Railroads

Lesson Plan created by:

Abraham Lincoln Presidential Library & Museum
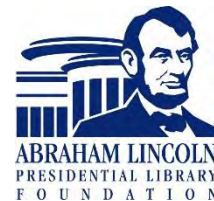
LESSON PLAN

Grade: 4th-8th grade

Title: Railroads Civil War Tech

Brief Synopsis: Instead of walking hundreds of miles, carrying food, medical supplies, and ammunition, Civil War soldiers could ride the rails. After building cities, factories, and railroad lines, students will complete challenges to see whose railroads functions the best.

Essential Question: How did railroads change warfare in the Civil War?

Objectives: Students will be able to

1. Explain the importance of railroads during the Civil War
2. Explain how the railroads change warfare in the Civil War
3. Explain the differences between the North and South's railroads and how that impacted the Civil War.

Learning Standards: This lesson addresses the following Illinois State Learning Standards.

<u>ELA</u>

CCR Reading: Integration of Knowledge and Ideas
7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.*

CCR Speaking and Listening: Comprehension and Collaboration
1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCR Speaking and Listening: Presentation of Knowledge and Ideas
4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

<u>Math</u>

4th grade:

Measurement and Data
• Represent and interpret data.

5th grade:

Measurement and Data
• Represent and interpret data.

6th grade:

Statistics and Probability
• Develop understanding of statistical variability.
• Summarize and describe distributions.

7th grade:

Statistics and Probability
• Draw informal comparative inferences about two populations.

8th grade:
Statistics and Probability
• Investigate patterns of association in bivariate data.

<u>Social Science</u>

Inquiry Skills

4th-5th grade:

Evaluating Sources and Using Evidence
SS.IS.4.3-5. Gather relevant information and distinguish among fact and opinion to determine credibility of multiple sources.
SS.IS.5.3-5. Develop claims using evidence from multiple sources to answer essential questions.

Communicating Conclusions and Taking Informed Action
SS.IS.6.3-5. Construct and critique arguments and explanations using reasoning, examples, and details from multiple sources.
SS.IS.7.3-5. Identify a range of local problems and some ways in which people are trying to address these problems.

6th-8th grade:

Evaluating Sources and Using Evidence
SS.IS.5.6-8.MC. Develop claims and counterclaims while pointing out the strengths and limitations of both.

Communicating Conclusions and Taking Informed Action
SS.IS.6.6-8.LC. Construct arguments using claims and evidence from multiple sources, while acknowledging their strengths and limitations.
SS.IS.8.6-8.LC. Analyze how a problem can manifest itself and the challenges and opportunities faced by those trying to address it.
SS.IS.8.6-8.MdC. Assess individual and collective capacities to take action to address problems and identify potential outcomes.

Civics

4th Grade:

SS.CV.1.4. Distinguish the responsibilities and powers of government officials at the local, state, and national levels.

5th grade:

SS.CV.4.5. Explain how policies are developed to address public problems.

6th-8th grade:

SS.CV.3.6-8.LC, MdC, MC. Compare the means by which individuals and groups change societies, promote the common good, and protect rights.
SS.CV.5.6-8.MdC. Analyze the purposes, implementation, and consequences of public policies in historic and contemporary settings.

Geography

4th grade:

SS.G.1.4. Construct and interpret maps of Illinois and the United States using various media.

5th grade:

SS.G.1.5. Investigate how the cultural and environmental characteristics of places within the United States change over time.
SS.G.3.5. Analyze the effects of specific catastrophic and environmental events as well as technological developments that have impacted our nation and compare to other places.

6th-8th grade:

SS.G.1.6-8.LC. Use geographic representations (maps, photographs, satellite images, etc.) to explain relationships between the locations (places and regions) and changes in their environment.
SS.G.1.6-8.MdC. Use mapping and graphing to represent and analyze spatial patterns of different environmental and cultural characteristics.
SS.G.2.6-8.MdC. Compare and contrast the cultural and environmental characteristics of different places or regions.
SS.G.3.6-8.MdC. Explain how changes in transportation and communication influence the spatial connections among human settlements and affect the spread of ideas and culture.
SS.G.3.6-8.MC. Evaluate the influences of long-term human-induced environmental change on spatial patterns of conflict and cooperation.

Economics and Financial Literacy

6th-8th grade:

SS.EC.2.6-8.LC. Analyze the role of innovation and entrepreneurship in a market economy.

History

4th grade:

SS.H.1.4. Explain connections among historical contexts and why individuals and groups differed in their perspectives during the same historical period.

SS.H.3.4. Explain probable causes and effects of events and developments in Illinois history.

5th grade:

SS.H.1.5. Create and use a chronological sequence of related events to compare developments that happened at the same time.
SS.H.3.5. Explain probable causes and effects of events and developments in U.S. history.

6th-8th grade:

SS.H.1.6-8.LC. Classify series of historical events and developments as examples of change and/or continuity.
SS.H.1.6-8.MdC. Analyze connections among events and developments in broader historical contexts.
SS.H.1.6-8.MC. Use questions generated about individuals and groups to analyze why they, and the developments they shaped, are seen as historically significant
SS.H.2.6-8.MdC. Analyze multiple factors that influenced the perspectives of people during different historical eras.

Science (NGSS)

4th grade:

4-ESS3 Earth and Human Activity
4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.

5th grade:

3-5-ETS Engineering Design
3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

6th-8th grade:

MS-ETS1 Engineering Design
MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

Vocabulary Words:

Railroad   a system of tracks (lines) that trains travel over

Industrial   having factories that produce items in large quantities for use by people

Agriculture   having farms that grow items (foods and plant based materials) for use by people

Materials:

Content Information Sheet
Discussion Questions (see below)
Great Railroad Race Game Card (in packet)
Materials for Great Railroad Race Game – see game card for listing
Scenario Cards: 22 total (4 colors/teams with 5-6 scenario for each) (in packet)
Maps of Railroads (in packet)

Procedures:

1. Introduce the idea of railroads by asking student about types of transportation used today. Use discussion questions 1 and 2. Answer should include hover board, spaceship, plane, car, bicycle, train, wagon, horse, walk, etc.
2. Explain that today we will be focusing on railroads and the Civil War. Asking students to think about why railroads were important to the Civil War. Transport large numbers of people and supplies, Travel long distances, Travel at fast rates of speed, Provided economic, social, and political drivers
3. Discussion the history of railroads.
4. Show a map of railroads in 1860. Use discussion question 3 to notice differences and similarities based on location.
5. Discuss railroads during the Civil War include the difference between North and South.
6. Discuss Tactical use of railroads during the Civil War.
7. Play the Great Railroad Race Game.
8. Discuss the results of Civil War Railroads. Use discussion questions 4 and 5 to assist.
9. Conclude with student explaining how railroads changed warfare. Discussion question 6.

Discussion Questions:

1. What types of transportation do we use today?
2. What modes of transportation have we used from 1800s to present or in the past?
3. What do they notice about the map of railroads? Where are the railroad lines located?
4. What are key things you learned about railroads?
5. Why were railroads important?
6. How did railroads change warfare?

