



Department of
Education

Fresh Fruit and Vegetable Program

Working with the Taste of Tennessee

Tennessee School Nutrition Program | August 2017



Fresh Fruit and Vegetable Program (FFVP) Guide

Nutrition education is a required component of the FFVP. This guide—which is intended for teachers to use to reinforce skills in math and science—was developed to combine local fruits and vegetables from the FFVP with CORE curriculum to encourage a nutrition-driven education program that feeds hungry minds.

August—Tomatoes

Kindergarten

- **Fun fact:** Tomatoes are actually fruits because they have seeds, but they taste like vegetables.
- **Nutrition blurb:** Tomatoes are a source of nutrients that help you stay healthy and keep you from getting sick.
- **Math activity:** If I cut a tomato into four pieces and give two pieces to my friend, how many pieces do I have left?
 - Answer: two pieces left
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from
 - *Standard 2*
- **Science activity:** Use senses to investigate and describe the tomato before they try it. What color is it? What shape is it? What does it smell like?
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0007.2.1*

First Grade

- **Fun fact:** Tomatoes are actually fruits because they have seeds, but they taste like vegetables.
- **Nutrition blurb:** Tomatoes have lots of vitamins and minerals that help you grow and stay healthy and strong.
- **Math activity:** Jill has two tomatoes, John has five tomatoes, and Mary has 10 tomatoes. How many tomatoes do they have all together?
 - Answer: 17
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems using addition and subtraction
 - *Standard 2*

- **Science activity:** Identify which parts of the tomato are solid and which parts are liquid.
 - Skin and seeds are solids. Juice is liquid.
 - *Physical Science*
 - *Standard 9: Matter*
 - *GLE 0107.9.1*

Second Grade

- **Fun fact:** Did you know that the largest tomato ever grown weighed 7 lbs., 12 oz.? That is bigger than some newborn babies!
- **Nutrition blurb:** Tomatoes have lots of vitamin A and vitamin C, which help keep your eyes and body healthy.
- **Math activity:** Jimmy has seven tomatoes, Sarah has 12 tomatoes, and Mary has x tomatoes. Together, they have 45 tomatoes. How many tomatoes does Mary have?
 - Answer: 26 tomatoes
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems using addition and subtraction
 - *Standard 1*
- **Science activity:** Name the different parts that make up a tomato plant and what it needs to survive.
 - Stem, leaves, seeds, skin
 - It needs water, air, and sunlight to survive
 - *Life Science*
 - *Standard 1: Cells*
 - *GLE 0207.1.1*

Third Grade

- **Fun fact:** Did you know that tomatoes are 95 percent water? That is more than a watermelon, which is 92 percent water.
- **Nutrition blurb:** Tomatoes are the richest source of a nutrient called lycopene, which can help fight diseases like cancer.
- **Math activity:** Claire has 12 tomatoes that weigh 5 lbs. each. What is the total weight of her tomatoes?
 - Answer: 60 lbs.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving multiplication and division
 - *Standard 3*

- **Science activity:** Use a magnifier to identify the different parts of the tomato plant. Do you see any seeds? Do you see different colors?
 - *Life Science*
 - *Standard 1: Cells*
 - *GLE 0307.1.1*

Fourth Grade

- **Fun fact:** Did you know that tomatoes were thought to be poisonous until 1820 when a man named Robert Gibbon Johnson decided to prove they were safe to eat by eating a whole basket in front of a crowd?
- **Nutrition blurb:** Tomatoes are the richest source of a nutrient called lycopene, which can help fight diseases like cancer.
- **Math activity:** Lauren has $\frac{7}{10}$ of a tomato. Write this number as a decimal.
 - Answer: 0.70
 - *Domain:* Number and Operations-Fractions
 - *Cluster:* Understand decimal notation for fractions and compare decimal fractions
 - *Standard 6*
- **Science activity:** Discuss the different things that a tomato plant needs to survive and what could happen if a big pumpkin plant was planted right next to the little tomato plant.
 - Answer: Tomatoes need light energy to grow and survive, along with water and soil.
 - Answer: If a pumpkin plant was planted next to the tomato, it could take over all of the nutrients that the tomato plant needs and cause competition.
 - *Life Science*
 - *Standard 2: Interdependence/Standard 3: Flow of Matter and Energy*
 - *GLE 0407.2.1/GLE 0407.3.1*

Fifth Grade

- **Fun fact:** Tomatoes were first grown by the Aztec people of Mexico and the Inca people of Peru as early as the year 700.
- **Nutrition blurb:** Tomatoes are the richest source of a nutrient called lycopene, which can help fight diseases like cancer. This nutrient is also found in pink grapefruit and watermelon.
- **Math activity:** Gary started with 450 tomatoes. He bought 27. His friend Paula gave him four baskets with 36 tomatoes in each basket. Then Gary sold 12 baskets with 45 tomatoes in each basket to his neighbor. Write this problem as an equation and determine how many tomatoes Gary has left:
 - Answer: $450+27+(4 \times 36)-(12 \times 45) = 81$ tomatoes left.

- *Domain:* Operations and Algebraic Thinking
- *Cluster:* Write and interpret numerical expressions
- *Standard 2*
- **Science activity:** Discuss what makes a tomato cell different from an animal cell.
 - Answer: discuss cell wall, mitochondria, cytoplasm.
 - *Life Science*
 - *Standard 1: Cells*
 - *GLE 0507.1.1*

Sixth Grade

- **Fun fact:** Tomatoes were first grown by the Aztec people of Mexico and the Inca people of Peru as early as the year 700.
- **Nutrition blurb:** Tomatoes are the richest source of a nutrient called lycopene, which can help fight diseases like cancer. This nutrient is also found in pink grapefruit and watermelon.
- **Math activity:** Each jar of marinara sauce uses seven tomatoes for every four onions. How many onions are used per one tomato?
 - Answer: 4/7 of an onion
 - *Domain:* Ratios and Proportional Relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems
 - *Standard 2*
- **Science activity:** Identify the role of a tomato—consumer, producer, or decomposer—and explain the method used by tomatoes to obtain nutrition and energy.
 - Answer: producer and consumer, and photosynthesis
 - *Life Science*
 - *Standard 2: Interdependence*
 - *GLE 0607.2.1*

PA announcement K-3: Tomatoes have a lot of vitamins and minerals to help keep you healthy and strong.

PA announcement K-6: Oranges aren't the only food with a lot of vitamin C; tomatoes are a great source too!

Photo link: <https://www.pexels.com/photo/fresh-appetizer-delicious-basil-96616/>

September—Melons/Watermelons

Kindergarten

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** Watermelons are filled with water so they can help keep you hydrated.
- **Math activity:** If John has five watermelons and he eats two, how many does he have left?
 - Answer: three
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
 - *Standard 5*
- **Science activity:** Use senses to investigate and describe the watermelon before they try it. What color is it? What shape is it? What does it smell like? What does it taste like?
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0007.2.1*

First Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** Watermelons are filled with water so they can help keep you hydrated.
- **Math activity:** If John has 20 watermelons and he sells eight of them, how many does he have left?
 - Answer: 12
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction
 - *Standard 1*
- **Science activity:** Identify which parts of the watermelon are solid and which parts are liquid.
 - Answer: The rind, seeds, and flesh are solid. The juice is liquid.
 - *Physical Science*
 - *Standard 9:* Matter
 - *GLE 0107.9.1*

Second Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** Watermelons are high in vitamins A and C. These vitamins can help keep your eyes healthy and keep you from getting sick.
- **Math activity:** Watermelons are 92 percent water and six percent sugar. What percent of a watermelon is not water?
 - Answer: eight percent
 - If 92 percent is water, and six percent is sugar, what percent is left?

- Answer: two percent
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction
 - *Standard 1*
- **Science activity:** How does a watermelon grow? On a tree, bush, vine? What things does it need to grow?
 - Answer: grows on a vine; needs air, soil, water
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0207.1.1*

Third Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** watermelons are high in vitamins A and C. These vitamins can help keep your eyes healthy and keep you from getting sick.
- **Math activity:** John has five different baskets with eight watermelons in each basket. How many total watermelons does he have?
 - Answer: 40
 - Suzie brings John two more baskets with eight watermelons in each basket. How many total watermelons does John have now?
 - Answer: 56
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving multiplication and division
 - *Standard 1*
- **Science activity:** Use a magnifier to identify the different parts of the watermelon plant. Can you see any seeds? Do you see any different colors?
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0307.1.1*

Fourth Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** Watermelons have lots of vitamins and minerals, including vitamin C, vitamin A, potassium, magnesium, and vitamins B1, B5, and B6. These vitamins and minerals can keep you from getting sick, help you build strong muscles, and have energy.
- **Math activity 1:** If the harvest occurred 5,000 years ago, and the year is 2017, what year did the first harvest occur in?

