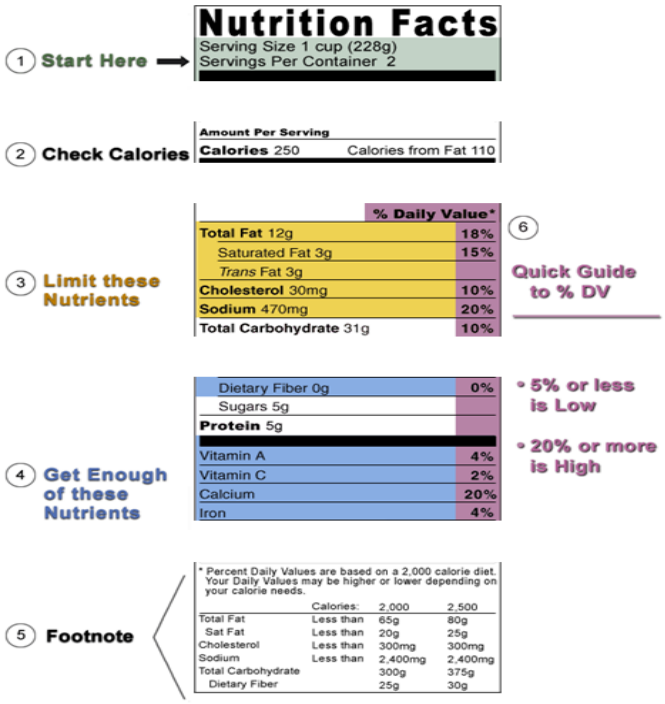
ChooseMyPlate.gov [3] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

See the website for more information on fruit and vegetable consumption and physical activity.[2]

Nutrition Facts label

The Nutrition Facts label has been revised and is used in the workbook. The following excerpts from the FDA website [4] describe the components of the label:



1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
5. % DVs are based on a 2,000-calorie diet.
6. 5% DV or less is low and 20% DV or more is high.

References

1. Physical Activity. (2016, February 04). Retrieved January 26, 2017, from https://www.cdc.gov/healthyplaces/healthtopics/physactivity.htm

2. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

2. How to Understand and Use the Nutrition Facts Label. (n.d.). Retrieved October 06, 2016, from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm#see1

3. Choose MyPlate. (n.d.). Retrieved October 06, 2016, from https://www.choosemyplate.gov/

What Winter Squash and Vegetables Can Do for Your Health

- Supply your body with necessary nutrients.
- Help keep you at a healthy weight.
- Reduce your chances of diseases like obesity, and type 2 diabetes.

Harvest of the Month
Winter Squash
Healthy and Smart Vocabulary

Transition Words

Transition words connect sentences and ideas together. You can use these words to connect your reasons, examples and conclusion.

Getting Started	Adding On	Wrapping Up
for example	too, also	in summary
for instance	second, third	to sum up
first	in fact	finally
	furthermore	

Vitamin A, Vitamin C, and dietary fiber all support your blood functioning.

Let's get our blood flowing with twenty jumping jacks.

Vitamin C, and Potassium are important for your muscles. Flex your biceps.

Now touch your
HEAD,
SHOULDERS,
KNEES, and
TOES five times.

Vitamin A is important for your eyesight and cell growth throughout your body.

Let's take a **look** around.

Vegetables like winter squash help us keep a healthy weight.

Pretend you have just eaten some unhealthy food drop down into a squat.

Now you have just eaten some healthy winter squash. Jump up. Okay, now repeat that four more times. Squat. Jump. 3 more...

Winter Squash **Movement Prompt Number 4**

Winter squash and other vegetables along with physical activity can help prevent obesity and Type-2 diabetes.

Eat some winter squash and jog in place for 30 seconds.

Harvest of the Month - Broccoli
Grade 5, Lesson 3

Summary

Learning Objectives

- Identify nutrition facts and the health benefits of broccoli.
- Determine which foods belong in the five MyPlate food groups.
- Distinguish between healthy and unhealthy food choices.
- Describe how a person can eat healthfully throughout the day.

Goals, Competencies, and Standards

- Harvest of the Month Goal
  Increase consumers' preference for fruits and vegetables.

- Health Standard: Nutrition Competency
  5.5-6 Use a decision-making process to identify healthy foods for meals and snacks.

- Common Core Standards
  CCSS.ELA-LITERACY.W.5.3
  Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Materials: Harvest of the Month Workbooks, 1 bite-size floret of broccoli per student, MyPlate Relay Game mat (5), MyPlate food group signs with removable strips (cut strips in advance), MyPlate Relay Game visual aid, Educator Newsletter, Family Newsletters

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	20 minutes
Link It	Guided Practice	10 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

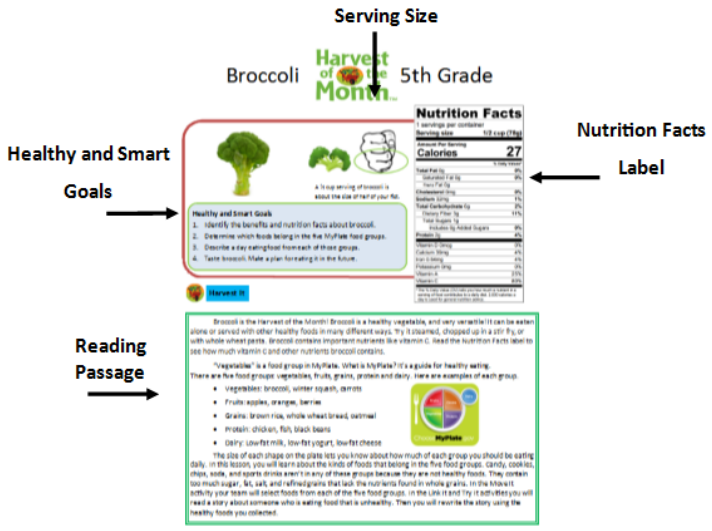
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about broccoli containing nutrition information.

Teacher Guide students in reading and interpreting the Nutrition Facts Label.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the lesson's **Healthy and Smart Goals** with the class which can be found in their workbook in the Harvest It section.
    - Identify the benefits and nutrition facts about broccoli.
    - Determine which foods belong in the five MyPlate food groups.
    - Describe a day eating food from each of those groups.
    - Taste broccoli. Make a plan for eating it in the future.
3. Read the introductory passage with your students.

    Broccoli is the Harvest of the Month! Broccoli is a healthy vegetable, and very versatile! It can be eaten alone or served with other healthy foods in many different ways. Try it steamed, chopped up in a stir fry, or with whole wheat pasta. Broccoli contains important nutrients like vitamin C. Read the Nutrition Facts label to see how much vitamin C and other nutrients broccoli contains.

Nutrition Facts

1 servings per container

Serving size	**1/2 cup (78g)**
Amount Per Serving	
Calories	**27**
	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 32mg	**1%**
Total Carbohydrate 6g	**2%**
Dietary Fiber 3g	**11%**
Total Sugars 1g	
Includes 0g Added Sugars	**0%**
Protein 2g	**4%**
Vitamin D 0mcg	0%
Calcium 39mg	4%
Iron 0.54mg	4%
Potassium 0mg	0%
Vitamin A	25%
Vitamin C	80%

*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.

A ½ cup serving of broccoli is about the size of half of your fist.

4. Guide students in interpreting the nutrition facts label in their workbook. Explain that they should strive to include a variety of nutrients from the food they eat. Five percent or less of a nutrient is low, while 20% or above is considered high.
5. Draw their attention to the DV of vitamin C for broccoli. Ask them if a ½ cup serving of broccoli would be sufficient to supply the recommended daily value. Continue the reading.

"Vegetables" is a food group in MyPlate. What is MyPlate? It's a guide for healthy eating.
There are five food groups: vegetables, fruits, grains, protein and dairy. Here are examples of each group.

- *Vegetables: broccoli, winter squash, carrots*
- *Fruits: apples, oranges, berries*
- *Grains: brown rice, whole wheat bread, oatmeal*
- *Protein: chicken, fish, black beans*
- *Dairy: Low-fat milk, low-fat yogurt, low-fat cheese*

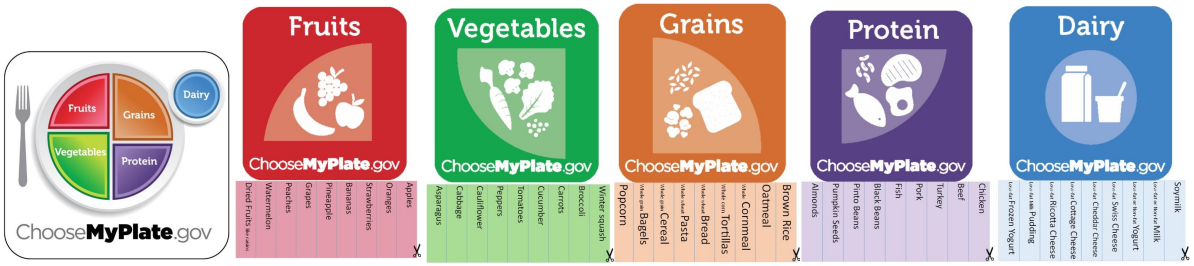
The size of each shape on the plate lets you know about how much of each group you should be eating daily. In this lesson, you will learn about the kinds of foods that belong in the five food groups. Candy, cookies, chips, soda, and sports drinks aren't in any of these groups because they are not healthy foods. They contain too much sugar, fat, salt, and refined grains that lack the nutrients found in whole grains. In the Move It activity your team will select foods from each of the five food groups. In the Link It and Try It activities, you will read a story about someone who is eating food that is unhealthy. Then you will rewrite the story using the healthy foods you collected.

Move It

Activity Choosing Foods from the Five Food Groups

Students will work in teams to collect names of foods belonging to the five MyPlate groups.

Teacher will tell the instructions to the game and supervise the play.



MyPlate Relay Game Mat (make 5) and the MyPlate food group signs with removable strips

Instructions

1. Explain that they will be playing a relay game to learn what foods belong in each of the five MyPlate food groups. MyPlate is an icon that serves as a reminder for healthy eating. See the **Nutrition Resources and Health Messages** for more information.
2. Select five students. Give each of them one of the five MyPlate food group signs. Position them in different locations. Assign the remaining students to them to form teams.
3. Explain the game:
    a. The object of the game is to collect two foods from each of the food groups.
    b. One team member at a time will go to another food group sign, collect one strip that has a food on it, bring it back to their team, and put it on their team's mat. Show one of the mats and pass one out to each team.
4. Have a student model collecting a food strip, returning to their team, and placing it on their mat. Begin the game. End the game when each team has two foods from each food group on their mat.

MyPlate Relay Game

Place the foods your team and your classmates collected in the correct food groups.

