

# My Family's Peach Farm: Economic Understandings

## Grade

3<sup>rd</sup> - 5<sup>th</sup> grade, 8-11 years old

## Time

- One 45-minute period to introduce lesson and writing assignment
- Multiple periods for research, writing, creating, and editing (dependent upon level and grade)

## Purpose

Students will gain an understanding of how a family's peach tree farm can economically impact the community in which they live as well as the economy at the national level.

## Georgia Standards of Excellence

### 3<sup>rd</sup> Grade

- **SS3E1: Define and give examples of the four types of productive resources.**
- **SS3E3: Give examples of interdependence and trade and explain the benefits of voluntary exchange.**
  - a. Describe the interdependence of consumers and producers.
  - b. Describe how goods and services are allocated by price in the marketplace.
  - c. Explain that some goods are made locally, some elsewhere in the country, and some in other countries.

### 4<sup>th</sup> grade

- **SS4E1: Use the basic economic concepts of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events.**
  - a. Describe opportunity cost and its relationship to decision-making across time (e.g., decisions to settle in the West).
  - b. Explain how price incentives affect people's behavior and choices: decisions about what crops (e.g., cotton, and tobacco) to grow and products (e.g., textiles) to produce.
  - f. Give examples of technological advancements and their impact on business productivity during the development of the United States. (e.g., cotton gin, steamboat, steam locomotive, and telegraph).

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## 5<sup>th</sup> grade

- **SS5E2: Describe the functions of four major sectors in the U.S. economy.**
  - a. Describe the household function in providing resources and consuming goods and services.
  - b. Describe the private business function in producing goods and services.
- **SS5E3: Describe how consumers and producers interact in the U.S. economy**

## Materials

- *My Family's Peach Farm* book (hard copies or online)
- PowerPoint per grade
- Worksheet per grade
- Drawing paper
- World map or globe (optional)
- United States map (optional)
- Georgia map (optional)

## Resources

- Georgia Farm Bureau: <https://www.gfb.org/>
- Georgia Peach Council: <https://gapeaches.org/>
- University of Georgia: <https://extension.uga.edu/topic-areas/fruit-vegetable-ornamentals-production/peaches.html>

## Vocabulary

**Drip Tape:** used for irrigation to allow water to drip slowly to the roots of plants, either from above the soil surface or buried below the surface

**Ecosystem:** A community of interacting organisms and their environment. Ecosystems often contain many living things and can be as small as your backyard or as large as the ocean

**Environment:** All our surroundings including the air, soil, water, plants, and animals

**Grading:** A sorting process that places peaches into categories according to size, shape, color and volume

**Harvesting:** The process or period of gathering crops

**Irrigation:** The supply of water to land or crops to help plants grow

**Loam:** A soil having the appropriate amount of silt, clay and sand for good plant growth

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**Nutritional:** Includes everything in your food, such as vitamins, protein, fat and more. It's important to eat a variety of foods, including fruits, vegetables, dairy products and grains so that you have what you need to grow and be healthy

**Orchard:** A piece of land planted with fruit trees

**Packing Shed:** A shed that handles packing and shipping of peaches and other agricultural products

**Pest:** A destructive insect or other animal that attacks crops, food or livestock

**Prune:** To trim a tree by cutting away dead or overgrown branches to let in more sun and increase fruitfulness and growth

**Ripening:** The process of being full-grown and ready to eat

**Prune:** To trim a tree by cutting away dead or overgrown branches to let in more sun and increase fruitfulness and growth

**Scales:** Tiny insects that suck the plant juices from twigs, branches, fruit and foliage

## Background

Peaches are not historically native to Georgia. Franciscan monks introduced peaches to the Georgia coast on St. Simons and Cumberland islands in 1571. By the mid-1700s, the Cherokee were cultivating peaches! Peaches were successfully shipped and sold outside of Georgia in the mid-1800s when Raphael Moses used champagne baskets to help preserve the flavor of the fruit.

