Name_____

Harvest of the Month

TEACHER GUIDE

4th 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 4, Lesson 1

Summary

Learning Objectives

- Identify nutrition facts and health benefits about apples.
- Visualize visiting places that have apples while participating in a physical activity.
- Write a story about visiting places that have apples and returning to those places in the future.
- Identify steps for eating more fruits and vegetables, including apples.
- Taste 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 Competencies
  6.4. Make a plan to choose healthy foods and beverages.
  7.4. Practice how to take personal responsibility for eating healthy foods.

- Common Core Standard
  CCSS.ELA-LITERACY.W.4.3
  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, Educators Newsletter, Family Newsletters, vocabulary visual aid, apples quartered (one quarter per student).

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	20 minutes
Digest It	Tasting, Reflection, and Informal Assessment	10 minutes

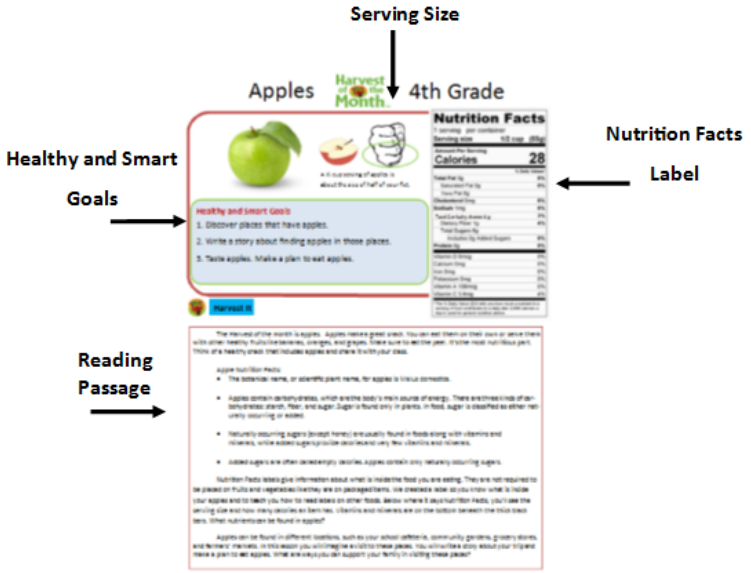
Procedures

Harvest It

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 reading the new Nutrition Facts label.
2. Read the lessons **Healthy and Smart Goals** with the class:
   - Discover places where you can find apples.
   - Write a story about finding apples in those places.
   - Taste apples. Make a plan to eat more apples.

3. Read the introductory passage with your students which can be found in their workbook. Students will consider healthy snacking and identify the nutritional benefits of eating apples:

   The Harvest of the month is apples. 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 a healthy snack that includes apples and share it with your class.

   Apple Nutrition Facts:

   - *The botanical name, or scientific plant name, for apples is Malus domestica.*
   - *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.*

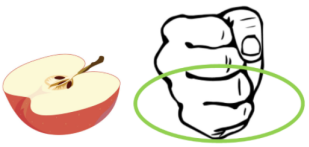
Nutrition Facts labels give information about what is inside the food you are eating. They are not required to be placed on fruits and vegetables like they are on packaged items. We created a label so you know what is inside your apples and to teach you how to read labels on other foods. Below where it says Nutrition Facts, you'll see the serving size and how many calories an item has. What nutrients can be found in apples?

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 (see Nutrition Facts Label above.) Explain that every day, they should strive for 100% of the Percent Daily Value (DV) of nutrients listed on the Nutrition Facts label. Say that 5% or less of a nutrient on a product is low, while 20% or above is considered high.

5. Draw their attention to the DV of Vitamin C and fiber. Ask them if a 1/2 cup serving of apples would be sufficient to supply the recommended daily DV. Continue the reading.

Apples can be found in different locations, such as your school cafeteria, community gardens, grocery stores, and farmers' markets. In this lesson, you will imagine a visit to these places. You will write a story about your trip and make a plan to eat apples. What are ways you can support your family by visiting these places?

Move It

Activity Accessing and Choosing Apples in Our Community

Students will follow along with a reading passage about finding apples in their community. They will participate in a physical activity that simulates the adventure.

Teacher will read a story below that emphasizes knowing about places that sell apples and making plans to visit them.

Move it

In the Move It activity, you will take a virtual trip to places in your community where apples can be found. Your teacher will read a story. Listen for cues to be physically active. In the Try It section, you will write a story based on your experience. Part of the story will include your plan to return to these places and eat apples. During this activity, imagine yourself taking responsibility for making healthy food choices!

Instructions

1. Inform students that you will be reading a story aloud to them. Explain that as you read the story, they will be listening and responding through movement when they receive prompts. The story is about finding places in their community where they can find apples to eat. They will act out the movements in the story.
2. Say that after the reading, they will be writing a version of the story that emphasizes making a plan to return to places with healthy apples to eat.
3. Discuss the vocabulary on the visual aid to familiarize your students with words they will find in the story.
4. Tell students to give themselves enough room to move in place.
5. Read the following passage to the students and give the prompts for moving, which are in bold type. The locations are underlined.

   Eating fruits and vegetables is important to your health. Knowing where they can be found and making a plan to get them are important steps towards eating healthfully. Listen to the story and follow the directions.

   Bicycle ride in place. *Up ahead is a community garden. Look, your teacher is standing there next to an apple tree. She/he says, "Hi. Good to see you."*

   Wave both arms up and down. *She/he says, "A community garden is a place where people work together to grow healthy fruits and vegetables. Try this apple. It was grown in a garden."*

   Reach up high for apples. Keep reaching and grabbing. Place an apple in your imaginary backpack. *She/he says, "Will you come back sometime and help in the garden? When will you visit again?" Imagine you have a notepad or a smartphone for you to write down what you decide.*
   Use your hands to write or type in a reminder to come back to the community garden. *What does it say?*

   Bike again. *You're heading for the supermarket. There it is. Go into the store. You find a helpful grocer who shows you where the apples are in the produce section. There are yellow, green and red apples. Explain that you're on a journey to visit all the places where apples can be found in your neighborhood. "What a fun journey!" the grocer says. "Ask your family to come back here to get some apples."*

Place some apples in your shopping cart. Hold the handle of the cart and speed walk to the checkout line.

Write or type into your giant notepad or smartphone *when you plan to come back to the supermarket. What did you write?*

"Hey, is there a farmers' market today?" you ask yourself. You check your notepad or smartphone. Yes, but they are closing shortly.

Bike as quickly and safely as you can. *You're in luck; it's open. Find a stand selling apples. Wow, what a variety! They have so many colors and sizes of apples. Free samples! Woo-hoo. Try a few kinds. Choose some to buy.*

Reach up and put your apples on the scale. *Ask the farmer what days and times the market is open this month. Bag three different colors and sizes of apples. "When will you come back to get apples to eat?" the farmer asks.*

Write or type into your giant note pad or smartphone *when you plan to return to the farmers' market.*

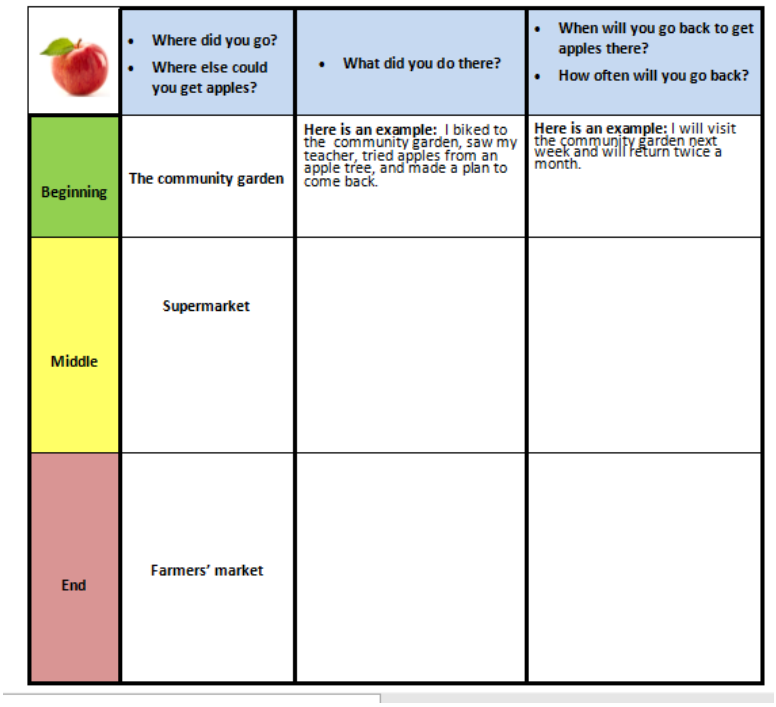
Bike home as quickly as you can. *What is your plan to find apples in your school cafeteria? Add that to your plan. Share your experience and your plan with your family.*

Link It

Activity Organizing Ideas for Writing a Story about Getting Apples

Students will recall their journey in the Move It activity and place their ideas in a graphic organizer in preparation for writing a story of their experiences in the Try It section.

Teacher will guide students in developing a story that also acts as a plan for accessing fruits and vegetables in their community.



	• Where did you go? • Where else could you get apples?	• What did you do there?	• When will you go back to get apples there? • How often will you go back?
Beginning	The community garden	**Here is an example:** I biked to the community garden, saw my teacher, tried apples from an apple tree, and made a plan to come back.	**Here is an example:** I will visit the community garden next week and will return twice a month.
Middle	Supermarket		
End	Farmers' market		

Instructions

1. Tell students they will recall the different places in the community they visited in the Move It activity and will write their version of a story about it. Explain that they will also be including their plan for returning to these places.
2. Guide students in completing the graphic organizer found beneath the Link It section of their workbook shown below. Encourage them to add their creativity to personalize the story.

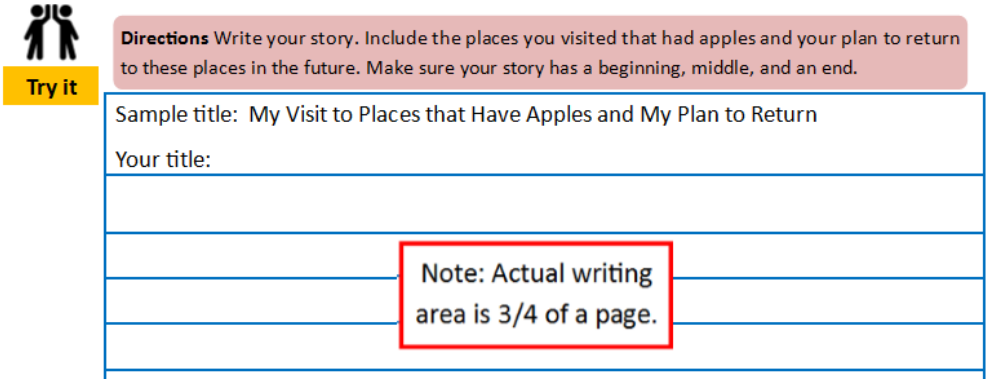
	Where did you go? Where else could you get apples?	What did you do there?	When will you go back to get apples there? How often will you go back?
Beginning	The community garden	I biked there, saw my teacher, tried apples from an apple tree, and made a plan to come back.	I will visit the community garden next week and will return twice a month.
Middle	Supermarket		
End	Farmers' market		

Try It

Activity Writing a Story about Getting Apples

Students will use the details in the graphic organizer in the Link It section to write about their visit to places in their community and their plan to return to those places.

Teacher will support students in writing their story.



Instructions

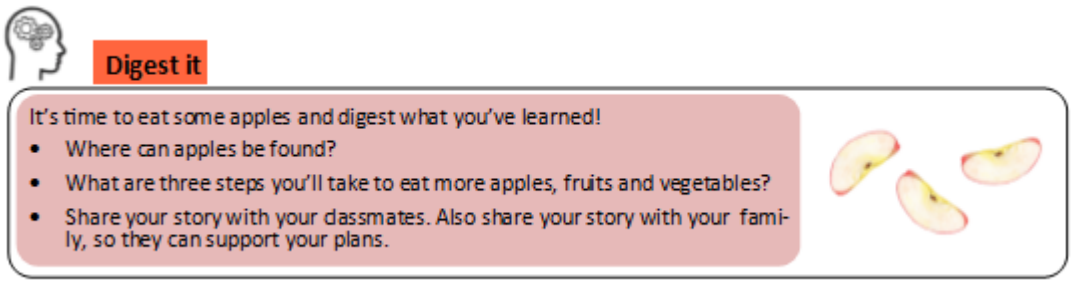
1. Tell students to create a story using the ideas they organized in the Link It section.
2. Remind them it is important for their story to have the following features:
    a. A beginning, middle, and end.
    b. A discussion of where they went and what they did there.
    c. Statements about when and how often they will return to the places that have apples.