	Fruits	Vegetables	Grains	Protein	Dairy
Your class' choices	Apples	Winter squash	Brown Rice	Pumpkin Seeds	Milk
The foods your team collected					

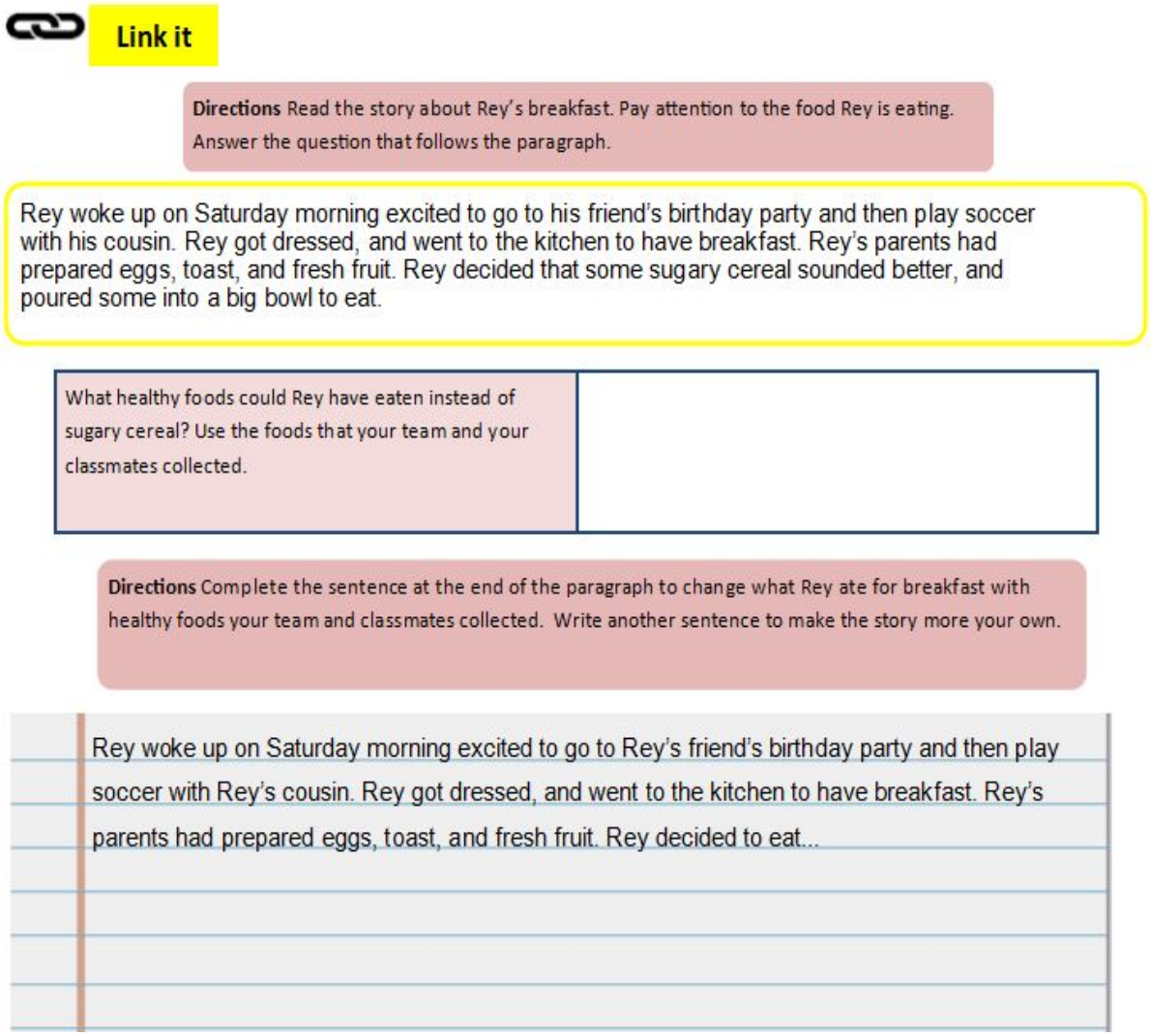
5. Have students return to their desks. Ask a student to share one of their team's fruit selections out loud. Record it in the chart on the MyPlate Relay Game visual aid. Instruct students to do the same on the similar chart in their workbook. Call on other teams to share their answers for the remaining food groups and include them in the chart.
6. Tell students to record the foods their teams collected in the chart of their workbook. Explain that they will be able to use those foods in a story they will be writing.

Link It

Activity Read and Analyze a story about unhealthy eating, and rewrite It

Students will read the beginning of a story about a character who makes unhealthy breakfast choices and then consider what foods he could have eaten instead.

Teacher will guide students in reading the story, discussing it, and rewriting the story.



Instructions

1. Tell students they will be reading a story. Ask them to think about the food choices the character is making as they read the story.
2. Read the story aloud located in the Link It section of their workbook:

   Rey woke up on Saturday morning excited to go to his friend's birthday party and then play soccer with his cousin. He got dressed, and went to the kitchen to have breakfast. His parents had prepared eggs, toast, and

fresh fruit. Rey decided that some sugary cereal sounded better and poured himself a big bowl to eat.

3. Ask the class what Rey ate for breakfast and whether they were healthy choices. Then, ask them what items Rey was offered for breakfast and food groups they belong in.
4. Explain that they will be rewriting a sentence in the paragraph about what Rey ate for breakfast to include some items from the five food groups they collected during the Move It activity. Tell them that first, they will come up with some ideas for the sentence.

What healthy foods could Rey have eaten instead of sugary cereal? Use the foods that your team and your classmates collected.	

5. Lead the class in a Think-Pair-Share. The prompt is, "What healthy foods could Rey have eaten instead of what he ate?" Have them think silently for 30 seconds about the prompt. Then, tell them to share their ideas with a neighbor. Next, have the class share possible answers. Finally, ask them to place their ideas in the white box next to the prompt.
6. Construct a sentence using their answers on the board beginning with, "Rey decided to eat…" For example, "Rey decided to eat oatmeal with raisins, almonds, and a glass of nonfat milk."

Rey woke up on Saturday morning excited to go to Rey's friend's birthday party and then play soccer with Rey's cousin. Rey got dressed, and went to the kitchen to have breakfast. Rey's parents had prepared eggs, toast, and fresh fruit. Rey decided to eat...

7. Tell the class to complete the sentence at the end of the paragraph. Encourage them to write an additional sentence to personalize the story.

Try It

Activity Rewrite the Story

Students will rewrite the parts of the story that pertain to what Rey ate for lunch and a snack.

Teacher will monitor student progress rewriting the story.

See the next page.

Try it

Directions Read the story about Rey's *lunch*. Complete the sentence at the end of the paragraph to change what Rey ate at lunch with healthy foods your class collected. Include broccoli. Write another sentence to make the story more your own.

Later, lunch was being served at the birthday party. There was an assortment of healthy and unhealthy food choices to choose from. Rey ate cookies and cake, and washed it down with a soda.

Later, lunch was being served at the birthday party. There was an assortment of healthy and unhealthy food choices to choose from. Rey ate...

Instructions

1. Tell students they will rewrite the rest of the story. Read the first set of directions in the Try It section aloud with the class and answer any questions.

Directions Read the story about Rey's *snack*. Rewrite the paragraph to show Rey and Rey's cousin making healthy choices. Include broccoli. Use foods that your team and your classmates collected. Add more sentences to make the story your own.

After the party, Rey went over to his cousin's house. They planned on playing soccer, but decided to watch TV instead. They got some chips from the kitchen and snacked on them while they watched. Before they knew it, the party size bag of chips was gone and they were very thirsty. Rey and Rey's cousin each drank a 24 ounce sport drink.

2. Read the second set of directions in the Try It section aloud with the class and answer any questions.
3. Monitor student progress.

Digest It

Activity Broccoli Tasting, Reflection, and Informal Assessment

Students will taste broccoli, review nutrition facts about broccoli, and share their writing.

Teacher will hand out the tasting and guide a discussion.

Digest it

- Taste broccoli.
- What nutrients does broccoli have?
- What are examples of the fruits, vegetables, grains, protein and dairy food groups?
- What snack with broccoli did you describe Rey eating?
- What is your plan for eating snacks with broccoli?

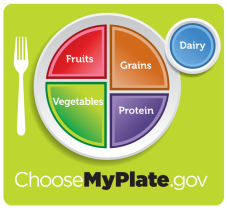
Instructions

1. Tell students they will be trying some broccoli and reflecting on their learning.
2. Have students wash their hands. The Center for Disease Control [1] suggests:

> Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
> Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
> Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
> Rinse your hands well under clean, running water.
> Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen broccoli in the cafeteria, and if they tried it.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the broccoli. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The broccoli is green, crunchy, and bumpy."
    c. Model respectful responses to not liking the tasting: "I appreciate being offered the broccoli. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time.
8. Discuss the questions in the Digest It section of the workbook:
    a. Taste broccoli.
    b. What nutrients does broccoli have? [Refer to the Nutrition Facts label and passage at the beginning of the workbook to find answers such as vitamin A and C, Calcium, Iron, and fiber.]
    c. What are examples of the fruits, vegetables, grains, protein and dairy food groups?
    d. What snack with broccoli did you describe Rey eating?
    e. What is your plan for eating snacks with broccoli?
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.

Nutrition Resources and Health Messages



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- Make half of your grains whole grains.
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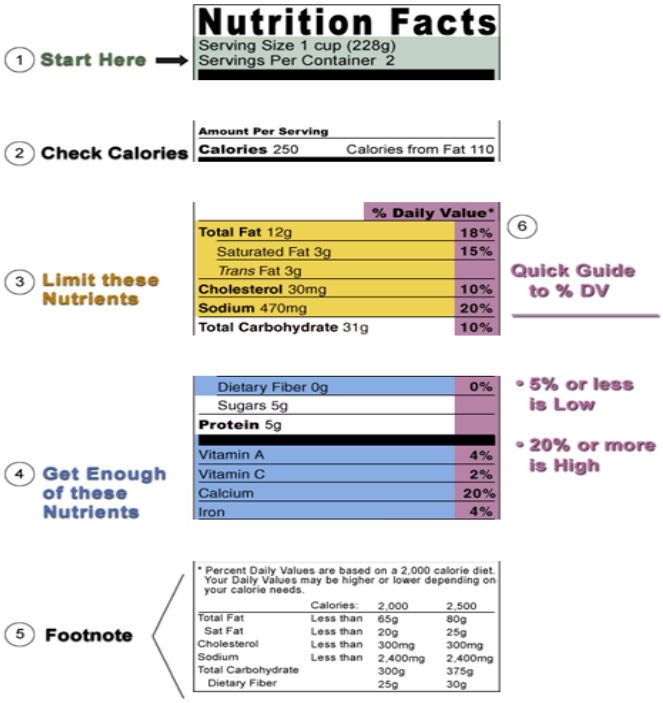

1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
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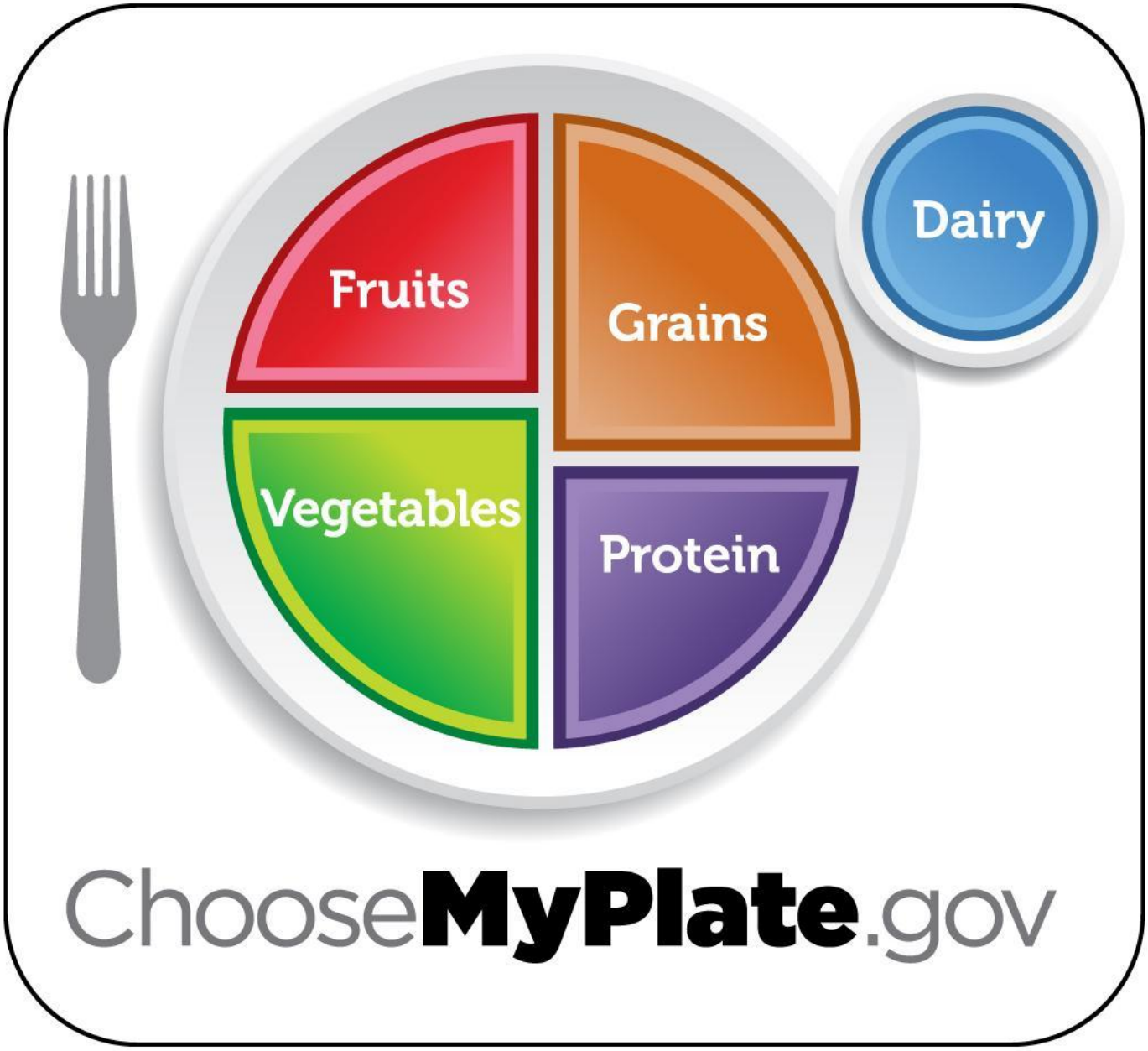