- Answer: -2983 years
- **Math activity 2:** Water requirement: 6–8 cups per day. 1 cup of water = $\frac{1}{2}$ lb. If each pound of watermelon has .92 lbs. water, then how much watermelon would you have to eat to drink the equivalent of 6 cups of water?
 - Answer: 3.26 lbs. of watermelon
 - *Domain:* Operations and Algebraic Thinking/Number and Operations-Fractions
 - *Cluster:* Use the four operations with whole numbers to solve problems/Understand decimal notation for fractions, and compare decimal fractions
 - *Standard 1/7*
- **Science activity:** Watermelon seeds grow best when the soil is 95 degrees Fahrenheit. How could a sudden weather change affect the seeds?
 - Answer: The seeds would not survive if there was a frost or snow storm in the summer.
 - *Life Science*
 - *Standard 5:* Biodiversity and Change
 - *GLE 0407.5.2*

Fifth Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition Blurb:** Watermelons have lots of vitamins and minerals, including vitamin C, vitamin A, potassium, magnesium, and vitamins B1, B5, and B6. These vitamins and minerals can keep you from getting sick and help you build strong muscles and have energy.
- **Math activity 1:** If the harvest occurred 5,000 years ago, and the year is 2017, what year did the first harvest occur in?
 - Answer: -2983 years
- **Math activity 2:** Water requirement: 6–8 cups per day. 1 cup of water = $\frac{1}{2}$ lb. If each pound of watermelon has .92 lbs. water, then how much watermelon would you have to eat to drink the equivalent of 6 cups of water?
 - Answer: 3.26 lbs. of watermelon
 - *Domain:* Numbers and Operations in Base Ten
 - *Cluster:* Perform operations with multi-digit whole numbers and with decimals to hundredths
 - *Standard 7*
- **Science activity:** What does a watermelon eat to grow? How does it get food? Describe the process by which a watermelon obtains food.
 - Answer: by photosynthesis
 - *Life Science*
 - *Standard 3:* Flow of Matter and Energy

- GLE 0507.3.1

Sixth Grade

- **Fun fact:** The first watermelon harvest occurred 5,000 years ago in Egypt.
- **Nutrition blurb:** Watermelons have lots of vitamins and minerals, including vitamin C, vitamin A, potassium, magnesium, and vitamins B1, B5, and B6. These vitamins and minerals can keep you from getting sick and help you build strong muscles and have energy!
- **Math activity 1:** If the harvest occurred 5,000 years ago, and the year is 2017, what year did the first harvest occur in?
 - Answer: -2983 years
- **Math activity 2:**
 - Water requirement: 6–8 cups per day. 1 cup of water = 1/2 lb. If each pound of watermelon has .92 lbs. water, then how much watermelon would you have to eat to drink the equivalent of 6 cups of water?
 - Answer: 3.26 lbs. of watermelon
 - *Domain:* The Number System
 - *Cluster:* Compute fluently with multi-digit numbers and find common factors and multiples
 - *Standard 3*
- **Science activity:** Compare and contrast the different methods used by watermelons and humans to obtain energy.
 - Answer: photosynthesis vs. eating/metabolism.
 - *Life Science*
 - *Standard 2:* Interdependence
 - GLE0607.2.1

PA announcement K-3: Watermelons are fruits and actually do have a lot of water in them.

PA announcement K-6: Eating watermelon can help keep you hydrated in the summer, and it is packed with vitamins.

Photo Link: <https://www.pexels.com/photo/sliced-watermelon-128598/>

October—Bell Peppers

Kindergarten

- **Fun fact:** Did you know that bell peppers come in five different colors? Green, yellow, red, orange, and purple.
- **Nutrition blurb:** Bell peppers have vitamins that help keep you from getting sick.
- **Math activity:** If April has one red bell pepper, one green bell pepper, and two yellow bell peppers, how many bell peppers does she have?
 - Answer: four
 - What two colors is she missing?
 - Answer: orange and purple
 - If she buys one orange bell pepper at the store, how many does she have now?
 - Answer: five
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
 - *Standard 5*
- **Science activity:** Use senses to investigate and describe the bell pepper before they try it. What color is it? What does it smell like? What does it taste like?
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0007.2.1*

First Grade

- **Fun fact:** Did you know that bell peppers come in five different colors? Green, yellow, red, orange, and purple.
- **Nutrition blurb:** Bell peppers have vitamins that help keep you from getting sick.
- **Math activity:** If April has five red bell peppers, two green bell peppers, and 10 yellow bell peppers, how many bell peppers does she have?
 - Answer: 17
 - If she buys three orange bell peppers at the store, how many does she have now?
 - Answer: 20
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction
 - *Standard 1*
- **Science activity:** Use magnifiers to observe the bell pepper's different parts and record observations. Do you see any seeds? Do you see any different colors in the flesh?
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0107.1.2*

Second Grade

- **Fun fact:** Did you know that bell peppers originated in Central America and South America? They were introduced to Europe in the 1500s.
- **Nutrition blurb:** One bell pepper gives you more vitamin C than you need in a day. Eating these peppers can keep you from getting sick.
- **Math activity:** If one pepper provides 2 grams of fiber, how many peppers would you need to eat to reach the goal of 24 grams of fiber per day?
 - Answer: 12
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction
 - *Standard 1*
- **Science activity:** How does a bell pepper grow? On a tree, bush, vine? What things does it need to grow?
 - Answer: grows on a vine; needs air, soil, water
 - *Life Science*
 - *Standard 1: Cells*
 - *GLE 0207.1.1*

Third Grade

- **Fun fact:** Did you know that bell peppers originated in Central America and South America? They were introduced to Europe in the 1500s.
- **Nutrition blurb:** One bell pepper provides 190 percent of your daily requirement of vitamin C. Eating these peppers can help keep you from getting sick.
- **Math activity 1:** If peppers came to Europe in the year 1500 and the year is 2017, how many years ago were peppers introduced to Europe?
 - Answer: 517 years ago
- **Math activity 2:** If one pepper provides almost 200 percent of your daily vitamin C requirement, what fraction of a pepper would you need to eat to reach 100 percent of your daily requirement?
 - Answer: $\frac{1}{2}$
 - *Domain:* Numbers and Operations-Fractions
 - *Cluster:* Develop understanding of fractions and numbers
 - *Standard 1*
- **Science activity:** Use a magnifier to identify the different parts of the bell pepper plant.
 - Look at the stem, seeds, rind, and flesh.
 - *Life Science*
 - *Standard 1: Cells*

- *GLE 0307.1.1*

Fourth Grade

- **Fun fact:** Did you know that bell peppers originated in Central America and South America? They were introduced to Europe in the 1500s.
- **Nutrition blurb:** One bell pepper provides 190 percent of your daily requirement of vitamin C. Eating these peppers can help keep you from getting sick.
- **Math activity:** Judy has $\frac{7}{8}$ of a bell pepper in her lunch, and Jill has $\frac{3}{4}$ of a bell pepper in her lunch. How much of a bell pepper do they have if they add their bell peppers together?
 - Answer: $1\frac{13}{8}$ bell peppers (1 and $\frac{5}{8}$)
 - *Domain:* Number and Operations-Fractions
 - *Cluster:* Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers
 - *Standard 3a*
- **Science activity:** Bell pepper seeds grow best when the temperature is above 70 degrees Fahrenheit. How could a sudden weather change affect the seeds?
 - Answer: The seeds would not survive if there was a frost or snow storm in the summer.
 - *Life Science*
 - *Standard 5:* Biodiversity and Change
 - *GLE 0407.5.2*

Fifth Grade

- **Fun fact:** Did you know that bell peppers originated in Central America and South America? They were introduced to Europe in the 1500s.
- **Nutrition blurb:** One bell pepper provides 190 percent of your daily requirement of vitamin C. Eating these peppers can help keep you from getting sick.
- **Math activity:** Judy has $\frac{7}{8}$ of a bell pepper in her lunch, and Jill has $\frac{3}{4}$ of a bell pepper in her lunch. How much of a bell pepper do they have if they add their bell peppers together?
 - Answer: $1\frac{13}{8}$ bell peppers (1 and $\frac{5}{8}$)
 - *Domain:* Numbers and Operations-Fractions
 - *Cluster:* Apply and extend previous understandings of multiplication and division to multiply and divide fractions
 - *Standard 1*