Resources:

<u>Online Resources</u>

Videos

Civil War Trust, Civil war and Railroads in 4 minutes,
https://www.youtube.com/watch?v=Ko3wexxTxjY&t=71s

Smithsonian, Lincoln and the Railroads, https://www.youtube.com/watch?v=Kv9efDIUBVQ

Civil War Tech: Trains, History Channel, https://www.youtube.com/watch?v=gdYEHFRMlUQ

Websites

Civil War Technology, PBS Online, http://www.pbs.org/opb/historydetectives/feature/civil-war-innovations/

Railroads Critical Role in the Civil War, History Net, http://www.historynet.com/railroads-critical-role-in-the-civil-war.htm

Railroads in the 1800s, http://www.american-historama.org/1801-1828-evolution/railroads-in-the-1800s.htm

Railroads in the Civil War, https://www.american-rails.com/railroads-in-the-civil-war.html

<u>Other Resources</u>

Allen, Thomas B. and Allen, Roger MacBride. *Mr. Lincoln's High-Tech War*. Washington D.C.: National Geographic, 2009.

Gintzler, A.S.. *Rough and Ready Railroaders*. Santa Fe, New Mexico: John Muir Publications, 1994.

Further Reflection: (more questions)

1. What do successful railroads need to have?
2. Why was the North more successful with railroads than the South? What were strengths and weaknesses of each region's railroad lines?

The Great Railroad Race

Materials: (Amounts below sufficient for one board game)
Four colored fabric squares (or construction paper) – red, blue, green, yellow
Four rolls of masking tape
One set of railroad activity scenarios for each team color – red, blue, green, yellow
Eight paper dice – Four with action items, two with red/blue dots, two with yellow/green dots
Folders with game pieces – trees, mine symbol, houses (small and large), factories, barns, explosions, supply crates
Blue painters tape (to repair any torn rivers)

Pre-class set up:
1. Print scenario cards, dice, and game pieces. Photocopy and cut out stacks of game pieces.
2. Lay out each fabric square so that they resemble the following set up:
   a. Red   Blue
      Green   Yellow
3. Lay out trees on the squares to match the drawing in the lower right-hand corner of the first scenario for each corresponding color. Make sure to check and repair any torn rivers.
4. Lay out game pieces and paper dice on a table or on the ground for easy student access.
5. Set out one set of activity scenarios for each color making sure the blue and red groups have six scenarios each and the green and yellow groups have five.

Game:
1. Have the teacher break the students into four teams. Each team will sit around their colored square.
2. Before passing out the activity scenarios, inform the teams they will participate in a game where they will build a regional economy, populate their area, and build railroads using the scenario cards. Once each group has completed building their area, the squares will team up blue and red vs. green and yellow to battle each other.
3. Provide the teams with their sets of scenarios (each team should have 5 or 6 scenario cards). Tell them to read each card and complete the actions required. To build their areas, they will use the game pieces nearby. Ask the teacher to help the students if necessary.
4. When each area is completely built, check each quadrant (a final picture of each settled quadrant is provided for the teacher.) Ask the students to share information about their area with the group. Are they more industrial or agricultural? High population? Industry? What makes their area different from the other three?
5. Tell the teams they will now merge into the green/yellow and red/blue. Give each team one dice with action items on it and a dice with their opponent's colors on it. The action item dice have actions involving attacks on their opponents and rebuilding actions for their own side. Each team will take turns rolling the dice.
6. The first team will roll the dice with their opponent's colors. Whichever color comes up will be the square the team will attack. If the side with both colors comes up, the team can choose who they will attack. They will them roll the action dice to see what action they will take. After the action is completed, the next team's turn begins.
7. Game play continues until there are 10 minutes of class time left. Allow play to continue until 5 minutes before the end.
8. At the end of game play ask the students to look at their area. What changes have occurred to their area? What challenges does their area have now that did not exist before the battle? What advantages do they have? How do they compare to the other areas?
9. Ask students to help clean up board game.

Content Information Sheet

1. History of Train
   a. First train locomotive invented in Great Britain by George Stephenson in early 1800s
      i. Applied technology of steam engines to create locomotive
      ii. Rail shipping costs for carriage (cargo) decreased by 60-70%
2. Railroads in the United States
   a. Many large cities and shipping ports used canals to move goods
   b. July 4, 1828 Baltimore broke ground on the Baltimore and Ohio Railroad
      i. Made the city more competitive with New York and the Erie Canal due to location near water and closer to the frontier
      ii. First shovelful of dirt dug by Charles Carroll, 91 year old signer of Declaration of Independence
   c. 1830 South Carolina Canal and Railroad Company
      i. Build for interstate trade
      ii. Owned first steam locomotive build for sale in the United States
   d. 1831 Mohawk and Hudson
      i. 1st railroad in New York State
      ii. Connected Mohawk River in Schenectady with Hudson River in Albany
      iii. Reduced a 40 mile all day trip to 17 mile trip taking less than one hour
      iv. Confederates built approximately 50 ironclads, more than 20 saw action
   e. Early train difficulties
      i. Hard to find engine for rough and uneven terrain
         1. Would use horse-drawn trains to travel difficult areas
      ii. The first steam locomotive lost to a horse during trails
         1. Took early lead, but lost after a belt broke
         2. Executives were impressed with steam technology and did support switching to steam engines
3. Railroads during the Civil War
   a. 1861
      i. North had 22,000 miles of track, South had 9,500 miles of track
         1. Highlights the differences between the Southern agricultural lifestyle and the Northern industrial lifestyle
         2. South primarily used the railroads to get cotton to port towns
      ii. Many southern railroad employees went north at the outbreak of the war
      iii. Prior to 1861 few of the southern railroad tracks were more than 100 miles long
   b. Railroad Uses During the Civil War
      i. Locomotives were used to transport supplies and troops, provide logistical support, and conduct reconnaissance missions
         1. Locomotives were able to discover troop locations and dispositions; if came under attack had the ability to reverse course and travel much faster than cavalry soldiers could
         2. Served as communication conduits when telegraph wires were cut
      ii. Most major battles during the war occurred near important rail junctions and armies camped along railroad lines to have access to their logistical support