MyPlate game mat

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Vegetables

ChooseMyPlate.gov

- Asparagus
- Cabbage
- Cauliflower
- Peppers
- Tomatoes
- Cucumber
- Carrots
- Broccoli
- Winter squash

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Grains

ChooseMyPlate.gov

- Brown Rice
- Oatmeal
- Whole Cornmeal
- Whole corn Tortillas
- Whole wheat Bread
- Whole wheat Pasta
- Whole grain Cereal
- Whole grain Bagels
- Popcorn

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- Apples
- Oranges
- Strawberries
- Bananas
- Pineapple
- Grapes
- Peaches
- Watermelon
- Dried Fruits like raisins

50

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Protein

ChooseMyPlate.gov

- Chicken
- Beef
- Turkey
- Pork
- Fish
- Black Beans
- Pinto Beans
- Pumpkin Seeds
- Almonds

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Dairy

ChooseMyPlate.gov

Soymilk

Low-fat or Non-fat Milk

Low-fat or Non-fat Yogurt

Low-fat Swiss Cheese

Low-fat Cheddar Cheese

Low-fat Cottage Cheese

Low-fat Ricotta Cheese

Low-fat Milk Pudding

Low-fat Frozen Yogurt

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MyPlate Relay Game

Place the foods your team and your classmates collected in the correct food groups.

	 Fruits	 Vegetables	 Grains	 Protein	 Dairy
Your class' choices					
The foods your team collected					

Harvest of the Month - Orange
Grade 5, Lesson 4

Summary

Learning Objectives

- Identify nutrition facts and the health benefits of oranges.
- Realize the significance of the servings per container on a Nutrition Facts label.
- Multiply to find the amount of sugar and calories in more than one serving.
- Taste oranges and make a plan for eating them.

Goals, Competencies, and Standards

- Harvest of the Month Goal
  Increase consumption and access to healthy beverages and reduce consumption of unhealthy beverages.

- Health Standard: Nutrition Competencies
  5.5-6 Use a decision-making process to identify healthy foods for meals and snacks.
  3.5-6. Interpret information provided on food labels.

- Common Core Standard
  CCSS.MATH.CONTENT.5.NBT.B.5
  Fluently multiply multi-digit whole numbers using the standard algorithm.

Materials: Harvest of the Month Workbooks, Nutrition Resources and Health Messages, multiplication game gram and serving cards (cut), 1 slice of orange per student, vocabulary visual aid, Educator Newsletter, Family Newsletters

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	15 minutes
Link It	Guided Practice	15 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

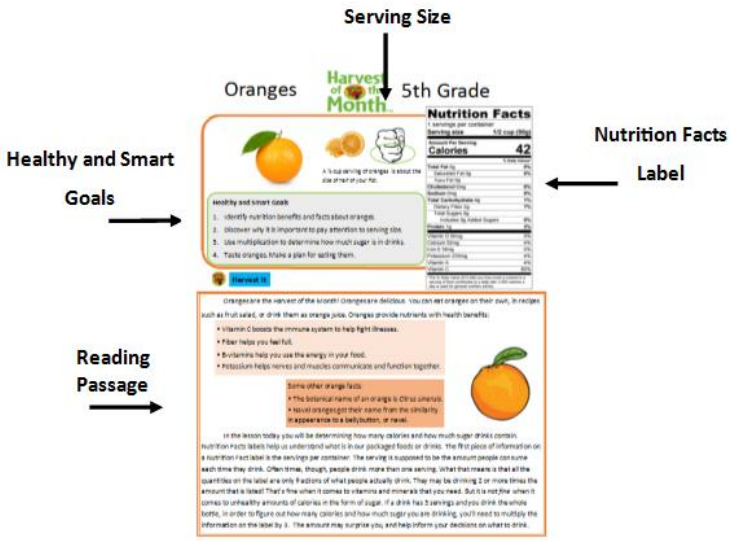
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about oranges, containing nutrition information.

Teacher will guide students in reading and interpreting the Nutrition Facts Label.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the lesson's Healthy and Smart Goals with the class which can be found in their workbook.
    - Identify the benefits and nutrition facts about oranges.
    - Discover why it is important to pay attention to serving size.
    - Use multiplication to determine how much sugar is in various drinks.
    - Taste oranges and make a plan for eating them.

3. Begin reading the introductory passage with your students.

    Oranges are the Harvest of the Month! Oranges are delicious. You can eat oranges on their own, in recipes such as fruit salad, or drink them as orange juice. Oranges provide nutrients with health benefits:

    • Vitamin C boosts the immune system to help fight illnesses.
    • Fiber helps you feel full.
    • B-vitamins help you use the energy in your food.
    • Potassium helps nerves and muscles communicate and function together.

Nutrition Facts

1 servings per container

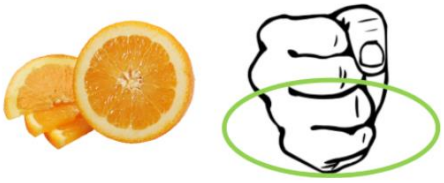
Serving size **1/2 cup (90g)**

Amount Per Serving

Calories **42**

	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 0mg	**0%**
Total Carbohydrate 4g	**1%**
Dietary Fiber 2g	**7%**
Total Sugars 8g	
Includes 0g Added Sugars	**0%**
Protein 1g	**2%**
Vitamin D 0mcg	0%
Calcium 52mg	4%
Iron 0.18mg	0%
Potassium 235mg	4%
Vitamin A	4%
Vitamin C	80%

*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.



A ½ cup serving of oranges is about the size of half of your fist.

4. Guide students in interpreting the nutrition facts label in their workbook. Explain that they should strive to include a variety of nutrients from the food they eat. Five percent or less of a nutrient is low, while 20% or above is considered high.
5. Draw their attention to the DV of Vitamin C from oranges which is shown on the bottom of the label. Ask them if a 1/2 cup serving of oranges would be sufficient to supply the recommended daily value of Vitamin C. Discuss how they would acquire the DV for other vitamins and minerals on the label.
6. Continue the reading:

Some other orange facts:

• The botanical name of an orange is Citrus sinensis.

• Navel oranges got their name from the similarity in appearance to a bellybutton, or navel.

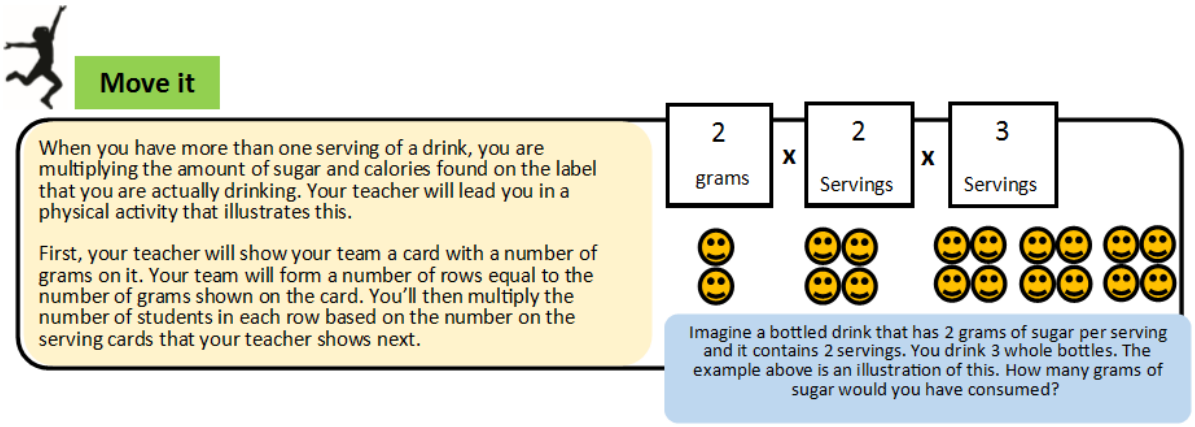
In the lesson, today you will be determining how many calories and how much sugar drinks contain. Nutrition Facts labels help us understand what is in our packaged foods or drinks. The first piece of information on a Nutrition Fact label is the servings per container. The serving is supposed to be the amount people consume each time they drink. Often times, though, people drink more than one serving. What that means is that all the quantities on the label are only fractions of what people actually drink. They may be drinking 2 or more times the amount that is listed! That's fine when it comes to vitamins and minerals that you need. But it is not fine when it comes to unhealthy amounts of calories in the form of sugar. If a drink has 3 servings and you drink the whole bottle, in order to figure out how many calories and how much sugar you are drinking, you'll need to multiply the information on the label by 3. The amount may surprise you, and help inform your decisions on what to drink.

Move It

Activity Serving Size and Gram Multiplication Game

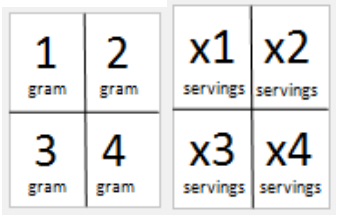
Students will play a two-team game that simulates multiplying grams and servings.

Teacher will explain and lead the game.



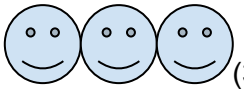
Instructions

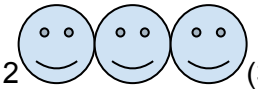
1. Tell the class they are going to play a multiplication game to get them ready for finding the number of calories and grams contained in various drinks based on the number of serving sizes they contain.
2. Explain the game to your class.
    a. *There will be two teams. The object of the game is to be the first to line up to a number that is the product of servings and grams.*



These are the playing cards before they are cut.

    b. *First, I will show a grams card. It will show either 1, 2, 3, or 4 grams. Each team will need to make a row across that is the number on the card. For example, if the card was 3 grams, three students will need to line up side by side for each team. [Ask volunteers to model this step.]*

Team 1  (3g)

Team 2  (3g)

    c. *Next, I will show a serving card. It will show either 1x, 2x, 3x, or 4x servings. When this card is shown each team will need to send team members to line up behind the others the number of times on the card. For example, in the 3 grams example, if the 2x serving card is shown each team must send three more students to represent 2 times. Once they line up, they call out the product, in this case 6. [Ask volunteers to model this step. See below.]*

d. *Then, I will show another serving card. If I show a 1x card, there should be no other students joining in because anything times 1 is that same number. If I show a 2x card, there should be six more students in because 6x2 equals 12. [Ask volunteers to model this step. Each team should have 3 rows with 4 students lined up behind each row.]*
e. *I will continue to show serving cards after both teams have lined up and called out the number. If I show a number on a serving card that when multiplied times the number of those already in play will exceed the number of students on an entire team, each team must call out what that product is without moving. For example, 6 students times 4 would be 24, and that is more than the number of students on a team. So, when that happens, the teams should call out 24. [Ask volunteers to model this step.]*
f. *Also, when that happens, and a correct number is called out by a team, the game resets with players clearing the floor and me starting with a new beginning number of grams. [Ask volunteers to model this step.]*

3. Divide the class into two teams. Start the game. Suggestions:
    a. You may wish to start the first round by choosing the cards deliberately to encourage understanding, by starting with smaller numbers. For example, using a 1 gram card and then the serving cards in this sequence: 1x, 2x, and 3x.
    b. You may reward a team for winning by allowing a member of that team to pick the cards in the next round.

Link It

Activity Reading Nutrition Facts Labels

Students will learn to read nutrition facts labels, and calculate how much of each nutrient they would receive if they consumed multiple servings.

Teacher will guide students in reading the nutrition facts labels and making calculations.

See the next page.

Link it

Nutrition Facts labels provide useful information. But you need to use your multiplication skills to get a better understanding of what you are eating and drinking. The information on the label is based on the serving size listed on the package. If what you eat or drink each time is more than the serving size listed on the label then you will need to multiply to figure out what you are really getting.