- **Science activity:** What does a bell pepper eat to grow? How does it get food? Describe the process by which a bell pepper obtains food.
 - Answer: by photosynthesis
 - *Life Science*
 - *Standard 3: Flow of Matter and Energy*
 - *GLE 0507.3.1*

Sixth Grade

- **Fun fact:** Did you know that bell peppers originated in Central America and South America? They were introduced to Europe in the 1500s.
- **Nutrition blurb:** One bell pepper provides 190 percent of your daily requirement of vitamin C. Eating these peppers can help keep you from getting sick.
- **Math activity:** How many cups of bell peppers will each person get if three people share $\frac{1}{4}$ cup of bell peppers equally?
 - Answer: $\frac{1}{12}$ cup
 - *Domain:* The Number System
 - *Cluster:* Apply and extend previous understanding of multiplication and division to divide fractions by fractions
 - *Standard 1*
- **Science activity:** Compare and contrast the difference methods used by bell peppers and humans to obtain energy.
 - Answer: photosynthesis vs. eating/metabolism.
 - *Life Science*
 - *Standard 2: Interdependence*
 - *GLE0607.2.1*

PA announcement K-3: Bell peppers are vegetables that come in five different colors and have lots of healthy vitamins in them.

PA announcement K-6: Did you know bell peppers are not spicy like hot peppers? Bell peppers taste sweet and have enough vitamin C to last you the whole day.

Photo Link: <https://www.pexels.com/photo/food-healthy-vegetables-peppers-7017/>

November—Sweet Potatoes

Kindergarten

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground.
- **Nutrition blurb:** Sweet potatoes contain a vitamin that helps you see.
- **Math activity:** Sweet potatoes are grown in California, North Carolina, South Carolina, Louisiana, Mississippi, Alabama, Texas, and Georgia. How many states are sweet potatoes grown in?
 - Answer: eight
 - *Domain:* Counting and Cardinality
 - *Cluster:* Know number names and the count sequence.
 - *Standard 3*
- **Science activity:** Have students observe sweet potatoes in solid and sliced form. Allow students to hold an entire sweet potato and to smell it. Then, allow students to try a cut up sweet potato and report their findings after tasting and smelling.
 - *Kindergarten:* Embedded Inquiry
 - *GLE 0007.Inq.1:* Observe the world of familiar objects using the senses and tools.

First Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain a vitamin that helps you see.
- **Math activity:** Jan bought 10 sweet potatoes, but used four to cook dinner. How many sweet potatoes does Jan have left?
 - Answer: six
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand and apply properties of operations and the relationship between addition and subtraction.
 - *Standard 4*
- **Science activity:** Have students observe sweet potatoes in solid and sliced form. Allow students to hold an entire sweet potato and to smell it. Then, allow students to try a cut up sweet potato and report their findings after tasting and smelling.
 - *Grade 1:* Embedded Inquiry
 - *GLE 0107.Inq.1:* Observe the world of familiar objects using the senses and tools.

Second Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain vitamin A. This vitamin helps you see.
- **Math activity:** Sweet potatoes are the state vegetable of North Carolina. If 40 percent of America's sweet potatoes come from North Carolina, what percent of sweet potatoes come from other states?
 - Answer: 60 percent
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction.

- *Standard 1*
- **Science activity:** Have students observe sweet potatoes in solid and sliced form. Allow students to hold an entire sweet potato and to smell it. Then, allow students to try a cut up sweet potato and report their findings after tasting and smelling. Have the students discuss their favorite way to eat sweet potatoes and talk about how their taste, smell, and texture are different.
 - *Grade 2: Embedded Inquiry*
 - *GLE 0207.Inq.1:* Observe the world of familiar objects using the senses and tools.

Third Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain Vitamin A. This vitamin helps you see.
- **Math activity:** Margaret is baking a sweet potato casserole. For each sweet potato she puts in the casserole, the baking time requires an extra 15 minutes. If the recipe calls for six sweet potatoes, how long in hours and minutes does the casserole need to bake for?
 - Answer: one hour and 30 minutes
 - *Domain:* Measurement and Data
 - *Cluster:* Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
 - *Standard 1*
- **Science activity:** Sweet potatoes are root plants. Roots absorb water and nutrients from the soil and anchor the plant in the ground. Ask the class what they know about roots and the life cycle of sweet potatoes. Discuss other root vegetables the class may know of, such as carrots, potatoes, and beets.
 - *Life Science*
 - *Standard 4:* Heredity
 - *GLE 0307.4.1:* Identify the different life stages through which plants and animals pass.

Fourth Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain Vitamin A. This vitamin helps you see.
- **Math activity:** A half cup of cooked sweet potato contains 2 grams of protein. How many grams of protein are in $\frac{3}{4}$ cup of cooked sweet potatoes?
 - Answer: 3 grams
 - *Domain:* Number and Operations—Fractions
 - *Cluster:* Extend understanding of fraction equivalence and ordering.
 - *Standard 2*
- **Science activity:** Despite being grown under the ground, sweet potatoes still require light and energy to grow and survive. Discuss why a sweet potato would still need light and energy and how the potato obtains these nutrients while underground.
 - Answer: photosynthesis.

- *Life Science*
- *Standard 3: Flow of Matter and Energy*
- *GLE 0407.3.1: Demonstrate that plants require light energy to grow and survive.*

Fifth Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain Vitamin A. This vitamin helps you see.
- **Math activity:** A good sweet potato should be firm, dark, dry, smooth, and without blemishes. Jack bought two boxes of 80 sweet potatoes. In box A, 13 have blemishes and need to be thrown away. In box B, seven have blemishes and need to be thrown away. What is the fraction of blemished to unblemished sweet potatoes?
 - Answer: 20/160 or 1/8
 - *Domain:* Number and Operations—Fractions
 - *Cluster:* Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
 - *Standard 3*
- **Science activity:** Discuss the life cycle of root plants. Compare and contrast photosynthesis in root plants and plants that are above ground.
 - *Life Science*
 - *Standard 3: Flow of Matter and Energy*
 - *GLE 0507.3.1: Demonstrate how all living things rely on the process of photosynthesis to obtain energy.*

Sixth Grade

- **Fun fact:** Sweet potatoes are root vegetables, meaning they are grown under the ground. They grow in hot climates and take 150 frost-free days to develop.
- **Nutrition blurb:** Sweet potatoes contain Vitamin A. This vitamin helps you see.
- **Math activity:** We paid \$167 for 175 sweet potatoes. How much did we pay per sweet potato? Round to two decimal places.
 - Answer: \$0.95
 - *Domain:* Ratios and Proportional Relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 2*
- **Science activity:** Sweet potatoes are very susceptible to damage at harvest. Due to the risk of damage, hand-harvest is preferred over mechanical harvesting. Discuss the harvesting process of sweet potatoes. Compare and contrast benefits of using machinery compared to hand-harvesting. Also discuss unintended consequences of machine harvesting on a sweet potato crop.
 - *Grade 6: Embedded Technology & Engineering*
 - *GLE 0607.T/E.3: Compare the intended benefits with the unintended consequences of a new technology.*

PA Announcement K-3: Sweet potatoes are orange vegetables grown in the ground. Eating sweet potatoes helps us have healthy eyes, a healthy brain, and helps keep us from getting sick.

PA Announcement K-6: One serving of sweet potato has more than two times the daily value of vitamin A each person needs. Vitamin A fights infection, keeps skin healthy, and maintains good vision.

Photo Link: <https://www.pexels.com/photo/potatoes-cutting-board-wooden-cooking-89247/>

December—Apples

Kindergarten

- **Fun fact:** Apples contain air, which makes them float.
- **Nutrition blurb:** The peel of an apple is full of lots of nutrients that keep us healthy.
- **Math activity:** Abby has four apples in her basket, and Jenny has six apples in her basket. How many total apples do they have together?
 - Answer: 10
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
 - *Standard 4*
- **Science activity:** Apples grow on trees. What three things does an apple tree need to grow?
 - Answer: water, food, air
 - *Life Science*
 - *Standard 3:* Flow of Matter and Energy
 - *GLE 0007.3.1:* Recognize that living things require water, food, and air.

First Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** The peel of an apple is full of lots of nutrients that keep us healthy.
- **Math activity:** Apples come in red, green, and yellow. Susie has three red apples, two green apples, and five yellow apples. How many total apples does Susie have?
 - Answer: 10 apples
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction.
 - *Standard 2*
- **Science activity:** At the grocery store, Mary bought an apple and a bottle of apple juice. Which one of these is a liquid and which one is a solid?
 - Answer: The apple is a solid. Apple juice is a liquid.
 - *Physical Science*

- *Standard 9: Matter*
- *GLE 0107.9.2: Distinguish between the properties of solids and liquids.*

Second Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** Apples are full of vitamin C, potassium, and other nutrients that keep you healthy. It is important to eat the peel because that is where most of the nutrients and fiber are found.
- **Math activity:** One of George Washington's favorite hobbies was pruning his apple tree. Every time George went to prune his apple tree, he would pick five apples. If George pruned his tree seven times in one week, how many apples did he pick?
 - Answer: 35
 - *Domain:* Number and Operations in Base Ten
 - *Cluster:* Understand place value.
 - *Standard 2*
- **Science activity:** Apples can handle temperatures as low as -40 degrees Fahrenheit. In what season are these temperatures occurring?
 - Answer: winter
 - *Earth and Space Science*
 - *Standard 8: The Atmosphere*
 - *GLE 0207.8.1: Associate temperature patterns with seasonal changes.*

Third Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** Apples are full of vitamin C, potassium, and other nutrients that keep you healthy. It is important to eat the peel, because that is where most of the nutrients and fiber are found.
- **Math activity:** Todd has three baskets of golden delicious apples. If each basket has seven apples inside, how many total apples does Todd have?
 - Answer: 21
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving multiplication and division.
 - *Standard 1*
- **Science activity:** Mrs. Tyler's class has a worm that lived in soil in their classroom. One of her students ate an apple for lunch. Mrs. Tyler saved the apple core to use for food for their worm. This is an example of composting and recycling. Discuss with the class the benefits of recycling. Give ideas of ways students can recycle on their own.
 - *Earth and Space Science*
 - *Standard 7: The Earth*

- *GLE 0307.7.4:* Design a simple investigation to demonstrate how earth materials can be conserved or recycled

Fourth Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** Apples are full of vitamin C, potassium, and other nutrients that keep you healthy. It is important to eat the peel, because that is where most of the nutrients and fiber are found.
- **Math activity:** A peck of apples weighs 10.5 lbs. How many pounds do 5 pecks weigh?
 - Answer: 52.5 lbs.
 - *Domain:* Numbers and Operations—Fractions
 - *Cluster:* Understand decimal notation for fractions, and compare decimal fractions.
 - *Standard 5*
- **Science activity:** Draw two to three different apples on the board. Draw each one with a different size bite taken out. Ask the class how much of the apple they think has been eaten. After getting three to four different answers, explain how everyone may interpret the same picture in different ways.
 - *Grade 4:* Embedded Inquiry
 - *GLE 0407.Inq.5:* Recognize that people may interpret the same results in different ways.

Fifth Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** Apples are full of vitamin C, potassium, and other nutrients that keep you healthy. It is important to eat the peel, because that is where most of the nutrients and fiber are found.
- **Math activity:** If Suzie has $\frac{1}{4}$ of an apple and Lucy has $\frac{6}{8}$ of an apple, how many apples do they have together?
 - Answer: one apple
 - *Domain:* Number and Operations—Fractions
 - *Cluster:* Use equivalent fractions as a strategy to add and subtract fractions.
 - *Standard 1*
- **Science activity:** Draw two to three different apples on the board. Draw each one with a different size bite taken out. Ask the class how much of the apple they think has been eaten. After getting three to four different answers, explain how everyone may interpret the same picture in different ways.
 - *Grade 5:* Embedded Inquiry
 - *GLE 0507.Inq.5:* Recognize that people may interpret the same results in different ways.

Sixth Grade

- **Fun fact:** 25 percent of an apple's volume is air, which is why they float and make bobbing for apples so fun.
- **Nutrition blurb:** Apples are full of vitamin C, potassium, and other nutrients that keep you healthy. It is important to eat the peel, because that is where most of the nutrients and fiber are found.
- **Math activity:** A peck of apples weighs 10.5 lbs. and costs \$20. If Andy buys 2 pecks of apples, how much is he paying per pound of apples?
 - Answer: \$1.05
 - *Domain:* Ratios and Proportional Relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 2*
- **Science activity:** Apples are grown commercially in 36 states. Despite the large quantities of apples grown each year, most apples are still picked by hand. Discuss the pros and cons of picking apples by hand as compared to using machinery to speed up the process.
 - *Grade 6:* Embedded Technology & Engineering
 - *GLE 0607.T/E.3:* Compare the intended benefits with the unintended consequences of a new technology.

PA Announcement K-3: Apples are a perfect and healthy snack. They provide us with quick energy, nutrients, and fiber to leave us feeling full.

PA Announcement K-6: Apples are a perfect and healthy snack. They provide us with quick energy, nutrients, and fiber to leave us feeling full. Eat 2 1/2 to 5 cups of fruit per day to stay healthy!

Photo Link: <https://www.pexels.com/photo/red-apples-fruit-juicy-39028/>

January—Hydro Lettuce

Kindergarten

- **Fun fact:** The largest lettuce head weighed 25 lbs.
- **Nutrition blurb:** Lettuce is made up of a lot of water, so it can help you stay hydrated.
- **Math activity:** If the largest carrot weighed 14 lbs., and the largest lettuce head weighed 25 lbs., which vegetable was bigger?
 - Answer: the head of lettuce
 - *Domain:* Counting and Cardinality
 - *Cluster:* Compare Numbers
 - *Standard 7*
- **Science activity:** Where does lettuce come from? What do you put in the ground to make it grow?
 - Answer: Lettuce grows in the ground from seeds.

- *Kindergarten*: Embedded Inquiry
- *GLE 0007.Inq.2*: Ask questions, make logical predictions, plan investigations, and represent data.

First Grade

- **Fun fact**: Lettuce is a member of the sunflower family.
- **Nutrition blurb**: Lettuce is 96 percent water, so it can help you stay hydrated.
- **Math activity**: Larissa ate 2 cups of lettuce; Betsy ate 3 cups more than Larissa. How many cups of lettuce did Betsy eat?
 - Answer: Betsy ate 5 cups of lettuce.
 - *Domain*: Numbers and Operations in Base Ten
 - *Cluster*: Use place value understanding and properties of operations to add and subtract.
 - *Standard 5*
- **Science activity**: Where is lettuce grown? How does it start?
 - Answer: Lettuce grows in the ground from seeds.
 - *Embedded Inquiry*
 - *GLE 0007.Inq.2*: Ask questions, make logical predictions, plan investigations, and represent data.

Second Grade

- **Fun fact**: Christopher Columbus introduced lettuce to North America, and it has grown here ever since.
- **Nutrition blurb**: Lettuce is a good source of vitamin A, which helps your eyes stay healthy.
- **Math activity**: 2 cups of lettuce has 1 gram of fiber; one apple has around 3 grams of fiber. How many more grams of fiber does one apple have than 2 cups of lettuce?
 - Answer: Apples have 2 grams more.
 - *Domain*: Operations and Algebraic Thinking
 - *Cluster*: Represent and solve problems involving addition and subtraction.
 - *Standard 1*
- **Science activity**: Lettuce can grow in temperatures between 45–75 degrees Fahrenheit. What time of year would this be?
 - Answer: It depends on where you live, but for Tennessee, this would be nearly year round.
 - *Earth and Space Science*
 - *Standard 8*: The atmosphere
 - *GLE 0207.8.1*: Associate temperature patterns with seasonal changes.

Third Grade

- **Fun fact:** Christopher Columbus introduced lettuce to North America, and it has grown here ever since.
- **Nutrition blurb:** Lettuce is a good source of vitamin A, which helps your eyes stay healthy.
- **Math activity:** If lettuce travels 200 miles from Kentucky to Tennessee in 10 hours, how many miles did it go each hour?
 - Answer: 20 miles/hour
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving multiplication and division.
 - *Standard 1*
- **Science activity:** The parts of lettuce you eat are the leaves. Leaves are the part of the plant that convert sunlight and carbon dioxide into energy.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0307.1.1:* Use magnifiers to make observations of specific plant and animal body parts and describe their functions.