Digest It

Activity Tasting Apples and Reflecting on Learning

Students will taste apples and make connections between their stories and how they will acquire apples in the future.

Teacher will provide an apple tasting and lead a discussion.



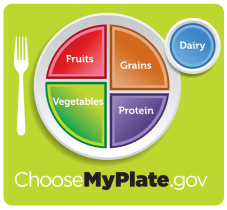
Instructions

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 apple. 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.
    a. Where can apples be found in your community?
    b. What are three steps you'll take to eat more apples, fruits and vegetables?
    c. Share your story with your classmates. Also share your story with your family, so they can support your plans.
9. Encourage students to eat apples in the cafeteria. Ask them to raise their hands if they will try apples in the cafeteria this week, and congratulate them.
10. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.
11. Extend student learning by using activities from the Educator's Newsletter.

Nutrition Resources and Health Messages



MyPlate

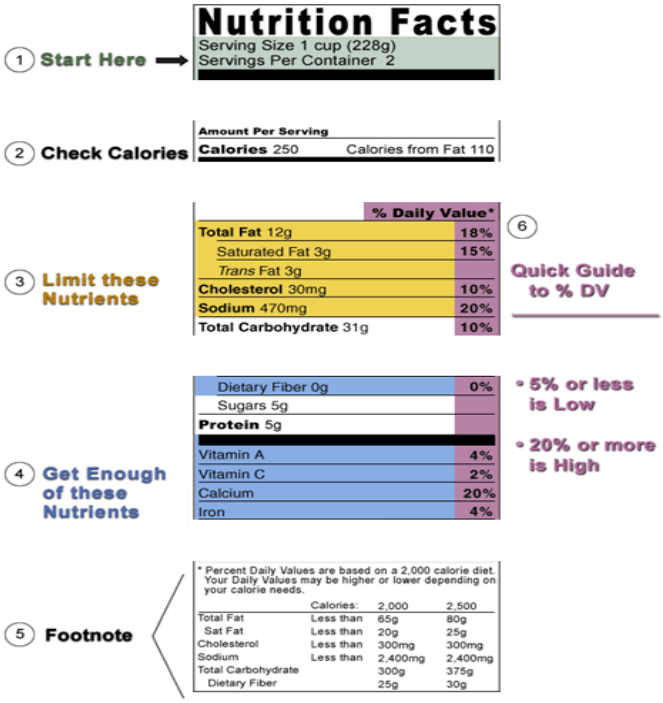
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

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

3. 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

Harvest of the Month
Apples
Healthy and Smart Vocabulary

cafeteria: the place in your school where you eat every day and make healthy choices.

community gardens: places where people in a neighborhood grow fruits and vegetables together.

farmers' market: an outdoor food market where farmers sell the fruit and vegetables they grew.

food bank: a place where food is stored and given to people who need it.

grocery store: a store that sells many kinds of food, including fruits and vegetables.

school garden: a place at your school where fruits and vegetables are grown by students.

Harvest of the Month - Winter Squash
Grade 4, Lesson 2

Summary

Learning Objectives

- Identify nutrition facts and the health benefits of eating winter squash.
- Express how to take personal responsibility for eating more fruits and vegetables, including winter squash.
- Examine why physical activity is important, explore different types, and find out how much physical activity they should engage in daily.
- Monitor daily physical activity using line plots.

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
  1.3. Identify ways to increase and monitor physical activity.

- Common Core Standard
  CCSS.MATH.CONTENT.4.MD.B.4
  Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *

Materials: Harvest of the Month workbooks, 1 bite-size piece of cooked winter squash or approximately 5 pumpkin seeds per student, Daily Physical Activity Chart blackline master, 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

* Familiarize students with this standard if they have not been introduced to it.

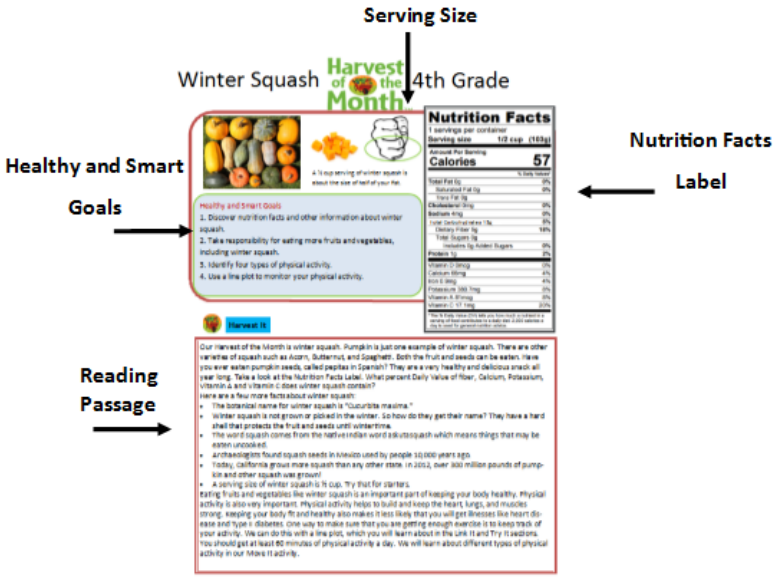
Procedures

Harvest It

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 **Healthy and Smart Goals** for the lesson aloud with the class.
   - Discover nutrition facts and other information about winter squash.
   - Take responsibility for eating more fruits and vegetables, including winter squash.
   - Identify four types of physical activity.
   - Use a line plot to monitor your physical activity.
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 just one 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, called pepitas in Spanish? They are a very healthy and delicious snack all year long. Take a look at the Nutrition Facts Label. What percent Daily Value of fiber, Calcium, Potassium, Vitamin A and Vitamin C does winter squash contain?

See the next page.

Nutrition Facts

1 servings per container

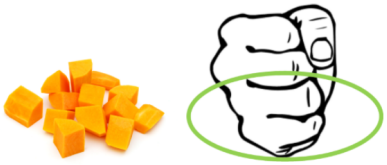
Serving size **1/2 cups (103g)**

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 is 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.*

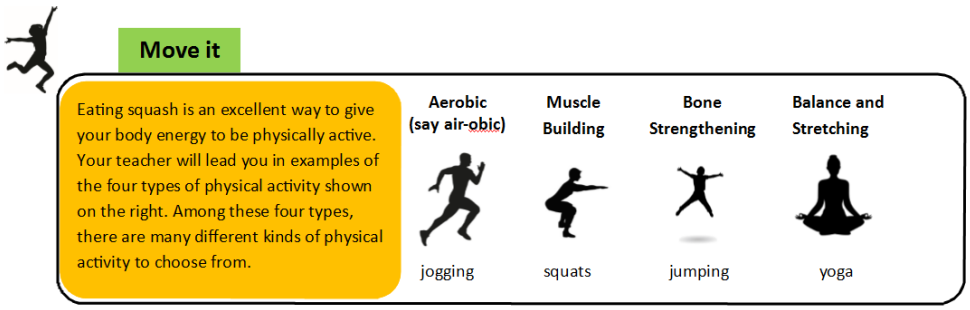
Eating fruits and vegetables like winter squash is an important part of keeping your body healthy. Physical activity is also very important. Physical activity helps to build and keep the heart, lungs, and muscles strong. Keeping your body fit and healthy also makes it less likely that you will get illnesses like heart disease and Type II diabetes. One way to make sure that you are getting enough physical activity is to keep track of your activity. We can do this with a line plot, which you will learn about in the Link It and Try It sections. You should get at least 60 minutes of physical activity a day. We will learn about different types of physical activity in our Move It activity.

Move It

Activity Learning and Engaging in Four Types of Physical Activity

Students will participate in four types of physical activity and find out the benefits it has on their health.

Teacher will lead students in four types of physical activity and a reading of the benefits of it.



Instructions

1. Explain that they will be learning four types of physical activity. Add that they will be learning why physical activity is important.
2. Tell students to stand up. Say that you will be leading them in different types of physical activity and giving an example of each.
3. Follow this script:

   *Class, first we are going to learn about **aerobic activity**. It's a kind of physical activity that makes you breathe harder and your heart beat faster. An example of this is jogging. Everyone, jog in place.* [After 20-30 seconds signal them to stop.]

   *Now, we are going to do a **muscle-strengthening** activity that will make your muscles stronger. Let's call it the "squash," otherwise known as squats. Everyone squash.* [Lead class in 10-15 squats shown below. Instruct students to pretend like they are going to sit in a chair. Keep the back straight, head up, bring arms forward as they sit into squat position. Slowly straighten up to standing and put arms down.]

   *Now, we are going to do some **bone-strengthening**. Let's jump in place.* [Lead students in 10-15 jumps.]

   *The last type of physical activity is **balance and stretching**. This kind of activity makes you flexible and less likely to get injured. Yoga is one example of a balance and stretching activity. We are going to do the "squash blossom" pose. Stretch both hands up as far as you can go...put your palms together...imagine you are a squash blossom that hasn't opened yet...now stretch your arms out to the side...the flower is opening...hands to the sides of your legs...hands back up again...and repeat.*

4. Now, repeat the circuit with the four physical activities, but replace the descriptions of each one with these reasons all physical activity can help you. Say:

   - *Be with friends or meet new people.* [jog]

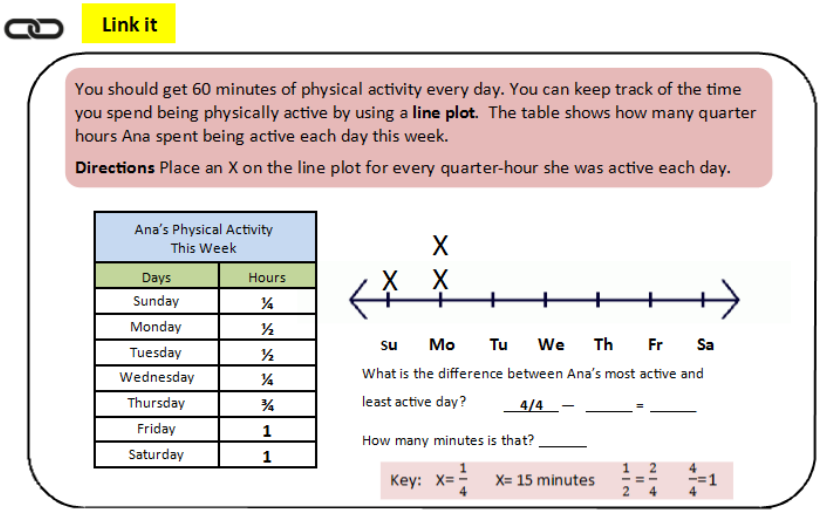
- *Have stronger muscles and bones.* [squats]
- *Stay at or get to a healthy weight.* [jump]
- *Enjoy yourself and have fun.* [yoga “squash blossom” pose, see above]

Link It

Activity Use a Line Plot to Graph Physical Activity

Students will place X’s on a line plot to show the number of quarter-hours a student did physical activities each day of a week.

Teacher will show students how to interpret data by creating a line plot.



Instructions

1. Familiarize students with standard CCSS.MATH.CONTENT.4.MD.B.4 if they not been introduced to it.
2. Remind students that they should engage in 60 minutes of physical activity a day. It is useful to monitor, or keep track of, the amount of physical activity they are getting.
3. Explain that 15 minutes is a quarter-hour. Direct their attention to the table and the line plot in the Link It section of their workbook. Show them how the quarter-hour for Sunday in the table is represented on the line plot with an X.
4. Tell students to use the key to see how many fourths make up ½ and then show them how the hours for Monday are represented on the line plot. Ask them to represent ¾ hours on the line plot for Wednesday. Continue in this manner for the other days.
5. Lead students in answering the question, “What is the difference between Ana’s most active and least active days?”
6. Ask students if Ana has increased or decreased her physical activity from the beginning to the end of the week and by how many minutes.