In order to find out the total number of calories in a container you need to multiply the number of servings times the calories per serving.

This drink doesn't have just 70 calories. It has 140!

If you drink the whole bottle you are getting 140 calories.

2 (servings per container) X 70 (amount of calories per serving) = 140 (total calories per container)

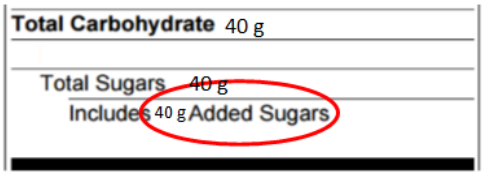
Instructions

1. Read the text in the pink box at the beginning of the student workbook Link It section. Then, explain the example. Students must first identify the location of the servings per container and the quantity there. In this case it is 2. Then they must find the number of calories. In this case it is 70. Next, they must multiply. The answer is 140.

If you drink the whole bottle, how many calories would you consume?

___ (servings per container) X ___ (amount of calories per serving) = ___ (total calories per container)

2. Tell students to complete the soda problem: 3 servings x160 cal.=480 cal. Ask them how many calories they would consume if they drank the whole bottle. Tell them that is a lot of calories.



3 (servings per container) X 40 (grams of sugar) = (total grams of added sugar for the whole bottle)

3. The next problem asks students to find the total grams of added sugar in the same bottle of soda. They must multiply 3 servings x 40g to get 120g.

Try It

Activity Independently Finding Calories and Grams of Sugar

Students will study the Nutrition Facts labels on several drinks and find caloric and sugar content.

Teacher will provide guidance *and* monitor student work.

Nutrition Facts
2 servings per container
Serving size **8 oz**
Amount Per Serving
Calories **120**

If you drink the whole bottle, how many calories would you consume?

____ servings per container X ____ amount of calories per serving = ____ total calories per container

Total Carbohydrate 30 g
Total Sugars 30 g
Includes 30 g Added Sugars

____ servings per container X  grams of sugar =  total grams of added sugar for the whole bottle

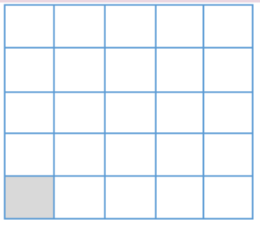
Instructions

1. Ask students to complete the first two problems shown above.
2. Show students how to convert grams of sugar into sugar cubes. They will be answering 2 problems that ask them to do this. Each sugar cube is about 3 grams. So, show them that 12 grams divided by 3 grams = 4 sugar cubes.

Want to see what that many grams of added sugar looks like in sugar cubes? Since there are about 3 grams of sugar in a sugar cube, you can divide the total amount by 3 to get the total amount of sugar cubes. Try it.

 total grams of added sugar for the whole bottle ÷ 

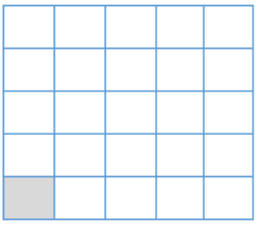
each sugar cube is about 3 grams = ____ sugar cubes per bottle

 Shade in the number of sugar cubes you found.

This drink has important vitamins and minerals. But take a look at how much added sugar it contains.

total grams of added sugar for the whole bottle ÷ 

each sugar cube is about 3 grams = ____ sugar cubes per bottle

 Shade in the number of sugar cubes you found.

3. Tell them to find the number of sugar cubes worth of sugar in each drink for the two problems above. Discuss their answers.

Directions How many grams of added sugar are contained in this bottle of water? It has 2 servings. How many would you find in 1000 bottles? Why would water be the healthiest way to hydrate?

Total Carbohydrate 0g
Total Sugars 0 g
Includes 0g Added Sugars

____ servings per container X grams of added sugar = total grams of added sugar for the whole bottle

Directions An orange isn't a drink. But it makes an excellent snack. They contain water and they have vitamins and minerals too. See how many grams of **added** sugar are there in 1.5 servings of oranges.

Total Carbohydrate 11g
Total Sugars 8 g
Includes 0g Added Sugars

____ servings per container X grams of added sugar = total grams of added sugar

1. Tell students to solve the next problem. They must determine the amount of added sugar in a bottle of water that contains 2 servings. The answer is 0. They are also asked how many grams of added sugar in 1000 bottles of bottled water. The answer is still zero. Discuss why water would be the healthiest way to satisfy their thirst.
2. Ask them to solve the final problem. They must determine the amount of **added** sugar in 1.5 servings of orange. The answer is zero, because there is not any **added** sugar in oranges or other fruit.

Digest It

Activity Tasting Oranges, Reflection, and Informal Assessment

Students will taste oranges and discuss good choices for hydration.

Teacher will provide a tasting of oranges, and facilitate conversation about good choices for hydration.

Digest it

It's time to eat an orange and digest what you've learned!

- Taste oranges.
- Name something that has water, lots of vitamins and minerals and no added sugar.
- Why is it important to read the Nutrition Facts label and use your math skills?
- What are your plans for eating oranges?

See the next page.

Instructions

1. Tell students they will be trying some oranges and reflecting on their learning.
2. Have students wash their hands. The Center for Disease Control [1] suggests:

> Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
> Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
> Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
> Rinse your hands well under clean, running water.
> Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen oranges in the cafeteria, and if they tried them.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the orange. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The orange is juicy, sweet, and bright orange."
    c. Model respectful responses to not liking the tasting: "I appreciate being offered the orange. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time."
8. Have students reflect on the questions in the workbook:
    a. Name something that has water, lots of vitamins and minerals and no added sugar.
    b. Why is it important to look at nutrition facts labels and use your math skills?
    c. What are your plans for eating oranges??
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.
10. Optional - Try infused water! Fill a pitcher with water. Add orange slices. Let the flavor infuse for an hour before serving to the students. Alternately, serve by giving students cups of water that they can squeeze their orange slice into.

Nutrition Resources and Health Messages

MyPlate

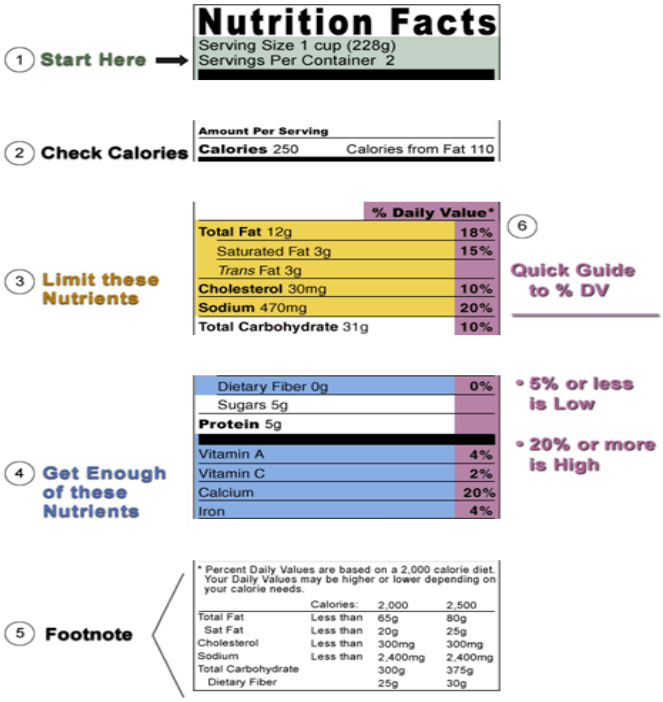
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

See the website for more information on fruit and vegetable consumption and physical activity.[2]

Nutrition Facts label

The Nutrition Facts label has been revised and is used in the workbook. The following excerpts from the FDA website [3] describe the components of the label:



1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
5. % DVs are based on a 2,000-calorie diet.
6. 5% DV or less is low and 20% DV or more is high.

References

1. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

2. How to Understand and Use the Nutrition Facts Label. (n.d.). Retrieved October 06, 2016, from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm#see1

3. Choose MyPlate. (n.d.). Retrieved October 06, 2016, from https://www.choosemyplate.gov/

1 gram	2 gram
3 gram	4 gram

This page is intentionally left blank.

x1 servings

x2 servings

x3 servings

x4 servings

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Harvest of the Month

Orange

Healthy and Smart Vocabulary

1. **nutrient** (*noun*)**:** a substance that plants, animals, and people need to live and grow.

2. **nutrition facts label** (*noun*): provides information on the contents and quantity of nutrients in a specific food.

3. **hydrate** (*verb*): to add water or moisture to (something) : to supply (something) with water.

4. **moderation** (*adjective*): average in size or amount; neither too much nor too little.

5. **calories** (*noun):* a unit of heat used to indicate the amount of energy that foods will produce in the human body.

Harvest of the Month - Carrot
Grade 5, Lesson 5

Summary

Learning Objectives

- Identify nutrition facts and the health benefits of carrots.
- Plot ordered pairs on a coordinate plane.
- Interpret graphs to understand the advantages of locally grown food.
- Taste carrots and make a plan for eating them.

Goals, Competencies, and Standards

- Harvest of the Month Goal
  Increase consumption of locally grown food items by connecting growers to their communities through farmers' markets, food retail stores, schools, and food banks, among others.

- Nutrition Competency
  1g.5-6. Explain how food is transported from farm to table, focusing on maintaining nutritional quality.

- Common Core Standard
  CCSS.MATH.CONTENT.5.G.A.2
  Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Materials: Harvest of the Month Workbooks, 1 piece of carrot per student, Plot and Ordered Pair visual aid, Hop Plot visual aid, string or yarn (optional, for Move It activity extension), Educator Newsletter, Family Newsletters

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	15 minutes
Link It	Guided Practice	15 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

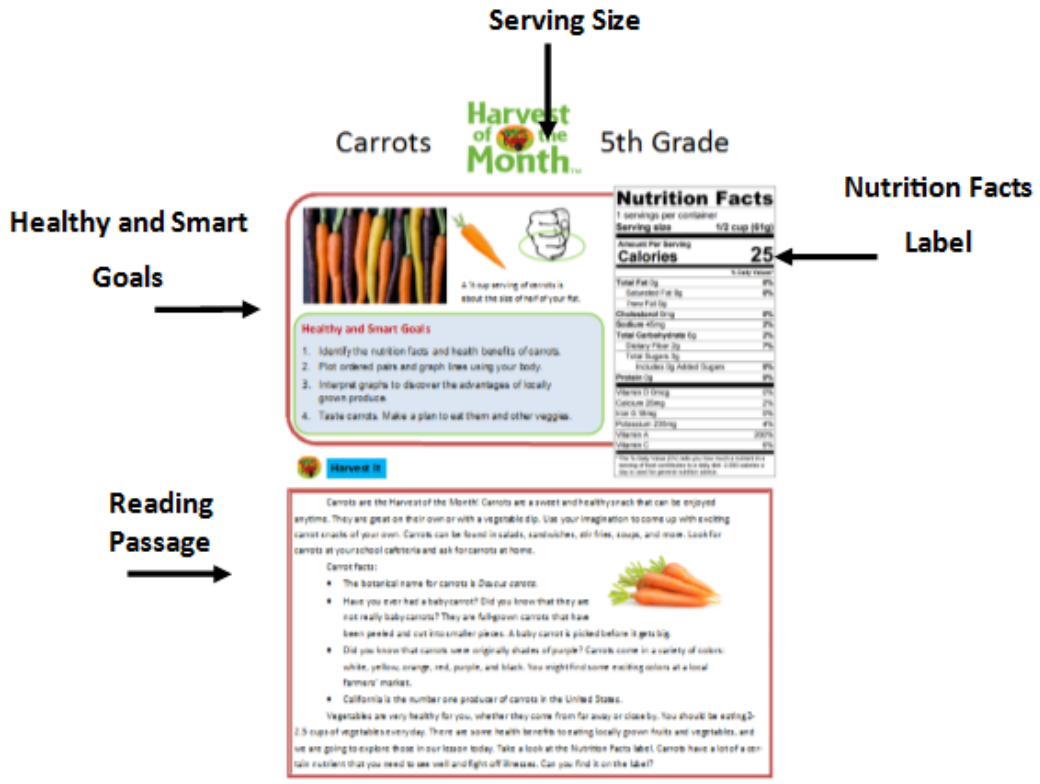
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about broccoli containing nutrition information.