Fourth Grade

- **Fun fact:** There are five main types of lettuce: romaine, butterhead, loose-leaf, crisphead, and celtuce.
- **Nutrition blurb:** Lettuce is 96 percent water, so it can help you stay hydrated.
- **Math activity:** If you cut a head of lettuce and give Rosco $\frac{1}{4}$ of the head, Jennifer $\frac{1}{8}$ of the head, and Henry $\frac{1}{2}$ of the head, how much is left for you?
 - Answer: $\frac{1}{8}$
 - *Domain:* Number and Operations in Base Ten
 - *Cluster:* Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
 - *Standard 3*
- **Science activity:** The parts of lettuce you eat are the leaves. The leaf margin is the edge of the leaf. The leaf is usually flat and grows from the stem of the plant. It captures sunlight and carbon dioxide to make food for the plant to use to grow; this is called photosynthesis.
 - *Life Science*
 - *Standard 3:* Flow of matter and energy
 - *GLE 0407.3.1:* Demonstrate that plants require light energy to grow and survive

Fifth Grade

- **Fun fact:** In the United States, lettuce is the second most popular fresh vegetable. Americans eat about 30 lbs. of lettuce every year. That’s about five times more than what we ate in the early 1900s.
- **Nutrition blurb:** 2 cups of lettuce provides 1 gram of fiber and 1 gram of protein.
- **Math activity:** If we currently eat on average 30 lbs. of lettuce each year, how many pounds is that each month?
 - Answer: 2.5
 - *Domain:* Numbers and Operations in Base Ten
 - *Cluster:* Perform operations with multi-digit whole numbers and with decimals to hundredths.
 - *Standard 7*
- **Science activity:** The parts of lettuce you eat are the leaves. The leaf margin is the edge of the leaf. The leaf is usually flat and grows from the stem of the plant. It captures sunlight and carbon dioxide to make food for the plant to use to grow; this is called photosynthesis.
 - *Life Science*
 - *Standard 3:* flow of matter and energy
 - *GLE 0507.3.1P:* Demonstrate how all living things rely on the process of photosynthesis to obtain energy.

Sixth Grade

- **Fun fact:** Iceberg lettuce got its name from the fact that California growers started shipping it covered with heaps of crushed ice in the 1920s. It had previously been called crisphead lettuce.
- **Nutrition blurb:** 2 cups of lettuce provides 1 gram of fiber and 1 gram of protein.
- **Math activity:** If a head of lettuce costs \$2.25, how many whole heads of lettuce could you buy with \$8?
 - Answer: three
 - What percentage or fraction of a head of lettuce could be bought if you only had \$1.50?
 - Answer: 66 percent or $\frac{2}{3}$
 - *Domain:* Ratios and proportional relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 3*
- **Science activity:** California and Arizona are the largest producers of lettuce—what biome(s) does California consist of? What biome(s) does Arizona consist of?
 - Answer: desert, tundra, etc.
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0607.2.4:* Analyze the environments and the interdependence among organisms found in the world’s major biomes.

PA Announcement K-3: Lettuce is made up of mostly water, so it can help you stay hydrated in the hot summer months.

PA Announcement K-6: 1 cup of lettuce can give you 50 percent of your daily needs of vitamin A, a vitamin that helps strengthen your vision.

Photo Link: <https://www.pexels.com/photo/food-salad-field-fresh-89267/>

February—Mushrooms

Kindergarten

- **Fun fact:** There are more than 10,000 different types of mushrooms.
- **Nutrition blurb:** Try something new! Eating mushrooms can help our bones grow.
- **Math activity:** Raw mushrooms are good for seven to 10 days before they need to be thrown out. Your parents bought mushrooms at the grocery store on February 1. It is now February 12; is it time to throw them out?
 - Answer: Yes; it has been more than 10 days.
 - *Domain:* Counting and Competency
 - *Cluster:* Know number names and the count sequence.
 - *Standard 1*
- **Science activity:** Use your senses to discover the mushroom. What does it look like? What does it smell like? What does it feel like? Finally, taste the mushroom. What does it taste like?
 - *Kindergarten:* Embedded Enquiry
 - *GLE 0007.Inq.1:* Observe the world of familiar objects using the senses and tools.

First Grade

- **Fun fact:** There are more than 10,000 different types of mushrooms.
- **Nutrition blurb:** Try something new! Eating mushrooms can help our bones grow because they contain vitamins.
- **Math activity:** Raw mushrooms are good for seven to 10 days before they need to be thrown out. Your parents bought mushrooms at the grocery store on February 6. It is now February 15; is it time to throw them out?
 - Answer: No, it is not time to throw them out, because it has been only nine days.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Add and subtract within 20.

- *Standard 6*
- **Science activity:** Look at all of the mushrooms around you that your classmates have. Classify them by differences in shape, color, and texture. Do some look bumpier than others? Are some darker brown? Are the insides of some more white than others?
 - *Physical Science*
 - *Standard: Matter*
 - *GLE 0107.9.1:* Classify objects according to their physical properties.

Second Grade

- **Fun fact:** Most plants require sunlight to make energy for themselves using photosynthesis. Mushrooms do not require sunlight or water; they are a fungus. They actually grow best in the dark.
- **Nutrition blurb:** The mushroom is a very nutritious food. One portabella mushroom contains more potassium than a banana.
- **Math activity:** Raw mushrooms are good for seven to 10 days before they need to be thrown out. In order to make them last longer, mushrooms should be frozen in plastic freezer bags. If we have a box with 50 mushrooms, and we are cooking 15 mushrooms today, how many should be frozen for later?
 - Answer: 35 mushrooms
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction
 - *Standard 1*
- **Science activity:** Mushrooms grow best in the winter and in the dark. What is a normal temperature for the winter? Do you think the temperature would drop even more at night once the sun goes down?
 - Answer: In Tennessee, below 40 degrees Fahrenheit, and yes.
 - *Earth and Space Science*
 - *Standard 8:* The Atmosphere
 - *GLE 0207.8.1:* Associate temperature patterns with seasonal changes.

Third Grade

- **Fun fact:** Most plants require sunlight to make energy for themselves using photosynthesis. Mushrooms do not require sunlight or water; they are a fungus. They actually grow best in the dark.
- **Nutrition blurb:** The mushroom is a very nutritious food. One portabella mushroom contains more potassium than a banana.
- **Math activity:** Raw mushrooms are good for seven to 10 days before they need to be thrown out. In order to make them last longer, mushrooms should be frozen in plastic freezer bags, which hold

10 mushrooms each. If we have a box of 50 mushrooms, how many plastic freezer bags will we need?

- Answer: five
- *Domain:* Operations and Algebraic Thinking
- *Cluster:* Multiply and divide within 100.
- *Standard 7*
- **Science activity:** Do you see that the inside of the mushroom looks spongy? What shape is the mushroom? Use your magnifier to look closely at the mushroom and examine its different parts.
 - Answer: cap/head, stem, etc.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0307.1.1:* Use magnifiers to make observations of specific plant and animal body parts and describe their functions.

Fourth Grade

- **Fun fact:** Most plants require sunlight to make energy for themselves using photosynthesis. Mushrooms do not require sunlight or water; they are a fungus. They actually grow best in the dark.
- **Nutrition blurb:** The mushroom is a very nutritious food. Different species can be a good source of vitamin B, along with minerals such as copper and potassium. One portabella mushroom contains more potassium than a banana.
- **Math activity:** After being sown in the ground, mushrooms are harvested by hand after a 33-day growing cycle. How many weeks is the mushroom growing cycle?
 - Answer: four weeks. Remainder: five days.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Use the four operations with whole numbers to solve problems.
 - *Standard 3*
- **Science activity:** Mushrooms are very unique. They are made of cells, like all living things, but their number of cells does not increase as they grow. The cells fill with water and expand. Discuss with your classmates how this may differ from other plants and animals that produce more cells as they grow.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0407.1.1:* Recognize that cells are the building blocks of all living things.

Fifth Grade

- **Fun fact:** Most plants require sunlight to make energy for themselves using photosynthesis. Mushrooms do not require sunlight or water; they are a fungus. They actually grow best in the dark.