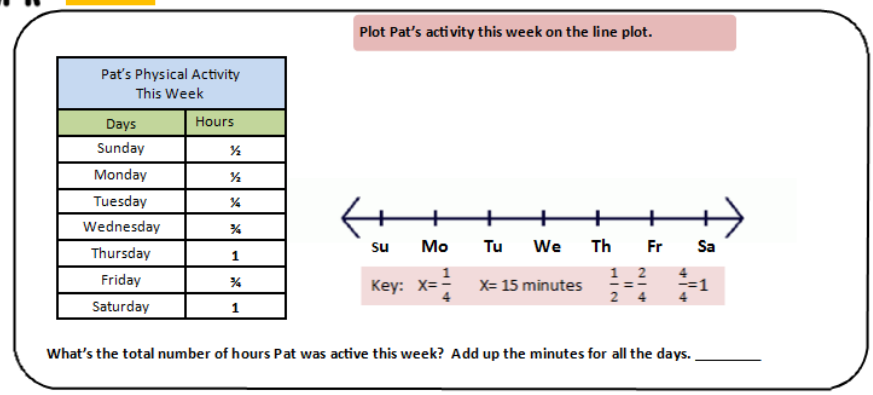
Try It

Activity Independent Work Creating Line Plots

Students will work independently to complete the math problems involving a data table and a line plot. In the second table, they will record their physical activity for the last two days and then set a goal for the next five days.

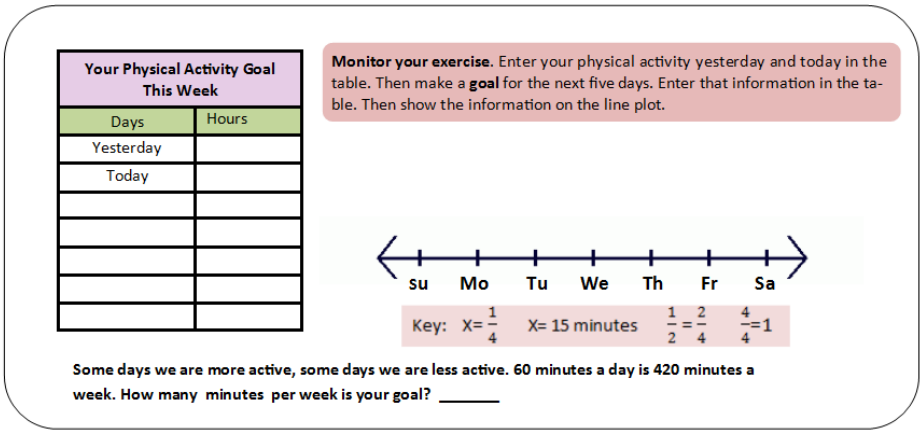
Teacher will monitor student progress and ask students to share their answers to the first table and line plot.

Try it



Instructions

1. Discuss the instructions in their workbook for the first problem.
2. After giving students enough time to complete the problem, prompt students to share their answers.



3. Explain that in the second problem they will be setting a goal for their activity for the next five days, and they will be entering their own information in the table using quarter-hours.
4. Ask students to begin. Monitor their progress.

Digest It

Activity Tasting Squash and Reflection on Physical Activity

Students will taste squash, reflect on their present level of physical activity, and consider monitoring their activity for the next five days.

Teacher will provide a tasting of squash, ask students to reflect on their learning, and encourage them to monitor their physical activity levels.

Digest it

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

- Name an important nutrient in winter squash.
- What are the four types of physical activity?
- Track your physical activity the next five days using the chart below.

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 [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.

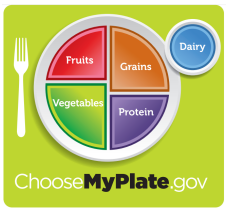
3. Tell students to wait until everyone has their tasting and you give them the go-ahead to eat.
4. Ask the students, while they are waiting, to think about if and when they've seen winter squash in the cafeteria, and if they tried it.
5. Tell them to eat on a count of three.
6. Encourage students to 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. Hand out copies of the Daily Physical Activity Chart blackline master or use the version in the student workbooks. Tell students they will be tracking their physical activity for the

next five school days. Discuss how and when your students will track their physical activity on the chart.

9. Guide a discussion about what they learned using the prompts below, which students can find in the Digest It section of their workbook.
    a. Name an important nutrient in winter squash.
    b. What are the four types of physical activity?
    c. Track your physical activity the next five days using the chart below.
10. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipe.
11. Extend student learning by using activities from the Educator's Newsletter.

Nutrition Resources and Health Messages



MyPlate

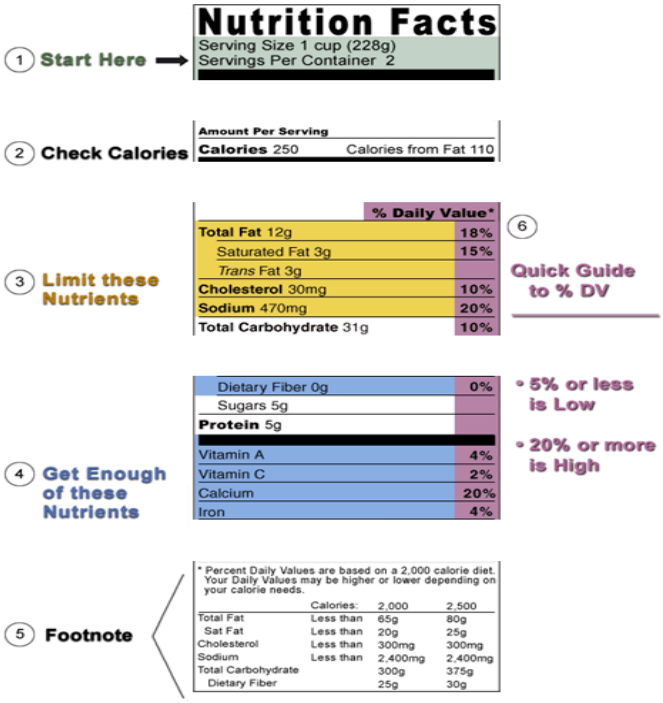
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- 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

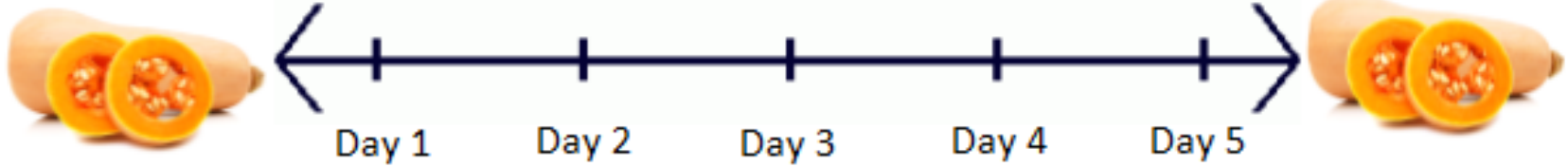
1. Wash Your Hands. (2016, April 11). Retrieved September 28, 2016, from http://www.cdc.gov/features/handwashing/

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/

Daily Physical Activity Chart

Directions Place an X above each day for every 1/4 hour, or 15 minutes, you engage in physical activity. Track your physical activity over the course of the next 5 school days. Sixty minutes is the daily recommended amount of physical activity for children your age. That is 7 hours or 420 minutes per week.



Key: X= $\frac{1}{4}$ hours X= 15 minutes $\frac{4}{4}$=1 hour

Physical activity and eating fruits and vegetables are important parts of being healthy. Try this month's harvest—Winter Squash.

Harvest of the Month - Broccoli
Grade 4, Lesson 3

Summary

Learning Objectives

- Identify nutrition facts and health benefits of eating broccoli.
- Imagine a healthy snack using broccoli as one of the ingredients.
- Compose three short snack descriptions, using sensory details.
- Taste broccoli.
- Make a plan to eat broccoli.

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
  1g.4. Identify a variety of ways to prepare or include fruits, vegetables, and whole grains in daily meals and snacks.

- Common Core Standard
  CCSS.ELA-.LITERACY.W.4.3.D
  Use concrete words and phrases and sensory details to convey experiences and events precisely.

Materials: Harvest of the Month workbooks, one bite-size floret of broccoli per student, fruit and vegetable color cards (cut out from main sheet), "Create a Tasty Snack Description" 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

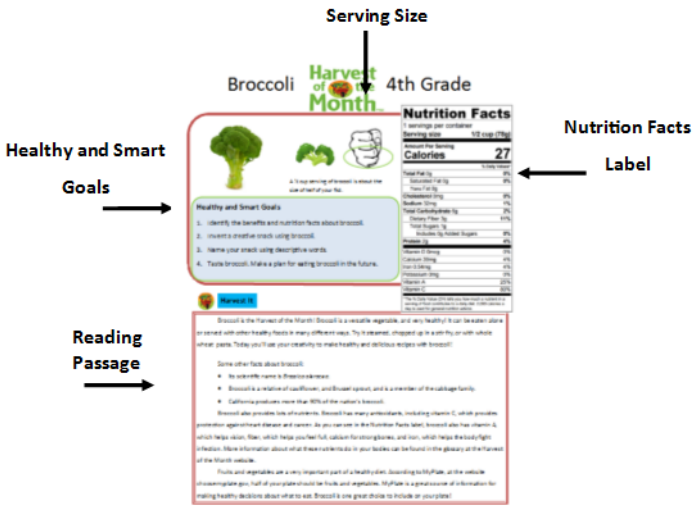
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about 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 benefits and nutrition facts about broccoli.
   - Invent creative snacks using broccoli.
   - Name your snack using descriptive words.
   - Taste broccoli. Make a plan for eating broccoli in the future.
3. Read the introductory passage with your students, which can be found in their workbook:

> *Broccoli is the Harvest of the Month! Broccoli is a versatile vegetable, and very healthy! 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. Today you'll use your creativity to make healthy and delicious recipes with broccoli!*

Some other facts about broccoli:

- *Its scientific name is Brassica oleracea.*
- *Broccoli is a relative of cauliflower, and Brussel sprout, and is a member of the cabbage family.*
- *California produces more than 90% of the nation's broccoli.*

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 A for broccoli. Ask them if a ½ cup serving of broccoli would be sufficient to supply the recommended daily value. Continue the reading.

Broccoli also provides lots of nutrients. Broccoli has many antioxidants, including vitamin C, which provides protection against heart disease and cancer. As you can see in the Nutrition Facts label, broccoli also has vitamin A, which helps vision, fiber, which helps you feel full, calcium for strong bones, and iron, which helps the body fight infection. More information about what these nutrients do in your bodies can be found in the glossary at the Harvest of the Month website.

Fruits and vegetables are a very important part of a healthy diet. According to MyPlate, at the website choosemyplate.gov, half of your plate should be fruits and vegetables. MyPlate is a great source of information for making healthy decisions about what to eat. Broccoli is one great choice to include on your plate

Move It

Activity Select Foods for a Snack Recipe

Students will select ingredients they will use to create snack recipes containing broccoli.

Teacher will place lists of different colored fruits and vegetables in various locations in the classroom, then direct students to choose their ingredient selections for a snack recipe.

Move it

Directions Select Foods for Your Snack Recipe! Imagine you are a celebrity chef asked to come up with two snack recipes containing broccoli. You will visit the lists of fruits and vegetables your teacher has placed around the room. Each list contains fruits and vegetables of a different color. **Choose at least one of each color and record them in the table below.** You will use these choices and some of your favorite other ingredients in your snack recipes.

Red	Orange or Yellow	Green	Blue or Purple	Your Favorites Foods
		Broccoli		

Instructions

1. Introduce broccoli as the Harvest of the Month vegetable. Express that you like it, especially when it is in combination with other foods you like.
2. Give a quick overview of the entire lesson:
    - selecting foods to be used in a snack recipe
    - brainstorming descriptive words
    - describing the snacks
    - sharing the snack descriptions with the class
3. Place lists of different colored fruits and vegetables in different locations in the classroom. Let students know that each list has fruits and vegetables of a certain color.

See the next page.

Red Cherries Cranberries Radishes Raspberries Red apples Beets Red bell peppers Grapes Red potatoes Tomatoes Strawberries Watermelon	**Orange** Apricots Butternut squash Cantaloupe melons Carrots Nectarines Oranges **Yellow** Chickpeas Corn Mangoes Pineapples Yellow peppers Yellow tomatoes Wax beans
Green Asparagus Cabbage Celery Cucumbers Soy beans Apples Green beans Green peppers Snow peas Sugar snap peas	**Blue/Purple** Blackberries Blueberries Eggplant Plums Red cabbage Figs Grapes Purple potatoes

This is the full sheet before the cards are cut out.

4. Tell them that they are going to pretend like they are a chef on a TV show that has to create a dish using one required ingredient, and other ingredients of their choosing that they think would go well with it.
5. Tell students that they will be visiting the different colored cards and recording their selections in their workbook. They may select fruits and vegetables not on the list as well.
6. Explain that you want all students to visit each station. Consider using a rotation, and a signal such as “broccoli.”

Link It

Activity How to Create a Tasty Snack Description

Students will observe how to take the ingredients and turn them into a snack description.