Teacher Guide students in reading and interpreting the Nutrition Facts Label.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the **Healthy and Smart Goals** for the lesson aloud with the class:
   - Identify the nutrition facts and health benefits of carrots.
   - Plot ordered pairs and graph lines using your body.
   - Interpret graphs to discover the advantages of locally grown produce.
   - Taste carrots. Make a plan to eat them and other veggies.

3. Read the introductory passage with your students which can be found in their workbook:

   Carrots are the Harvest of the Month! Carrots are a sweet and healthy snack that can be enjoyed anytime. They are great on their own or with a vegetable dip. Use your imagination to come up with exciting

carrot snacks of your own. Carrots can be found in salads, sandwiches, stir fries, soups, and more. Look for carrots at your school cafeteria and ask for carrots at home.

Carrot facts:

- *The botanical name for carrots is Daucus carota.*
- *Have you ever had a baby carrot? Did you know that they are not really baby carrots? They are full-grown carrots that have been peeled and cut into smaller pieces. A baby carrot is picked before it gets big.*
- *Did you know that carrots were originally shades of purple? Carrots come in a variety of colors: white, yellow, orange, red, purple, and black. You might find some exciting colors at a local farmers' market.*
- *California is the number one producer of carrots in the United States.*

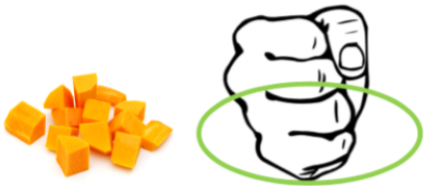
Vegetables are very healthy for you, whether they come from far away or close by. You should be eating 2-2.5 cups of vegetables every day. There are some health benefits to eating locally grown fruits and vegetables, and we are going to explore those in our lesson today. Take a look at the Nutrition Facts label. Carrots have a lot of a certain nutrient that you need to see well and fight off illnesses. Can you find it on the label?

Nutrition Facts

1 servings per container

Serving size	**1/2 cup (61g)**
Amount Per Serving	
Calories	**25**
	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 45mg	**2%**
Total Carbohydrate 6g	**2%**
Dietary Fiber 2g	**7%**
Total Sugars 3g	
Includes 0g Added Sugars	**0%**
Protein 0g	**0%**
Vitamin D 0mcg	0%
Calcium 26mg	2%
Iron 0.18mg	0%
Potassium 235mg	4%
Vitamin A	200%
Vitamin C	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.



A ½ cup serving of carrots is about the size of half of your fist.

4. Guide students in interpreting the nutrition facts label in their workbook. Explain that throughout the week, they should strive for 100% of the Percent Daily Value (DV) of the nutrients listed on the Nutrition Facts label.
5. Draw their attention to the DV of vitamin A for carrots. Ask them if a ½ cup serving of carrots would be sufficient to supply the recommended daily value and how they would get 100%.

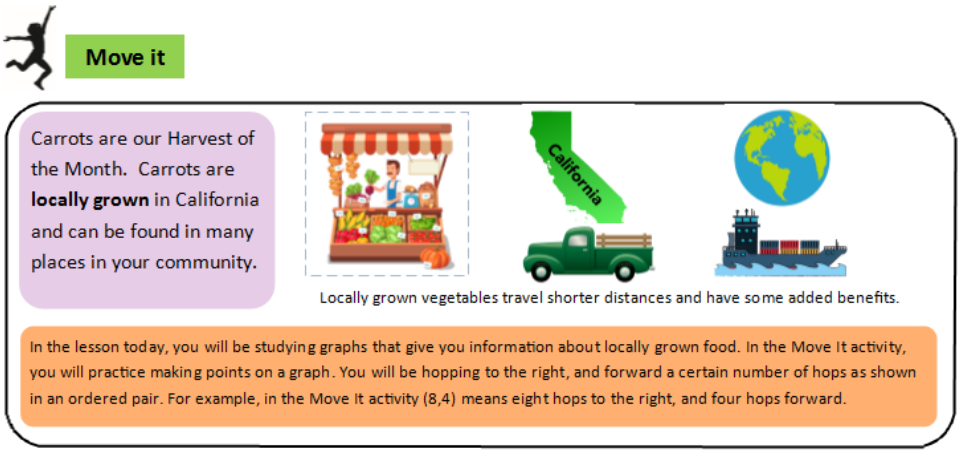
Move It

Activity Hop Plot

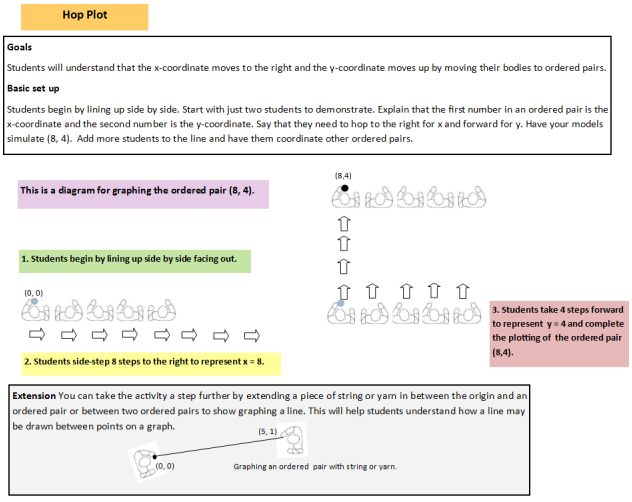
Students will plot ordered pairs as a group by walking or hopping to the right and forward.

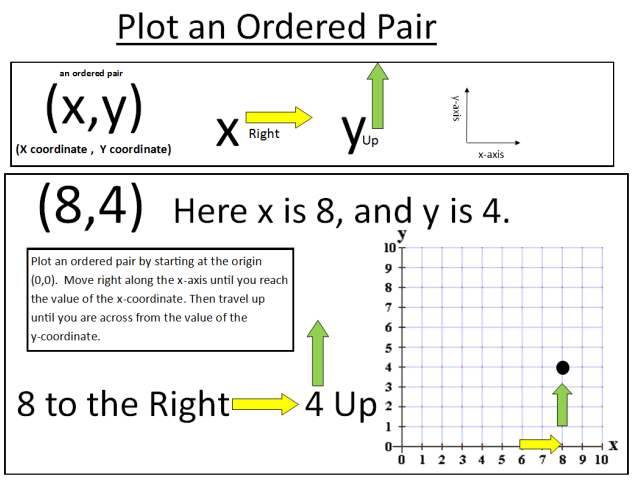
Teacher will explain what ordered pairs are and how they are plotted, and then guide students in moving their bodies to coordinates. See the accompanying visuals.

Important Note: This Move It activity is best done in a wide-open space, such as outside or in a multi-purpose room. If an outdoor space is not an option, you may wish to have one student participate at a time and choose coordinates that conform to your classroom space.



student workbook





See the full-size versions of Hop Plot and Plot an Ordered Pair visual aids at end of lesson.

Instructions

1. Preview the Hop Plot diagram to visualize the physical activity.
2. Tell students that in the Link It and Try It sections they will be using graphs to understand information about locally grown food. Say that In the Move It activity they will learn how graphs work.
3. Use the Plot an Ordered Pair visual aid to describe what an ordered pair is. Explain that the first number in an ordered pair is the x-coordinate and the second number is the y-coordinate. Say the x-coordinate tells you how far to move right along the x-axis and the y coordinate tells you how far to move forward along the y-axis.

4. Select five students and line them up side by side. Tell them they will demonstrate the ordered pair (8, 4) as shown on the visual. Direct them to move 8 steps or hops to the right and 4 steps or hops forward.
5. Increase the number of students in the line and give them more ordered pairs to demonstrate.
6. See the bottom of the Hop Plot sheet for extension ideas.

Link It

Activity Mile-a-Minute Carrots

Students will plot the points on the graph representing time and distance.

Teacher will help students in plot points on the graph and interpreting the results.

Link it

Graphs are used to show information. Today you are going to use them to show how fruits and vegetables change as they travel distances.

Graphs are made of lines called axes. The **x-axis** goes from left to right, and the **y-axis** goes up and down. We place points on the graph by using **ordered pairs.** The first number of an ordered pair tells you how far to travel on the x-axis to the right. The second number tells you how far to travel up on the y-axis.

Directions Plot these coordinates then draw a line to connect the points. The graphed line shows a truck traveling a mile a minute.

1. (1,1) (4,4) (6, 6) (8,8) (9, 9)

Truck 1

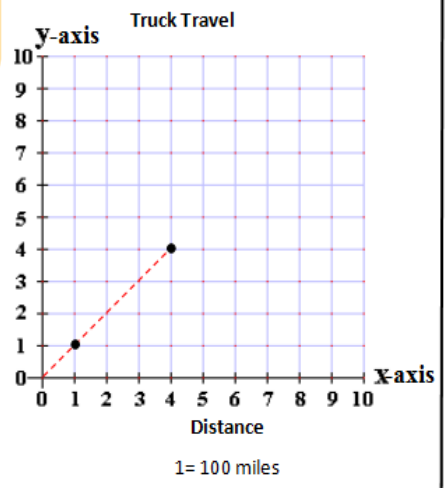
Time

1=100

Now plot these coordinates and graph the line to connect the points.

2. (1,2) (2,4) (3,6) (4,8) (5, 10)

Truck 2



Does the second graph line show a truck traveling faster or slower? How do you know?

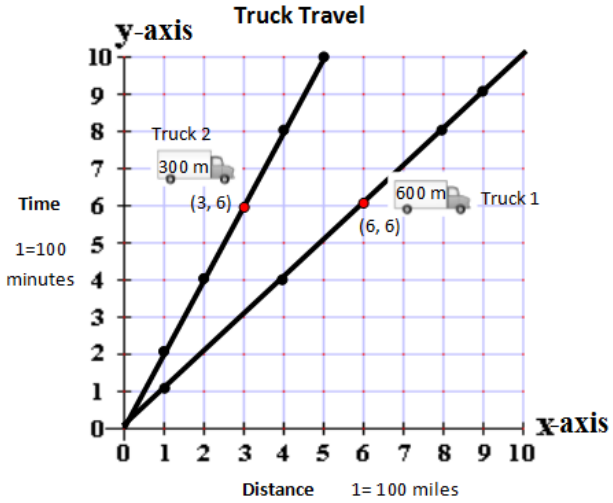
_____

_____

See the next page.

Instructions

1. Introduce these ideas:
   - Produce is grown locally in the same state, or in another state, or outside the country.
   - The distance and time it takes for produce to reach its destination may impact its quality.
2. Describe the parts of the graph found in the Link It section. For example, the x-axis represents time, and the y-axis represents distance. Say that the graph represents the distance and time it takes for produce to travel from the farm to them.
3. Help students plot the first set of points.
4. Once all their points are on the graph, have the students draw a line connecting the points.
5. Repeat steps 3 and 4 with the next set of coordinates.
6. Ask students if Truck 1 travels faster or slower than Truck 2. The answer is "faster." Show that in 600 minutes Truck 1 travels 600 miles (6,6), whereas in 600 minutes Truck 2 has only traveled 300 miles (3,6).



Try It

Activity Traveling Carrots

Students will plot coordinates, graph lines, and interpret graphs.

Teacher will guide students in plotting points and graphing lines, and discussing how food quality is impacted by ripeness and handling.

See the next page.

Try it

Directions Now it's your turn. Remember the first number is on the x-axis. Start there. Then go up until you are across from the second number on the y-axis.

Fruit and vegetables that are grown and sold locally are picked when they are **ripe**. For many vegetables this means they are more **nutritious.** Fruit and vegetables grown far away are often picked before they are ripe so they don't spoil while they travel.

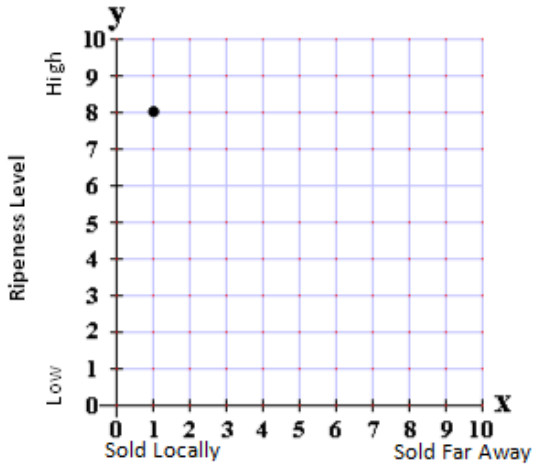
Plot these coordinates

(1,9)

(4,7)

(6,5)

(10,3)



What does the graphed line represent? How might ripeness be affected by where fruits and vegetables are sold?