1. Second only to waterways for ability to provide logistical support
            iii. Dangers
                    1. Engines could explode or sparks might set fires
    c. Confederate Railroads
            i. Railroads owned privately and the competitive owners did not work together
                    1. Presented maintenance problems
                    2. Owners did not want government involvement in railroad management
            ii. Companies used different track gauges ranging from four to six feet wide
                    1. Goods had to be transferred from one railroad to another, often crossing through towns by wagon to get from one to the other
            iii. Union blockade of Atlantic Ocean and Gulf of Mexico shut off supply lines between the South and England where iron for engines and rails primarily came from
            iv. Speeds forced to drop from 25 mph in 1861 to 10 mph in 1863 due to worn equipment
    d. Tactical Uses of Railroads During Civil War
            i. Throughout the war, railroads enabled the quick transport of large numbers of soldiers and heavy artillery over long distances. One of the most significant uses of trains came after the Battle of Chickamauga in September 1863, when Abraham Lincoln was able to send 20,000 badly needed replacement troops more than 1,200 miles from Washington, D.C. to Georgia (in just 11 days) to fortify Union forces—the longest and fastest troop movement of the 19th century.
            ii. Control of the railroad in a region was crucial to military success, and railroads were often targets for military attacks aimed at cutting off the enemy from its supplies. Union General William Tecumseh Sherman provided particularly adept at the art of railroad sabotage. During his infamous "March" through Georgia and the Carolinas, his men destroyed thousands of miles of Confederate rails, leaving heaps of heated, twisted iron that southerners wearily referred to as "Sherman's neckties."
            iii. Burned bridges and destroyed tunnels greatly slowed railroad travel during war time.
            iv. Cut telegraph ties prevented conductors from receiving information about broken tracks and collapsed bridges which led to accidents.
4. Results of the Civil War on Railroads
    a. 1862 Creation of the United States Military Railroad
    b. July 1, 1862 President Lincoln signs the Pacific Railway Act leading to the construction of the Transcontinental Railroad
            i. Initial route surveys took place in 1854 under then-US Secretary of War Jefferson Davis.
    c. George Pullman began tinkering with the idea of a comfortable railroad "sleeping car" after a particularly uncomfortable train ride in upstate New York. By 1863, he had produced his first two models, the Pioneer and the Springfield, named for the Illinois hometown of then-President Abraham Lincoln. Pullman's cars were indeed comfortable, but they were also prohibitively expensive and few railroad companies were interested in leasing them—until President Lincoln's assassination in April 1865. After Lincoln's death, a Pullman car was used as part of the cortege that travelled through several Northern cities before returning

his body to Illinois. The funeral train was front-page news, and when Pullman also temporarily loaned one of his beautiful sleeper cars to a grief-stricken Mary Todd Lincoln, the publicity poured in. Two years later, he established the Pullman Palace Car Company, which would revolutionize train travel around the world. Curiously enough, when Pullman died in 1897, his replacement as head of the company was none other than Robert Todd Lincoln, the slain president's eldest son.
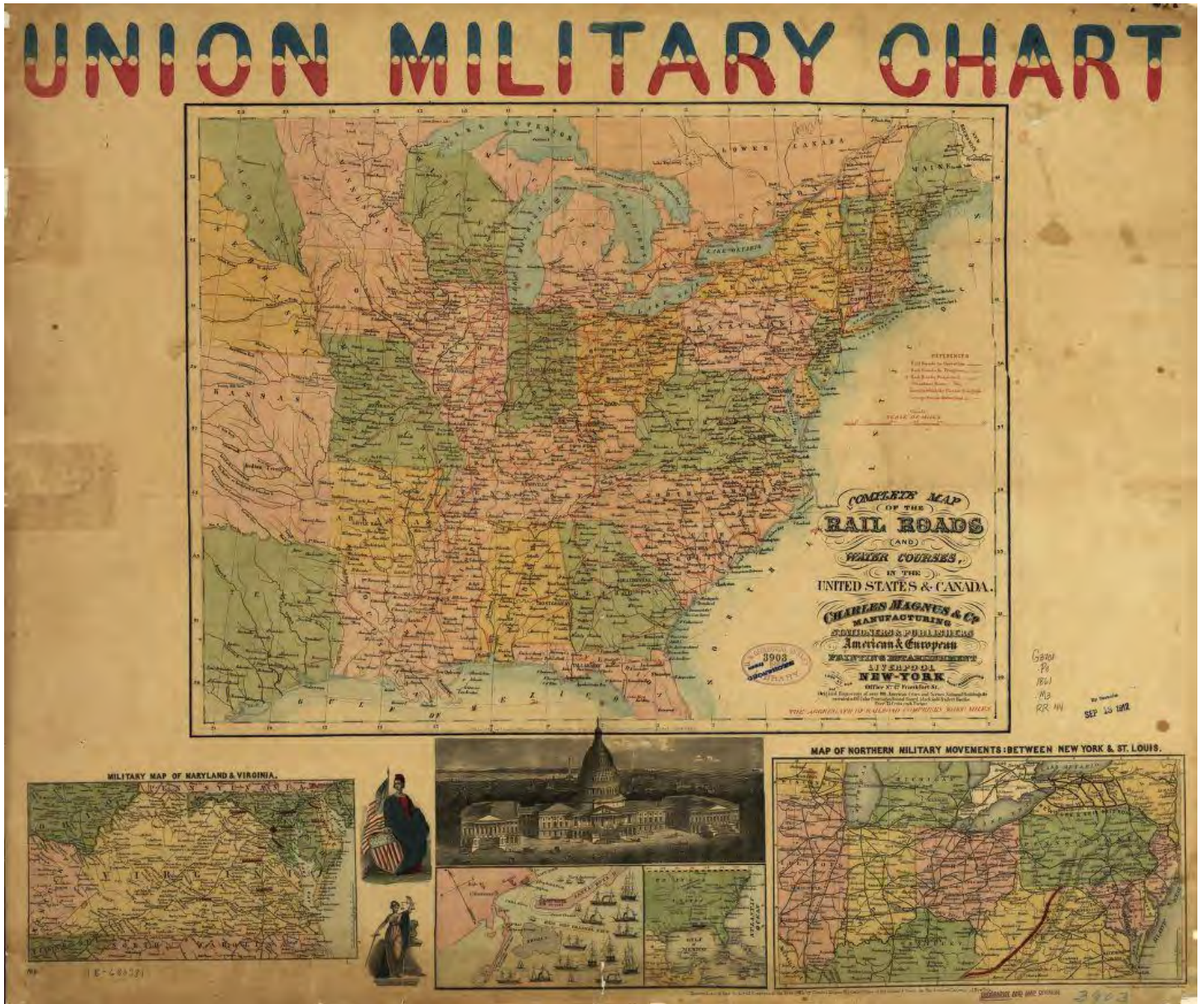
Maps of Railroads

Lloyd, James T. Lloyd's American railroad map. [New York, 1861] Map. Retrieved from the Library of Congress, <www.loc.gov/item/gm70005368/>.