Teacher will model how to create a snack description using the “Snack Description” visual aid.

Create a Tasty Snack Description

Directions Create a delicious sounding snack description. Spice up the sound of your snacks with some exciting words. Select some descriptive words from the taste, feels, and actions verb columns, and enter them where it says, "Use a descriptive word for each ingredient."

Tastes		Feels (texture)		Action Verbs	
Bold	Spicy	Chewy	Flakey	Chopped	Grated
Buttery	Sweet	Creamy	Fluffy	Covered	Melted
Cheesy	Sour	Crispy	Hot	Dipped	Mixed
Delicious	Tasty	Crumbly	Gooey	Dripped	Sliced
Peppery	Zesty	Crunchy	Juicy	Drizzled	Sprinkled
Rich		Fizzy	Moist	Dusted	Whipped

Choose your ingredients.

Harvest of the Month	Fruit or Vegetable	Fruit or Vegetable	A Favorite Food
Broccoli	carrot	grape	salad

Use a descriptive word for each ingredient.

green	sweet	juicy	crunchy

Put all the ingredients and descriptions together in a single phrase.

Crunchy, green, broccoli salad,
with sweet carrots and juicy grapes

Instructions

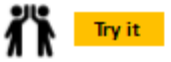
1. Explain that part of their snack menu items will include words that describe how the item tastes, and feels (texture), and how it is prepared (action verb).
2. Direct their attention to the lists of such words in the Link It section of the workbook. Encourage them to come up with additional words of their own and record them on the board or screen.
3. Model how to create a snack description using the "Create a Tasty Snack Description" visual aid, which is like the Link It section in the workbook. Show them how to record vegetables and a favorite food of theirs, that they think will pair well with broccoli, under "Choose Your Ingredients."
4. Thinking out loud, select some descriptive words from the taste, feels, and action verb column. Enter your descriptive words where it says, "Use a descriptive word for each ingredient."
5. Model describing the snack. Compose the description for the snack and place it beneath "Describe your snack." Solicit ideas from the class on how to improve the name of the snack.

Try It

Activity Create Snack Descriptions

Students will create a snack description using broccoli and the food items they have chosen.

Teacher will monitor student progress and provide support as they create snack descriptions.



Try it

Recipe 2

Choose new ingredients. Use different colored fruits and vegetables.

Harvest of the Month	Fruit or Vegetable	Fruit or Vegetable	A Favorite Food
Broccoli			

Use a descriptive word for each ingredient.

Put all the ingredients and descriptions together in a single phrase.

_____

_____

Recipe 3

Choose your ingredients for your last recipe. Use different colored fruits and vegetables.

Harvest of the Month	Fruit or Vegetable	Fruit or Vegetable	A Favorite Food
Broccoli			

Use a descriptive word for each ingredient.

Put all the ingredients and descriptions together in a single phrase.

_____

_____

Instructions

1. Tell students it is now their turn to create their own snack description.
2. Tell them that they should follow the procedure you modeled in the Link It section.
3. After a few minutes, stop and check for understanding.
4. Challenge early finishers to compose a second snack with either more ingredients or greater description.
5. Remind them that they will be sharing the description of their snack during the Digest It section.

See the next page.

Digest It

Activity Tasting Broccoli and Sharing Snack Descriptions

Students will taste broccoli, reflect on what they have learned, and share recipes.

Teacher will provide a tasting of broccoli, ask students to share what they have learned, and discuss a recipe in the Family Newsletter.

Digest it

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

- What are some of the nutrients in broccoli?
- Share your snacks' descriptions.
- What are some ways we can use broccoli as an ingredient in recipes?
- What is your plan to be able to try your broccoli snacks?

Instructions

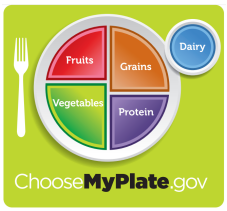
1. Tell students they will be trying some broccoli and reflecting on their learning.
2. Have students wash their hands. Center for Disease Control [1] suggests:

> 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. Guide a discussion about what they learned, using the prompts below, which students can find in the Digest It section of their workbook.
    a. What are some of the nutrients in broccoli?
    b. Share your snacks' descriptions.

    c. What are some ways we can use broccoli as an ingredient in recipes?
    d. What is your plan to be able to try your broccoli snacks?
9. Distribute the Family Newsletter. Discuss a recipe in the newsletter. Ask students to present the newsletter to their family members and share the recipes.

Nutrition Resources and Health Messages



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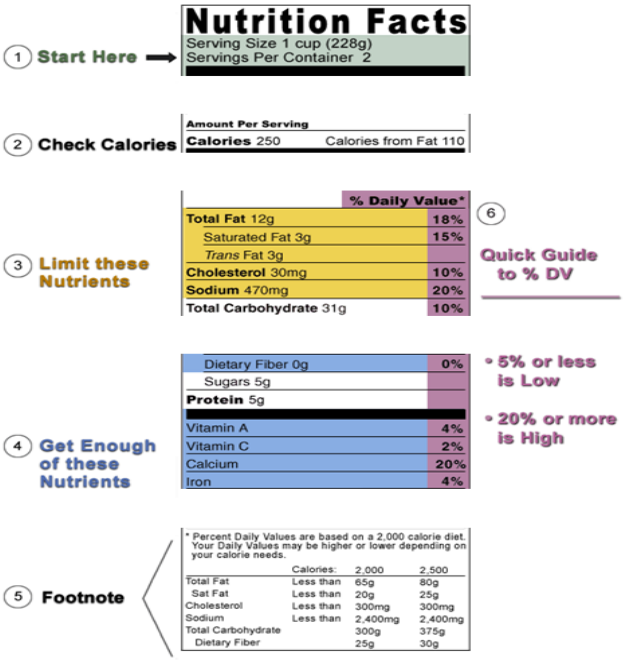
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

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.

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Red
Cherries
Cranberries
Radishes
Raspberries
Red apples
Beets
Red bell peppers
Grapes
Red potatoes
Tomatoes
Strawberries
Watermelon

Orange
Apricots
Butternut squash
Cantaloupe melons
Carrots
Nectarines
Oranges

Yellow
Chickpeas
Corn
Mangoes
Pineapples
Yellow peppers
Yellow tomatoes
Wax beans

Green
Asparagus
Cabbage
Celery
Cucumbers
Soy beans
Apples
Green beans
Green peppers
Snow peas
Sugar snap peas

Blue/Purple
Blackberries
Blueberries
Eggplant
Plums
Red cabbage
Figs
Grapes
Purple potatoes

Create a Tasty Snack Description




Directions Create a delicious sounding snack description. Spice up the sound of your snacks with some exciting words. Select some descriptive words from the taste, feels, and actions verb columns, and enter them where it says, "Use a descriptive word for each ingredient."

Tastes		Feels (texture)		Action Verbs	
Bold	Spicy	Chewy	Flakey	Chopped	Grated
Buttery	Sweet	Creamy	Fluffy	Covered	Melted
Cheesy	Sour	Crispy	Hot	Dipped	Mixed
Delicious	Tasty	Crumbly	Gooey	Dripped	Sliced
Peppery	Zesty	Crunchy	Juicy	Drizzled	Sprinkled
Rich		Fizzy	Moist	Dusted	Whipped

Choose your ingredients.

Harvest of the Month	Fruit or Vegetable	Fruit or Vegetable	A Favorite Food
Broccoli			

Use a descriptive word for each ingredient.

Put all the ingredients and descriptions together in a single phrase.

_____

_____

Harvest of the Month - Oranges
Grade 4, Lesson 4

Summary

Learning Objectives

- Identify nutrition facts and health benefits about oranges.
- Express how to take personal responsibility for eating more fruits and vegetables, including oranges.
- Use a decision-making process to choose healthy drinks.
- Multiply to find the number of calories different drinks contain.
- Determine how much physical activity is necessary to burn calories.

Goals, Competencies, and Standards

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

- Snap-Ed Objective
  Consumption and access to healthy beverages and reduced consumption of unhealthy beverages.

- Health Standard: Nutrition Competency
  4.5. Describe how to use a decision-making process to select nutritious foods and beverages.

- Common Core Standard
  CCSS.MATH.CONTENT.4.NBT.A.2
  Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

Materials: Harvest of the Month workbooks, 1 orange slice per student, 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	15 minutes
Try It	Independent Practice	20 minutes
Digest It	Tasting, Reflection, and Informal Assessment	15 minutes

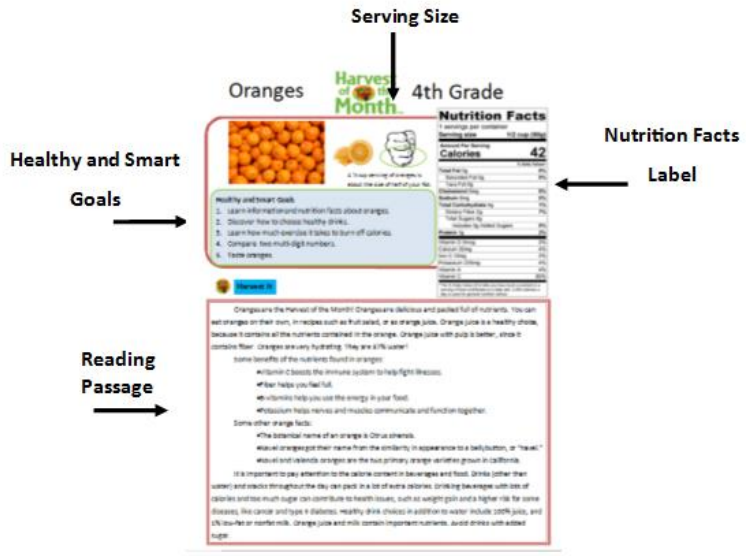
Procedures

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 **Healthy and Smart Goals** for the lesson aloud with the class:
    - Learn information and nutrition facts about oranges.
    - Discover how to choose healthy drinks.
    - Learn how much exercise it takes to burn off calories.
    - Compare two multi-digit numbers.
    - Taste oranges.

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

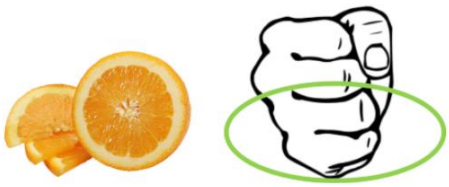
> *Oranges are the Harvest of the Month! Oranges are delicious and packed full of nutrients. You can eat oranges on their own, in recipes such as fruit salad, or as orange juice. Orange juice is a healthy choice, because it contains all the nutrients contained in the orange. Orange juice with pulp is better, since it contains fiber. Oranges are very hydrating. They are 87% water!*

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. Pause the reading here. 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 (DV) of Vitamin C for oranges. Ask them if a ½ cup serving of orange would be sufficient to supply the recommended daily value. Continue the reading.

Some benefits of the nutrients found in oranges:

- *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.*

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."*
- *Navel and Valencia oranges are the two primary orange varieties grown in California.*

It is important to pay attention to the calorie content in beverages and food. Drinks (other than water) and snacks throughout the day can pack in a lot of extra calories. Drinking beverages with lots of calories and too much sugar can contribute to health issues, such as weight gain and a higher risk for some diseases, like cancer and type II diabetes. Healthy drink choices in addition to water include 100% juice, and 1% low-fat or nonfat milk. Orange juice and milk contain important nutrients. Avoid drinks with added sugar.

Move It

Activity Burning Calories Through Different Kinds of Activity

Students will engage in different kinds of physical activity and learn how many calories they burn.

Teacher will direct students to participate in different types of physical activity and say how many calories each activity burns.

Move it

The amount of calories we use up depends on the type of our physical activity. Sitting burns about 35 calories in a half hour. Walking burns 140 calories, and running about 280 calories in a half hour. In the Move It activity, your teacher will lead you in different kinds of physical activity and will tell you how many calories each will use up.

These are the amounts of calories we burn in a half hour by engaging in different kinds of physical activity.

Sitting 35

Walking 140

Running 280

Instructions

1. Tell students they will be doing different kinds of physical activity and learning how many calories they burn. Ask them to create enough space for themselves so they have room to move about.
2. Lead the class in the following moderate physical activities for 20-30 seconds each. Tell students what the physical activity is and how many calories it burns in a half hour. ***Calories burned vary based on height/weight, age, and intensity level. The amounts in the chart are based on a 154-pound man as per USDA [1].

Activity	Calories Burned in a Half Hour
Touching your toes	90 calories
Lifting weights (use pretend weights)	110 calories
Moderate Walking	140 calories
Dancing (e.g. doing the twist)	165 calories
Hiking uphill	185 calories

3. Lead the class in the following vigorous physical activities for 20-30 seconds. Tell students what the physical activity is and how many calories it burns in a half hour.

