



## Post-Trip Lesson Plan Transportation

- I. Grade level: grades 3-5
  - II. Objectives:
    - a. To compare transportation in 1898 with transportation today.
    - b. To discuss various means of transportation in 1898 and their histories.
    - c. To examine how transportation affected the citrus industry in the late 19<sup>th</sup> century.
    - d. To understand the different means of communication in 1898 compared to today in relation to railroads.
  - III. Standards:
    - a. Sunshine State Standards(2006):
      - 1) Social Studies: Time, Continuity, and Change: Standard 6: Understands the history of Florida and its people.
      - 2) Social Studies: People, Places, and Environments: Standard 2: Understands how factors such as population growth, human migration, improved methods of transportation and communication, and economic development affect the use and conservation of natural resources.
  - IV. Vocabulary:
    - a. Flying Cracker: an express passenger train that traveled between Jacksonville and Tampa in the 1890s. This would be about a 9 hour trip.
    - b. Freight: Goods to be transported by train.
    - c. Short rail lines: trains that ran short distances between towns.
    - d. Telegraph: a method of communication, using coded signals.
- Activity 1: Transportation in 1898 versus Transportation today
- V. Materials:
    - a. One shoe Box per student
    - b. Construction Paper
    - c. Crayons, Colored Pencils, Markers
    - d. Various other crafts supplies (optional)
  - VI. Procedures: Read the history of transportation in 1898 with your students. Next the students of the class will create one large train. Assign one student as the engineer to make the engine and engineers cart. And Assign one student to make the Caboose. All the other students can create the passenger and Freight cars in between. Each student will need a shoe box for their cart and other craft supplies to decorate it. Also tell each student to label what they would like to transport in their cart on the outside of the cart. Once all the carts are finished line them up in order and finish with the Open-Ended Questions.
  - VII. History:
    - a. Railroads: Railroads began growing in Florida in the 1880s and 1890s. The first train to enter Tampa was in 1883, which was a town of 1000 people before the railroad. Railroads were used to carry people, mail, and goods to different areas in the United States. One of the most important people on a train is a conductor. The



Conductor is the supervisor of the trains who is in control of the crew and freight. The Engineer is in charge of driving the train. With no telephones or other means of verbal communication those on the train and those off the train would communicate with hand signals (activity 2) and the train's horn. Henry Bradley Plant is a transportation entrepreneur who invested in the creation of railroads in Florida. After the creation of the first railroad path into Tampa, due to his investment, the city Plant City was named after him (1885).

- b. Horse and Buggies: Another type of transportation was by horse and buggy. In this instance a horse would pull a carriage that would be large enough to carry several people and sometimes large enough to carry a whole family. This was a type of private transportation, were the horse and the carriage would be owned by a family.
- VIII. Assessment: This activity can be graded based on participation, completion, and creativity.
- IX. Open-Ended Questions:
- a. What types of transportation do we have today?
  - b. What types of transportation existed in 1898?
  - c. How has transportation improved over the past century?
  - d. Have you ever ridden on a train? A Horse Carriage? Explain.

### Activity 2: Worksheet: Trains and the Citrus Industry

- X. Materials:
- a. Worksheet: Trains and the Citrus Industry
  - b. Writing Utensil
- XI. Procedures: Read the history provided below about trains and the citrus industry in Florida. Once finished hand out the worksheet: Trains and the Citrus Industry to the students. Give them enough time to finish the worksheet then discuss the Open-Ended Questions.
- XII. History:
- a. Trains were used to ship various citrus fruits. These fruits could either be sent to the north, or they could be transferred to a port on the water where they would be shipped on a boat to their destination.
  - b. The transfer of fruit on a train was very difficult. If one fruit was overripe it could bruise another fruit in the same box. In addition, during chilly nights if the train began to freeze so would the citrus fruit which prefers warm weather. Whenever the train had knowledge of a freeze coming various horn signals would transfer their knowledge onto those in charge of the freight so that they would be able to protect their goods.
  - c. In order for fruit to arrive at its destination healthy certain farming procedures were necessary to be followed: The fruit should be picked as it ripens rather than all at once. Ripe fruit left on the tree will damage ripening fruit. When gathering the ripe fruit, cut the stem close to the orange rather than pull the orange from the tree. Boxes should contain no more than 75-100 oranges. Full boxes should be stored in the packing house until the moisture has escaped from the rind.
  - d. Correct packing of oranges began in the grove with careful removal of the fruit from the tree and specific plans for packing the fruit for shipping. Workers



placed fruit in wooden barrels or boxes, using Spanish moss to cushion the fruit. Workers at the packing house would sort through fruit and discard damaged citrus. Children would paste labels on boxes. Fruit box labels had more significance than the logo of the packing house. Colors indicated quality of fruit inside: Blue—best quality, red—2nd grade (medium quality), black, gold or yellow—damaged or poor quality. Widespread use of packing labels didn't become common until the 1930s.

