

Human adaptation and modification of the environment.

Name:

G4A: Scarcity, Surplus, Trade, and Transportation.

Vocabulary

- Scarcity
- Surplus
- Population Density

Essential Question – How did the surplus of natural resources affect U.S. population density and transportation.



Case Study: Industrial America and the West 1830's - 1880's.

In 1860, most Americans considered the Great Plains the “Great American Desert.” Settlement west of Minnesota, Iowa, Missouri, Arkansas, and Louisiana averaged just 1 person per square mile. The only parts of the Far West that were highly settled were California and Texas. Between 1865 and the 1890s, however, Americans settled 430 million acres in the Far West--more land than during the preceding 250 years of American history. By 1893, the Census Bureau was able to claim that the entire western frontier was now occupied.

The discovery of gold, silver, and other precious minerals in California in 1849, in Nevada and Colorado in the 1850s, in Idaho and Montana in 1860s, and South Dakota in the 1870s sparked an influx of prospectors and miners. The expansion of railroads and the invention of barbed wire and improvements in windmills and pumps attracted ranchers and farmers to the Great Plains in the 1860s and 1870s.

Directions: You will be analyzing and answering questions within the 4 sources in order to answer the Essential Question.

- As you analyze the sources, reflect on the ways in which location, natural resources, and population impact one another.

Source 1: Natural Resources of Industrial America.

England was the first country to industrialize, but others in Europe -- namely France and Germany — soon followed. Across the Atlantic Ocean, the United States was also beginning to stir. Always rich in natural resources, the former English colonies were blessed with a huge supply of fertile land. Dense forests throughout the country provided wood for building and heating. In the Northeast many swift rivers provided the power to turn water wheels. Huge deposits of coal were discovered in the Allegheny Mountains around the time of the Civil War. The mighty Mesabi Mountain Range in Minnesota was a source of the ore needed to make iron and steel. Rich deposits of copper were found in the West. Reserves of crude oil were discovered in Pennsylvania and Ohio, and when these ran out they were found in Oklahoma and Texas. The United States was truly a land of plenty.

Natural Resource	Iron Ore 	Coal 	Oil 	Lumber 
Description of Resource	The largest iron deposits were discovered in the mid to late 1800's in the midwest. Iron ore could be processed into steel, which could be used to build railroads, buildings, bridges, etc. As the US expanded, the need for more	Coal was first mined in the United States during the early 1700's primarily in the northeast. It is used as a fossil fuel to produce heat and energy. Coal replaced wood in fueling the steam engine and machinery; it was	With the discovery of a large oil well in Western Pennsylvania in the late 1850's, an industry was born in the US. Drilling for oil also led to the petroleum refining industry. Oil could be transformed into kerosene, which	The eastern United States was covered in forests that could be used to harvest lumber. Deforestation impacted the US economy until the US expanded further west and more forest lands were acquired. Lumber could be

infrastructure (railroads, buildings, bridges) grew as well. Additionally, steel could be used to build factories for manufacturing consumer goods.	used in both transportation and manufacturing. During the Industrial Revolution, coal helped power the railways of America (needed to transport goods across a growing nation) and power machines in factories.	could be used for lighting lamps and later as gasoline for automobiles. Kerosene was the major source of lighting for most American homes until 1930. Additionally, as the use of the automobile grew in the early 1900's, oil was a needed commodity.	used to fuel the steam engines. Lumber was used for engines that were used on trains, steamboats, any other new machinery that ran on steam. Lumber was also used to build homes and other buildings during the rapid expansion of the United States during the Gilded Age.
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NATURAL RESOURCE	LOCATION	HOW WAS IT USED?
IRON ORE	1.	
COAL	2.	
OIL	3.	
LUMBER	4.	

Source 2: The Emergence of the Railroad

A powerful, inexpensive, and consistent form of transportation paved the way for rapid and explosive railway growth, as well as stimulated growth in the iron, wood, coal, and other related industries. The railroad industry quickly became the nation's first "big business" as it accelerated the development of virtually every other industry in the country. By 1890, railroad lines covered nearly every corner of the United States, bringing raw materials to industrial factories and finished goods to consumer markets. By the time of the Civil War there were already 30,000 miles of railroads spanning America. This was just a start. A full 200,000 miles of railroads were built between 1865- 1910. Steel rails covered the country, connecting East to West, North to South, and all regions in between.

Certain captains of industry like Cornelius Vanderbilt and James J. Hill played leading roles in this feat. The most notable accomplishment was completing the transcontinental railroad in 1869 with the pounding in of the famous golden spike into the ground where the eastward and westward bound track met. The Chinese laborers, who were mostly responsible for the work on the Western terminal of that railroad, performed heroically. They were often lowered down mountains in straw baskets to plant dynamite charges and sometimes killed in the blasts. In the winter they slept huddled under snow tunnels which frequently collapsed. Harassed or ignored by white workers, they nevertheless out-worked and out-produced their better-paid European counterparts. Millions of dollars and over 400,000,000 acres of land were granted to the corporations that built these railroads, and the roads, built in haste, had to be reinforced and replaced to make travel safe. The railroads, of course, made further industrialization possible because they connected buyers with producers and factories with the sources of their raw materials.

5. How many railway lines were built between 1865 - 1910?

a.