Instructions

1. Tell students to plot the ordered pairs and graph the line for the first problem of the Try It section.
2. Direct students' attention to the orange text box in the Try It section. Read the text aloud. Ask students to interpret their graph based on the information in the text.
3. Lead a Think-Pair-Share on the writing prompt: "What does the graphed line represent? How might ripeness be affected by where fruits and vegetables are sold?" First ask students to think about the prompt silently. Then ask them to share their thoughts with their neighbor. Next ask them to share their ideas with the class. Finally, ask them to record their ideas in space provided. (See this USDA report [1] for more information about locally grown produce.)

How fruits and vegetables are **handled** can affect their freshness. Foods grown far away may have more chances to get bruised from a bumpy ride and go through temperature changes that can lower their **nutrition** level.

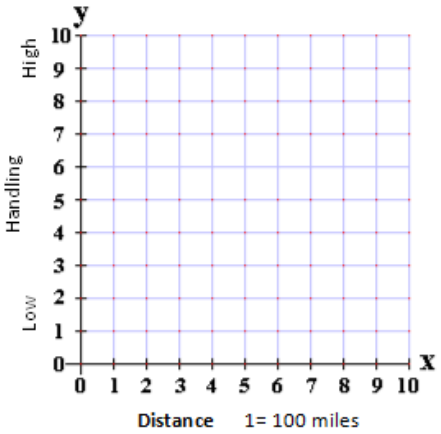
Plot these coordinates

(1,1)

(4,3)

(7,5)

(10,7)



What does the graphed line represent? What does it tell you about what can happen to fruits and vegetables the farther they travel?

4. Tell students to plot the ordered pairs and graph the line for the second problem of the Try It section.

5. Direct students' attention to the second orange text box in the Try It section. Read the text aloud. Tell students to interpret their graph based on the information in the text. Ask them to respond to the prompt: What does the graphed line mean? What does it tell you about what happens to fruits and vegetables the farther they travel? (See Martinez, 2010).
6. Discuss that produce is handled when it is picked, sorted, cleaned, packaged, and transported. Say that overhandling can lead to a loss of quality and, to a lesser extent, nutrient loss. The farther produce travels, the more likely it will be handled and diminished in quality and nutrient value (see Harvard School of Public Health [2].)

Digest It

Activity Tasting and Reflection

Students will taste carrots, and discuss the benefits of locally grown produce.

Teacher will hand out the tasting, and guide the final discussion.

Digest it

Enjoy your carrot. Remember that fruits and vegetables are important to eat whether they come from near or far! Eat about 2 1/2 cups a day. Locally grown fruits may be more nutritious, and are often fresher and more ripe.

- What are some reasons that a vegetable grown locally may be fresher than one grown far away?
- What happens to fruits and vegetables as they travel?
- Make a plan to eat carrots and other vegetables. When and where will you eat them? How will you ask for them? How will they become part of your snacks, breakfast, lunch and dinner every day?

Instructions

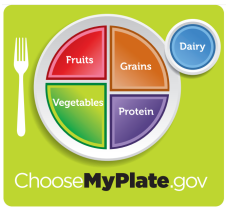
1. Tell students they will be trying some carrots and reflecting on their learning.
2. Have students wash their hands. Center for Disease Control [3] suggests:

> Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
> Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
> Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
> Rinse your hands well under clean, running water.
> Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen carrots in the cafeteria, and if they tried them.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the carrot. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The carrot is crunchy, hard, and shiny."

    c. Model respectful responses to not liking the tasting: "I appreciate being offered the carrot. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time."
8. Guide a discussion about what they learned using the prompts below, which can also be found in the Digest It section of their workbook.
    a. What are some reasons that a vegetable grown locally may be fresher than one grown far away?
    b. What happens to fruits and vegetables as they travel?
    c. Make a plan to eat carrots and other vegetables. When and where will you eat them? How will you ask for them? How will they become part of your snacks, breakfast, lunch and dinner every day?
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.

Nutrition Resources and Health Messages



MyPlate

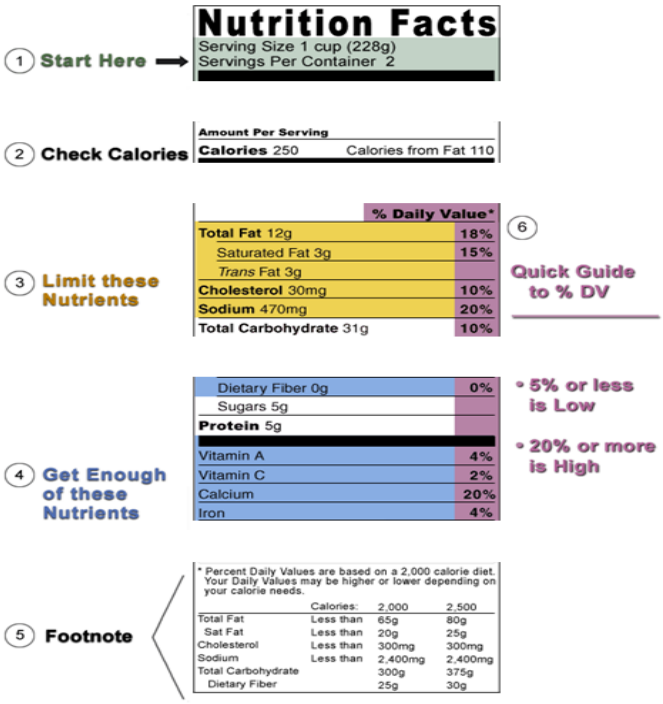
ChooseMyPlate.gov [4] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

See the website for more information on fruit and vegetable consumption and physical activity.[2]

Nutrition Facts label

The Nutrition Facts label has been revised and is used in the workbook. The following excerpts from the FDA website [5] describe the components of the label:



1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
5. % DVs are based on a 2,000-calorie diet.
6. 5% DV or less is low and 20% DV or more is high.

References

1. Martinez, S. (2010). *Local food systems: Concepts, impacts, and issues*. Washington, D.C.: U.S. Dept. of Agriculture, Economic Research Service.

2. “Is Local More Nutritious?” It Depends. (n.d.). Retrieved January 27, 2017, from http://www.chgeharvard.org/sites/default/files/resources/local_nutrition.pdf

3. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

4. How to Understand and Use the Nutrition Facts Label. (n.d.). Retrieved October 06, 2016, from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm#see1

3. Choose MyPlate. (n.d.). Retrieved October 06, 2016, from https://www.choosemyplate.gov/

Hop Plot

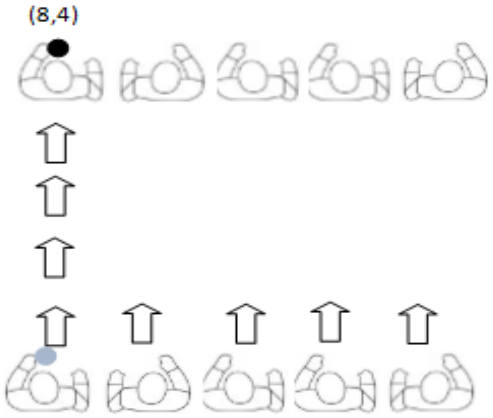
Goals

Students will understand that the x-coordinate moves to the right and the y-coordinate moves up by moving their bodies to ordered pairs.

Basic set up

Students begin by lining up side by side. Start with just two students to demonstrate. Explain that the first number in an ordered pair is the x-coordinate and the second number is the y-coordinate. Say that they need to hop to the right for x and forward for y. Have your models simulate (8, 4). Add more students to the line and have them coordinate other ordered pairs.

This is a diagram for graphing the ordered pair (8, 4).

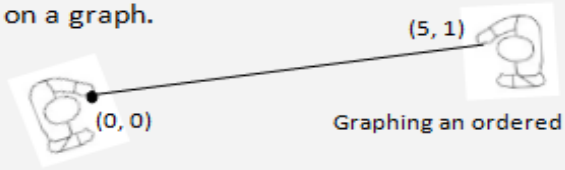


1. Students begin by lining up side by side facing out.

2. Students side-step 8 steps to the right to represent x = 8.

3. Students take 4 steps forward to represent y = 4 and complete the plotting of the ordered pair (8,4).

Extension You can take the activity a step further by extending a piece of string or yarn in between the origin and an ordered pair or between two ordered pairs to show graphing a line. This will help students understand how a line may be drawn between points on a graph.



Graphing an ordered pair with string or yarn.

Plot an Ordered Pair

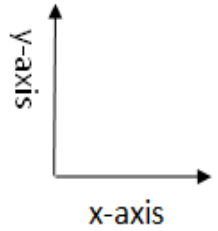
an ordered pair

(x,y)

(X coordinate , Y coordinate)

x Right

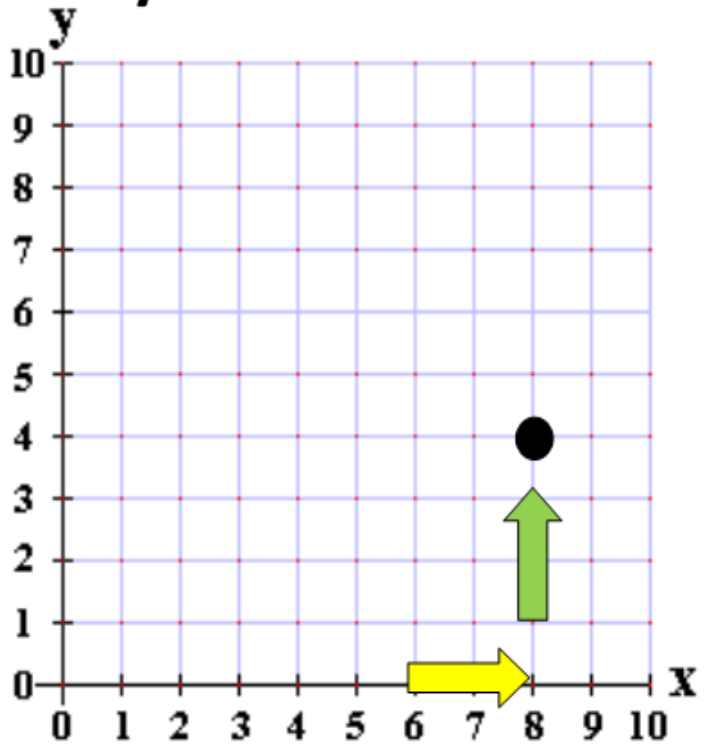
y Up



(8,4) Here x is 8, and y is 4.

Plot an ordered pair by starting at the origin (0,0). Move right along the x-axis until you reach the value of the x-coordinate. Then travel up until you are across from the value of the y-coordinate.

8 to the Right → 4 Up



Harvest of the Month - Berries
Grade 5, Lesson 6

Summary

Learning Objectives

- Identify nutrition facts and health benefits of berries.
- Articulate the process of berry production and distribution.
- Paraphrase spoken and written descriptions about nutrition and health benefits.
- Taste berries and set goals for eating them.

Goals, Competencies, and Standards

- Harvest of the Month Goal
  Expand familiarity with California grown fruits and vegetables, local farmers, the state's rich agricultural bounty, and how food travels from farms to our plates.

- Health Standard: Nutrition Competency
  1h.5-6. Describe the benefits of eating a nutritionally balanced diet consistent with current research-based dietary guidelines.