- XIII. Assessment: This worksheet can be graded based on completion, use of historical information, and creativity.
- XIV. Open-Ended Questions:
- Where is citrus fruit grown?
  - How do cooler places get citrus fruit?
  - What are some different types of citrus fruit?
  - How did various places get citrus fruit in 1898?

Separate the class into two groups. Group one works on Activity 3, and group two works on Activity 4. Once each group has finished their tasks they can switch.

#### Activity 3: Railroads and Hand Signals

- XV. Materials:
- Train from activity 1
- XVI. Procedures: Review the rail road hand signals with group 1 (retrieved from Railroad Communication Signals: selected NORAC Operating Rules). Then choosing two students allow one student to be the engineer of the class train (activity 1) and another student to be in charge of hand signals. Have student 2 make hand signals and see if student 1 is able to understand each signal. Rotate positions through all the students in group 1 until everyone has had a chance. Repeat activity with group 2.
- XVII. History:
- During the day a red flag and fusees (a red signal flare) are used for signaling. During the night a white light and fusees are used for signaling.
  - Hand signals must be done from a point where the train can easily see the signals. Furthermore, the signal must be sufficiently ahead of time to allow the train to comply with the signal.
  - Any object waved violently near a track is a symbol for the train to stop.
- XVIII. Assessment: This activity can be graded based on participation.
- XIX. Open-Ended Questions:
- What modes of communication do we use today?
  - What types of communication was used in relation to train in 1898?
  - Can you name any industries that use hand signals? (Airplane platform crew etc.)

#### Activity 4: Candy Train

- XX. Materials:
- Marshmallows
  - Pretzel sticks



- c. Cheerios
  - d. Peanut butter, cream cheese, or icing
  - e. Various other candies for decoration
- XXI. Procedures: Hand out 5 or 6 marshmallows to the students in the class and 5 or 4 pretzels sticks. Tell them to use the pretzel sticks to attach the marshmallow together and create the carts of the train. The cheerios can be used as wheels on each cart.

**Sources Consulted:**

Treatise and Handbook of Orange Culture in Florida, Louisiana and California

By T.W. Moore

E. R. Pelton & Co., New York 1886

Florida Heritage Collection online

The Florida Railroad

The Florida Heritage Collection

Jacksonville as a Nineteenth-Century Railroad Center

by Herbert J. Doherty Jr.

Florida Historical Quarterly

Volume 58, 4

Charlotte Harbor Division of the Florida Southern Railroad

By Vernon E. Peeples

Florida Historical Quarterly Volume 58, 3

Railroads of Southwest Florida

By Gregg M. Turner

1999 Arcadia Publishing

The Citrus Industry in the Sunshine State

By Brian and Richard Weaver

1999

The Story of Florida Citrus

Florida Department of Agriculture

June 1969

# Railroad Hand Signals

Hand signals, with or without a flag or lamp, must be given as follows:

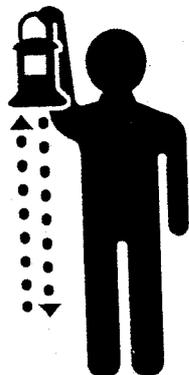
(a) **Stop**  
Swung horizontally at right angle to the track



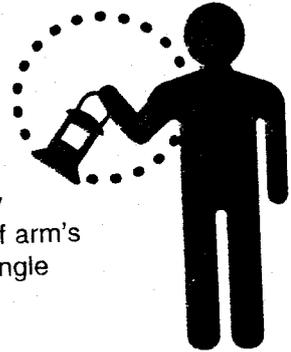
(b) **Reduce Speed**  
Held horizontally at arm's length



(c) **Proceed**  
Raised and lowered vertically



(d) **Back**  
Swung vertically in a circle at half arm's length at right angle to the track



(e) **Apply Air Brakes**  
Swung horizontally above the head when train is standing



(f) **Release Air Brakes**  
Held at arm's length above the head when train is standing



(g) **Drop or Raise Pantograph**  
Swung vertically in a circle at full arm's length at right angle to the track





Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Post-Trip Lesson Plan Trains and the Citrus Industry

Instructions: Color the picture of the train below then write a short narrative.