https://www.loc.gov/resource/g3701p.rr000430/
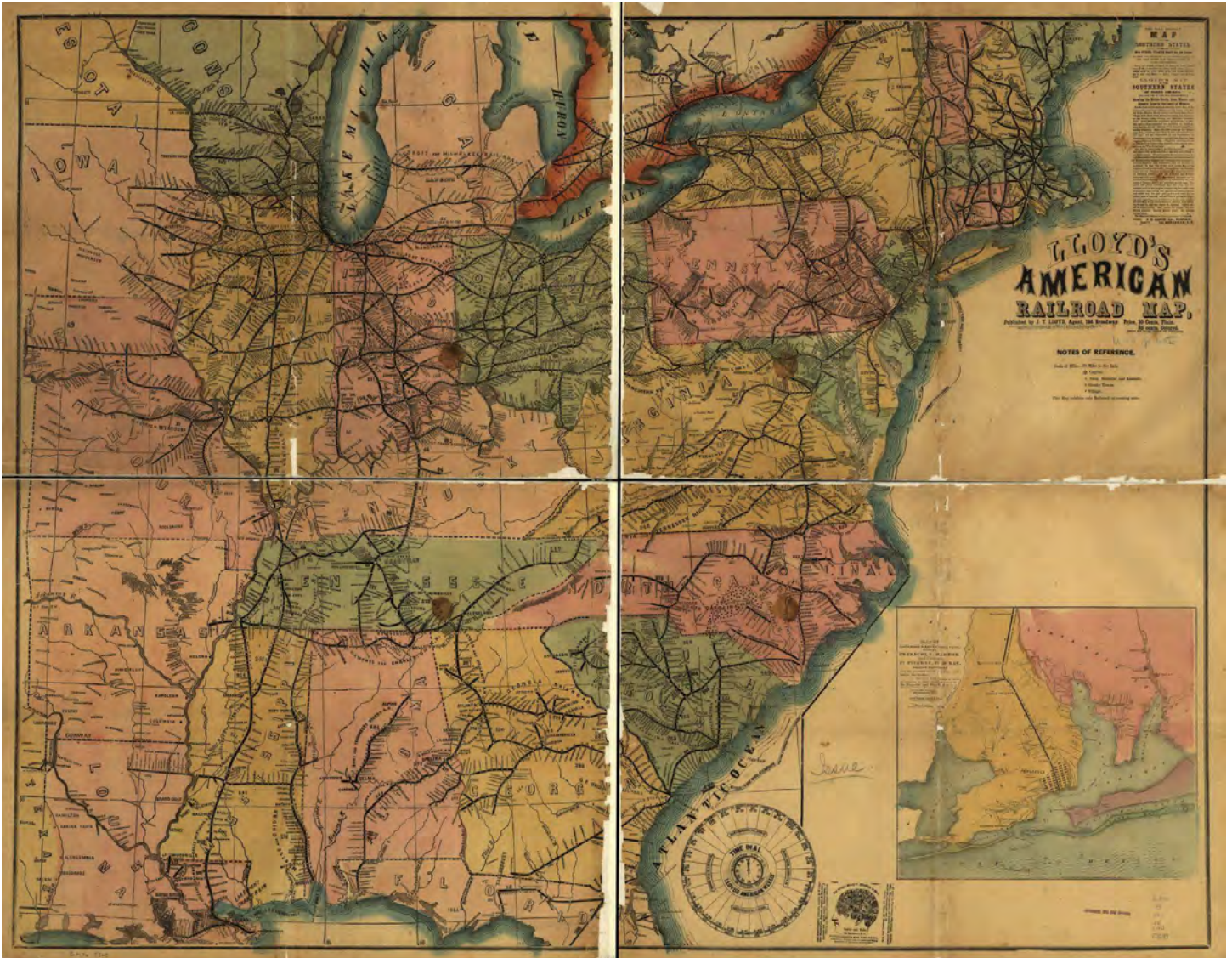
Magnus, Charles. Complete map of the rail roads and water courses, in the United States & Canada. [New York, 1861] Map. Retrieved from the Library of Congress, <www.loc.gov/item/98688331/>.

https://www.loc.gov/item/98688331/

Paullin, Charles O. and John K. Wright. *Atlas of the Historical Geography of the United States*. Washington, D.C. 1932. Page 139.
http://railroads.unl.edu/documents/view_document.php?id=rail.str.0243