6. Describe the purpose of the transcontinental railroad.

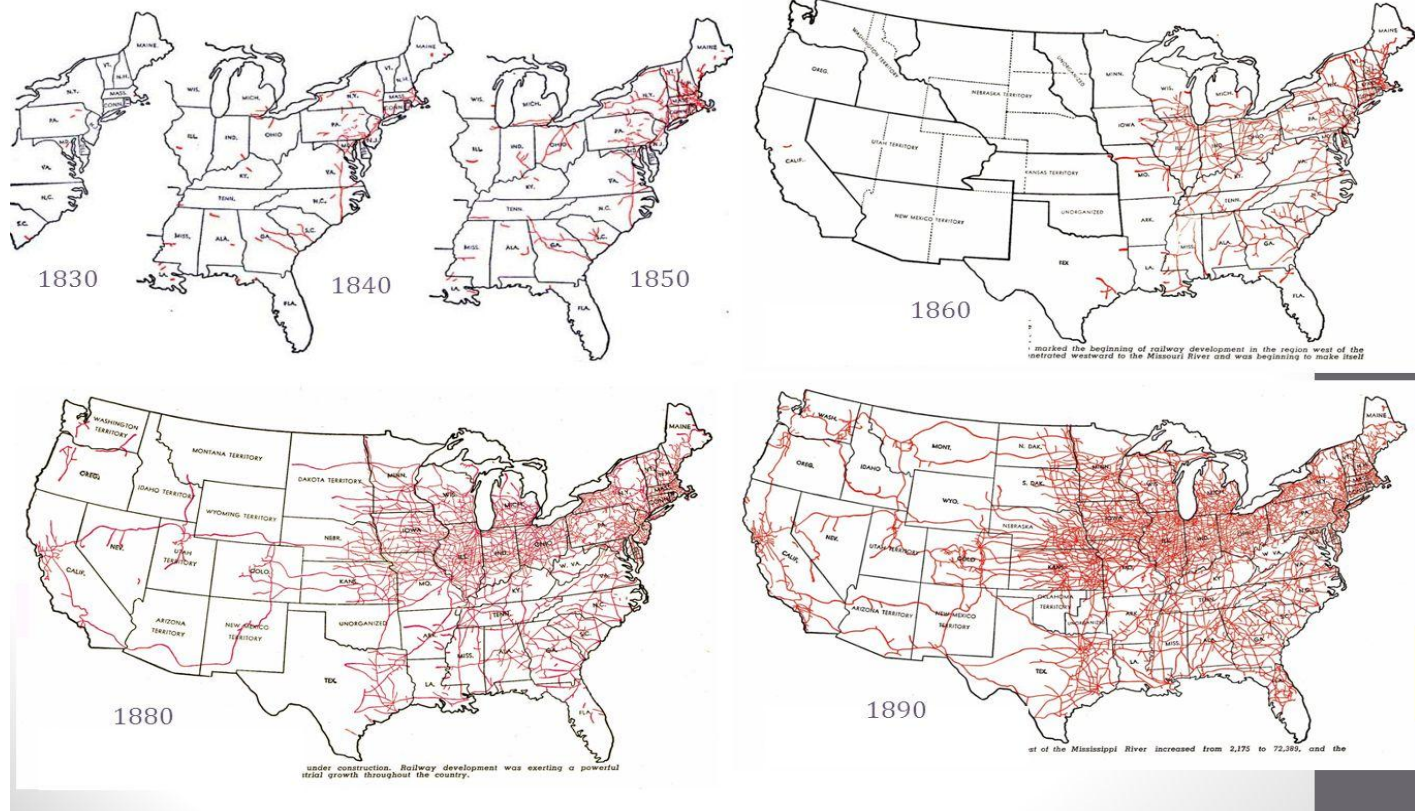
b.

7. How do you think the emergence of railroads spurred growth in other industries?

c.

Source 3: Expansion of Railroads throughout the US.

Growth of Railroads



8. The expansion of the railroad industry is connected to the surplus of natural resources because ?

a.

Source 4: U.S. Population Density from 1790 - 1990.

If the picture doesn't show, click this link -

<https://www.visualcapitalist.com/visualizing-200-years-of-u-s-population-density/>



9. Notice the population density from the 1830's - 1880's, what trend do you see? (think location)

a.

10. How might the trend you answered above be connected to sources 1 - 3 on your packet?

b.

11. Extended question - Finish the Sentence

How might the surplus of natural resources in the U.S. impact imports and exports?

- Import - Good or service bought by a country (the U.S.) from another country.
- Exports - Good or service sold by a country (the U.S.) to another country.

Directions: finish either of the sentence frames based on the evidence and your perspective.

Do you think imports / exports increased or decreased? Explain your answer.

- U.S. imports during this time (increased/decreased) because....
- U.S. exports during this time (increased/decreased) because....

12. Essential Question - How did the surplus of natural resources affect U.S. population density and transportation.

Directions: Based on Sources 1 - 4, answer the essential question in 1-2 paragraphs (**4- 8 sentences**). Use evidence from the sources to support your answer. Use **AT LEAST TWO SOURCES**.

Sentence Frames

- The surplus of natural resources affected transportation by....
- Transportation in the U.S. was impacted by the surplus of natural resources because source 1 details..... which shows.....

Example Sentence

- Transportation in the U.S. was impacted by the surplus of natural resources because source 1 details that iron ore was used to create railways and trains while coal was used to fuel train engines which shows the growth in railway transportation.