Activity	Calories Burned in a Half Hour
Basketball or soccer	220 calories
Swimming laps	255 calories
Bicycling quickly	280 calories

Moderate Running	280 calories

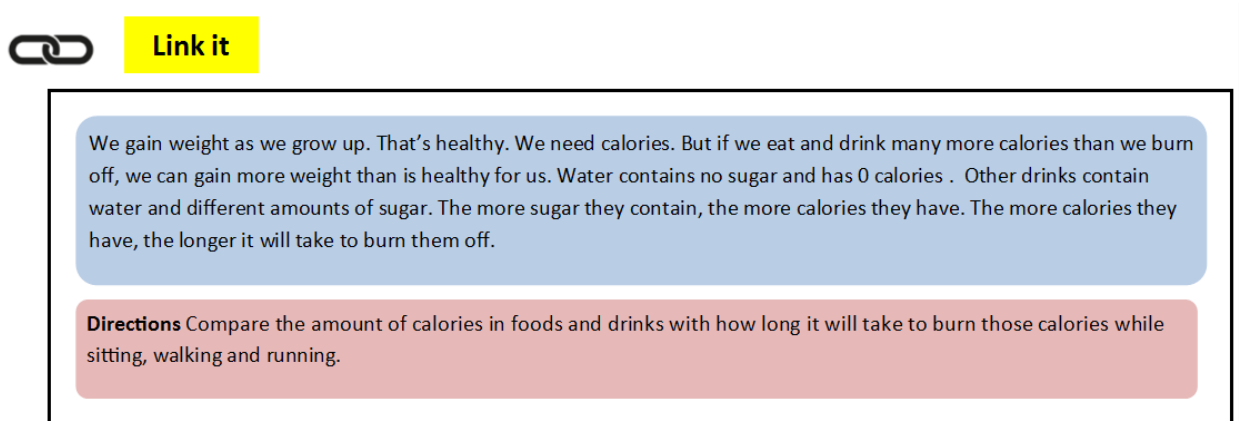
4. Ask students to return to their seats. Tell them they are sitting and they are only burning 35 calories every half hour. Ask students what happened when they expended more effort; they burned more calories.

Link It

Activity Comparing Two Numbers and Drawing Conclusions

Students will compare multi-digit numbers to determine if the calories consumed in drinks and foods can be expended in a half hour.

Teacher will explain how to compare the hundreds', tens', and ones' place of two numbers to determine if the calories contained in certain drinks and foods can be burned off in a half hour.



Instructions

1. Explain that not all drinks have the same number of calories. Say they are going to learn roughly how many calories different drinks contain and then determine if a half hour of physical activity would use all of the calories up.
2. Introduce or review place value through the hundredths place.
3. Introduce or review how to compare two multi-digit numbers. Show them how to determine the place farthest to the left for two numbers. Say that if one number has a digit in a place farther to the left, it is the greater number, e.g. 20 < 200.
4. If two numbers have a digit in the same place farthest to the left, they must compare the digits to see which is greater, e.g. 100< 200.
5. Say that if two numbers have a digit in the same place farthest to the left, and those digits are identical, they must compare the digits to the right to see which is greater, e.g. 200 < 250.
6. Direct students to the example in the Link It section of their workbook that looks like the following.

See the next page.

An orange has 60 calories. What activities burn off the calories from an orange in ½ hour? Circle either <, >, or = to show your answer.

60 < = > 35 sitting

Compare the value of tens place.

60 < = > 140 walking

A number that is in the tens place is lesser than a number that has a digit in the hundredths place.

60 < = > 280 running

Circle the correct answer.

7. Say the following:

   *An orange contains **60** calories. Sitting for a half hour uses up 35 calories, walking uses up 140 calories, and running uses up 280 calories. We are going to determine whether these three activities would use up all the calories in an orange.*

8. Discuss the example in their workbook. Show them how to circle either less than, more than, or equal to, to indicate their answer.
9. Guide students in completing the comparisons with the sports drink.

A sports drink has 150 calories. What activities will burn off the calories from the sports drink in ½ hour? Circle either <, >, or = to show your answer.

150 < = > 35 sitting

150 < = > 140 walking

150 < = > 280 running

10. Lead students in answering the following questions from their workbook:

- About how long would it take to burn off the calories of the orange while sitting?
- About how long would it take to burn off the calories of the sports drink while walking?
- About how long would it take to burn off the calories of the sports drink while running?

Try It

Activity Comparing Calories Consumed with Calories Burned

Students will compare multi-digit numbers to determine if the calories in drinks can be expended in a half hour. They will also make decisions based on their comparisons.

Teacher will guide students in analyzing information about calories in drinks and physical activity.

Try it

Directions Compare the amount of calories in drinks with how long it will take to burn those calories while sitting, walking and running.

Two small drink pouches have 200 calories. What activities will burn off the calories from the drink pouches in ½ hour? Circle either <, >, or = to show your answer.

200 < = > 35 sitting 200 < = > 140 walking 200 < = > 280 running

A large soda contains 250 calories. What activities will burn off the calories from the large soda in ½ hour? Circle either <, >, or = to show your answer.

250 < = > 35 sitting 250 < = > 140 walking 250 < = > 280 running

A large juice drink (which contains very little juice, and a lot of added sugar) contains 300 calories. What activities will burn off the drink in ½ hours? Circle either <, >, or = to show your answer.

300 < = > 35 sitting 300 < = > 140 walking 300 < = > 280 walking

Which of these drinks could you burn the calories off by sitting ½ hour?_____

Which of these drinks could you burn the calories off by walking ½ hour?_____

Which of these drinks could you burn the calories off by running ½ hour?_____

Instructions

1. Read the directions to the Try It section aloud with the students
2. Monitor their progress as they complete the first three problems and the questions that follow.
3. Discuss the answers to these questions from their workbook:

   Which of these drinks could you burn the calories off by sitting ½ hour?_____

   Which of these drinks could you burn the calories off by walking ½ hour?_____

   Which of these drinks could you burn the calories off by running ½ hour?_____

4. Discuss the prompt from their workbook:

   You learned if we eat and drink many more calories than we burn off, we can gain more weight than is healthy for us. Looking back at your answers in the Link It and Try It sections, what decisions will you make about your drink choices and physical activity?

5. Ask them to write their decisions in the workbook. Consider having them write more on the topic on a separate sheet of paper.

Digest It

Activity Tasting Oranges and Reflection

Students will taste some orange and reflect upon what they learned about sugar, calories, drinks, and physical activity.

Teacher will provide a tasting of at least one orange slice per student and lead a conversation about using a decision-making process to choose healthy drinks.

Digest it

Now it is time to taste some orange and digest your thoughts.

What did you learn about physical activity, sugar, and calories?

Will you choose your drinks any differently now?

What will you consider when you choose your drinks in the future?

Instructions

1. Tell students they will be trying some orange and reflecting on their learning.
2. Have students wash their hands. 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'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. Guide a discussion about what they learned, using the prompts below, which students can find in the Digest It section of their workbook.
    a. What did you learn about physical activity, sugar, and calories?
    b. Will you choose your drinks any differently now?
    c. What will you consider when you choose your drinks in the future?
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

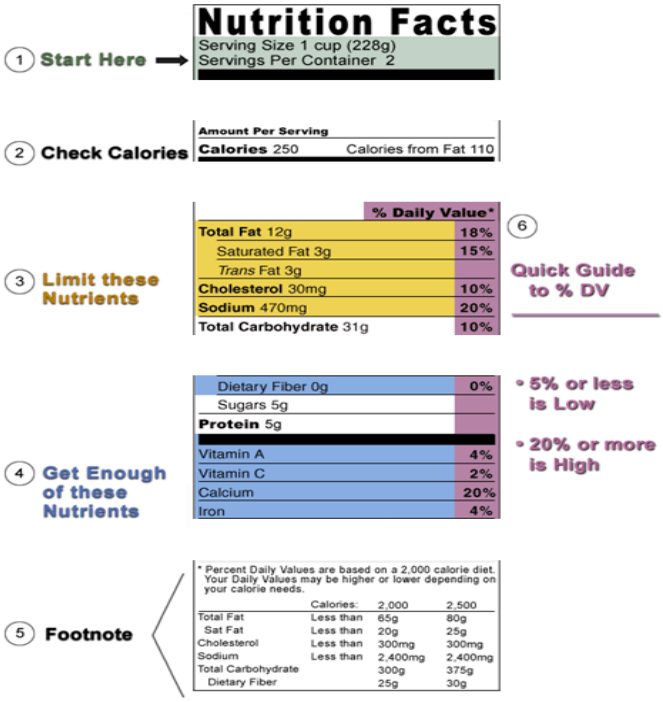
ChooseMyPlate.gov [3] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- 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. How many calories does physical activity use (burn)? (2015, July 22). Retrieved January 26, 2017, from https://www.choosemyplate.gov/physical-activity-calories-burn

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/

Harvest of the Month - Carrots
Grade 4, Lesson 5

Summary

Learning Objectives

- Identify nutrition facts and health benefits about carrots.
- Discover places in the community where students can find locally grown fruits and vegetables, including carrots.
- Write an opinion piece on the benefits of locally grown and sourced fruits and vegetables.
- Taste a carrot and share their writing.

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.

- Health Standard: Nutrition Competency
  2.4. Identify examples of a food item associated with a neighborhood, city, state, or country.

- **Common Core**
  CCSS.ELA.-LITERACY W.4.1
  Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

Materials: Harvest of the Month workbooks, 1 full size carrot or 2-3 baby cut carrots per student, class set of Locally Grown cards, Writing an Opinion Piece 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	20 minutes
Digest It	Tasting, Reflection, and Informal Assessment	10 minutes

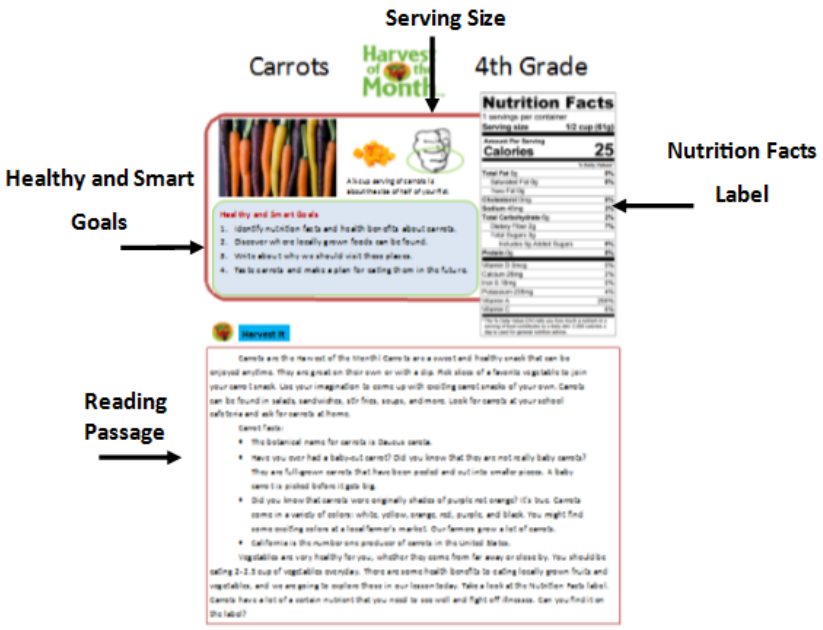
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about carrots 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 nutrition facts and health benefits about carrots.
   - Discover where locally grown foods are found.
   - Write about why we should visit these places.
   - Taste carrots and make a plan for eating them.

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 dip. Pick slices of a favorite vegetable to join your carrot snack. 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-cut 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, not orange? It's true. 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. Our farmers grow a lot of carrots.*
- *California is the number one producer of carrots in the United States.*

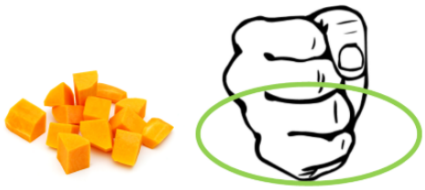
Vegetables are very healthy for you, whether they come from far away or close by. You should be eating 2-2.5 cup of vegetables every day. There are some health benefits to eating locally grown fruits and vegetables, and we are going to explore those in our lesson today. Take a look at the Nutrition Facts 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 (see Nutrition Facts label above.) Explain that every day they should strive for 100% of the Percent Daily Value (DV) of nutrients listed on the Nutrition Facts label. Say that 5% or less of a nutrient in a product is low, while 20% or above is considered high.