Railroads 1850 and 1860; Overland Mail, 1850-1869

These two maps from the 1932 *Atlas of the Historical Geography of the United States* **display overland mail routes and railroad lines in the United** States during **the mid-nineteenth century. The maps show the extent of railroads in 1850 and 1860 and overland mail from 1850 to 1869.**
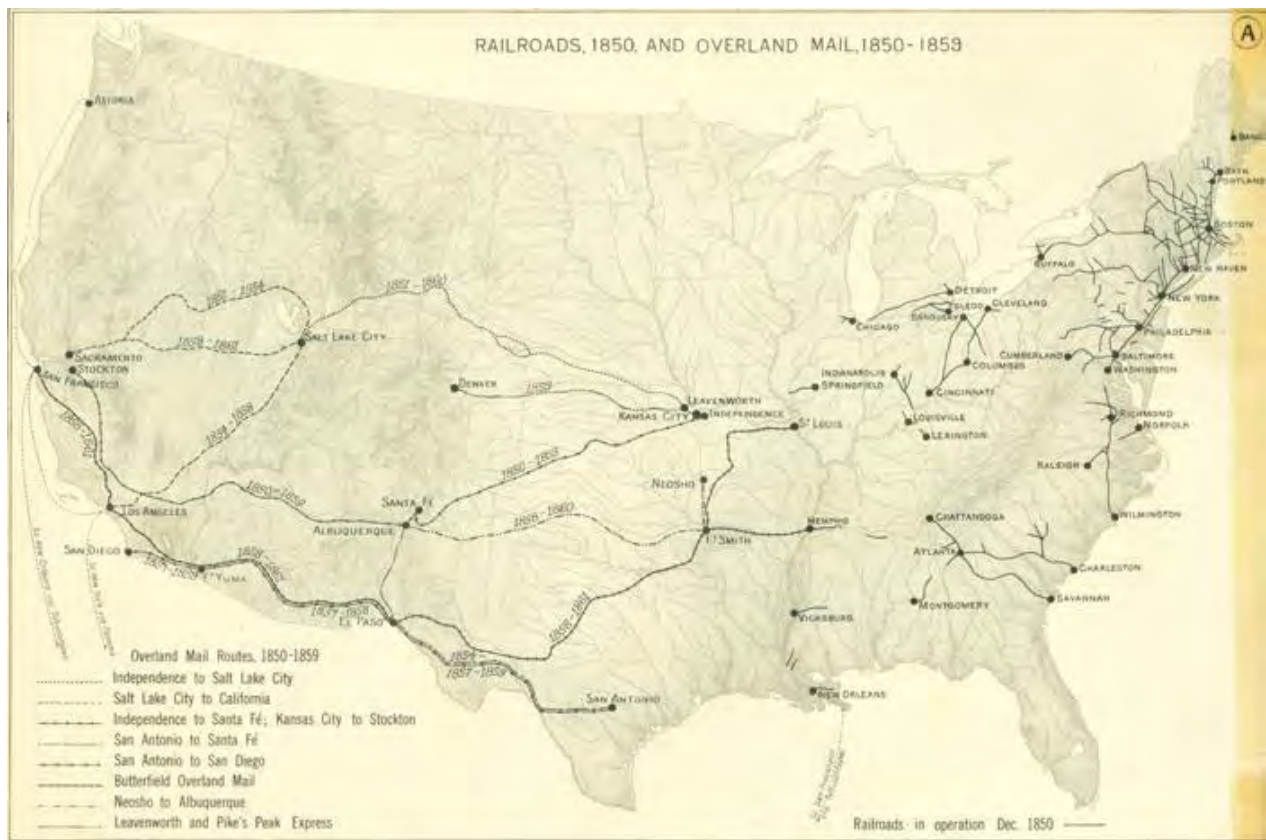
RAILROADS, 1850, AND OVERLAND MAIL, 1850-1859
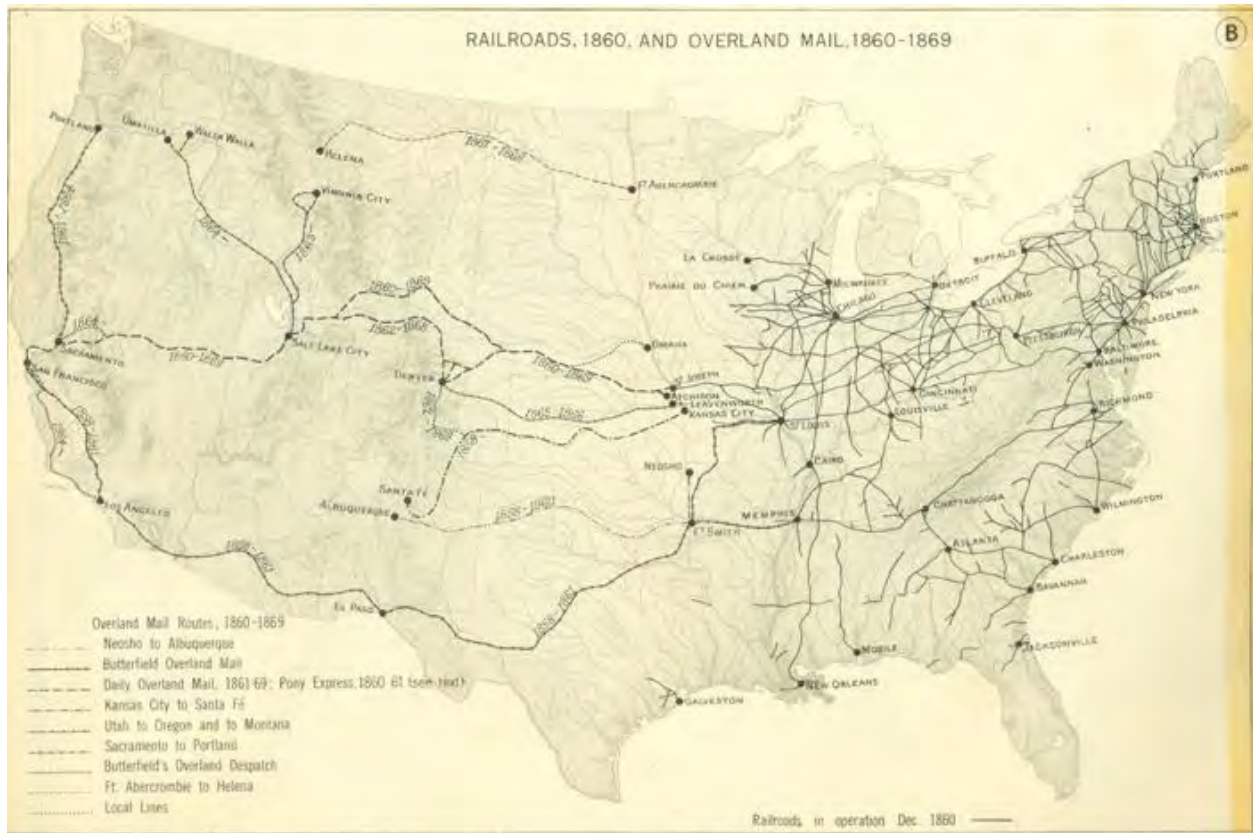
RAILROADS, 1860, AND OVERLAND MAIL, 1860-1869

Weather:

Your quadrant has warm, humid summers and cold, snowy winters.

Environment:

The landscape is covered with prairie grasses. Near the rivers, there are areas with lots of trees.

To start, make sure your quadrant looks like the image here.

- **Add four (4) trees near both rivers.**
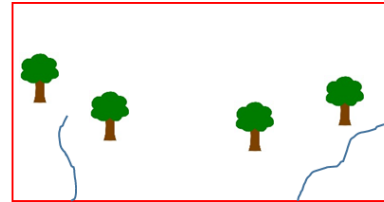
Task 1:

Settlers are moving from the East into your quadrant. They'll want to pick a spot that offers them the best chance at survival, somewhere with access to water and a forest for lumber. They will settle in the first area they see that matches this description. Place a settlement in the correct place [1].

1. **Place two (2) yellow houses (settlements) in the East near the river.**

Before you do Task 2, check to make sure your quadrant looks like the image below.
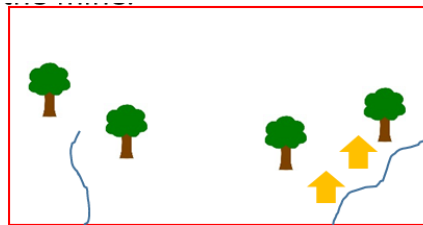
Task 2:

More and more people have moved into your area, making it look more like a town or small city than a settlement [1]. As the population has grown, people began to look for new ways to make money. Coal was discovered in the North Central area [2], and mining camp builds up around it [3].

1. **Replace the two (2) yellow houses with three (3) blue houses (city).**

2. **Place coal mine (shovel & axe) in top center of quadrant.**

3. **Place two (2) yellow near the mine.**

Before you do Task 3, check to make sure your quadrant looks like the image below.
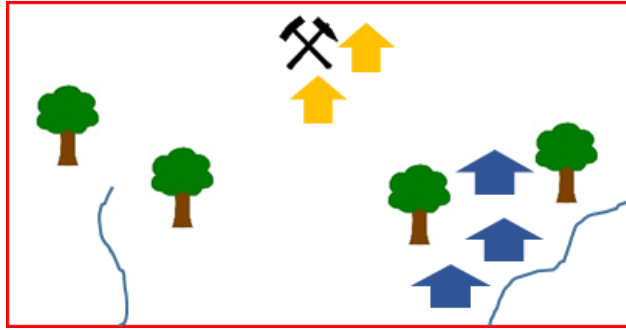
Task 3:

Though the coal mine just opened, it quickly runs out of coal and the mine closes. Luckily, a new coal field is found in the very center of your quadrant and the people move their homes to be near it [1]. As this mine becomes successful, a railroad track is laid between the coal mine and the city. Using the masking tape, connect the coal mine and the city [2].

