

# THE INDUSTRIAL REVOLUTION BEGINS IN ENGLAND



The Revolutions in France, the United States, and Latin America had the goals of giving equality to the people and changing the kinds of governments they lived under. Around the mid 1700's, a different kind of revolution began to take place in England. The shift from making goods by hand to making them with machines is known as the Industrial Revolution. This change in the way goods are produced would have a major impact on world civilization.

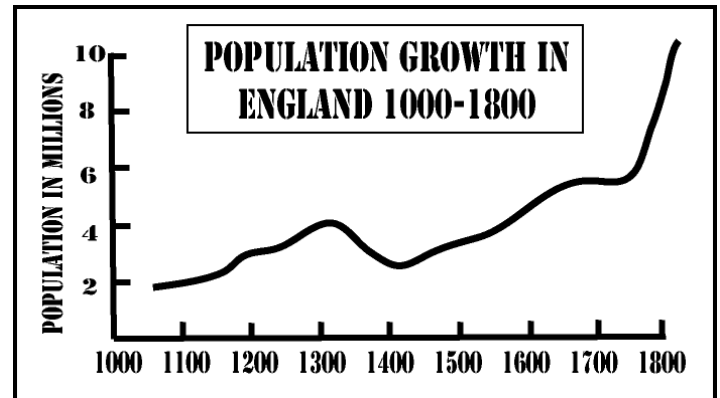
## AGRICULTURAL REVOLUTION

After buying up the land of village farmers, wealthy landowners enclosed their land with fences or hedges. They would trade land with other farmers so they could consolidate their land and make larger fields. Within these larger fields, called **enclosures**, landowners experimented with more productive seeding and harvesting methods to boost crop yields.



**Jethro Tull** was one of the first of these scientific farmers. His invention, called the **seed drill**, allowed farmers to sow seeds in well-spaced rows at specific depths. A larger share of the seeds took root, boosting crop yields.

According to the chart on the right, what effect did the agricultural revolution have upon the English population?




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## TECHNOLOGY

Inventor	Invention	Importance
John Kay <i>English</i>	Flying Shuttle (1733)	Operated by hand, it increased speed of weaving which outran supply of thread.
James Hargreaves <i>English</i>	Spinning jenny (1765)	Spun 8 to 10 threads at one time; could be used at home.
Richard Arkwright <i>English</i>	Water frame (1769)	A spinning machine driven by water, too large for home use; led to building of factories.
Samuel Crompton <i>English</i>	Spinning mule (1779)	Combined the jenny and the water frame; could spin fine, strong thread.
Edward Cartwright <i>English</i>	Power loom (1785)	Wove thread into cloth automatically and quickly; operated by water power.
Eli Whitney <i>American</i>	Cotton gin (179)	Automatically separated seed from raw cotton; increased quantity of cotton available to manufacturers.

According to the chart, how did advances in technology change the way goods were produced in England?

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# Business Venture

Imagine that you and your partner are *entrepreneurs* during the Industrial revolution. You want to set up a new business to try to get rich but you aren't sure where to start your business. Using all of the information from the maps below, make a decision on **where you will place your business**. You must:

- Pick a business type- **Textile, machine production, or farming**
- Examine the maps
- Put an X on the map at the bottom and explain why you think you will be successful for choosing that location

