



Citrus in Florida

Social Studies and Language Arts

Brief Description:

Citrus in Florida will examine the development of oranges and their history here in Florida. Students will discover the significant role citrus plays in Florida's economy and the impact citrus had on Florida's history.

Objectives: Students will be able to:

1. Identify the origin of oranges.
2. Describe the history of citrus in Florida.
3. Recognize the significance of the citrus industry to Florida.

Life Skills:

1. Gathering and Evaluating Information
2. Using computers to Process Information

Time:

Three, 45 minute to 1 hour sessions

Vocabulary:

- Citrus
- Grove
- Production

Materials:

- A variety of oranges, grapefruit and other citrus fruits
- A large bowl
- Copies of *Around the World* activity sheet for each group
- Copies of *The Historic Citrus Trail* activity sheet for each group
- Copies of *Peelin' Through the Net* activity sheet for each student
- Copies of *Surfin' The Citrus Wave* handout for each student
- Copies of *Florida's Citrus Producing Counties and Map*, handouts one per student
- A Florida map with counties named

Preparation:

- Gather a variety of citrus fruits and place in a large bowl.
- Make copies of *Around the World*, *Florida's Citrus Producing Counties and Map*, *Peelin' Through the Net* activity sheets and *Surfin' The Citrus Wave* handout for each student.
- Arrange time with the school computer lab for students to use the Internet.

Background:

History of Citrus... The origin of citrus goes back 20 million years, probably beginning its evolution in tropical Southeast Asia, or what is Malaysia today. From emperors to peasants, citrus fruits were enjoyed in ancient China, and much later, in Japan and the South Pacific. Over the centuries, traders and explorers carried citrus from Asia to the Middle East and Africa, and to ancient Greece and Rome. Greeks revered citrus highly, considering it the food or “golden apples” of their mythological gods. By the sixth and seventh centuries, citrus was popular among Europeans mostly for the fragrant, ornamental trees; the fruit itself was bitter. Not until Portuguese explorers brought a sweeter variety to Europe did sweet oranges dominate the groves of the Mediterranean.



Florida’s Citrus History

Citrus trees are not native to Florida. In 1493, citrus traveled to the New World on Columbus’ voyage to the island of Hispaniola. A few years later, Spanish explorers, perhaps Ponce de Leon, brought citrus seeds to Florida. By 1579, orange trees were growing in St. Augustine, the oldest European settlement in the United States. With good growing conditions, groves were established. Already in 1800, areas with easy access to two seaports -- St. Augustine and Tampa -- grew citrus: oranges, tangerines, lemons and limes. In 1823, the French Count Odet Philippe brought grapefruit from the West Indies to Florida, planting the first grove near Tampa.

As the citrus industry grew, so did Florida ---- and growing areas developed beyond the areas of the coast. As the railroads expanded, trains supplied citrus to other parts of the nation. The Great Freeze of 1894-95 devastated the thriving citrus industry. Fifteen years later, the industry began thriving again, and crops became bigger than ever. Today, oranges are the “golden apples” of Florida, and citrus is one of the state’s most important industries.

What’s Growing?

Florida’s 70,640,700 million orange and grapefruit trees, cultivated on 541,328 acres in 30 counties, grew a variety of citrus fruits in 2011. Those in largest production include Ambersweet, Hamlin, Navel, Pineapple and Valencia oranges; and white Marsh grapefruit, and Ruby Red and Flame grapefruit. Their characteristics differ; they mature at different times of the year.

Specialty fruits such as tangelos (cross between grapefruit and a tangerine), tangerines and temples are also produced. Varieties of tangerines include Dancy, Fallglo, Honey, Robinson, Royal Lee and Sunburst. Varieties of tangelos include Minneola and Orlando.

Grove Workers

Approximately 76,000 people work directly or indirectly in Florida's citrus industry. More than 10,000 of those are growers. In the groves, others care for and pick fruit. Horticulturists help growers manage water resources, diseases and pests. Many businesses supply fertilizer, watering equipment and other grove machinery. Truck drivers transport fruit from the grove to the packing and processing plants.

Packing House and Processing Plant Workers

Citrus processing plants employ many types of workers: managers, safety inspectors, scientists to test fruit, engineers and machinists to keep equipment running, computer specialists, workers to sort and inspect fruit, and even tasters. From large equipment to cans and packing boxes, businesses supply packinghouses and processing plants. Truck drivers transport fruit and citrus juice to retailers, who, in turn, make sure it is carefully displayed in supermarkets.

Selling Citrus

Even more people work to sell and promote citrus products. That includes staffs, large and small, which work in advertising, public relations and sales. Accountants keep track of the finances for the business. At the store level, employees stock freezer and refrigerator cases with juice, and produce workers maintain the quality of fresh citrus fruits. Food service employees such as those in restaurants, school cafeterias, airlines, vending machine businesses, and others, handle and serve citrus to consumers.