- Common Core Standards
  CCSS.ELA-LITERACY.W.5.8
  Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

Materials: Harvest of the Month Workbooks, a few berries per student, Berry California activity diagram and signs, Educator Newsletter, Family Newsletters

Lesson Sections	Topic	Time
Harvest It	Background about the Harvest of the Month	20 minutes
Move It	Physical Activity, Content for Link It	15 minutes
Link It	Guided Practice	15 minutes
Try It	Independent Practice	15 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

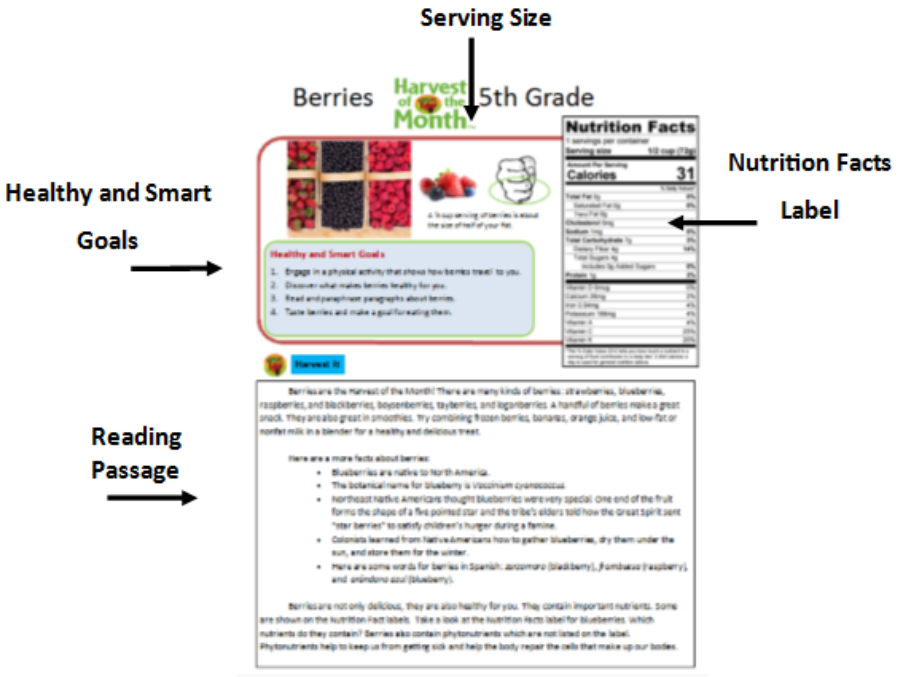
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about berries containing nutrition information.

Teacher Guide students in reading and interpreting the Nutrition Facts Label.



Each of the Harvest It components are expanded upon below.

Instructions

1. Familiarize yourself with the **Nutrition Resources and Health Messages** located at the end of the lesson plan that address the Dietary Guidelines for America and the new Nutrition Facts label.
2. Read the **Healthy and Smart Goals** for the lesson aloud with the class:
   - Engage in a physical activity that shows how berries travel to you.
   - Discover what makes berries healthy for you.
   - Read and paraphrase paragraphs about berries.
   - Taste berries and make a goal for eating them.

3. Read the introductory passage with your students which can be found in their workbook:

> *Berries are the Harvest of the Month! There are many kinds of berries: strawberries, blueberries, raspberries, and blackberries, boysenberries, tayberries, and loganberries. A handful of berries make a great snack. They are also great in smoothies. Try combining frozen berries, bananas, orange juice, and low-fat or nonfat milk in a blender for a healthy and delicious treat.*

Here are more facts about berries:

- *Blueberries are native to North America.*
- *The botanical name for blueberry is Vaccinium cyanococcus.*
- *Northeast Native Americans thought blueberries were very special. One end of the fruit forms the shape of a five-pointed star. The tribe's elders told how the Great Spirit sent "star berries" to satisfy children's hunger during a famine.*
- *Colonists learned from Native Americans how to gather blueberries, dry them under the sun, and store them for the winter.*
- *Here are some words for berries in Spanish: zarzamora (blackberry), frambuesa (raspberry), and arandano azul (blueberry).*

Berries are not only delicious, they are also healthy for you. They contain important nutrients. Some are shown on the Nutrition Fact labels. Take a look at the Nutrition Facts label for blueberries. Which nutrients do they contain? Berries also contain phytonutrients which are not listed on the label. Phytonutrients help to keep us from getting sick and help the body repair the cells that make up our bodies.

Nutrition Facts

1 servings per container

Serving size	**1/2 cup (72g)**
Amount Per Serving	
Calories	**31**
	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 1mg	**0%**
Total Carbohydrate 7g	**3%**
Dietary Fiber 4g	**14%**
Total Sugars 4g	
Includes 0g Added Sugars	**0%**
Protein 1g	**2%**
Vitamin D 0mcg	0%
Calcium 26mg	2%
Iron 0.54mg	4%
Potassium 188mg	4%
Vitamin A	4%
Vitamin C	25%
Vitamin K	20%

* 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.

A ½ cup serving of berries is about the size of half of your fist.

3. Guide students in interpreting the nutrition facts label in their workbook. Explain that throughout the week, they should strive for 100% of the Percent Daily Value (DV) of nutrients listed on the nutrition facts label.
4. Draw their attention to the DV of vitamin C for berries. Ask them if a ½ cup serving of berries would be sufficient to supply the recommended daily value and how they get 100%.

Move It

Activity Berry California

Students will work together to create exercises simulating why California grows so much produce and how berries get to us.

Teacher will lead students in the physical activity.

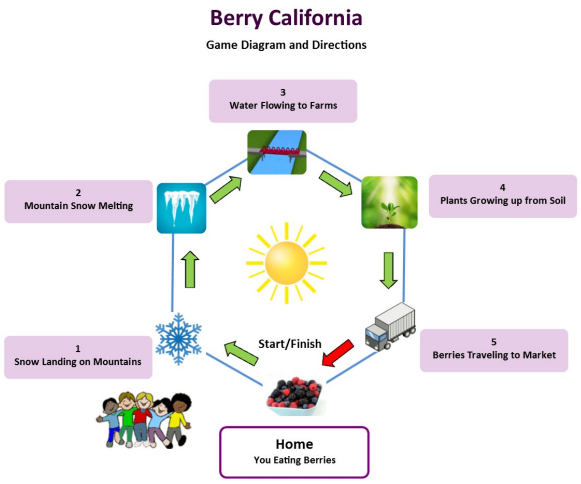
Move it

In this activity you will act out the process of berries forming and traveling to you to be eaten. Your teacher will guide you in creating six groups. Each group will act out a different stage in the process. The stages are:

1) Snow landing on mountains
2) Mountain snow melting
3) Water flowing to farms
4) Plants growing up from the soil
5) Berries traveling to market, and, very importantly
6) You eating berries!

Pay close attention to what you do. In the Link It section you and a classmate will retell your experiences and paraphrase what each of you say. Paraphrasing means using different words to describe what a writer or speaker has written or spoken.

Student workbook



See full size Berry California diagram at the end of lesson plan.

Instructions

1. Tell students they are going to participate in an activity that demonstrates how California grows so many berries and how berries get to us.
2. Use the Berry California Game Diagram and Directions sheet following this lesson to illustrate the steps leading to the consumption of berries.

3. Tell students as a group, you are going to make movements or exercises for each stage of the process.

Home You Eating Berries	3 Water Flowing to Farms
1 Snow Landing on Mountains	4 Plants Growing up from Soil
2 Mountain Snow Melting	5 Berries Traveling to Market

See full size signs are at the end of the lesson.

4. Hold up the Snowflakes Landing on Mountains card. Model a jumping jack as an example of a movement simulating snowflakes falling on the mountains.
5. Continue through each card in order of the process, and as a class, practice the movement or exercise that represents the process written on the sign. The movements for each card are below.

    (1) Snowflakes landing on mountains: *do jumping jacks*
    (2) Mountain snow melting: *bend over and touch your toes*
    (3) Water flowing to Farms: *march in place*
    (4) Plants growing up from soil: *jump in place*
    (5) Berries traveling to market: *run in place*
    Home/You eating berries: *pretend to eat berries*

6. Rotate through all of the cards until the class has created a movement for each one. Go through the process again, doing the motions representing each part of the process. End on “You eating berries.”

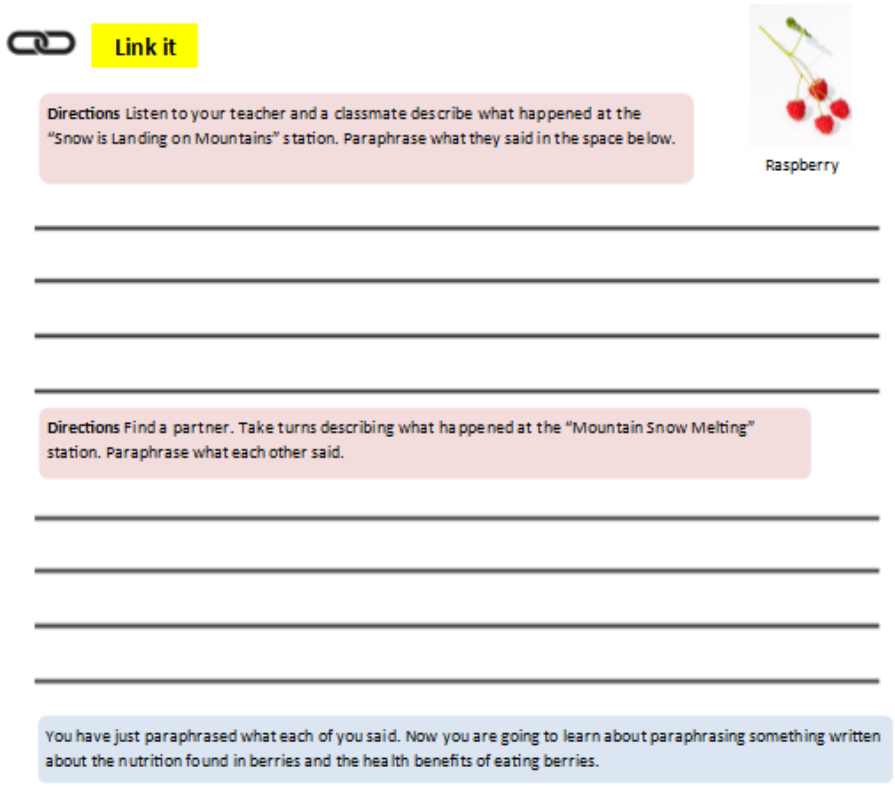
Link It

Activity Guided Practice Underlining and Paraphrasing Informational Text

Students will practice paraphrasing.

Teacher will guide students in paraphrasing.

See the next page.



Instructions

1. Tell the class they will practice paraphrasing by explaining to each other what they did in the Move It activity. Paraphrasing means to express a concept or meaning of ideas that are written or spoken using different words, especially to make ideas clearer.
2. Some ways to scaffold the idea of paraphrasing is to use sentence starters, such as:
    a. Based on what you said, did you mean…
    b. When you said…my understanding is…
    c. Can you tell me if I'm understanding correctly? I heard…
    d. It seems that you said…
    e. I heard you say…
3. Model explaining what happens at the "Snow is Landing on Mountains" station: "During the Snow Landing on Mountains station, we used our bodies to do jumping jacks and pretend we were snowflakes, coming down from the sky. This is the first step in the berry growth cycle."
4. Now tell a student to explain what happened at that same station. Ask the class if the two descriptions had mostly the same idea. Ask them how they were different.
5. Tell them to paraphrase in their workbook what they just heard you and the student say.
6. Tell students to partner up and take turns describing what happened at the "Mountain Snow Melting" station. Tell them to write what they recalled in their workbook. Ask them to compare their writing. Tell them to check for the same idea and different words.

Directions Read the following paragraph along with your teacher.

Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke. Eating a diet rich in some vegetables and fruits as part of an overall healthy diet may protect against certain types of cancers.

Blackberry

Here is an example of the first sentence paraphrased.

We can lower the chances of getting heart disease by eating lots of fruits and vegetables.

The sentence was paraphrased by using the Swap, Switch, Keep and Check strategy.

- **Swapped** "rich" with the phrase "lots of."
- **Switched** the order of words in the sentence by talking about heart disease first and fruits and vegetables last.
- **Kept** "heart disease" because it is the name of something.
- **Checked** to make sure the sentence has the same meaning as the original.

Directions Paraphrase the second sentence from the reading passage using the Swap, Switch, Keep and Check strategy.

7. Tell students to look at the reading passage about the benefits of eating fruits and vegetables.

   Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke. Eating a diet rich in some vegetables and fruits as part of an overall healthy diet may protect against certain types of cancers.

8. Read the first sentence. Say that the sentence could be paraphrased as:
   We can lower the chances of getting heart disease by eating lots of fruits and vegetables.

   Explain that you made some changes to the sentence. Use the visual aid to illustrate what you did (see below). The full-page visual is at the end of the lesson.

See the next page.

Swap, Switch, Keep, Check

A Strategy for Paraphrasing

Paraphrasing:
using different words to describe something said or written while keeping the same meaning.

SWAP
words with synonyms or similar phrases.

SWITCH
the order of words and sentences.