1. Your business type:

2. Place an X to mark the location of your business here →

3. Explain why you chose this location. How did you use the information on the various maps below to make your decision?

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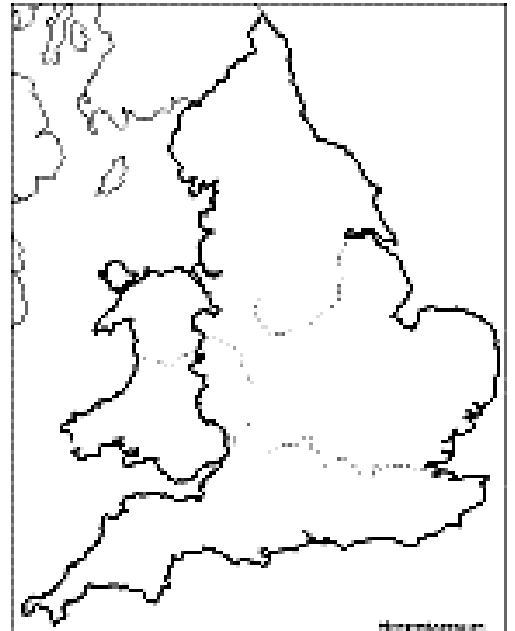
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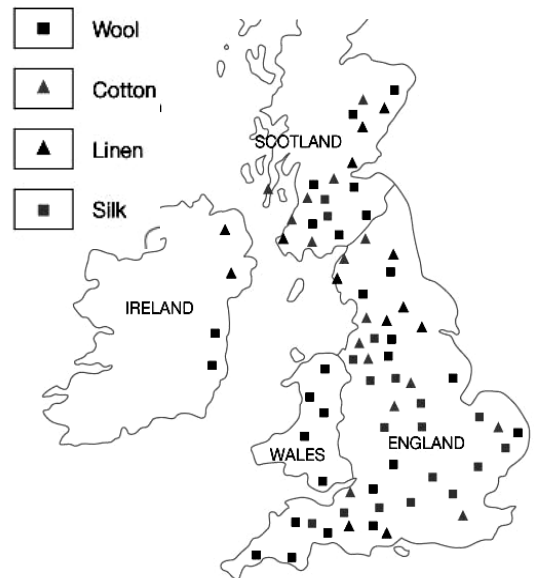
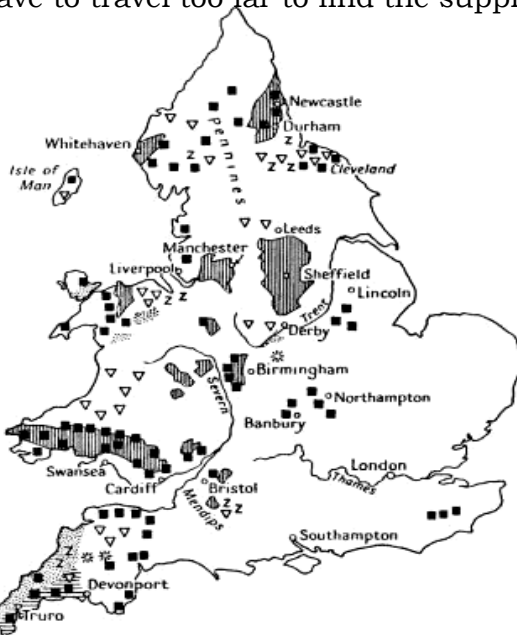


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1. **Natural Resources** are a critical part of setting up your business. If you have to travel too far to find the supplies you need, it will be very expensive.

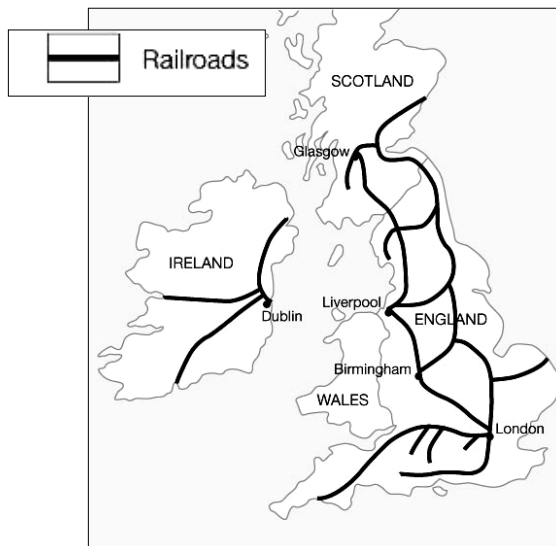
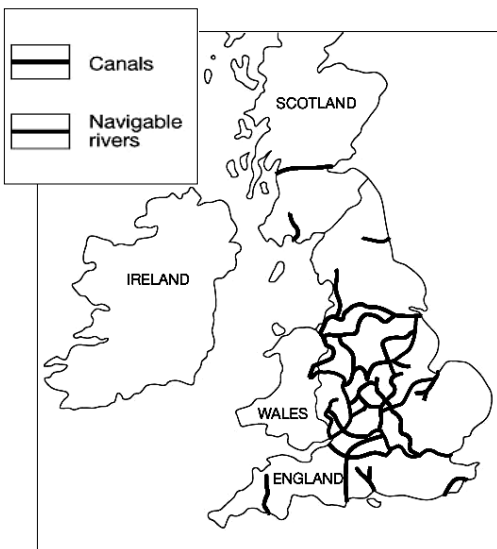
- Coal ———— ▨▨▨▨
- Iron ———— ■■■■
- Copper ———— ▨▨▨▨
- Lead ———— ▽▽▽▽
- Tin ———— ▨▨▨▨
- Manganese ———— \* \* \*
- Zinc ———— Z Z Z



