



Fruit, Fruit, and More Fruit - Second Grade

Purpose

Students will gain and apply information from the text, *The Fruits We Eat* written by Gail Gibbons to categorize fruit based on: where they are planted, how they are planted, harvested, processed, and shipped to stores for purchase.

Subject Area(s)

English Language Arts, Math, Science, and Social Studies

Common Core/Essential Standards

English Language Arts

- **CCSS.ELA-Literacy RI.2.4** Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- **CCSS-ELA-Literacy RI.2.5** Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
- **CCSS-ELA-Literacy RI.2.9** Compare and contrast the most important points presented by two texts on the same topic.
- **CCSS.ELA-Writing W.2.2** Write informative/explanatory text in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
- **CCSS.ELA-Writing W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
- **CCSS.ELA-Language L.2.6** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g. *When other kids are happy that makes me happy*).

Math

- **CCSS-Math-Measurement and Data 2.MD.D.9** Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
- **CCSS-Math-Measurement and Data 2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple

- put together, take-apart, and compare problems using information presented in the bar graph.
- **CCSS-Math-Geometry 2.G.A.3** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize the equal shares of identical wholes need not have the same shape.

Science

- **NC Essential Standard 2.L.2 Evolution and Genetics** Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.
- **2.L.2.1** Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.
- **2.L.2.1** Recognize that there is variation among individuals that are related.

Social Studies

- **2.G.2.1** Give examples of ways in which people depend on the physical environment and natural resources to meet basic needs.
- **2.E.1.2** Explain the role and impact consumers and producers have on the economy.
- **2.E.1.3** Summarize the concept of supply and demand.

Agricultural Literacy Outcomes

Agriculture and the Environment Outcomes

- Describe how farmers/ranchers use land to grow crops and support livestock.
- Provide examples of how weather patterns affect plant and animal growth for food.

Plants and Animals for Food, Fiber and Energy Outcomes

- Explain how farmers/ranchers work with the lifecycle of plants and animals (planting/breeding) to harvest a crop.
- Identify the importance of natural resources (e.g., sun, soil, water, minerals) in farming.

Science, Technology, Engineering and Mathematics Outcomes

- Identify examples of how the knowledge of inherited traits is applied to farmed plants and animals in order to meet specific objectives (i.e., increased yields, better nutrition, etc.).

Culture, Society, Economy and Geography Outcomes

- Identify plants and animals grown or raised locally that are used for food, clothing, shelter, and landscapes.
- Explain why farming is important to communities.

Essential Questions

1. What are fruits?
2. What characteristics of fruits make them different from vegetables?
3. What are the different categories of fruits and what are their characteristics?
4. What are the differences between an annual and perennial?
5. What are the different parts of a fruit?
6. How does climate impact what types of fruits can be grown?
7. What is the difference between seasonal climates and warm climates?
8. What are some ways that farmers harvest their fruit?
9. How do farmers determine what type of fruits they want to grow?
10. Where can you find fresh fruit to eat?

Vocabulary

Perennial: plants that grow for many seasons without having to be replanted.

Annuals: plants that grow for only one growing season and must be planted to grow a new plant.

Fruit: a food that is usually sweet, has a fleshy texture, and grows on trees, bushes, vines, and plants.

Botanist: a scientist who studies plants.

Cultivated: food that is grown, cared for, and harvested by people for consumption.

Harvesttime: time when fruits are ready to be picked.

Vines: plants that creep along the ground.

Cluster: group of fruit.

Pit/Stone: one seed that is found on the inside of a fruit.

Seasonal Climate: weather patterns that change throughout the year.

Dormant: plant that is alive but not growing.

Warm Climate: warm weather patterns that remain consistent throughout the year.

Field: an open area of land without woods or buildings.

Cranberry Bog: a low periodically flooded area in which cranberries are grown.

Plantation: a large area of land especially in a hot part of the world where crops (such as cotton) are grown.

Vineyard: a plantation of grapevines, especially one producing grapes for winemaking.

Orchard: an area of land devoted to the cultivation of fruit or nut producing trees.

Grove: a small orchard, or group of fruit-bearing trees, especially fruit trees.