KEEP
dates, amounts, names, and titles.

CHECK
to make sure the meaning stays the same.

Example

Original sentence:
Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke.

The sentence paraphrased:
We can lower the chances of getting heart disease by eating lots of fruits and vegetables.

Explain that you:

- **Swapped** "rich" with the synonym "lots of"
- **Switched** the order of words in the sentence by talking about heart disease first and fruits and vegetables last
- **Kept** "heart disease" because it is the name of something
- **Checked** to make sure the sentence has the same meaning as the original

7. Direct them to paraphrase the next sentence out loud with their partner and then write what they said in their workbook.

Try It

Activity Independent Practice Paraphrasing

Students will paraphrase key information in two texts.

Teacher will check for understanding and reteach as necessary.

Instructions

1. Tell students they will read two more texts about health benefits of fruits and vegetables.
2. Explain that they will now paraphrase like they did in the Link It section. This is the next passage:

Health Benefits

- *Eating lots of berries and other fruits may reduce risk for heart disease, including heart attack and stroke.*
- *Eating lots of berries and other fruits may protect against certain types of cancers.*

- *Eating foods containing fiber, such as berries and other fruits, may reduce the risk of heart disease, obesity, and type 2 diabetes.*
- *Eating foods such as berries and other fruits that are lower in calories per cup, instead of some other higher-calorie foods, may help in lowering the number of calories you eat.*

3. Check for understanding. Ask students to share their writing. Call on students to share their sentences.
4. Direct students to paraphrase the following passage which can be found in their workbook:

Nutrients Found in Berries

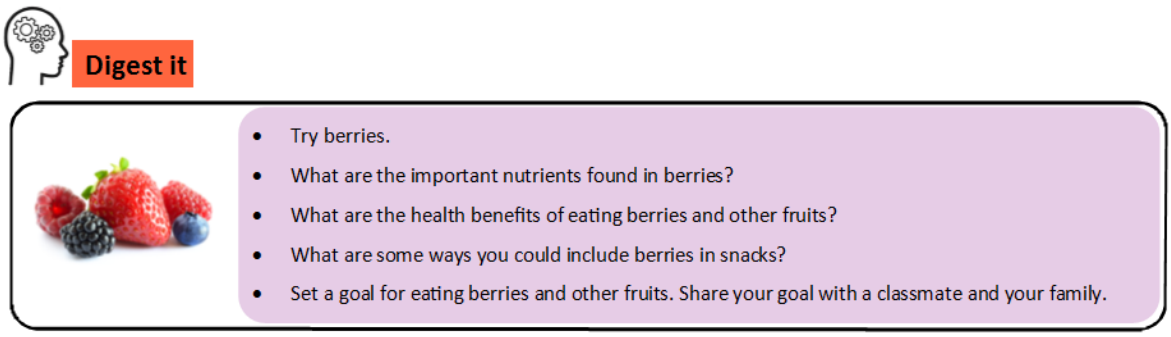
- *Fruits are sources of many essential nutrients that people often don't eat enough of, including potassium, dietary fiber, and vitamin C.*
- *Potassium may help to maintain healthy blood pressure. Fruit sources of potassium include berries, bananas, prunes and prune juice, dried peaches and apricots, cantaloupe, honeydew melon, and orange juice.*
- *Fiber-containing foods such berries and other fruits help provide a feeling of fullness with fewer calories. Whole or cut-up fruits are sources of dietary fiber; fruit juices contain little or no fiber.*
- *Vitamin C is important for growth and repair of all body tissues, helps heal cuts and wounds, and keeps teeth and gums healthy.*

Digest It

Activity Tasting Berries and Reflection

Students will taste berries, and discuss what they learned about berries in California.

Teacher will hand out berries and guide a discussion about California crops and berries.



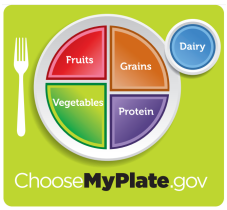
Instructions

1. Tell students they will be trying some berries and reflecting on their learning.
2. Have students wash their hands. The Center for Disease Control [1] suggests:

Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
Rinse your hands well under clean, running water.
Dry your hands using a clean towel or air dry them.

3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen berries in the cafeteria, and if they tried them.
5. Tell them to eat on a count of three.
6. Encourage students to try at least one bite.
7. Model respectful responses to tasting the berries. Give examples of expressing feelings in a considerate and supportive way, for example:
    a. Ask students to give a silent thumb up, down, or in the middle to indicate their opinion of the tasting.
    b. Describe the flavors, colors, or textures: "The berries are juicy, sweet, and purple."
    c. Model respectful responses to not liking the tasting: "I appreciate being offered the berries. I know it is healthy for me. It's not my favorite at the moment. I will give it another chance next time."
8. Guide a discussion about what they learned using the prompts below, which students can find in the Digest It section of their workbook.
    - What are the important nutrients found in berries?
    - What are the health benefits of eating berries and other fruits?
    - What are some ways you could include berries in snacks?
    - Set a goal for eating berries and other fruits. Share your goal with classmates and your family.
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.

Nutrition Resources and Health Messages



MyPlate

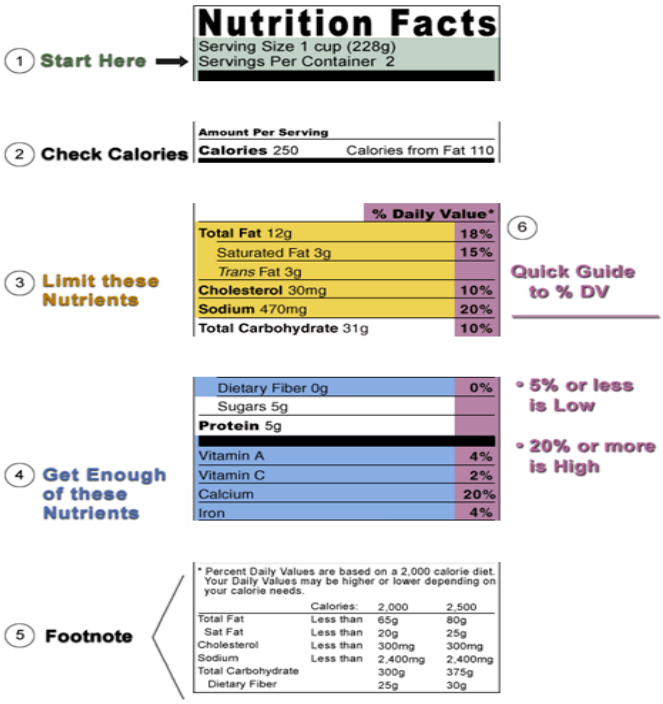
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

See the website for more information on fruit and vegetable consumption and physical activity.[2]

Nutrition Facts label

The Nutrition Facts label has been revised and is used in the workbook. The following excerpts from the FDA website [3] describe the components of the label:



1. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I consuming"? (e.g., 1/2 serving, 1 serving, or more).
2. The number of servings you consume determines the number of calories you actually eat.

   General Guide to Calories (per serving of food)

   - 40 Calories is low
   - 100 Calories is moderate
   - 400 Calories or more is high

   Eating too many calories per day is linked to overweight and obesity.
3. Health experts recommend that you keep your intake of saturated fat, *trans* fat and cholesterol as low as possible as part of a nutritionally balanced diet.
4. You can use the Nutrition Facts label not only to help *limit* those nutrients you want to cut back on, but also to *increase* those nutrients you need to consume in greater amounts.
5. % DVs are based on a 2,000-calorie diet.
6. 5% DV or less is low and 20% DV or more is high.

References

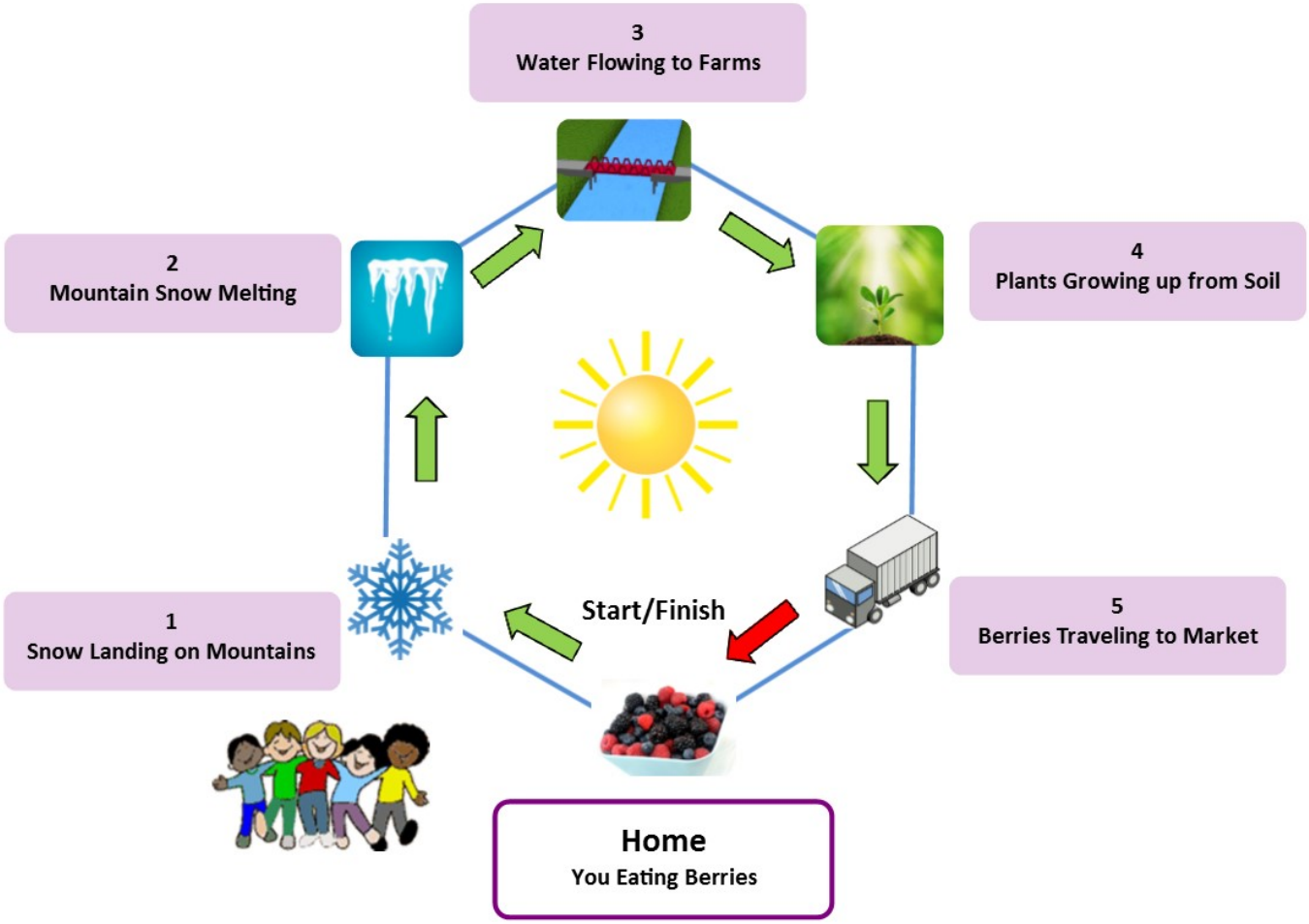
1. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

2. How to Understand and Use the Nutrition Facts Label. (n.d.). Retrieved October 06, 2016, from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm#see1

3. Choose MyPlate. (n.d.). Retrieved October 06, 2016, from https://www.choosemyplate.gov/

Berry California

Game Diagram and Directions



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Swap, Switch, Keep, Check

A Strategy for Paraphrasing

Paraphrasing:
using different words to describe something said or written while keeping the same meaning.

SWAP

words with synonyms or similar phrases.

SWITCH

the order of words and sentences.

KEEP

dates, amounts, names, and titles.

CHECK

to make sure the meaning stays the same.

Example

Original sentence:
Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke.

The sentence paraphrased:
We can lower the chances of getting heart disease by eating lots of fruits and vegetables.

The California Department of Public Health, with support from the Alameda County Office of Education, and with funding from the United States Department of Agriculture's Supplemental Nutrition Assistance Program – USDA SNAP, produced this material. These institutions are equal opportunity providers and employers. For important nutrition information, visit www.CaChampionsForChange.net.