- **Nutrition blurb:** The mushroom is a very nutritious food. Different species can be a good source of vitamin B, along with essential minerals such as copper and potassium. One portabella mushroom contains more potassium than a banana.
- **Math activity:** The casserole dish your mother is making for dinner requires $3\frac{1}{2}$ cups of portabella mushrooms. She is making three dishes of this casserole to give two of them to family friends. How many total mushrooms will she need?
 - Answer: 10 $\frac{1}{2}$ cups
 - *Domain:* Number and Operations—Fractions
 - *Cluster:* Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
 - *Standard 6*
- **Science activity:** Mushrooms are very unique. They are made of cells, like all living things, but their number of cells does not increase as they grow. The cells fill with water and expand. Discuss with your classmates how this may differ from other plants and animals that produce more cells as they grow.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0507.1.1:* Distinguish between the basic structures and functions of plant and animal cells.

Sixth Grade

- **Fun fact:** Most plants require sunlight to make energy for themselves using photosynthesis. Mushrooms do not require sunlight or water; they are a fungus. They actually grow best in the dark.
- **Nutrition blurb:** The mushroom is a very nutritious food. Different species can be a good source of vitamin B, along with essential minerals such as copper and potassium. One portabella mushroom contains more potassium than a banana.
- **Math activity:** You and your best friend go to the store in February to buy mushrooms. For every three white mushrooms you buy, your friend buys one portabella mushroom. What is the ratio of white to portabella mushrooms?
 - Answer: 3:1
 - *Domain:* Ratios and Proportional Relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 1*
- **Science activity:** Take your mushroom in your hand before you eat it. Toss it lightly in the air and catch it in your hand. Putting the mushroom in motion gives it kinetic energy. Now set the mushroom on your desk. The mushroom now has potential energy because of its height from the ground. It has the potential to fall and exert energy.
 - *Physical Science*

- *Standard 10: Energy*
- *GLE 0607.10.1: Compare and contrast the three forms of potential energy, compare potential and kinetic energy.*

PA Announcement K-3: One serving of mushrooms has more than the recommended daily serving of vitamin D, which can help our bones and teeth grow strong.

PA Announcement K-6: One serving of mushrooms has more than the recommended daily serving of vitamin D, which can help our bones and teeth grow strong. They are also naturally low in calories, fat, and sodium, so if you like mushrooms, it's okay to eat them in large amounts.

Photo Link: <https://www.pexels.com/photo/mushroom-on-brown-wooden-plate-129465/>

March—Carrots

Kindergarten

- **Fun fact:** The first carrots eaten were purple carrots.
- **Nutrition blurb:** Carrots are good for your eyes because they have vitamin A, which helps support your sight.
- **Math activity:** The longest carrot was 20 ft.; is that taller or shorter than you?
 - Answer: taller
 - *Domain:* Counting and Cardinality
 - *Cluster:* Compare Numbers
 - *Standard 7*
- **Science activity:** How are carrots grown?
 - Answer: Carrots grow from seeds. They grow underground but have stems and leaves that come up out of the ground as they get bigger.
 - *Kindergarten:* Embedded Inquiry
 - *GLE 0007.Inq.2:* Ask questions, make logical predictions, plan investigations, and represent data.

First Grade

- **Fun fact:** The first carrots eaten were purple carrots. Orange carrots were not common until the 1700s.
- **Nutrition blurb:** Just one medium carrot (not a baby carrot) counts as one serving of vegetables.

- **Math activity:** Larissa ate 2 cups of lettuce; Betsy ate 3 cups more than Larissa. How many cups of lettuce did Betsy eat?
 - Answer: Betsy ate 5 cups of lettuce
 - *Domain:* Numbers and Operations in Base Ten
 - *Cluster:* Use place value understanding and properties of operations to add and subtract.
 - *Standard 5*
- **Science activity:** How are carrots grown?
 - Answer: Carrots grow from seeds. They grow underground but have stems and leaves that come up out of the ground as they get bigger.
 - *Embedded Inquiry*
 - *GLE 0007.Inq.2:* Ask questions, make logical predictions, plan investigations, and represent data.

Second Grade

- **Fun fact:** Baby carrots are longer carrots that have been peeled, trimmed to 1 ½–2 in. in length, and packaged.
- **Nutrition blurb:** Just one medium carrot (not a baby carrot) counts as one serving of vegetables.
- **Math activity:** If a carrot was 8 in. long and trimmed to be 2 in. for a baby carrot, how much of the carrot was trimmed off?
 - Answer: 6 in.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction.
 - *Standard 1*
- **Science activity:** Carrot seeds cannot grow at temperatures above 95 degrees Fahrenheit. During what season is it 95 degrees Fahrenheit in Tennessee?
 - Answer: summer
 - *Earth and Space Science*
 - *Standard 8:* the Atmosphere
 - *GLE 0207.8.1:* Associate temperature patterns with seasonal changes.

Third Grade

- **Fun fact:** Baby carrots were once longer carrots that have been peeled, trimmed to 1 1/2–2 in. in length, and packaged.
- **Nutrition blurb:** Carrots have potassium, which helps your muscles work properly.
- **Math activity:** Farmer Jenna in California grew eight times more carrots than farmer Trent in Tennessee. Farmer Trent grew 2 lbs. of carrots this year. How many pounds of carrots did Farmer Jenna grow?

- Answer: 16 lbs.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving multiplication and division.
 - *Standard 1*
- **Science activity:** The part of the carrot you eat is the root. The root functions to absorb nutrients and moisture, anchor the plant in the soil, support the stem, and store food.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0307.1.1:* Use magnifiers to make observations of specific plant and animal body parts and describe their functions.

Fourth Grade

- **Fun fact:** Carrots are not just orange; some varieties produce white, yellow, purple, and even black carrots. In fact, the first carrots were purple, and orange carrots were not common until the 1700s.
- **Nutrition blurb:** Carrots are rich in vitamin A and can supply more than the recommended daily value in just one serving. Vitamin A promotes healthy teeth, skin, and helps our vision.
- **Math activity:** Carrots are always in season. You can buy them fresh, frozen, or canned. Sarah has just bought a bag of 100 carrots. She wishes to freeze 60 of them. In other words, she will freeze $\frac{60}{100}$ carrots. Rewrite this fraction as a decimal.
 - Answer: 0.6
 - *Domain:* Number and Operations—Fractions
 - *Cluster:* Understand decimal notation for fractions, and compare decimal fractions.
 - *Standard 6*
- **Science activity:** Growing carrots in your garden can be easy, but watch out for insects that attack carrots, such as garden beetles and grasshoppers. How can these pests disturb the carrots' ecosystem?
 - Answer: Predation; the pests might eat the carrots' leaves, and the carrot cannot perform photosynthesis as well.
 - *Life Science*
 - *Standard 2:* Interdependence
GLE 0407.2.1: Analyze the effects of changes in the environment on the stability of an ecosystem.

Fifth Grade

- **Fun fact:** Carrots are not just orange; some varieties produce white, yellow, purple, and even black carrots. In fact, the first carrots were purple, and orange carrots were not common until the 1700s when the Dutch farmers grew them to match the orange Dutch flag.
- **Nutrition blurb:** Carrots are rich in vitamin A and can supply more than the recommended daily value in just one serving. Vitamin A promotes healthy teeth, skin, and helps our vision.

- **Math activity:** How many pounds of carrots will each person get if three people split a 1/2 lb. bag of carrots equally?
 - Answer: 1/6 lb.
 - *Domain:* Numbers and Operations—Fractions
 - *Cluster:* Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
 - *Standard 7c*
- **Science activity:** Photosynthesis is the process by which the green part of a plant uses sunlight to make its own food from carbon dioxide and water. Carrots produce food with photosynthesis using their green leafy tops. Do you know what the two byproducts of photosynthesis are?
 - Answer: oxygen and glucose (sugar)
 - *Life Science*
 - *Standard 3:* Flow of Matter and Energy
 - *GLE 0507.3.1:* Demonstrate how all living things rely on the process of photosynthesis to obtain energy.

Sixth Grade

- **Fun fact:** Carrots are not just orange; some varieties produce white, yellow, purple, and even black carrots. In fact, the first carrots were purple, and orange carrots were not common until the 1700s when the Dutch farmers grew them to match the orange Dutch flag.
- **Nutrition blurb:** Carrots are rich in vitamin A and can supply more than the recommended daily value in just one serving. Vitamin A promotes healthy teeth, skin, and helps our vision.
- **Math activity:** Half-cup serving of carrots provides about 220 percent of the daily value of vitamin A. If Rachel ate 1/4 cup of carrots, what percentage of the daily value of vitamin A would she be getting?
 - Answer: 110 percent
 - *Domain:* The Number System
 - *Cluster:* Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
 - *Standard 1*
- **Science activity:** Take your carrot in your hand before you eat it. Toss it lightly in the air and catch it in your hand. Putting the carrot in motion gives it kinetic energy. Now set the carrot on your desk. The carrot now has potential energy because of its height from the ground. It has the potential to fall and exert energy.
 - *Physical Science*
 - *Standard 10:* Energy
 - *GLE 0607.10.1:* Compare and contrast the three forms of potential energy, compare potential and kinetic energy.

