



# The first European Industrial Revolution

from the Esri GeoInquiries™ collection for World History

Target audience – World history learners

Time required – 15 minutes

## Activity

Discover the first Industrial Revolution: birth and diffusion from 1750 to 1881.

## Standards

**C3: D2.His.15.9-12.** Distinguish between long-term causes and triggering events in developing a historical argument.

**C3: D2.His.1.9-12.** Evaluate how historical events and developments were shaped by unique circumstances of time and place, as well as broader historical contexts.

## Learning Outcomes

- Students will be able to compare and contrast pre- to post-industrialized Great Britain.
- Students will be able to identify the factors that created industrialization in Great Britain.

**Map URL:** <http://esriurl.com/worldHistoryGeoInquiry10>

## Ask

### What was industry like in Great Britain before the 1750s?

- Click the link above to launch the map.
- With the Details button depressed, click the button, (Show) Contents.
- To see a legend, click the layer name, 1750 Great Britain Resources.
- ? What industries were in Great Britain around 1750?
- ? What was the general geographic distribution of industries in 1750? [*Textile cottage industries were typically in rural areas and near major cities (not in the cities). Iron workshops were near coal mines and ships were in major ports.*]

## Acquire

### Why did the Industrial Revolution begin in Great Britain?

- Click the checkbox to the left of the layer name, 1750 Transportation.
- Click a river on the map.
- ? Why were rivers and canals important to industry? [*They provided water power for factories and a means for transporting raw materials (like coal and iron ore) and finished products..*]
- Turn on the layer, Industries.
- Click the agriculture, economics, and ships icons on the map and read the pop-ups.
- ? Why did these play an important role in the industrialization in Great Britain? (Hint: zoom in and out as needed.) [*Growing population, plenty of money available, and ready transportation to and from colonies*]

## Explore

### What effects did the Industrial Revolution have on Great Britain?

- Click the spinning wheel icon on the map and read the pop-up.
- Select the Great Britain 1850 layer check box to turn on the layer.
- ? What changes did you notice between industry in Great Britain 1750 and 1850? [*The textile factories in 1850 were clustered around coal mines as factories needed coal to run equipment.*]

## Analyze

### How large did the cities grow in Great Britain?

- Turn on the layer, Major Cities.
- Hover over the layer name, Major Cities. Press the Table icon.
- Click on the column header named, Population in 1750. Select Statistics.
- ? Write down the, Sum of values. This value is the population of all cities in 1750.
- ? Repeat this process for column header, Population in 1861
- ? What happened to the population from 1750 to 1881? *[It increased approximately six times the size in cities.]*
- ? What did the growth in population provide to encourage industrialization? *[More people moved to the cities to work in factories to produce more goods.]*

## Act

### Where in the Eastern Hemisphere did the Industrial Revolution diffuse?

- Turn off all layers.
- Turn on the layer, Industrial Revolution Diffusion.
- Zoom out (three times) and click the Play button in the timeslider at the bottom of the map..
- ? Where did industrialization spread or diffuse to first? *[Northern France, Belgium, and western Germany]*
- ? Did the diffusion seem to pick up speed or slow down? *[Picked up speed]*
- ? How can you tell? *[The distances of diffusion grew longer during the same time intervals as early in the industrialization diffusion.]*

### TURN A MAP LAYER ON AND OFF

- Make sure that the Details pane is selected, and click Show Contents Of Map.
- To show individual map layers, select the check boxes next to the layer names.
- Hint: If a map layer name is light gray, zoom in or out on the map until the layer name is black. The layer can now be turned on.

### IDENTIFY A MAP FEATURE

- Click a feature on the map, and a pop-up window will open with information.
- Links and images in the pop-up are often clickable.
- An arrow icon in the upper right of the window indicates that multiple features have been selected.
- Click the button to scroll through the features.

## Next Steps

### DID YOU KNOW?

ArcGIS Online is a mapping platform freely available to public, private, and home schools. A school subscription provides additional security, privacy, and content features. Learn more about ArcGIS Online and how to get a school subscription at <http://www.esri.com/schools>.

### THEN TRY THIS...

- Students can create a story map of their choice, comparing pre- and post-industrialized Great Britain.
- Use the Buffer tool to compare the location of pre-industrialization factories to rivers.

### TEXT REFERENCES

This GIS map has been cross-referenced to material in sections of chapters from these high school texts.

- *World History by Glencoe — Chapter 19*
- *World History by Prentice Hall — Chapter 19*
- *World History: Human Journey by Holt — Chapter 13*