1. Move the mine and two (2) yellow houses down from top to center of quadrant.

2. Connect the coal mine to the city (blue houses) with tape (railroad).

Before you do Task 4, check to make sure your quadrant looks like the image below.
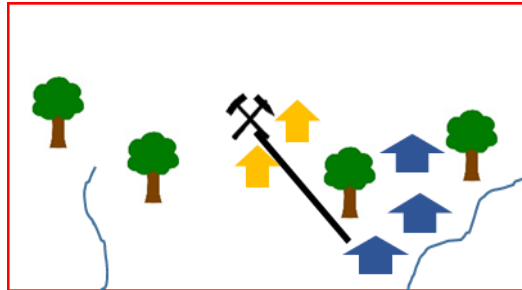
Task 4:

The residents of your quadrant write to their friends and family, describing the success they have found there, and more people move to the city [1]. Taking advantage of the population growth and the nearby coal mine, two factories open north of the city [2]. Railroad tracks are built from each factory to the mine. Using the masking tape, connect the coal mine and the city [3].

1. Add two (2) blue houses to the existing city.

2. Add two (2) factories North of the city.

3. Connect each factory to the mine with tape (railroad).

Before you do Task 5, check to make sure your quadrant looks like the image below.
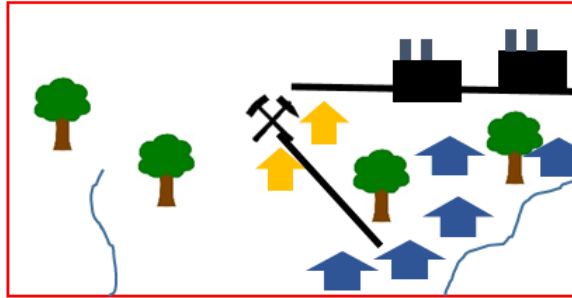
Task 5:

A few people decide to stop working in the coal mines, looking for cleaner and less dangerous work. They decide to build their homes next to the second river in your quadrant [1]. Sensing the potential of their location, two gentlemen open a factory downtown, along the river [2].

1. Add two (2) yellow houses near second river in the West.

2. Add factory near new settlement on Western river.

Before you do Task 6, check to make sure your quadrant looks like the image below.
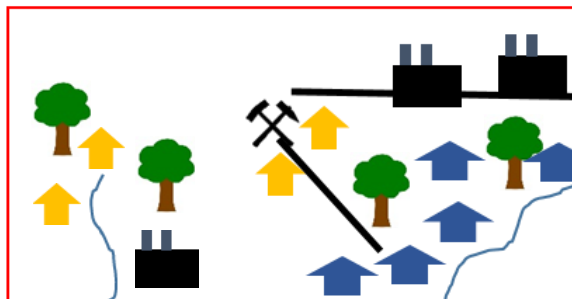
Task 6:

More people move into the western town [1]. The two cities in the quadrant realize that trade between them would benefit them both. Connect them with a railroad line [2].

1. Add two (2) blue houses to the Western city.

2. Connect the two (2) cities with tape (railroad).

When finished check to make sure your quadrant looks like the image here.
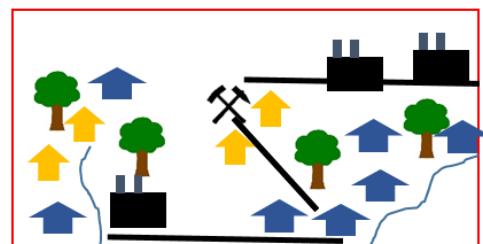
Weather:
Your quadrant has warm, humid summers and cold, snowy winters.
Environment:
The landscape is covered with prairie grasses. Near the rivers, there are areas with lots of trees.

To start, make sure your quadrant looks like the image here.

- **Add five (5) trees to the quadrant.**
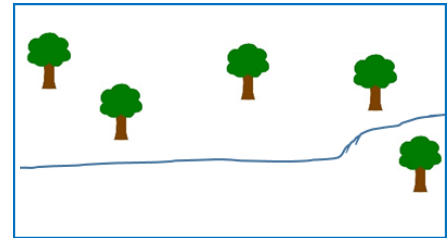
Task 1:
A large group of people decides they want to leave their homes in the East to move into the red quadrant. Many in the group become tired and ill halfway through and stop to rest. After much discussion, they decide to stop moving forward and build their settlement along the river [1].

1. **Add two (2) yellow houses in a central location along the river.**

Before you do Task 2, check to make sure your quadrant looks like the image below.
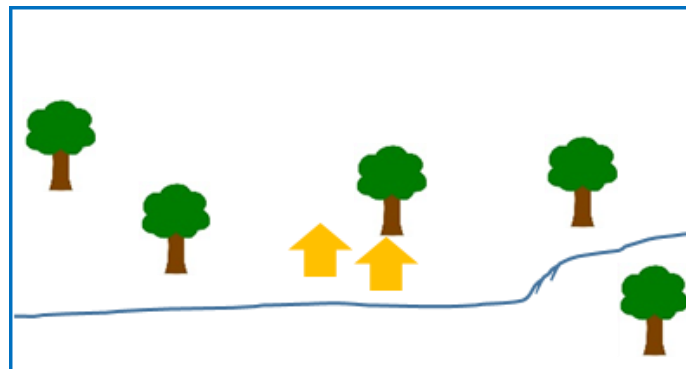
Task 2:
With all of the trees in the area, the residents decide to start 2 lumber mills along the river, just outside of town [1].

1. **Place 2 factories on each side of the settlement (yellow houses).**

Before you do Task 3, check to make sure your quadrant looks like the image below.
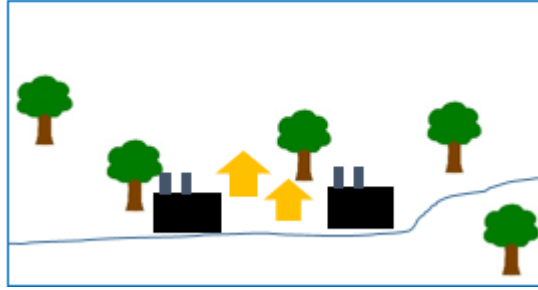
Task 3:

Business is booming! More and more people move into town to work in the lumber yards, making the settlement look more like a small city [1]. One faction in the city gets into an argument with the other residents and decides they no longer want to live in town. They move to the northwest corner of your quadrant [2].

1. **Replace two (2) yellow houses with three (3) blue houses to represent a city.**

2. **Put two (2) yellow houses in the Northwest.**

Before you do Task 4, check to make sure your quadrant looks like the image below.

Task 4:

Coal is found in the northeast corner of your quadrant [1], and coal mining camp springs up around it as men move there to work in the mines [2]. Hearing this, a new factory opens a little north of the city [3], and railroad track is laid between the new factory and the coal mine [4].