PA Announcement K-3: Carrots are one of the best sources of vitamin A. Vitamin A is good for your bones, teeth, vision, and your skin.

PA Announcement K-6: Help your parents choose the best carrots by selecting the darkest orange and freshest looking carrots. Do not pick dried out or split open carrots. Carrots are good for two weeks in the refrigerator.

Photo Link: <https://www.pexels.com/photo/food-orange-carrot-macro-73640/>

April—Broccoli

Kindergarten

- **Fun fact:** The average American eats more than 4 lbs. of broccoli a year.
- **Nutrition blurb:** Broccoli, like milk, is a good source of calcium.
- **Math activity:** If Jenny ate four stalks of broccoli, and Bobby ate two stalks of broccoli, who ate more?
 - Answer: Jenny ate more.
 - *Domain:* Counting and Cardinality
 - *Cluster:* Compare Numbers
 - *Standard 7*
- **Science activity:** How is broccoli grown? Where does milk come from?
 - Answer: Broccoli grows in the ground from seeds. Milk comes from animals such as cows or goats.
 - *Embedded Inquiry*
 - *GLE 0007.Inq.2:* Ask questions, make logical predictions, plan investigations, and represent data.

First Grade

- **Fun fact:** The average American eats more than 4 lbs. of broccoli a year.
- **Nutrition blurb:** Broccoli, like milk, is a good source of calcium.
- **Math activity:** Susan has 13 stalks of broccoli. Joe has 10 more stalks than Susan. How many stalks of broccoli does Joe have?
 - Answer: Joe has 23 stalks of broccoli.
 - *Domain:* Numbers and Operations in Base Ten
 - *Cluster:* Use place value understanding and properties of operations to add and subtract.
 - *Standard 5*
- **Science activity:** How is broccoli grown? Where does milk come from?
 - Answer: Broccoli grows in the ground from seeds. Milk comes from animals such as cows or goats.

- *Embedded Inquiry*
- *GLE 0007.Inq.2:* Ask questions, make logical predictions, plan investigations, and represent data.

Second Grade

- **Fun fact:** The word “broccoli” comes from the Italian word “brocco,” meaning “arm” or “branch.”
- **Nutrition blurb:** Broccoli, like milk, is a good source of calcium.
- **Math activity:** The minimum recommended amount of fiber to get in one day is 25 grams. If you eat 2 cups of broccoli, which contain a total of 5 grams of fiber, how many more grams of fiber would you need to get the daily amount?
 - Answer: 20 more grams of fiber
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Represent and solve problems involving addition and subtraction.
 - *Standard 1*
- **Science activity:** Broccoli is a cool weather crop—it grows best in either fall or spring. What temperature is normal for fall? What temperature is normal for spring?
 - Answer: It depends on where you live, but for Tennessee, 60s and 70s for both seasons.
 - *Earth and Space Science*
 - *Standard 8:* the atmosphere
 - *GLE 0207.8.1:* Associate temperature patterns with seasonal changes.

Third Grade

- **Fun fact:** The word “broccoli” comes from the Italian word “brocco,” meaning “arm” or “branch.”
- **Nutrition blurb:** Cup-for-cup, broccoli has as much vitamin C as an orange.
- **Math activity:** If a stalk of broccoli was cut into six pieces, how many pieces would you have to eat to eat $\frac{1}{2}$ of the stalk of broccoli?
 - Answer: three
 - *Domain:* Numbers and Operations—Fractions
 - *Cluster:* Develop understanding of fractions as numbers.
 - *Standard 1*
- **Science activity:** Broccoli has leaves. This is the part of the plant that converts sunlight and carbon dioxide into energy.
 - *Life Science*
 - *Standard 1:* cells
 - *GLE 0307.1.1:* Use magnifiers to make observations of specific plant and animal body parts and describe their functions.

Fourth Grade

- **Fun fact:** Broccoli are vegetables which grow as florets (clusters of flower buds) on stalks (stems).
- **Nutrition blurb:** Cup-for-cup, broccoli has as much vitamin C as an orange.
- **Math activity:** The minimum recommended amount of fiber to get in one day is 25 grams. 1 cup of broccoli has 2.2 grams of fiber. Round the grams of fiber in 1 cup to the nearest whole number.
 - Answer: 2 grams
 - 3 cups of broccoli have 6.6 grams of fiber—round this to the nearest whole number.
 - Answer: 7 grams
 - *Domain:* Number and Operations in Base Ten
 - *Cluster:* Generalize place value understanding for multi-digit whole numbers.
 - *Standard 3*
- **Science activity:** Broccoli has leaves. The leaf margin is the edge of the leaf. The leaf is usually flat and grows from the stem of the plant. It captures sunlight and carbon dioxide to make food for the plant to use to grow; this is called photosynthesis.
 - *Life Science*
 - *Standard 3:* Flow of matter and energy
 - *GLE 0407.3.1:* Demonstrate that plants require light energy to grow and survive.

Fifth Grade

- **Fun fact:** Broccoli is a member of the cabbage family and may help prevent certain types of cancer.
- **Nutrition blurb:** Cup-for-cup, broccoli has as much vitamin C as an orange.
- **Math activity:** The minimum recommended amount of fiber to get in one day is 25 grams. 1 cup of broccoli has 2.2 grams of fiber. A serving of broccoli is $\frac{1}{2}$ cup. How many grams of fiber are in $\frac{1}{2}$ cup?
 - Answer: 1.1 grams
 - How many cups do you need to get all 25 grams of fiber?
 - Answer: 11.36 cups of broccoli
 - *Domain:* Numbers and Operations in Base Ten
 - *Cluster:* Perform operations with multi-digit whole numbers and with decimals to hundredths.
 - *Standard 7*
- **Science activity:** Broccoli has leaves. The leaf margin is the edge of the leaf. The leaf is usually flat and grows from the stem of the plant. It captures sunlight and carbon dioxide to make food for the plant to use to grow; this is called photosynthesis.
 - *Life Science*
 - *Standard 3:* Flow of matter and energy

- *GLE 0507.3.1*: Demonstrate how all living things rely on the process of photosynthesis to obtain energy.

Sixth Grade

- **Fun fact:** Broccoli is a member of the cabbage family and may help prevent certain types of cancer.
- **Nutrition blurb:** Cup-for-cup, broccoli has as much vitamin C as an orange.
- **Math activity:** The minimum recommended amount of fiber to get in one day is 25 grams. 1 cup of broccoli has 2.2 grams of fiber. A serving of broccoli is 1/2 cup. What percentage of the daily recommended amount of fiber does one serving of broccoli contain?
 - Answer: 4.4 percent
 - How many servings of broccoli would you need to eat to get the recommended amount of fiber for a whole day?
 - Answer: 22.7 servings (1/2 cup servings)
 - If one apple has 3.3 grams of fiber, how many servings (1/2 cup) of broccoli would you have to eat to have the same amount of fiber as one apple?
 - Answer: three servings
 - *Domain:* Ratios and proportional relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 3*
- **Science activity:** California produces around 90 percent of the broccoli in America—what biome(s) does California consist of?
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0607.2.4:* Analyze the environments and the interdependence among organisms found in the world’s major biomes.

PA Announcement K-3: Broccoli, like milk, is a good source of calcium, which helps your bones and teeth stay strong.

PA Announcement K-6: Cup-for-cup, broccoli has as much vitamin C as an orange. Vitamin C helps you fight off sickness such as colds.

Photo Link: <https://www.pexels.com/photo/green-broccoli-vegetable-on-brown-wooden-table-47347/>

May—Strawberries

Kindergarten

- **Fun fact:** Look at your strawberries; do you see the little yellow dots? These are seeds. Strawberries are the only fruit that wear their seeds on the outside.
- **Nutrition blurb:** One serving of strawberries gives our bodies vitamin C, which can help fight off colds and other sicknesses. One serving is about four large strawberries. Do you think you could eat that many?
- **Math activity:** Strawberry picking season is in the summer. This summer, your mom has picked three strawberries and you have picked two strawberries. If your mom gives her three strawberries to you, how many strawberries do you have?
 - Answer: five
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
 - *Standard 5*
- **Science activity:** Living things require food, water, and air. Which of these things do you think the strawberries need to grow in the soil?
 - Answer: All of them—plants need air, water, and food.
 - *Standard 3*
 - *Flow of Matter and Energy*
 - *GLE 0007.3.1:* Recognize that living things require water, food, and air.