5. Draw their attention to the DV of Vitamin A. Ask them if a 1/2 cup serving of carrots would be sufficient to supply the recommended daily DV.

Move It

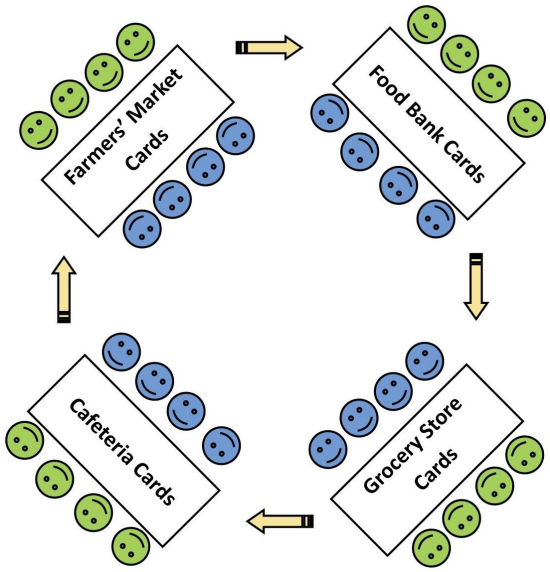
Activity Learning About Places with Locally Grown Produce

Students will learn about the benefits of local food suppliers. They will use the information they collect to write an opinion piece about places with locally grown produce in the Link It and Try It sections.

Teacher will lead students through the four stations where they will collect the information.
Please note: Consider conducting this activity outside if there is not enough space for students to move all at once in the classroom.

Locally Grown cards and sample classroom layout for Move It activity.

Welcome to the farmers' market! We let our fruit ripen on the tree or vine and deliver them to you from close by, so our fruits are ripe and flavorful. The carrots you find here are often of better quality and cheaper than in the supermarket. It feels good to meet the people who grow the food you eat.	Welcome to our supermarket! Most of our fruits and vegetables are grown far away and are picked before they are ripe so they don't spoil before they get here. We get large deliveries from our trucks each week. But our locally grown fruits and vegetables were picked ripe and may be sweeter and have more flavor. Our locally grown carrots are ripe, sweet, and flavorful.
Welcome to the school cafeteria! When we get locally grown fruits and vegetables it's a real treat. Fresh fruits and vegetables taste better. Sometimes we get carrots from a farm or directly from the school garden. Having locally grown vegetables in the cafeteria also gives you more choices. Our locally grown carrots give you more choices and they're delicious. Try some.	Welcome to the food bank! We don't keep money here. A food bank collects food to give to people who need it. When generous people donate fruits and vegetables from their local farms and gardens, other people get more fresh local things to eat. If you have some locally grown fruit to share or are in need of some, please visit the food bank. The locally grown carrots served here are fresh and nutritious.



Instructions

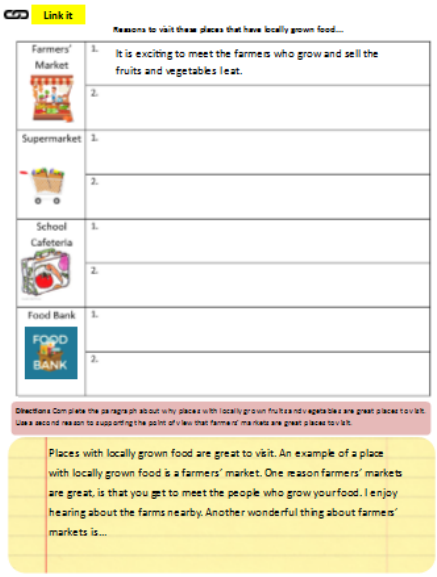
1. Set up the activity by making Farmers' Market, Food Bank, Grocery Store and Cafeteria stations. Put all of the cards for each of those places at their respective stations.
2. Explain that locally grown food is food that is grown close by. Say they will use their experience in the activity to write an opinion piece in the Try It section, about the benefits of locally grown food and the places they are sold.
3. Divide the class into four groups, and position them each by a station. Ask each student to pick up a card at the station they are at. Have one or more students read the prompt on the card to the group out loud. Tell them to pretend they are workers at that location when they are the readers and customers when they are listeners.
4. Rotate the groups to the next station after they have finished reading. Pick new students to read the card they find there. Continue in this manner until all groups have read the card at each station.

Link It

Activity Practice Writing an Opinion Piece About Buying Locally

Students will recall their experiences from the Move It activity and document them in the graphic organizer in their workbooks. They will develop a point of view regarding the benefits of local food and the places that they can be found.

Teacher will guide students in developing and placing ideas in a graphic organizer (see the Writing an Opinion Piece visual aid following the lesson). The teacher will model writing a short opinion piece that supports a point of view with reasons from the brainstorm.

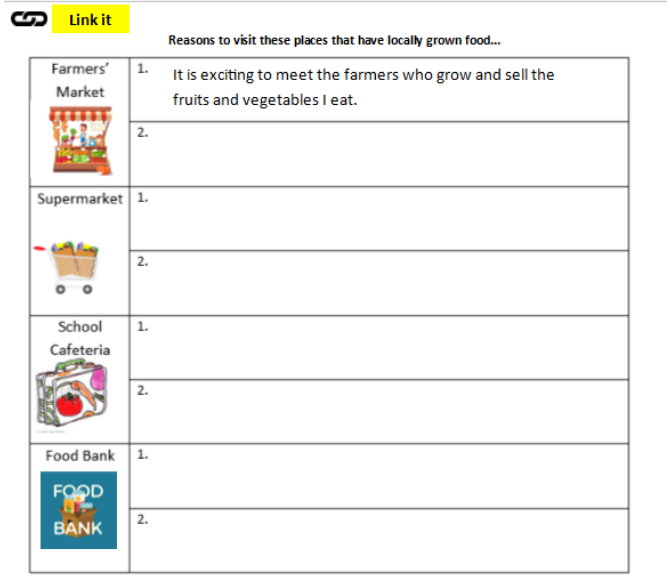

Link it

Reasons to visit these places that have locally grown food...

Farmers' Market	1.	It is exciting to meet the farmers who grow and sell the fruits and vegetables I eat.
	2.	
Supermarket	1.	
	2.	
School Cafeteria	1.	
	2.	
Food Bank	1.	
	2.	

Directions: Complete the paragraph about why places with locally grown fruits and vegetables are great places to visit. Use a second reason to support the point of view that farmers' markets are great places to visit.

Places with locally grown food are great to visit. An example of a place with locally grown food is a farmers' market. One reason farmers' markets are great, is that you get to meet the people who grow your food. I enjoy hearing about the farms nearby. Another wonderful thing about farmers' markets is...


Link it

Reasons to visit these places that have locally grown food...

Farmers' Market	1.	It is exciting to meet the farmers who grow and sell the fruits and vegetables I eat.
	2.	
Supermarket	1.	
	2.	
School Cafeteria	1.	
	2.	
Food Bank	1.	
	2.	

Instructions

1. Tell students that they will be writing an opinion piece about the benefits of locally grown food and the places they are sold and distributed.
2. Ask students to share some of the ideas about locally grown food outlets they documented in their workbook during the Move It activity.

See the next page.

Writing an Opinion Piece:

Visit Places with Locally Grown Produce

It is important to organize your ideas before you begin writing. You have just learned about different places that have locally grown fruits and vegetables. The sellers shared reasons why those places are great places to visit. You will be explaining why those places are great to visit using their reasons and ideas of your own.

Directions Watch how your teacher first writes two reasons that farmers' markets are great places to visit and then uses those ideas to write the beginning of a paragraph.

Point of view	**Visiting places with locally grown food is a great idea.**
Place	**Farmers' Markets**
Reason 1	
Reason 2	

Places with locally grown food are great to visit. An example of a place with locally grown food is a farmers' market.

3. Use the Writing an Opinion Piece visual aid shown above to write down the reasons they shared for farmers' markets. Place them in the white boxes in the table.

4. Read the paragraph that has been started on the visual aid: "Places with locally grown food are great to visit. An example of a place with locally grown food is a farmers' market."
5. Demonstrate how to continue writing the paragraph using the reasons you wrote in the table.

Directions Complete the paragraph about why places with locally grown fruits and vegetables are great places to visit. Use a second reason to supporting the point of view that farmers' markets are great places to visit.

Places with locally grown food are great to visit. An example of a place with locally grown food is a farmers' market. One reason farmers' markets are great, is that you get to meet the people who grow your food. I enjoy hearing about the farms nearby. Another wonderful thing about farmers' markets is...

6. Ask them to continue the paragraph that has been started in the Link It section of their workbook (show above) by giving a second reason for why farmers' markets are a great place.

Try It

Activity Writing an Opinion Piece About Buying Locally

Students will write an opinion piece using reasons written in the graphic organizer in the manner modeled in the Link It section.

Teacher will monitor and support student progress in writing the opinion piece.

Try it

Directions Continue the writing you began in the Link It section. Write about a grocery store, school cafeteria, and food bank. Give at least two examples of why these are great places to get locally grown food. Use ideas from the Move It section and your own ideas.

Instructions

1. Tell students that they are going to write their own opinion piece. They should vary the facts and reasons they choose, so it is different than the class example they just completed. They will be sharing their writing during the Digest It section.
2. Ask them to complete the graphic organizer in the Try It section. Share a student example of an opinion, and a fact or an experience that supports it.
3. Tell them to write the opinion piece. Monitor their progress.

Digest It

Activity Tasting Carrots and Reflection

Students will eat carrots, share opinions, and reflect on their learning.

Teacher will provide tasting and lead the discussion about locally grown food.

Digest it

Now it is time to taste some carrots and digest your thoughts.

- What are some nutrition facts about carrots?
- Where can locally grown foods be found?
- Share your writing about locally grown food.
- Taste carrots. Make a plan for eating them.

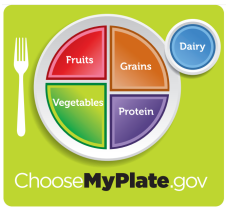
Instructions

1. Tell students they will be trying some carrots 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 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 carrots. 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 cold, crunchy, 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 students can find in the Digest It section of their workbook.
    a. What are some nutrition facts about carrots?
    b. Where can locally grown foods be found?
    c. Share your writing about locally grown food.
    d. Taste carrots. Make a plan for eating them.
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

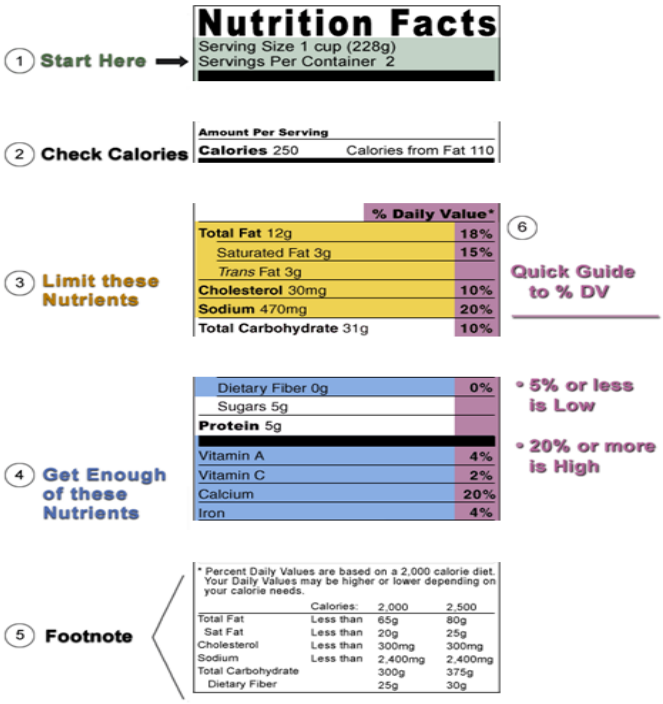
ChooseMyPlate.gov [2] is a resource for nutrition information based on the Dietary Guidelines for America. MyPlate illustrates the five food groups that are the building blocks of a healthy diet. The following is an excerpt from the ChooseMyPlate.gov website. It is recommended that you and your students:

- 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. Harvest of the Month Educator's Newsletter: Carrots. (n.d.). Retrieved from http://harvestofthemonth.cdph.ca.gov/documents/Spring/Carrots/Carrots%20-%20Educator%27s%20Newsletter_Final.pdf

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/

Writing an Opinion Piece:

Visit Places with Locally Grown Produce

It is important to organize your ideas before you begin writing. You have just learned about different places that have locally grown fruits and vegetables. The sellers shared reasons why those places are great places to visit. You will be explaining why those places are great to visit using their reasons and ideas of your own.

