

Topic 5.3 — Industrial Revolution Begins

Standards Alignment

AP Theme	Learning Objective	Key Concept
Humans and the Environments (ENV) – The environment shapes human societies, and as populations grow and change, these populations in turn shape their environments.	Unit 5: Learning Objective D – Explain how environmental factors contributed to industrialization from 1750 to 1900.	KC-5.1.I.A A variety of factors contributed to the growth of industrial production and eventually resulted in the Industrial Revolution, including: proximity to waterways; access to rivers and canals; geographical distribution of coal, iron, and timber; urbanization; improved agricultural productivity; legal protection of private property; access to foreign resources; accumulation of capital.
		KC-5.1.I.C The development of the factory system concentrated production in a single location and led to an increasing degree of specialization of labor.

Learning Objectives

By the end of this lesson, students should be able to:

- Explain how environmental factors such as coal deposits and waterways supported industrialization.
- Describe how improved agricultural productivity contributed to population growth and urbanization.
- Identify how the factory system transformed economic production.
- Analyze how environmental resources and geography influenced where industrialization began.

Lesson Overview

The Industrial Revolution began in the late eighteenth century and dramatically changed how goods were produced. Instead of relying on small workshops and manual labor, production increasingly took place in factories using machines powered by water and steam.

Environmental factors played a crucial role in this transformation. Regions with access to rivers, coal deposits, and iron ore were especially well suited for industrial development. Britain became the first industrial nation partly because it possessed these environmental advantages.

Industrialization reshaped both societies and environments. Cities expanded rapidly, factories concentrated workers in urban centers, and natural resources were used on a massive scale to power new technologies.

Essential Vocabulary

- **Industrialization**
The process of developing industries that use machines to produce goods in factories.
- **Factory System**
A method of production where many workers and machines produce goods in a single large workplace.
- **Urbanization**
The growth of cities as people move from rural areas to find jobs.
- **Natural Resources**
Materials found in nature, such as coal, iron, and timber, that people use to produce goods.
- **Capital**
Money or wealth used to invest in businesses, machines, and factories.

Background Reading

The Industrial Revolution began in Britain in the late 1700s. Several factors made Britain an ideal place for industrialization. The country had large deposits of coal and iron, which were essential for powering steam engines and building machinery. Britain also had many navigable rivers and canals that allowed raw materials and finished goods to be transported easily.

Agricultural improvements also helped prepare the way for industrialization. New farming techniques increased food production, which supported a growing population. As farms became more efficient, fewer workers were needed in agriculture. Many rural workers moved to cities to work in factories, contributing to rapid urbanization.

Industrial production also depended on economic conditions. Britain had accumulated capital through trade and colonial expansion, and its legal system protected private property and investment. These factors encouraged entrepreneurs to build factories and develop new technologies, leading to the expansion of the factory system.

Primary Sources

Primary Source 1

Andrew Ure – The Philosophy of Manufactures (1835)

Source: Fordham University Internet History Sourcebook

<https://sourcebooks.fordham.edu/mod/1835ure.asp>

The factory system unites large numbers of workers in one establishment, where machines powered by steam or water perform tasks that once required skilled

artisans. By organizing labor and machinery together in a single place, production becomes more efficient and capable of producing goods on a much larger scale.

In the modern factory, each worker performs a specialized task as part of a larger process of production. Instead of producing an entire object individually, workers now contribute small parts of the manufacturing process. This system greatly increases the speed and volume of production.

The concentration of machinery and labor also allows manufacturers to control the pace of work more effectively. Factories therefore represent a new stage in economic organization, transforming how goods are produced and distributed throughout society.

Source Analysis Questions

1. Identify ONE historical development described in the passage.
2. Explain ONE way the factory system changed how labor was organized.
3. Explain ONE broader economic impact of the factory system.

Primary Source 2

Friedrich Engels – The Condition of the Working Class in England (1845)

Source: Fordham University Internet History Sourcebook

<https://sourcebooks.fordham.edu/mod/1845engels.asp>

The rapid growth of factories and industry has drawn thousands of workers into cities where industrial production is concentrated. These cities expand quickly as workers migrate from rural areas seeking employment in the new factories.

The availability of coal deposits and rivers made certain regions ideal locations for industrial development. Factories were often built close to these natural resources so that machines could be powered efficiently and raw materials transported easily.

Industrialization has therefore transformed both landscapes and communities. Rural workers become urban laborers, and cities expand rapidly around factories, mines, and transportation networks.

Source Analysis Questions

1. Identify ONE environmental factor that contributed to industrialization.
2. Explain ONE reason workers moved from rural areas to cities.
3. Describe ONE way industrialization changed human environments.

Factors Contributing to Industrialization

Factor	How It Contributed to Industrialization
Coal and Iron Deposits	Provided fuel and materials needed for machines and factories
Rivers and Canals	Allowed efficient transportation of goods and raw materials
Agricultural Improvements	Increased food supply and freed workers for factory jobs

Capital Investment	Provided funding for factories and technological innovation
Urbanization	Concentrated workers and industries in growing cities

Change, Continuity, and Comparison

Change

- Production shifted from small workshops to factories
- Urban populations increased rapidly
- Machines replaced many forms of manual labor

Continuity

- Economic inequality between workers and owners continued
- Many industries still relied on traditional raw materials

Comparison

Industrial production differed from earlier craft production because factories centralized labor and used machines to increase output.

Key Takeaways

- Environmental resources such as coal and iron helped industrialization begin.
- Rivers and canals supported transportation and factory power.
- Agricultural improvements increased population and labor supply.
- The factory system concentrated production and specialized labor.
- Industrialization reshaped cities and environments.

Practice Activity

Answer each question in **2–3 sentences**.

- Identify ONE environmental factor that contributed to the Industrial Revolution.
- Explain ONE way agricultural improvements contributed to industrialization.
- Describe ONE effect of the factory system on workers.

Primary Source Citations

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