First Grade

- **Fun fact:** Look at your strawberries; do you see the little yellow dots? These are seeds. Strawberries are the only fruit that wear their seeds on the outside.
- **Nutrition blurb:** One serving of strawberries gives our bodies vitamin C, which can help fight off colds and other sicknesses. One serving is about four large strawberries. Do you think you could eat that many?
- **Math activity:** What is $10-8$? Think of this example to help: If you have tasted eight strawberries today, and your classmate sitting next to you has tasted two strawberries today, how many total strawberries have you both tasted? 10. Use what you know about these numbers to solve $10-8$.
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Understand and apply properties of operations and the relationship between addition and subtraction.
 - *Standard 4*
- **Science activity:** Look at all of the strawberries around you that your classmates have. Classify them by differences in shape, color, and texture. Do some look bumpier than others? Are some darker red? Are the insides of some more white than others?
 - *Physical Science*
 - *Standard:* Matter
 - *GLE 0107.9.1:* Classify objects according to their physical properties.

Second Grade

- **Fun fact:** Look at your strawberries; do you see the little yellow dots? These are seeds. Strawberries are the only fruit that wear their seeds on the outside.
- **Nutrition blurb:** One serving of strawberries is about 1/2 cup, or four large strawberries or six small strawberries. Do you think you could eat that many? One serving of strawberries gives our bodies vitamin C, which can help fight off colds and other sicknesses.
- **Math activity:** John is a farmer who is planting strawberries in the spring. He has planted 80 rows of strawberries and wants to plant 10 more rows. How many rows would John have after planting the rest?
 - Answer: 90 rows
 - *Domain:* Number and Operations in Base Ten
 - *Cluster:* Use place value understanding and properties of operations to add and subtract.
 - *Standard 8*
- **Science Activity:** Strawberries grow best in the spring and summer. What is a normal temperature for the warmer months like June and July? Do you think the temperature drops when the sun goes down at night?
 - Answer: Anywhere from 80–100 degrees Fahrenheit, and yes.
 - *Earth and Space Science*
 - *Standard 8:* The Atmosphere
 - *GLE 0207.8.1:* Associate temperature patterns with seasonal changes.

Third Grade

- **Fun fact:** The U.S. grows the most strawberries in the world.
- **Nutrition blurb:** A 1/2 cup of strawberries is an excellent source of vitamin C, which helps us fight off sicknesses. A 1/2 cup of strawberries is about four large strawberries or six small strawberries.
- **Math activity:** A summer salad recipe for a party calls for 4.34 oz. of strawberries. Jack is going to make four of these salads. 4.34 oz. multiplied by four is 17.36 oz. Round the ounces to the nearest whole tenth of an ounce.
 - Answer: 17.4 oz.
 - *Domain:* Number and Operations in Base Ten
 - *Cluster:* Use place value understanding and properties of operations to perform multi-digit arithmetic. (A range of algorithms may be used.)
 - *Standard 1*
- **Science Activity:** Do you see the little seeds on the outside of the strawberry? Strawberries are the only fruit that have their seeds on the outside. Use your magnifier to look closely at these seeds. See if you can pull one off to examine it closer.
 - *Life Science*
 - *Standard 1:* Cells
 - *GLE 0307.1.1:* Use magnifiers to make observations of specific plant and animal body parts and describe their functions.

Fourth Grade

- **Fun fact:** The U.S. grows the most strawberries in the world.
- **Nutrition blurb:** A 1/2 cup of strawberries is an excellent source of vitamin C, which helps us fight off sicknesses; it has more vitamin C than an orange.
- **Math activity:** After strawberries are planted, they will blossom with flowers. After blossoming, six weeks will pass before they are ready to be picked. Knowing that there are seven days in a week, how many days will pass before the flowers are ready to be picked?
 - Answer: 42 days
 - *Domain:* Operations and Algebraic Thinking
 - *Cluster:* Use the four operations with whole numbers to solve problems
 - *Standard 1*
- **Science activity:** Growing strawberries in your garden can be easy, but watch out for pests that attack strawberries, such as slugs and strawberry-bud weevils. How can these pests disturb the strawberries' ecosystem?
 - Answer: Predation; the insects could eat the green leaves on the strawberries, which could interfere with photosynthesis.
 - *Life Science*
 - *Standard 2:* Interdependence
 - *GLE 0407.2.1:* Analyze the effects of changes in the environment on the stability of an ecosystem.

Fifth Grade

- **Fun fact:** If you pick fresh strawberries, that's when they are the sweetest. The sugars will turn to starch over time, which is why they may not be as sweet from the grocery store.
- **Nutrition blurb:** Strawberries are high in phytonutrients that can protect us from certain cancers. They are a good source of vitamin C, which helps us have a stronger immune system. They also have iron, magnesium, and calcium to make healthy bones and a strong heart.
- **Math activity:** An average size of a strawberry is about 2 in. long, or about 5 cm. How many meters is a strawberry?
 - Answer: .05 meters
 - *Domain:* Measurements and Data
 - *Cluster:* Convert like measurement units within a given measurement system.
 - *Standard 1*
- **Science activity:** Photosynthesis is the process by which the green part of a plant uses sunlight to make its own food from carbon dioxide and water. Strawberries produce food with photosynthesis. Do you know what the two byproducts of photosynthesis are?
 - Answer: oxygen and glucose (sugar)
 - *Life Science*
 - *Standard 3:* Flow of Matter and Energy

- *GLE 0507.3.1*: Demonstrate how all living things rely on the process of photosynthesis to obtain energy.

Sixth Grade

- **Fun fact:** If you pick fresh strawberries, that's when they are the sweetest. The sugars will turn to starch over time, which is why they may not be as sweet from the grocery store.
- **Nutrition blurb:** Strawberries are high in phytonutrients that can protect us from certain cancers. They are a good source of vitamin C, which helps us have a stronger immune system. They also have iron, magnesium, and calcium to make healthy bones and a strong heart.
- **Math activity:** Four boxes of strawberries at Kroger are on sale together for \$10.00. What is the rate of each box of strawberries?
 - Answer: \$2.50
 - *Domain:* Ratios and Proportional Relationships
 - *Cluster:* Understand ratio concepts and use ratio reasoning to solve problems.
 - *Standard 2*
- **Science activity:** Take your strawberry in your hand before you eat it. Toss it lightly in the air and catch it in your hand. Putting the strawberry in motion gives it kinetic energy. Now set the strawberry on your desk. The strawberry now has potential energy because of its height from the ground. It has the potential to fall and exert energy.
 - *Physical Science*
 - *Standard 10:* Energy
 - *GLE 0607.10.1:* Compare and contrast the three forms of potential energy, compare potential and kinetic energy.

PA Announcement K-3: The heart shape of a strawberry is the first clue that it's healthy to eat. Eating strawberries will help protect our heart and gives us many vitamins.

PA Announcement K-6: Strawberries are among the healthiest foods. They give us vitamin C, antioxidants, and fiber, and don't have any fat. Antioxidants are little chemicals in food that help protect us from cancer and other illnesses.

Photo Link: <https://www.pexels.com/photo/agriculture-berry-close-up-color-298696/>

Free Materials:

- <http://www.extension.umn.edu/food/farm-to-school/education/cafeteria/>

- [https://www.education.ne.gov/ns/nslp/FFVP/BINDERS/F-V Fact Sheets Recipes.pdf](https://www.education.ne.gov/ns/nslp/FFVP/BINDERS/F-V_Fact_Sheets_Recipes.pdf)
- <http://www.islandgrowschools.org/blog/categories/harvest-of-the-month>
- <https://store.msueextension.org/Departments/Harvest-of-the-Month-Posters.aspx>
- <https://ndfarmtoschool.org/nd-harvest-of-the-month/>
- <http://www.clover.okstate.edu/fourh/aitc/lessons/extras/hom.html>
- <http://www.wafarmtoschool.org/Page/98/promotion>
- <http://harvestofthemonth.cdph.ca.gov/Pages/Posters.aspx>