Directions Watch how your teacher first writes two reasons that farmers' markets are great places to visit and then uses those ideas to write the beginning of a paragraph.

Point of view	**Visiting places with locally grown food is a great idea.**
Place	**Farmers' Markets**
Reason 1	
Reason 2	

Places with locally grown food are great to visit. An example of a place with locally grown food is a farmers' market.

Supermarket

Farmers' Market

Food Bank

School Cafeteria

Welcome to the farmers' market!

We let our fruit ripen on the tree or vine and deliver them to you from close by, so our fruits are ripe and flavorful.
The fruits and vegetables you find here are often of better quality and cheaper than in the grocery store?
It feels good to meet the people who grow the food you eat.

Welcome to our supermarket!

Most of our fruits and vegetables are grown far away and are picked before they are ripe so they don't spoil before they get here. We get large deliveries from our trucks each week. But our locally grown fruits and vegetables were picked ripe and may be sweeter and have more flavor.
Our locally grown carrots are ripe, sweet, and flavorful.

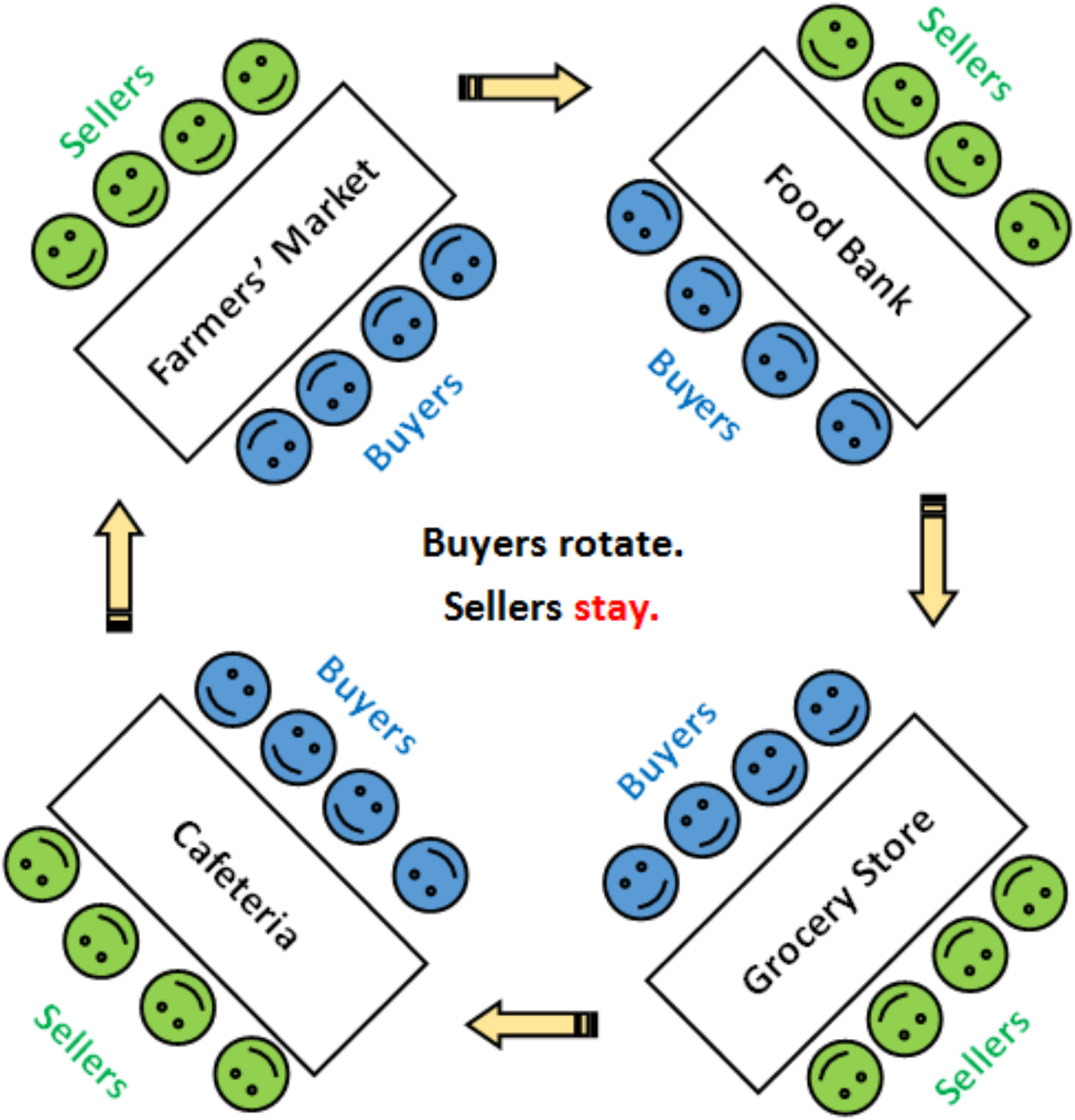
Welcome to the school cafeteria!

When we get locally grown fruits and vegetables it's a real treat. Fresh fruits and vegetables taste better. Sometimes we get them from a farm or directly from the school garden. Having locally grown vegetable in the cafeteria also gives you more choices. Our locally grown carrots give you more choices and they're delicious.
Try some.

Welcome to the food bank!

We don't keep money here. A food bank collects food to give to people who need it. When generous people donate fruits and vegetables from their local farms and gardens, other people get more fresh local things to eat. If you have some locally grown fruit to share or are in need of some, please visit the food bank. The locally grown carrots served here are fresh and nutritious.

Visit Places with Locally Grown Fruits and Vegetables



Harvest of the Month - Berries
Grade 4, Lesson 6

Summary

Learning Objectives

- Identify nutrition facts and health benefits about berries.
- Engage in a physical activity that highlights the four largest growing regions of berries in California.
- Use addition with decimals to find out which regions grow the most blueberries.
- Taste berries, discuss snacks with berries, and make home connections.

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 the farm to our plates.

- Health Standard: Nutrition Competency
  1h.4. List examples of foods that are grown in California and in different regions of the United States.

- Common Core
  CCSS.MATH.CONTENT.5.NBT.B.7
  Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

  Social Studies 4.1:
  Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

Materials: Harvest of the Month workbooks, at least 3 blueberries per student to taste, Blueberry Growing Region cards, 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

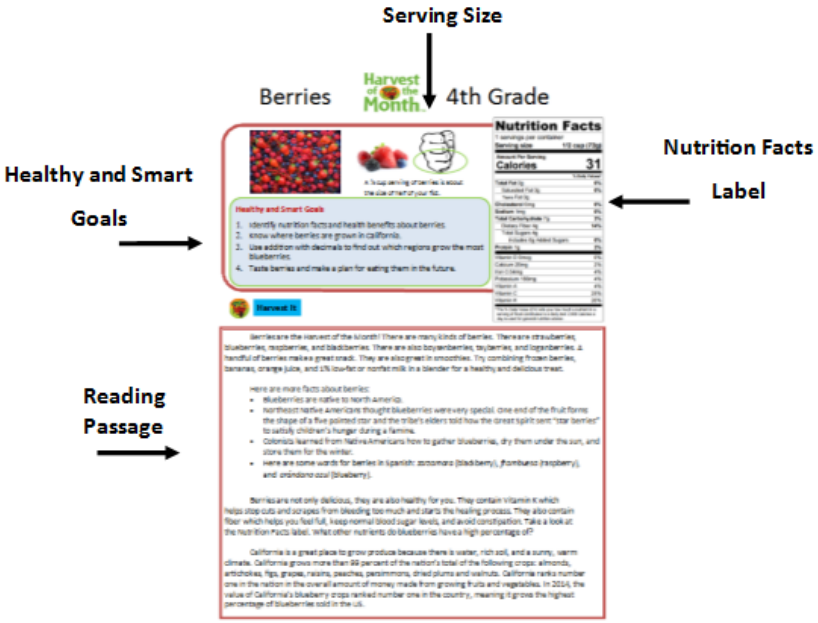
Procedures

Harvest It

Activity Setting Goals and Acquiring Nutrition Information

Students will read a passage about 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:
   - Identify nutrition facts and health benefits about berries.
   - Know where berries are grown in California.
   - Use addition with decimals to find out which regions grow the most blueberries.
   - Taste berries and make a plan for eating them in the future.
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 1% low-fat or nonfat milk in a blender for a healthy and delicious treat.

   Here are a 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 and 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 arándano azul (blueberry).*

Berries are not only delicious, they are also healthy for you. They contain Vitamin K which helps stop cuts and scrapes from bleeding too much and starts the healing process. They also contain fiber which helps you feel full, keep normal blood sugar levels, and avoid constipation. Take a look at the Nutrition Facts label. What other nutrients do blueberries have a high percentage of?

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.

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 nutrients listed on the nutrition facts label.
5. 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. Ask them how they could achieve 100% DV.

California is a great place to grow produce because there is water, rich soil, and a sunny, warm climate. California grows more than 99 percent of the nation's total of the following crops: almonds, artichokes, figs, grapes, raisins, peaches, persimmons, dried plums and walnuts. California ranks number one in the nation in the overall amount of money made from growing fruits and vegetables. In 2014, the value of California's blueberry

crops ranked number one in the country, meaning it grows the highest percentage of blueberries sold in the US.

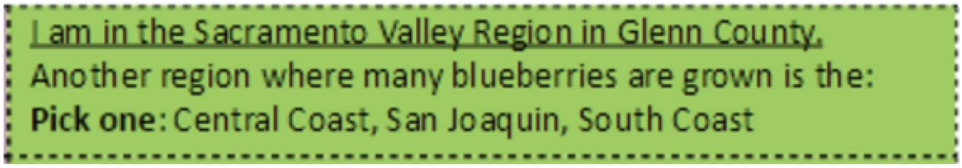
Move It

Activity Blueberry Growing Regions in California

Students will learn about the regions and counties in California where blueberries are grown by playing a "musical chairs" type of game.

Teacher will explain instructions and monitor student progress.

I am in the San Joaquin Region in San Joaquin County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Glenn County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Stanislaus County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Yuba County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Merced County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Yolo County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Madera County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Sacramento County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Fresno County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Colusa County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Kings County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Butte County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Tulare County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Solano County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Kern County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Tehama County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, South Coast
I am in the Central Coast Region in Sonoma County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Santa Barbara County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Santa Cruz County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Ventura County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Monterey County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Los Angeles County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in San Luis Obispo County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Orange County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Santa Clara County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in San Diego County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Napa County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Los Angeles County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Marin County. Another region where many blueberries are grown is the: **Pick one:** Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Orange County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley



Above: The Blueberry Growing Region cards sheet and one of the cards.

Instructions

1. The students will be playing a game. The object of the game is to find an open seat before all the seats are taken like the game "Musical Chairs." In this game, there is not any music. Instead, one student will name one of three growing regions listed on the bottom of their card. Then the reader, and everyone whose card says they are from that growing region, will try to find an open seat. Whoever cannot find an empty seat will read *their* card out loud and the game will continue.
2. Set up the game by cutting out all of the game cards from the sheet and giving every student a game card. Ask students to read the underlined sentence that contains the name of the growing region on their card, so they know what region they are from. For example, a card that says "I am in the Sacramento Valley Region in Glenn County" means they are from the Sacramento Valley Region. There are 7-8 cards per region. To confirm they know their growing region, you might say, "Who is from the San Joaquin

Region? Who is from the Sacramento Valley Region?" etc. Select one student to stand up. Place that student's chair to the side and say it is unavailable for sitting on during the game. Now there is one less chair than there are students participating, which is necessary for the game to work.