The Georgia peach industry increased significantly after the civil war and reached an all-time high in 1928 (producing almost eight million bushels). After the abolition of slavery, farmers were looking for a less labor intensive crop (unlike cotton). Mr. Samuel H. Rumph was one of the first to ship peaches from Georgia to New York, the first to ship them in a cooled railroad car, and the first to plant a large commercial orchard. He placed refrigerators (boxes full of ice, also called iceboxes) in the middle of a railroad car and then placed boxes of peaches (each box holding six crates) around the iceboxes. This idea of a cooled car eventually led to development of refrigerated railroad cars! He also developed a new peach variety and named it after his wife, Elberta. This variety was successful due to its higher quality and durability during shipping. Until 1960, the Elberta was a leading peach variety in Georgia. Due to these technological advances, peach production was able to expand in Georgia during the 19<sup>th</sup> century!

Today Georgia is home to more than forty varieties of commercial peach trees. Those peach trees are divided into two categories, freestone and clingstone. The fruit of the freestone peach easily breaks away from the stone (or pit), while the clingstone adheres to the pit. Georgia peaches are available for approximately sixteen weeks per year, from mid-May to mid-August.

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While we are still often referred to as the 'Peach State', today Georgia ranks third nationally overall for peach production; right behind California and South Carolina. Even so, Georgia still gets to enjoy important production and marketing advantages! Being close to eastern markets, there are normally good prices during the early harvests and high-quality fruit. Most peaches grown in Georgia are sold in the wholesale market, with a much smaller percentage sold at roadside markets. Little to no processing of the peaches takes place in Georgia.

## Procedures

1. Read aloud *My Family's Peach Farm* or provide a copy to each student and allow independent reading.
2. Lead discussions appropriate for the grade level. Worksheets and PowerPoints are available to help lead discussions. Worksheets are designed with the front being completed using *My Family's Peach Farm* and the back as an assessment tool for the economic concepts discussed (designing their own farm).

## 3<sup>rd</sup> Grade

1. Lead a discussion with students about the economic and agricultural importance of Georgia's peach industry and its possible impact on our everyday lives. Use the following questions:
  - a. Was there anything that surprised you about the process of growing peaches?
  - b. Give examples of the productive resources of the Pearson's peach farm.
    - i. Natural- The farmland where the peach trees are grown; the trees themselves; water
    - ii. Human Labor- Peach pickers or workers on the peach tree farm
    - iii. Capital goods- Peaches, products made from peaches
    - iv. Entrepreneurship- Grandparents who started the peach farm
  - c. What about other types of farms? Would they have similar or different resource needs? Why?
  - d. How is there an interdependence between peach farmers and consumers?
2. Is Georgia the only state growing peaches? What about other countries? Lead a discussion about where peach farms are grown. Have students find these locations on a map/globe.
  - e. Locally grown in middle Georgia right below the fall line
    - i. Top three counties: Taylor, Peach, and Macon
  - f. Other states: California, South Carolina.

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- g. Other leading countries in peach production include:
  - i. China (1<sup>st</sup>)
  - ii. Spain (2<sup>nd</sup>)
  - iii. Italy (3<sup>rd</sup>)
  - iv. Greece (4<sup>th</sup>)
  - v. United States (5<sup>th</sup>)