2. **Rivers and Canals** played a critical role in powering many of the factories and mills. Also, canals were used to move resources and goods that were produced from place to place.

3. **Railroads** were another very convenient way of moving goods and resources long distances across land.

4. **Population density** is another key in selecting a location. Without workers, you can't run a business.



## Population Density



## AFTER THE ACTIVITY-

**WAS ENGLAND THE RIGHT PLACE TO START AN INDUSTRIAL REVOLUTION? WHY?**

IN YOUR NOTEBOOK, EXPLAIN YOUR ANSWER USING SUPPORTING FACTS FROM TODAY'S LESSON.

A great number of streams ... furnish water-power adequate to turn many hundred mills: they afford the element of water, indispensable for scouring, bleaching, printing, dyeing, and other processes of manufacture: and when collected in their larger channels, or employed to feed canals, they supply a superior inland navigation, so important for the transit of raw materials and merchandise.

## RAILROADS



Building railroads created new jobs for farm laborers and peasants. Less expensive transportation led to lower-priced goods, thus creating larger markets. More sales meant more factories and more machinery. Business owners could reinvest their profits in new equipment, adding to the growth of the economy. This type of regular, ongoing economic growth became a basic feature of the new industrial economy.

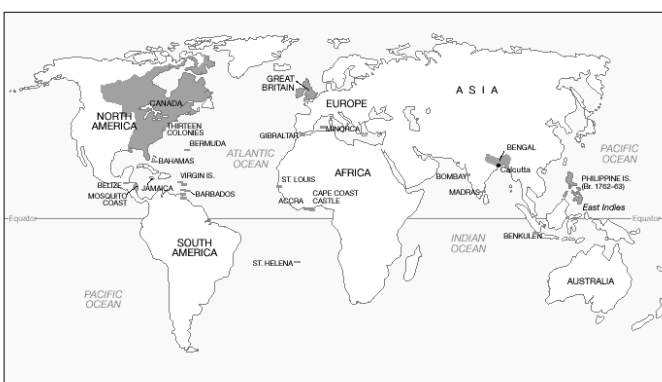
### How did Railroads help industrialization?

## NATURAL RESOURCES

### CAPITAL

Britain had a ready supply of money, or capital, to invest in the new industrial machines and the factories needed to house them. Many British people were very wealthy. Some, called entrepreneurs, were interested in finding new business opportunities and new ways to make profits.