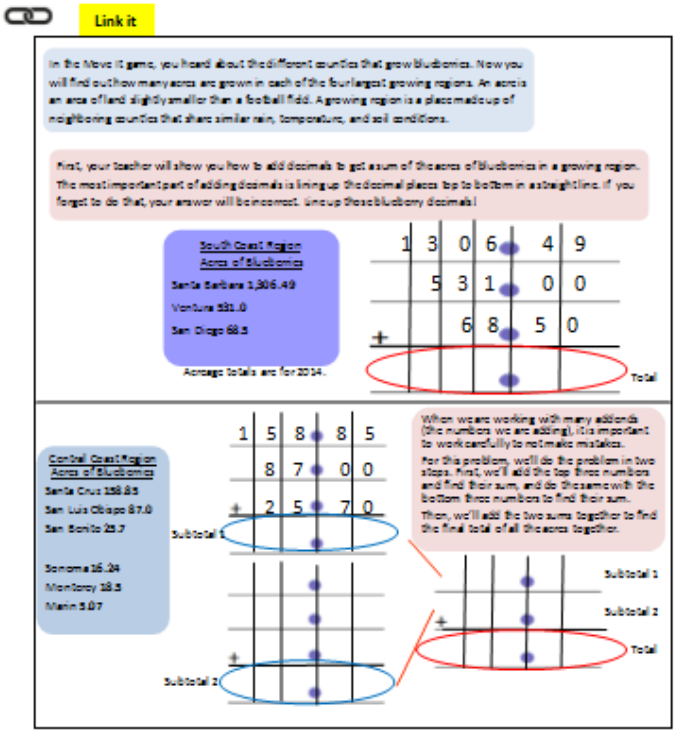
3. Explain that the player standing will read their card, and that when they get to the part that says "Pick one" they will have to pick one of the three regions listed to say out loud. Explain that when that happens, everyone who is from that region must get out of their seat and find an open chair. The person left standing will read their card and the game will continue.

Link It

Activity Practice Adding Acres with Decimal Points

Students will observe and practice the addition of decimals using berry acreage totals.

Teacher will model adding decimals using berry acreage totals in the South Coast region.



Instructions

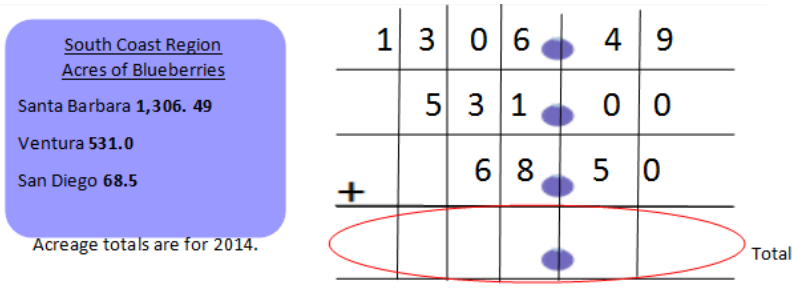
1. Read the first box:

> In the Move It game, you heard about the different counties that grow blueberries. Now you will find out how many acres are grown in each of the four largest growing regions. An acre is an area of land slightly smaller than a football field. A growing region is a place made up of neighboring counties that share similar rain, temperature, and soil conditions.

2. Then read the second box:

First, your teacher will show you how to add decimals to get a sum of the acres of blueberries in a growing region. The most important part of adding decimals is lining up the decimal places top to bottom in a straight line. If you forget to do that, your answer will be incorrect. Line up those blueberry decimals!

3. Point out that the acreage information from the South Coast Region table has been placed in the addition frame. Emphasize the importance of lining up the decimal as the amounts are added.



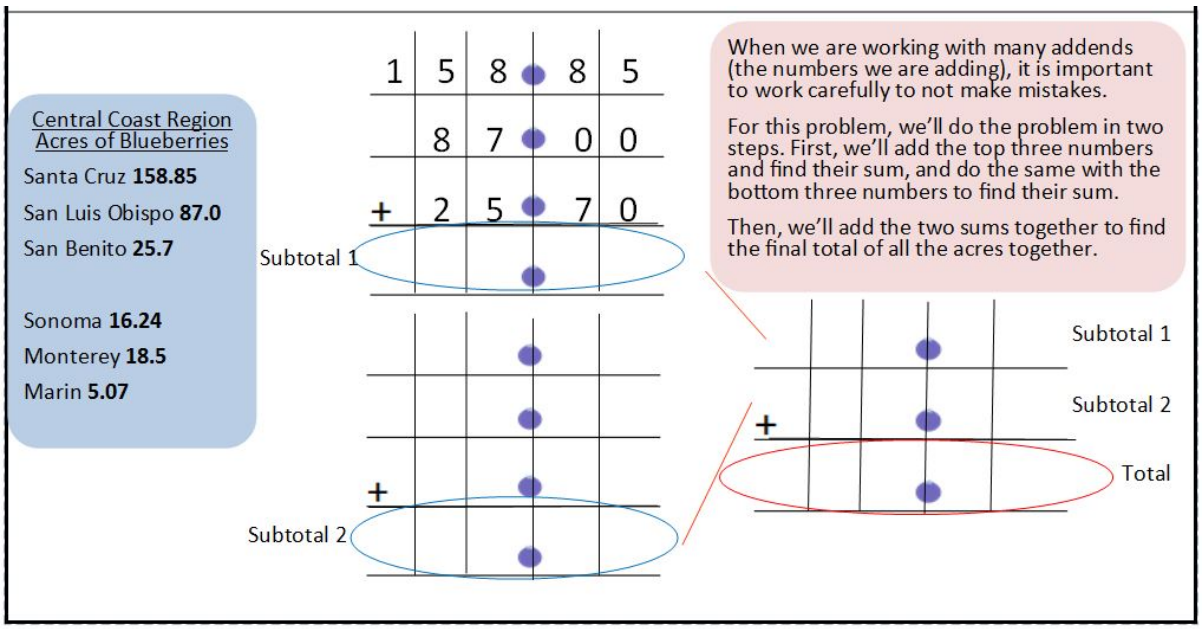
4. Add the amounts. Check for understanding and that they have all gotten the same answer. Provide additional support where needed.
5. Read the third box:

When we are working with many addends (the numbers we are adding), it is important to work carefully to not make mistakes.

For this problem, we'll do the problem in two steps. First, we'll add the top three numbers and find their sum, and do the same with the bottom three numbers to find their sum.

Then, we'll add the two sums together to find the final total of all the acres together.

6. Model the second problem, taking the acreage information from the Central Coast region. The first three amounts have already been put into the problem, model how to add them together. Then model plugging in the last three numbers with place value lined up, and find the sum.



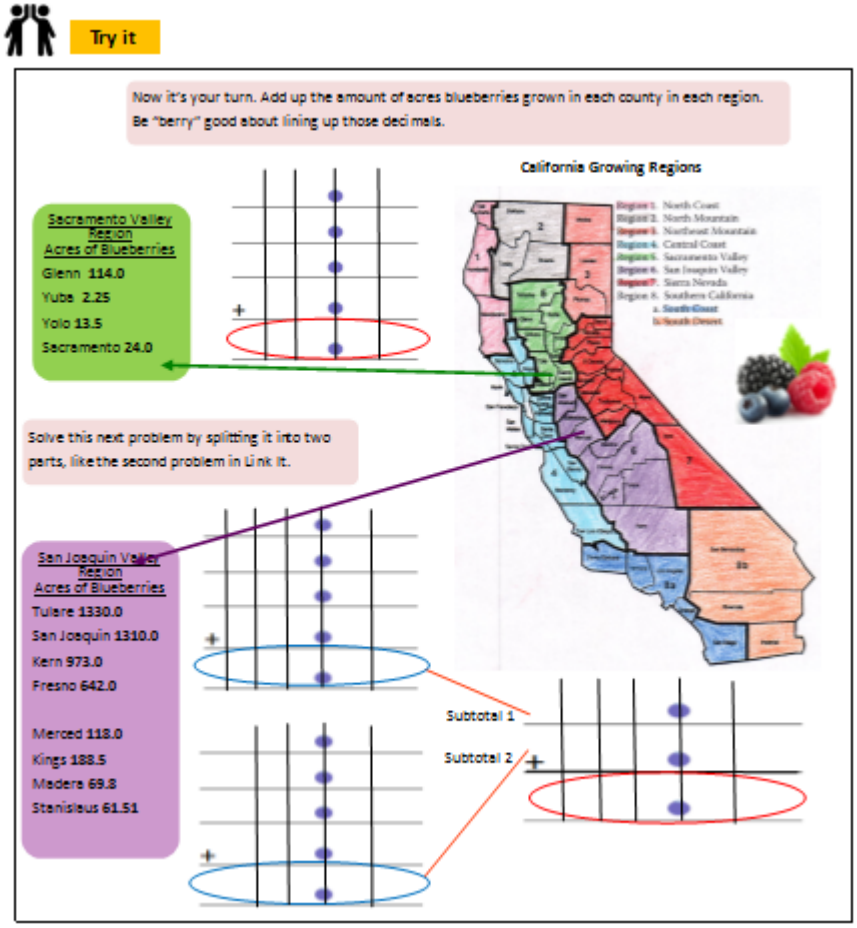
7. Model plugging in the sums from the first two problems where it's indicated, then adding them to find the total. Then check for understanding and that they have all gotten the same answer. Provide additional support where needed.

Try It

Activity Adding Acres with Decimals Points

Students will add up the number of acres of blueberries grown in 2 growing regions.

Teacher will monitor student progress to ensure students are coming up with the correct totals.



Instructions

1. Direct students to add up the acreage totals for the Sacramento Valley Region.
2. Check for understanding.
3. Tell students to add up the acreage totals for the San Joaquin Valley Region, with the problem split into two parts, like the second problem in Link It, and then the sums added together to find the final total.
4. Assess students understanding. Ask students to compare the totals of the four regions they have studied.

Digest It

Activity Taste Berries and Compare Blueberry Production

Students will taste berries, and compare their acreage totals to each other's and the regions with the least amounts of berries grown, and reflect on their learning.

Teacher will provide tasting and guide a discussion that includes talking about why some regions grow more blueberries.

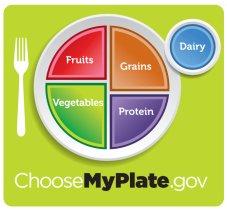
Instructions

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 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 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 squishy, juicy, 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.
    a. What are some ways you can eat berries as snacks?
    b. Where are berries grown in California?
    c. How many acres of berries are grown in the San Joaquin Valley region?
    d. Taste some berries.
    e. What is your plan for eating berries in the future?
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



My Plate

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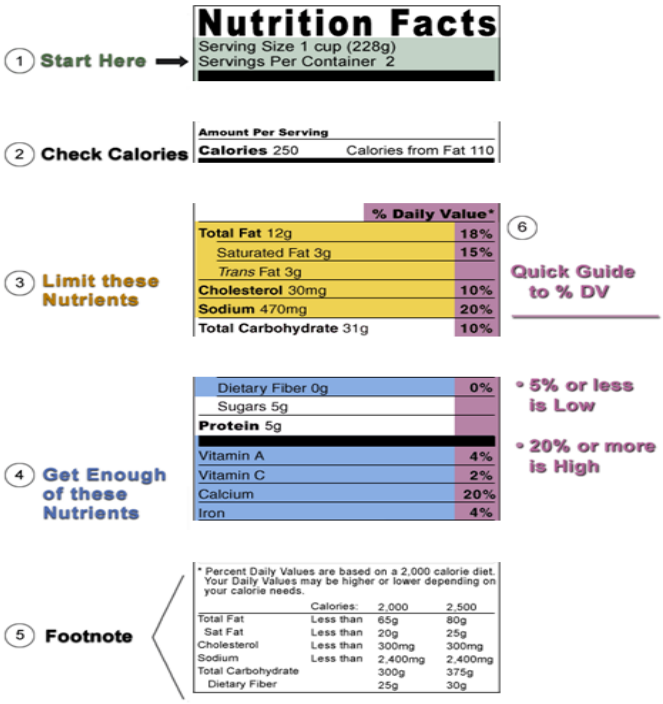
- Make half of your plates fruits and vegetables.
  -Focus on whole fruits.
  -Vary your veggies.
- Make half of your grains whole grains.
- Move to low-fat and fat-free milk or yogurt.
- Vary your protein routine.
- Drink and eat less sodium, less saturated fat, and less added sugar.

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.
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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.). Retrieve

I am in the San Joaquin Region in San Joaquin County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Glenn County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Stanislaus County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Yuba County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Merced County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Yolo County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Madera County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Sacramento County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Fresno County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Colusa County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Kings County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Butte County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Tulare County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Solano County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the San Joaquin Region in Kern County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, Central Coast, South Coast	I am in the Sacramento Valley Region in Tehama County. Another region where many blueberries are grown is the: **Pick one**: Central Coast, San Joaquin, South Coast
I am in the Central Coast Region in Sonoma County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Santa Barbara County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Santa Cruz County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Ventura County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Monterey County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Los Angeles County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in San Luis Obispo County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Orange County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Santa Clara County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in San Diego County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Napa County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Los Angeles County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley
I am in the Central Coast Region in Marin County. Another region where many blueberries are grown is the: **Pick one**: Sacramento Valley, San Joaquin, South Coast	I am in the South Coast Region in Orange County. Another region where many blueberries are grown is the: **Pick one:** Central Coast, San Joaquin, Sacramento Valley

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