## 4<sup>th</sup> Grade

1. Lead discussion into the entrepreneurship of the peach farm. Focus on opportunity costs, asking the students why they think the Pearson family decided to start a peach farm and why are they continuing today.
  - a. Was there any opportunity cost when the Pearson's decided to grow peaches?
  - b. What kinds of environmental factors on the farm does the farmer think about when deciding what crop to grow?
    - i. Soil quality, annual precipitation, temperature
    - ii. If the crop grows well without many additional resources (water, fertilizer, workers to prune, etc), then there is less cost on the farmer to grow that crop.
    - iii. If the crop does not grow well, then the farmer will need to increase additional resources to help the crop grow. This will increase the cost to the farmer, which then will increase the cost to the consumer so the farmer can still have a profit to support his/her family.
2. How does technology help farmers?
  - a. Discuss how Samuel H. Rumph's developments of a refrigerated railroad car and a high quality, durable peach variation assisted in the commercial development of Georgia's peach industry in the 19<sup>th</sup> century.
  - b. Can students list other historic inventions or technologies that has helped other Georgia farm industries? (cotton gin)
  - c. These are examples of how technology assisted farmers in reducing the overall cost of farming that crop, allowing for the farmer to increase the amount of money they keep (profit).
  - d. Have the students use the *My Family's Peach Farm* book to show how newer technology is assisting farmers.
    - i. Irrigation (drip tapes), page 8
    - ii. Tractors, page 16
    - iii. Conveyor belts, page 17
    - iv. Sorting machine, page 18
    - v. Camera grading peaches, page 19

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- e. Do all farms have the same type of equipment or is there a difference depending upon what is grown/raised?
  - i. Similar equipment: GPS tractors, irrigation systems, conveyor belts
  - ii. Different equipment: Cotton pickers, combines, mowers and shredders, planters, automated milking machines, etc.
3. Discuss why as consumers, we should care how farmers are affected by opportunity costs and technology?
  - i. The consumer has to be willing to pay a cost for the product/crop. If the cost is too high, the consumer will not be willing to buy.
    - i. This cost is determined by how much the consumer wants the product/service. If there is a high desire (demand), then the consumer will be willing to pay more for that good/service.
  - ii. The farmer needs to earn enough money from selling the crop to support the farmer's family as well as cover the growing and harvesting cost of the crops. If the cost is too low, then the farmer will not gain any profit for living.
  - iii. Discuss how price incentives can help sell products, especially during times when the product may not be bought.

## 5<sup>th</sup> Grade

1. Ask students to list the different sectors that play a role in the United States economy (household, private, bank, government). This discussion will focus on the household and private sectors, their functions, and how they are linked in the U.S. economy.
2. Discuss who comprises the household sector and private sector. How are these two sectors connected? The 5<sup>th</sup> grade PowerPoint provides examples.
  - a. The household sector is the consumer, anyone buying goods or services. A household can be a college student living in a dorm or a family of 12 living on a farm!
  - b. The producers, those making or offering goods and/or services, make up the private sector. Stores, factories, farmers, and restaurants are a part of the private sector.
    - i. Have students list who would make up the private sector from the book, *My Family's Peach Farm*. (Pearson's farm, restaurants, grocery stores/markets who buy the peaches from the farm)

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- c. The Pearson's can not manage the farm by themselves. They hire workers (human resource) to help them care for the trees and harvest the peaches. Restaurants and grocery stores, hire workers to stock food, work the cash register, and to keep the business working.
  - d. Where do these workers come from? The household sector! What does the private sector provide their employees in return for their work? A salary (money)! The household members now can buy food, clothing, and housing to survive. These two sectors are dependent upon each other!
    - i. The private sector employs the household sector to produce products or provide a service. The household sector is reimbursed, usually with money, which is used to buy product/services to survive.
    - ii. The 5<sup>th</sup> grade PowerPoint compares two households and two examples of the private sector (local farm fruit stand and grocery store) who may be in competition.
3. Once students complete the front of their worksheet detailing *My Family's Peach Farm*, they now will design their very own farm! Students will use classroom discussion and the front of the worksheet as a resource to create their farms.
- a. *My Family's Peach Farm* math lesson may be incorporated into the final assessment.

## Extensions

- Reach out to the local Farm Bureau and have a farmer visit the class.
- Use one of the recipes in *My Family's Peach Farm* book! Have the students track where the ingredients were bought to list the producers (private sector).
- Turn "build your own farm" into a bigger project by making posters, PowerPoints, or dioramas to share with the class.

## Other Reading Connections

- *Harvest Year* by Cris Peterson
- *Peaches; A Savor of the South Cookbook* by Kelly Alexander
- *The Tree Farmer* by Chuck Leavell and Nicholas Cravotta
- *Thomas Jefferson Grows a Nation* by Peggy Thomas

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## Fun Facts about Peaches!