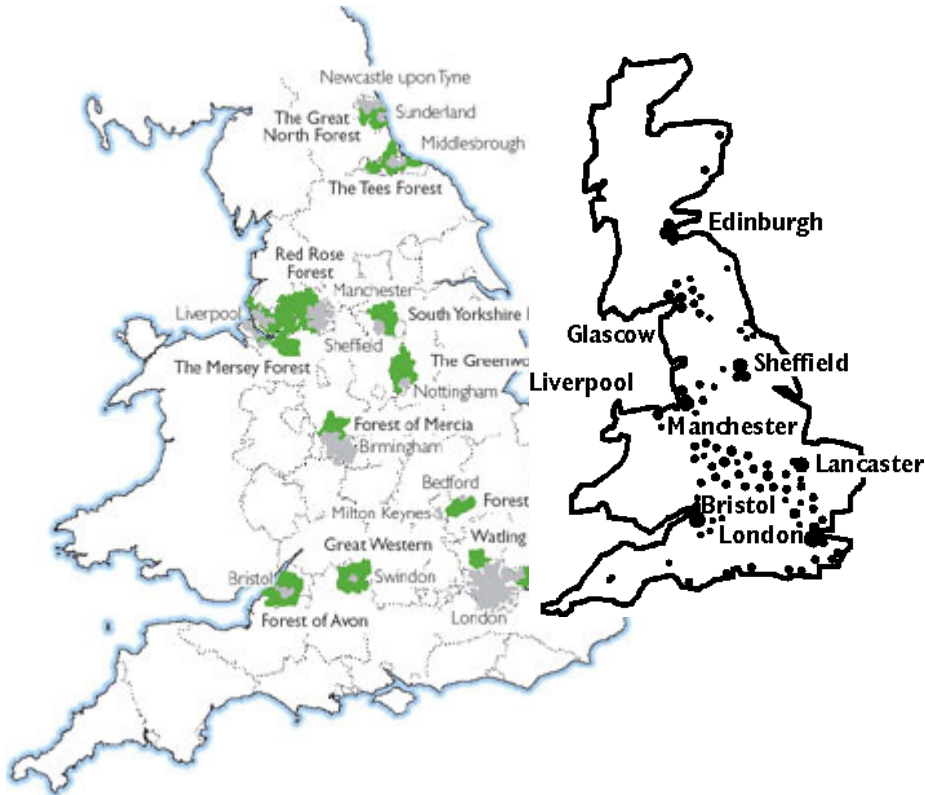
### How did capital help England industrialize?



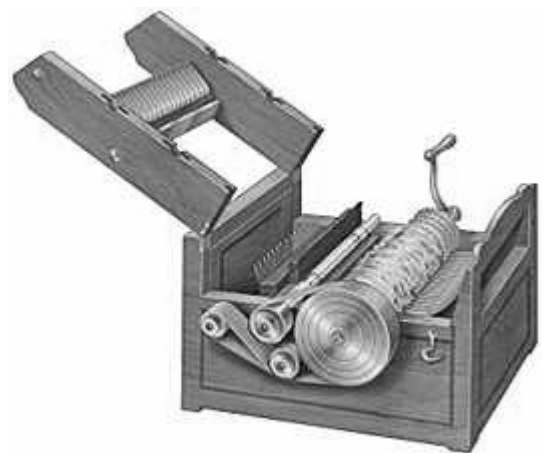
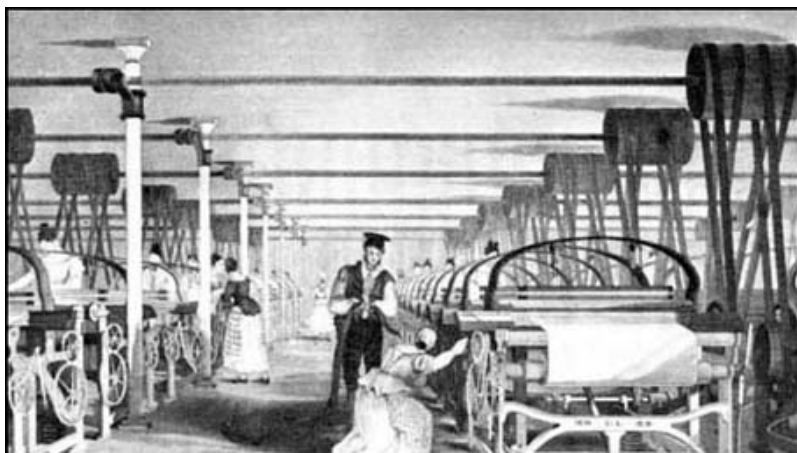
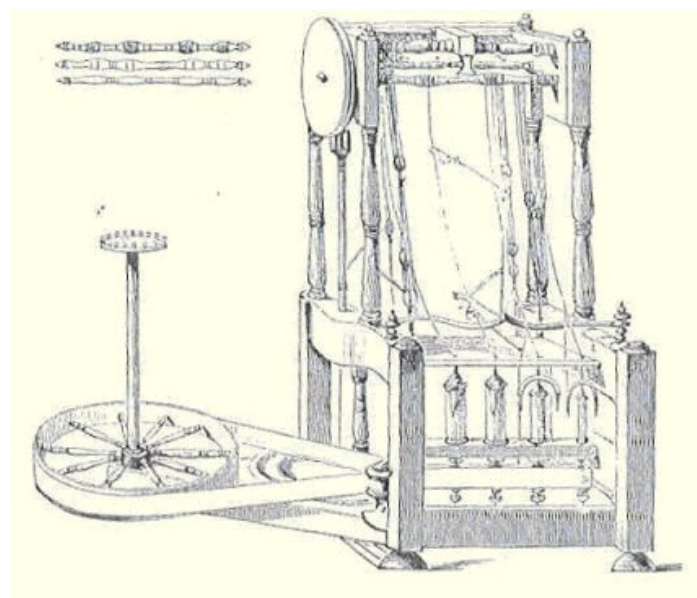
## COLONIAL EMPIRE