Student Motivator

Give each student in class a small portion of a piece of fruit; however check with your school nurse for

any food allergies. Using their senses (or eating the fruit) students will record observations about the fruit. Encourage students to write any information that they know about their particular fruit. Once they are finished have them turn and talk to a neighbor about their fruit and observations. Once they are finished sharing, ask each student to create a question that they do not know the answer to and record the question on a sentence strip. Students will share again with their entire class the question and one observation made with their neighbor. Post the questions in the classroom and address them once they arise during the lesson.

Using YouTube show students the video [The Sweet North Carolina Peach](#) to get the students thinking about fruits grown in North Carolina.

Background Knowledge

The book, *The Fruits We Eat* written by Gail Gibbons focuses on fruits. The book identifies different categories of fruit and their characteristics, parts of the fruit, when fruits are harvested, and how fruits are processed and used. Details are used to describe the types of plants that produce fruits and if those plants are annuals or perennials. Different varieties of fruits are identified to explain those that are indigenous to certain climates. Students will learn about different life cycles of fruits and how fruits are cultivated to maximize crop production. Students will use the website [Fresh for Kids](#) and [North Carolina Grower/Shipper Directory](#) to choose and research a fruit of their choice. Students will create a *foldable book* showcasing their fruit knowledge.

As you read the book highlight key vocabulary words and have students define the words based on their understanding of the text. Some questions to ask students while you are reading are: *what fruits have you eaten and have you ever picked/harvested the fruit? Does the climate in North Carolina allow farmers to grow all types of fruit? What fruits are we able to grow in North Carolina and when do we see these fruits grown? Do you think we can grow fruits in all regions of North Carolina or are some fruits better suited to one region or another? What conditions must be present for a successful harvest?*

North Carolina's climate lends itself to production of a variety of fruits. The length of growing seasons from the mountains to the coast as well as the temperature and average rainfall benefit farmers. North Carolina's soil that is very specific to the regions also enables farmers to grow fruits that have very specific needs as far as acidity, nutrients, and absorption rates.

What this means in North Carolina is farmers can produce and harvest fruits from early spring through late fall. Many of the fruits can be stored for long periods of time allowing North Carolina more

flexibility compared to other states with less diverse climates and soil types. Children in North Carolina have access to a wide variety of fresh fruits produced in their state; therefore, understanding the importance for each variety. These conditions provide North Carolina with additional revenue from its agricultural commodities.

Procedures

Activity 1

1. Introduce the book, *The Fruits We Eat* written by Gail Gibbons.
2. Show students the cover of the book and have students identify fruits they recognize. Record their answers on chart paper.
3. Begin reading the book stopping to identify key vocabulary and asking students to define words based on the reading. Record these words and definitions where they can be referenced throughout the activities.
 - a. Page 3- perennial, annual
 - b. Page 6- botanist, fruit,
 - c. Page 8- cultivated, harvesttime
 - d. Page 13- vines
 - e. Page 14- cluster
 - f. Page 18- pit, stone
 - g. Page 22- seasonal climate, dormant
 - h. Page 23- warm climate
 - i. Page 25- field, bog, plantation, vineyard, orchard, grove
4. Once you have finished reading the book, as a class conduct a poll to determine the favorite fruit for each student. Create a chart that can be referred to later (same as the words and definitions) that shows the fruit and how many students chose that fruit as their favorite.
5. Students will then choose a fruit that they are not familiar with to research. Key information that they will need to include can be found on the *Fruit Research Question Form* found in the **Essential Files**. Students will mainly use the [Fresh For Kids-Fruit](#) website to research their fruits.
6. When your botanists (students) complete their research they will create a *foldable book*. They will include the information they researched in their *book*. The expert botanist will then share their research with their class botanists. *Foldable book* directions and sample can be found in the **Essential Files**.