1. **Put coal mine (shovel & axe) in the Northeast.**

2. **Put two (2) yellow houses near the mine.**

3. **Put another factory above the blue houses (city).**

4. **Put tape (railroad) down from coal mine to new factory.**

**Before you do Task 5, check to make sure your quadrant looks like the image below.**
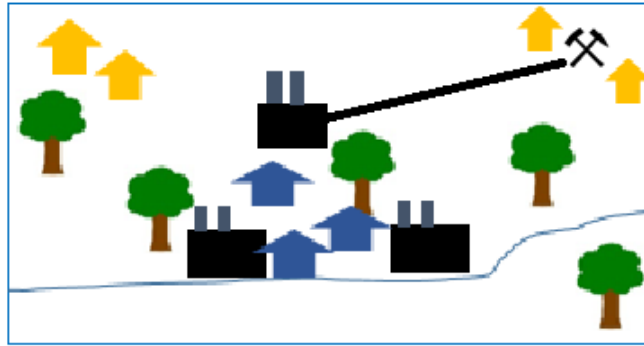
Task 5:

The settlement in the Northwest corner is struggling. After a townhall meeting, they decide to leave to move further south. They decided to settle along the river [1].

1. Move two (2) of the yellow houses in the Northwest down (South) by the river.

**Before you do Task 6, check to make sure your quadrant looks like the image below.**
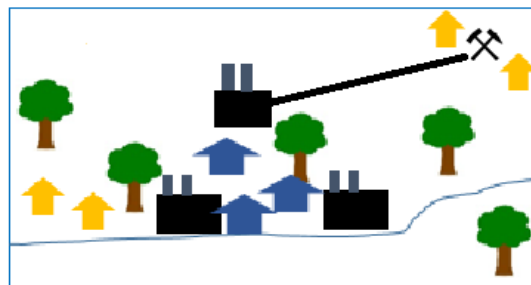
Task 6:

The small town in the west is thriving. More and more people are moving there [1] and a factory opens to employ the local residents [2]. Railroad is put in between the factory and the coal mine [3], and the two cities decide to build a railroad line between each other [4].

1. Replace two (2) yellow houses near the river with two (2) blue houses (city).

2. Put down a factory near the new city.

3. Put down tape (Railroad) from coal mine to new factory avoiding trees and other objects.

4. Connect two (2) cities (blue houses) with tape (Railroad).

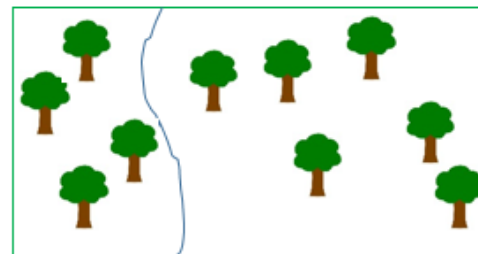When finished check to make sure your quadrant looks like the image here.
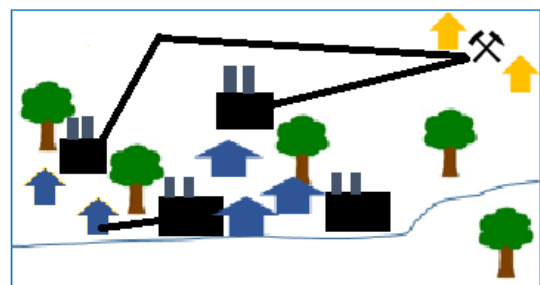
Weather:

Your quadrant has long, hot summers and mild winters. It never snows.

Environment:

The land here is very wooded, with rich soils made for growing crops.

To start, make sure your quadrant looks like the image here.

- **Add ten (10) trees.**

Task 1:

A group of settlers moves into your quadrant, wanting to make a new life for themselves. They pick a spot on the eastern edge of your quadrant, chop down a few of the trees, and build their homes [1].

1. **Remove one (1) tree from the Eastern side and replace with two (2) yellow houses.**

Before you do Task 2, check to make sure your quadrant looks like the image below.
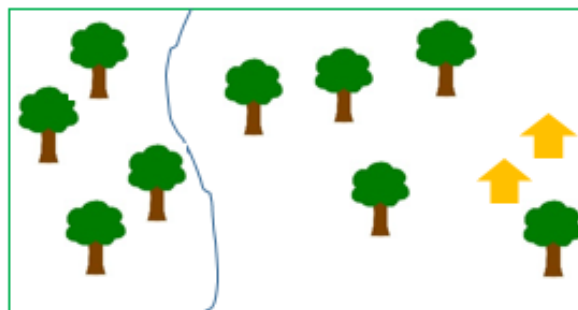
Task 2:

A coal field is discovered in the western section of your quadrant [1]. As miners move there, a small camp is built around it [2].

1. **Put coal mine (shovel & axe) in location west of the river.**

2. **Put two (2) yellow houses (settlement) near the new coal mine.**

**Before you do Task 3, check to make sure your quadrant looks like the image below.**
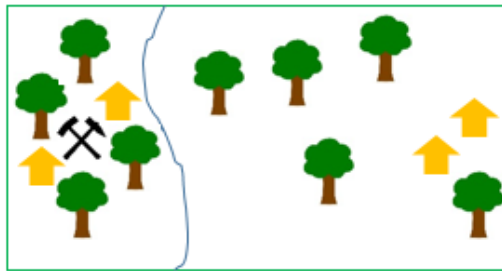
Task 3:

More and more people move into your settlement in the east, until it looks more like a city than a tiny village [1]. As it becomes crowded, families leave. They chop down trees to build their homes and start farming in the surrounding areas. Remove two tress and scatter little houses throughout your quadrant [2].

1. Replace two (2) yellow houses in the East with three (3) blue houses (city).

2. Remove two (2) trees near the river and replace five (5) yellow houses.

Before you do Task 4, check to make sure your quadrant looks like the image below.
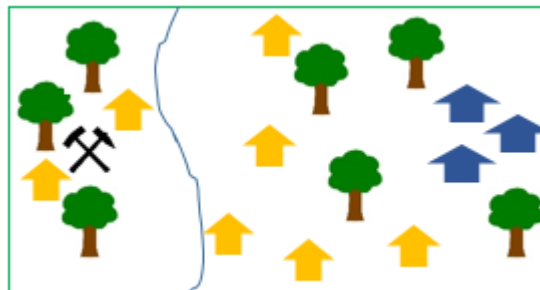

Task 4:

The camp surrounding the coal mine grows as more people move there [1]. Someone decided to take advantage of the access to coal and builds a factory just to the east of town [2]. More people build homes in areas throughout your quadrant [3].

1. Add two (2) yellow houses near the coal mine.

2. Add factory near coal mine.

3. Add three (3) yellow houses near settlement East of the river.

**Before you do Task 5, check to make sure your quadrant looks like the image below.**
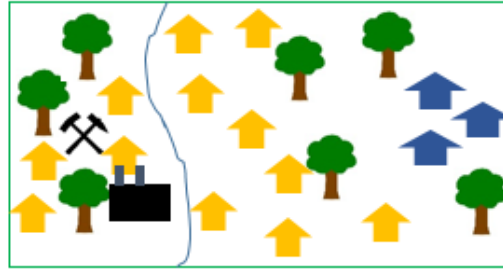
Task 5:

Realizing it would be profitable to send goods from the factory and coal from the mine to the city, officials decide to build a railroad line between the two locations. Unfortunately, there are a few houses and plantations in the way. Find a path for the railroad to go, looking for a route that won't interrupt people's homes [1]. If there are houses that must be moved, you will offer them new land in the upper portion of your quadrant and they will move [2].