A supply of markets gave British manufacturers a ready outlet for their goods. Britain had a vast colonial empire, and British ships could transport goods anywhere in the world.

# How did England's Colonial empire help England industrialize?



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John Kay English	Flying Shuttle (1733)	Operated by hand, it increased speed of weaving which outran supply of thread.
James Hargreaves English	Spinning jenny (1765)	Spun 8 to 10 threads at one time; could be used at home; helped fill demand for thread.
Richard Arkwright English	Water frame (1769)	A spinning machine driven by water, too large for home use; led to building of factories.
Samuel Crompton English	Spinning mule (1779)	Combined the jenny and the water frame; could spin fine, strong thread.
Edward Cartwright English	Power loom (1785)	Wove thread into cloth automatically and rapidly; operated by water power.
Eli Whitney American	Cotton gin (179)	Separated seed from raw cotton; increased quantity of cotton available to manufacturers.

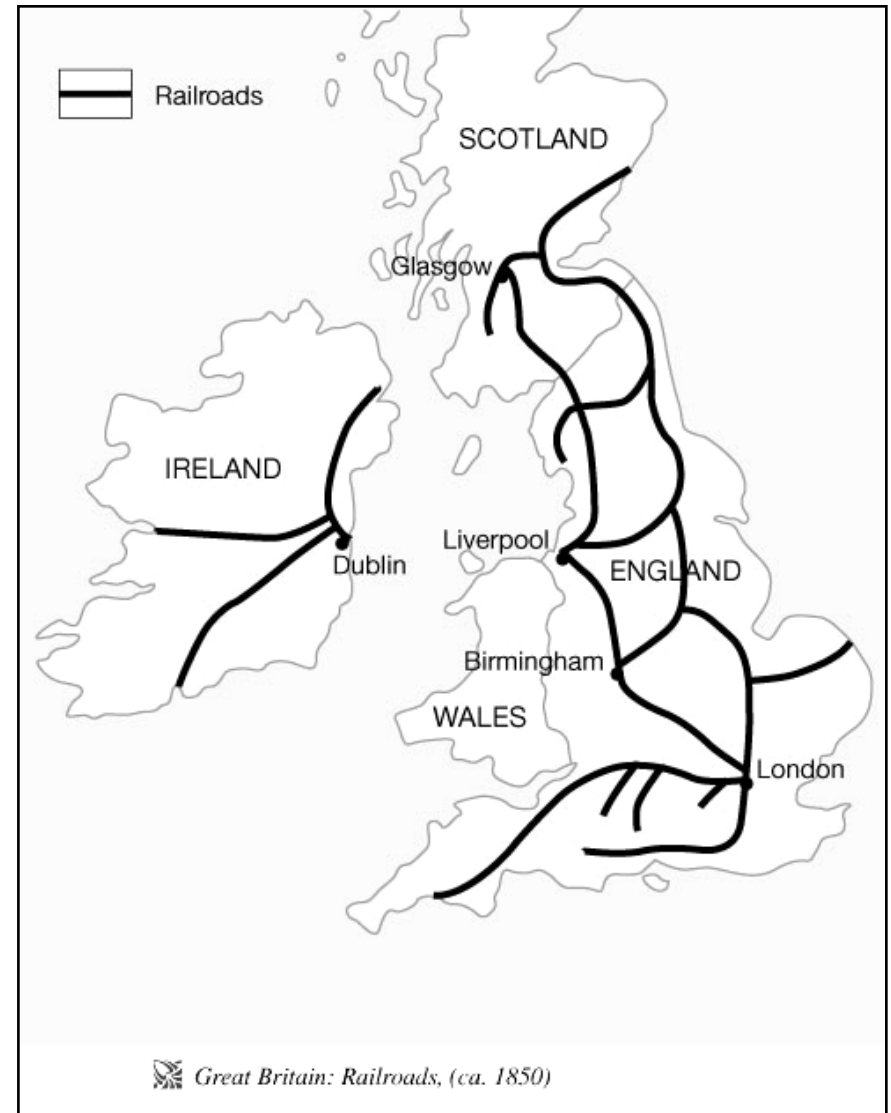




# Canals and Rivers



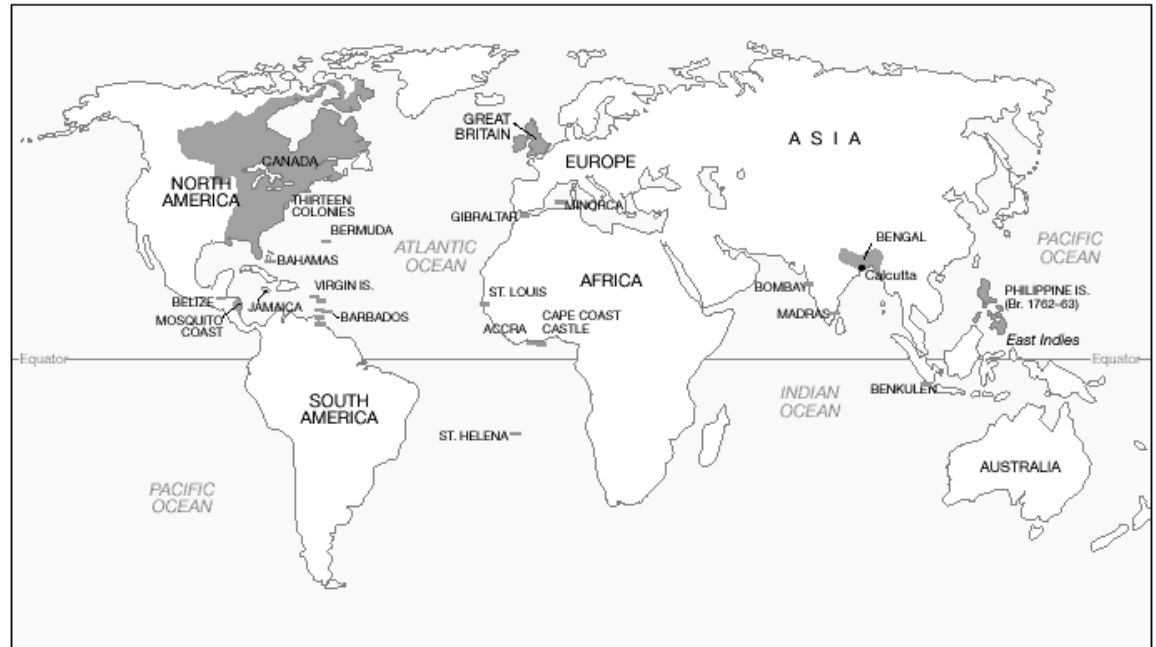
# Railroads




# Natural Resources



# British Empire



 The First British Empire (ca. 1763). The empire was the result of commercial enterprise and Britain's military successes.