Activity 2

1. Using the favorite fruit data that you collected during the reading of the book, students will create a bar graph displaying the most and least favorite fruits determined by the class.
2. Next, divide your class into groups of three.
3. Ask fellow teachers to allow a small group of students (3 in each group) to conduct a poll regarding fruits in their classrooms.
4. Each group will use the [North Carolina Grower/Shipper Directory](#) and choose three fruits that are grown in North Carolina.
5. Each group has to choose a different combination of fruits. Groups will then go to assigned classrooms where they will poll the students asking out of the three fruits which one is their favorite.
6. Each group will need to record their data in a data table. The group will decide what type of data table they will use. (Examples: T-chart, tally marks, fruits names with number of student choices beside)
7. Once the data has been collected they will return to the classroom.
8. Provide each group with a large piece of white construction paper or chart paper. Using the paper, groups will create a bar graph on their own using the data collected from the surveyed classrooms.
9. Next, each group will post the graphs from the survey around the room.
10. Using sticky notes groups will rotate around the room and create simple put together, take-apart, and compare problems. See link below for directions.
<http://www.corestandards.org/Math/Content/mathematics-glossary/Table-1/>
11. Students will write their problems on the sticky note (not solution) and place on each graph. Each group will need to create two problems.
12. Allow 3-5 minutes for the groups to work and then have groups rotate to the next graph where they will repeat the same process. Groups should look at the sticky notes already placed on the graph so there are no duplicate problems.
13. Continue this rotation pattern until each group returns to their original graph. The original group will then work together to solve the simple problems that were created on sticky notes based on their graph data.

Activity 3

1. As a class refer back to page 14 and 15 in *The Fruits We Eat*. You should record the different variety of grapes on the board.

2. While discussing the different grapes record the characteristics of the variety beside and under each type.
3. Ask the students the following questions. *How are they different? What characteristics do they share for being placed in the same fruit family? Are there other fruits with different varieties?*
4. Using the same groups as before assign each group a fruit family. (Example: apple, blueberry, or peach)
5. The groups will research and record the different varieties of fruit in that fruit family and their individual characteristics.
6. Next, have groups share their research for the assigned fruit family.
7. Each group should share the following information based on their research; *what are the characteristics that are used to identify the different varieties? Discuss color, shape, taste, size, growing season, and climate. Are these characteristics used for each fruit family or are their different characteristics used to identify the fruits?*
8. Discuss how there are varieties within each fruit family (Example: Apple Family; Golden Delicious, Red Delicious, Gala, Pink Lady, etc...) different fruits within the fruit category (Example: citrus, berry)
9. Point out that in this situation fruits are related to one another and share similar characteristics. Make a comparison - in the animal family we have the same situation. In the canine family there are many different breeds. Each breed has unique characteristics that they share that make them different from other breeds.
10. Show students a picture of a German Sheperd and a Yorkie or any two different breeds of a dog.
11. Have students describe the characteristics of each breed and then draw comparisons between the two that are similar allowing them to both fall into the canine family. The idea behind this activity is that characteristics of the adult are passed on to the offspring in both plants and animals. Refer the student's attention back to the chart you created based on the characteristics of the different types of grapes.

Activity 4

1. Collect grocery store sales papers for several weeks from different chains of stores.
2. Group the students using previous groups and give each group 1-2 sales fliers.
3. Have students go through the fliers and record the different types of fruit they find. This also would include processed fruits.
4. When they have their list of products have them refer to the fresh fruits and identify what season the fruits would be harvested.

5. If possible (pre-planning) have fliers available that are from different times of the year. Have students locate the date on the flier and determine the season the flier falls into.
6. *Ask students if they have ever wanted strawberries in January? Do we harvest strawberries in North Carolina during the month of January? Refer to the What's in Season Chart found in the Essential Files.*
7. Some questions that you can ask are: *What happens when a consumer wants a product but it is not available locally? Does this change the cost of the product? In what ways and why? How do we get products to our area if they are not grown locally?*
8. Point out some fruits are not available locally in certain seasons, for instance bananas in the winter. *Where would we get these fruits from and how would we get those products to the United States?*
9. *Why is it important to purchase fruit from our local farmers?* Use this question to discuss the economics behind farming. People become farmers to make a living as well as provide food for the general population. You could ask *How would purchasing fruits from outside North Carolina impact farmers in North Carolina?*
10. Provide students with 2-4 fruits that are not native to the United States and have them research where they are grown and how they are transported to the United States for consumption. *How does this transport impact the quality of food?* Examples of fruits to research are banana, mango, star fruit, kiwi, prickly pear, papaya, longan, kumquat, plantain, and persimmon.