When finished check to make sure your quadrant looks like the image here.

1. **Put tape (Railroad) from coal mine and factory in West to the blue houses (city) in East.**

2. **Move yellow houses from the center to the top if in the way of railroad tracks.**
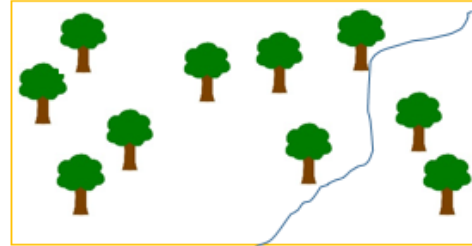
Weather:
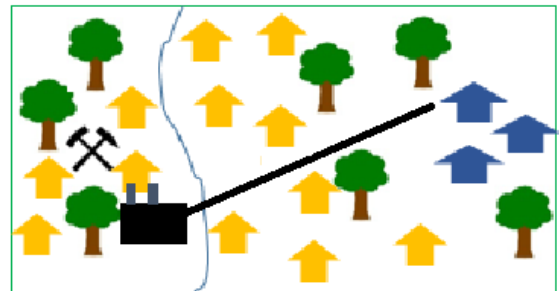
Your quadrant has long, hot summers and mild winters. It never snows.

Environment:

The land here is very wooded, with rich soils made for growing crops.

To start, make sure your quadrant looks like the image here.


- **Add ten (10) trees.**

Task 1:

Settlers are moving from the East into your quadrant. They'll want to pick a spot that offers them best chance at survival, somewhere with access to water and open farming land. They will settle in the first area they see that matches this description [1].

1. **Put one (1) barn in a central location.**

Before you do Task 2, check to make sure your quadrant looks like the image below.
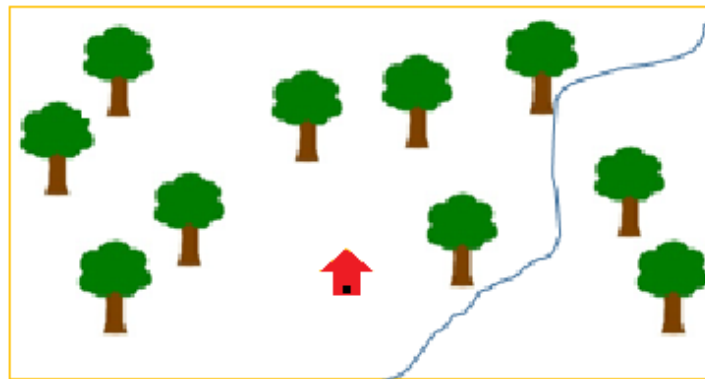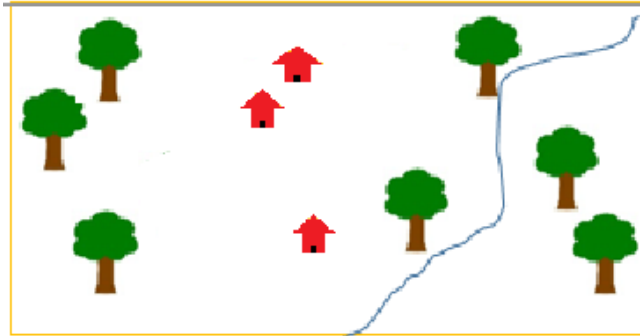

Task 2:

New settlers move into the area looking for land to farm. They will want to live in open spaces large enough to have property to plant on [1].

1. **Remove three (3) trees and replace them with two (2) barns in open areas.**

**Before you do Task 3, check to make sure your quadrant looks like the image below.**

Task 3:

The farming settlers harvest successfully to make it through their first few harvests. Small businesses begin to appear to provide them with supplies. Place a small settlement in a location convenient for all the farmers in the area. You will need to cut down a tree to give the settlement room to grow [1].

1. **Remove one (1) tree and replace with one (1) blue house (city).**

**Before you do Task 4, check to make sure your quadrant looks like the image below.**
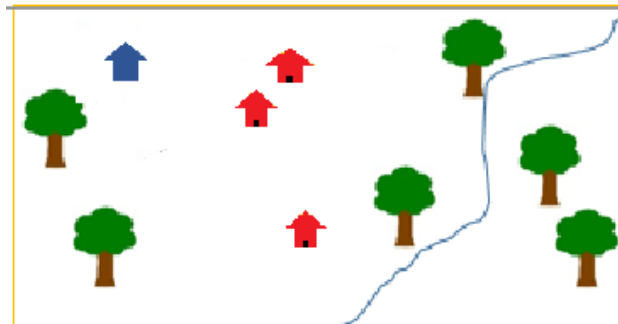
Task 4:

The number of goods and services needed in the area grows and the small settlement needs access to water to ship their harvests to other areas. Place a larger settlement along the river in your quadrant [1].

1. **Add one (1) blue house (city) near the river.**

Before you do Task 5, check to make sure your quadrant looks like the image below.
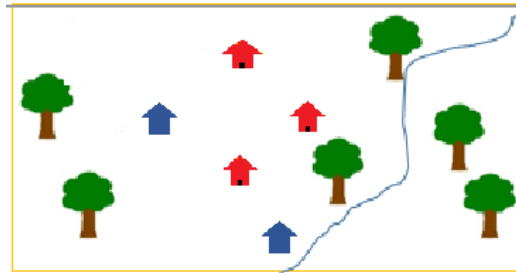

Task 5:

More people move into the area providing goods and services for the farmers. Add two additional settlement buildings next to the growing town on the river [1]. Railroads are needed to connect the original settlement to the growing new city on the water [2].

1. Add two (2) yellow houses (settlement) near blue houses (city) on the river.

2. Connect central city to river city with tape (Railroad).

When finished check to make sure your quadrant looks like the image here.

Railroad track damaged. Pull up some tape and put down an explosion.
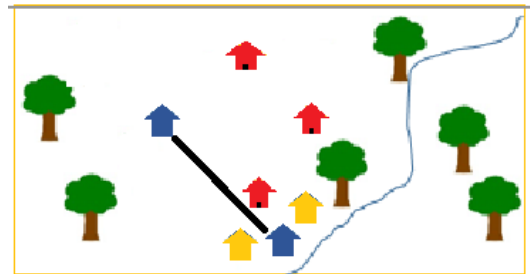
ATTACK!

Battle damages railroad track. Pull up some tape and put down an explosion.

ATTACK!

Factory damaged. Place an explosion on it.

ATTACK!

Repair one section of damaged track. Remove an explosion and put down new tape.

REPAIR

Make repairs to one of the factories. Remove one explosion.

REPAIR

Place one crate of supplies on each unharmed factory in your quadrant.

REPAIR