Consumers around the world buy citrus from Florida! In the United States alone, 63 percent of American oranges and nearly 100 percent of the American orange juice comes from Florida. Florida is the world's largest grower of grapefruit, exporting more than 50 percent of its grapefruit. The fruit, along with the jobs and businesses that support the citrus industry, brings more than \$9 billion to Florida each year.



Introduction:

1. Ask the students:

*What do you think of when I say “citrus”? (Hold up the bowl of citrus fruit when asking this question.)

(Citrus is a large family of fruit, including oranges, grapefruit, tangerines, tangelos, lemons, limes and others.)

2. Ask the students:

*What were your first thoughts when you looked at this bowl of citrus fruit? *(Responses will vary, but may refer to taste, color, different varieties, citrus in a meal or snack, a grove nearby, a job picking oranges, etc.)*

3. Ask the students:

*How many of you drank a glass of orange juice or ate an orange for breakfast?

4. Inform the students that if they did, they were involved in an industry that brings more than \$9 billion dollars annually to Florida. That’s right, \$9 billion! Citrus is one of Florida’s most important economic industries. Florida leads not only the U.S. in both grapefruit and orange production, it also leads the world in grapefruit production and follows only Brazil in the production of oranges.

5. Ask the students:

*So, where did it all begin? Just how has Florida become so productive in the citrus industry? That is what we will explore today.



Activity One:

1. Ask students what they know about citrus in Florida. Have them brainstorm to see what they may know.
2. Divide the class into small groups (4-5 students) and hand out the *Around The World*, and *The Historic Citrus Trail*, activity sheets to each group. Have students take notes and trace the “route” of oranges as you discuss the history and geography related to oranges. Discuss the key points found on *The Historic Citrus Trail* page.
3. Hand out copies of *Florida's Citrus Producing Counties* and *Florida's Citrus Producing Counties Map* activity sheets to each student. Have them identify the citrus producing counties (use the state map to identify the counties), label them and note production. Can they see any patterns?
4. Hand out *Peelin' Through the Net* activity sheet. Provide students with computers for this part of the activity or print off copies of the information and copy it for student use if Internet access is not available.

5. Instruct students to refer to the websites listed on the activity sheet as well as the previous discussion to determine the amount of oranges and grapefruit produced around the world and answer these questions.

*Where and when did citrus originate? (*Southeast Asia [Malaysia], 20 million years ago*)

*When was citrus introduced to Florida? When was citrus introduced to Hispaniola? (*Columbus brought oranges to Hispaniola, now Haiti, in 1493; oranges were not introduced to Florida until the 1500s.*)

*How has the citrus industry helped shape the history of Florida? (*It is a major contributor to the economy and history of Florida.*)

*How has the citrus industry contributed to Florida's environment? (*Citrus helps keep Florida green with open space.*) (*Trees also help produce clean air.*)

*By 1800, St. Augustine and Tampa were thriving with oranges, tangerines, lemons and limes. What were two major factors that contributed to the success of these two citrus areas around the world? (*These two areas had a favorable climate and easy access to sea-ports, thus, making distribution of their product easier.*)

*How long after oranges were grapefruits introduced to Florida? (*Grapefruits were brought to Florida in the early 1800s; about three centuries after oranges were introduced.*)

*Why is the citrus industry so important to Florida? (*It is a large contributor to Florida's economy. It contributes \$9 billion of the state's total agricultural economic impact of \$100 billion.*)

*What does this do for the citizens of Florida? (*It provides jobs for approximately 76,000 people, pays taxes and is a nutritious food.*)

*How does agriculture contribute to the well being of Florida communities? (*It provides jobs, pays taxes, serves as a home to wildlife, allows to water to percolate through the soil and recharge the aquifer, and is a nutritious food.*)

6. When the class is finished, ask:

*What sources, besides the Internet, could you use to find information? (*Library books, magazines, newspapers, The Chamber of Commerce, The Florida Department of Citrus, encyclopedias, people, etc.*)



Evaluation Options:

1. Have the students write a report about the importance of citrus to the economy and citizens of Florida.
2. Have students research and write a report about the path citrus has taken around the world.
3. Have the students graph the production statistics by county in various ways.

Variations or Alternatives:

1. Have students imagine that they are citrus growers in the 1870s and others in the 1990s. Have them write a “diary entry” about a day in their lives comparing the different times.
2. Have students explore other citrus websites and write a summary about the one they found most interesting. (Refer to the *Surfin' The Citrus Wave* sheet for addresses.)
3. Locate and ID places on a map where citrus grows. (Place color dots indicating type of citrus oranges, grapefruit, lemons, etc.)
4. Have the students develop a citrus timeline based on the information provided.