- The “Peach State” is the nickname for Georgia.
- The world’s largest peach cobbler is made every year in Georgia. The cobbler measures 11 feet by 5 feet.
- August is national peach month.
- Peaches are picked by hand to decrease the damage which may be caused by machines.
- A large peach has fewer than 70 calories and 3 grams of fat.
- Georgia’s peach industry is concentrated in Crawford, Peach, Taylor, and Macon counties, far enough north to receive sufficient winter chilling. However, far enough south to avoid late frosts and guarantee early harvest dates.
- Fresh Georgia peaches are available only 16 weeks out of the year, from mid-May to August.
- The peach is a member of the rose family.
- The first peaches were planted in Georgia in the 18th century. The first commercial production did not occur until the mid-19th century.
- Georgia ranks third nationally in acres devoted to growing peaches.

## References

Albert, S., Gregory, B., Goodwin, M., David, Roepke, D., Nmarie, ... Rae. (n.d.). *How to Plant, Grow, Prune, and Harvest Peaches and Nectarines*. From Harvest to Table. Retrieved October 1, 2019, from

<https://harvesttotable.com/how-to-grow-peaches-and-nectarines/>

Dacy, G. H. (1924, March). *The Romance of Georgia Peaches*. *The Field Illustrated: A Journal of Advance Agriculture, Scientific Breeding and Rural Sports*. Vol. 34. Num. 3. Pages 18-19. Retrieved February 18, 2020 from

<https://play.google.com/books/reader?id=uF4SAQAAMAAJ&hl=en&pg=GBS.RA1-PA7>

The American Heritage Science Dictionary. *Loam*. (n.d.). Retrieved November 26, 2019, from <https://www.dictionary.com/browse/loam>

Galileo. *Georgia Info*. (n.d.). *Peaches*. Retrieved November 1, 2019, from

<https://georgiainfo.galileo.usg.edu/topics/economy/article/peaches>

Georgia Peach Council. (n.d.). *Father of Georgia Peach Industry*. Edited from *The Elberta Peach: The Beginning of the Southern Peach Industry* by D. Lane, Jr. Retrieved February 19, 2020 from <https://gapeaches.org/about-us/father-of-the-ga-peach-industry/>.



# My Family's Peach Farm: Economic Understandings

Iowa State University. *Peaches*. (n.d.). From Agricultural Marketing Resource Center. Retrieved September 28, 2019, from <https://www.agmrc.org/commodities-products/fruits/peaches>

Kids.Net.Au - Encyclopedia: Opportunity cost. (n.d.). Retrieved November 25, 2019, from [http://encyclopedia.kids.net.au/page/op/Opportunity\\_cost](http://encyclopedia.kids.net.au/page/op/Opportunity_cost)

Mierzejewski, Kathee. . (2018, April 5). *Peach Tree Care: How to Grow Peaches*. Retrieved November 26, 2019, from <https://www.gardeningknowhow.com/edible/fruits/peach/peach-tree-care.htm>

Peach Regional Chamber of Commerce. *The Peach Industry*. (n.d.). Retrieved October 1, 2019, from <https://www.peachchamber.com/the-peach-industry>

Pearson Farm. *Farm and Family History*. (n.d.). Retrieved November 26, 2019, from <https://pearsonfarm.com/pages/farm-family-history>

Pixabay. (n.d.). 1,361 Free images of Peach. Retrieved October 1, 2019, from <https://pixabay.com/images/search/peach/>

Sawe, B. E. (2017, January 17). *Where do Peaches Grow?* Retrieved September 28, 2019, from <https://www.worldatlas.com/articles/world-s-top-peach-producing-countries.html>

Taylor, Kathryn C. (September 26, 2018). *Peaches*. In New Georgia Encyclopedia. Retrieved February 4, 2020 from <https://www.georgiaencyclopedia.org/articles/arts-culture/peaches>.