Materials

- *The Fruits We Eat* written by Gail Gibbons
- Sentence strips
- Graph paper
- Technology
- Chart paper
- Sticky Notes
- Blank Paper
- Variety of fresh fruit
- Grocery store sales papers
- Fruit research questions

Suggested Companion Resources

- *The Vegetables We Eat* written by Gail Gibbons
- *How Did That Get In My Lunchbox? The Story of Food* written by Chris Butterworth

- *Fruits On My Plate* written by Mari Schuh
- MyPlate Kids' Place
<http://www.choosemyplate.gov/kids/index.html>
- NC Apple Growers Association
<http://www.ncapplegrowers.com/>
- NC Strawberry Association
<http://www.ncstrawberry.com/>
- National School Lunch Program Material Fact Sheet Fruits and Vegetables
<http://www.fns.usda.gov/nslp/nslp-material-fact-sheets-vegetables-fruits>
- Ag in the Classroom- Kid's Zone
<http://www.agclassroom.org/kids/index.htm>

Essential Files

- [*North Carolina's National Rank*](#)
- [*North Carolina's Highlight Ag Statistics*](#)
- [*What's In Season Chart*](#)
- [*Fruit Research Question Form*](#)
- [*A Look at North Carolina Agriculture*](#)
- [*Foldable Book Directions*](#)

Essential Links

- Fresh for Kids – Fruit
http://www.freshforkids.com.au/fruit_pages/fruit.html
- North Carolina Grower/Shipper Directory
<http://www.ncfreshlink.com/shipperdirectory/fruit.htm>
- North Carolina Department of Agriculture – Ag is Cool
<http://www.ncagr.gov/agscool/>
- Nourish Interactive
<http://www.nourishinteractive.com/nutrition-education-printables/category/31-fruit-food-group-myplate-healthy-foods-kids-fun-pages>
- Best Health
<http://www.besthealthmag.ca/best-eats/nutrition/7-exotic-fruits-and-why-theyre-good-for-you?slide=1#hbqxhFOSamTCQvKj.97>

Ag Facts

- Fruits, vegetables, nuts, and berries make up 5.1% of North Carolina's agriculture commodities.

- North Carolina's climate is conducive to many types of fruits but not tropical fruits that would be found in *warm climates* since North Carolina experiences *seasonal climates*.
- In 2012 blueberries were ranked 15th and watermelons were ranked 19th in farm dollars for North Carolina.
- In 2014 North Carolina was 6th in the nation for blueberry production (USDA) and 7th for apple production.

Extension Activities

- Using the book *The Vegetables We Eat* written by Gail Gibbons, students can create a T-chart or Venn diagram comparing fruits to vegetables.
- Using a variety of fruit cut or separate into sections to demonstrate fractions.
- Students can find the mass of each individual fruit that can be bought in bulk (e.g., apples, oranges, bananas).
- Using a map of North Carolina identify the three different regions, research, and record what fruits are grown in each region and county.

Sources & Credits

- <http://www.merriam-webster.com/>
- <https://www.youtube.com/watch?v=fJEuw7p8RiY>
- <http://www.ncagr.gov/>
- <http://www.usda.gov/wps/portal/usda/usdahome>
- http://www.freshforkids.com.au/fruit_pages/fruit.html
- <http://www.ncfreshlink.com/shipperdirectory/fruit.htm>
- <http://www.ncagr.gov/agscool/>
- <http://www.nourishinteractive.com/nutrition-education-printables/category/31-fruit-food-group-myplate-healthy-foods-kids-fun-pages>
- <http://www.besthealthmag.ca/best-eats/nutrition/7-exotic-fruits-and-why-theyre-good-for-you?slide=1#hbqhxhFOSamTCQvKj.97>
- <https://blogs.edutech.nodak.edu/badlandsreadingcouncil/files/2012/03/reading-and-study-skills-foldables.pdf>