



Unit 3 Overview

In 1750, many people did things in ways that would have been recognizable to their ancestors. Most everything was made in the home, farm, or small artisanal shops, and mostly by hand. The Industrial Revolution began when people learned to harness new fossil fuels and machines to do work. It transformed the way we worked, the places we lived, our sense of families and identities, our relationships to our food and to each other, and much more. The results weren't the same for everyone, but they helped to shape the modern world.



00:01

*Kim Lochner and Colby
Burnett*

So, Colby...

Yes?

You ever wonder why we both grew up speaking English?

Even though we're from countries in different hemispheres?

That are nowhere near England.

It's a mystery we may never...

Oh, it's totally covered in another unit.

Oh.

Colby Burnett

*Photo montage of
artworks depicting
revolutions all over the
world. The paintings are
scenes of war.*

Hi, I'm Colby Burnett, and along with Kim Lochner, we're introducing Unit 3: Industrialization. Political transformations shook the world in the late 18th century. The slave regime was overthrown in Haiti. The Wars of Independence occurred in the American colonies. Europe experienced the French Revolution. Together, these transformations ushered in new ideas about sovereignty, the rights of citizens, and our modern, global system of nation-states. But another dramatic, if more gradual, transformation was taking place at the same time. The story of this unit is about that transformation, the birth of the industrialized world.

00:59

*Paintings of farmland and
farmhouses, pre-industrial
revolution*

Kim Lochner

*Global artwork shows
people farming, herding,
and weaving by hand*

Political revolutions changed who was allowed to participate in government. But the Industrial Revolution changed everything about how humans lived and worked. This was due to a transformation in production and distribution only equaled by our turn to farming thousands of years earlier.

Most people living before industrialization did many things just like their ancestors had for generations. The majority were farmers or herders. What they produced was for themselves and for local consumption. And it was made in the home or in small workshops. Most of the energy to do all this work came from their own muscles, animals, or, in some cases, water or wind. The ways that people worked and the things they made had in some cases changed over the preceding centuries. But these innovations were mostly small, or gradual, or geographically limited. The Industrial Revolution changed all of this—quickly in some places, and more slowly in others.

01:59

*Detailed drawings depict
factories, large machines,
and trains.*

It began with the discovery of how to use fossil fuels like coal, and later oil, to power machines to do work. The result was the development of so many aspects of modern life. This included big machines, factories, electricity, and mass transportation. All of these changes also allowed humans to build bigger and richer networks. Fossil fuels led to steamships and railroads, and later cars and airplanes, to move people and goods. Electricity facilitated the development of new long-distance communication systems—the telegraph and, later, the telephone and the internet.

02:42

These changes also transformed human communities. People moved from rural regions to cities in search of factory work. The model of an extended family in a large village broke down, and was replaced by a nuclear family in a small

A painting of a large (extended) family is contrasted with a photo of a much smaller (nuclear) family

03:10

apartment. While parents worked all day, schools emerged to train children to become workers. Both religion and government had to evolve to accommodate these kinds of changes.

Some historians argue that the Industrial Revolution was the most important transformation in creating the world in which we now live. In this unit, we consider this argument by breaking it down and looking at the evidence.

We ask: What was the cumulative impact of the Industrial Revolution, and how was it experienced? Was the experience the same for everyone, or did it differ based on class, gender, racial identity, and geographic location?

03:46

Colby Burnett

One way to begin to answer questions about the differing impacts of the Industrial Revolution is with data. Of course, we don't have complete sets of numerical data for this era. But we can combine the pieces we do have to get a picture of change. For example, industrialized countries could quickly create cheaper products. This meant they had more goods to export to other countries. And they could sell those goods much cheaper than local merchants and producers could. In this chart of exported goods, we see how exports from Britain rose dramatically as it industrialized. Before about 1750, exports from all parts of Britain—including the regions of England and Wales—weren't that high, although they were slowly growing. Then, in 1750, as Britain industrialized, exports suddenly skyrocketed. We can contrast that with Spain, the Netherlands, and France, which by 1800 hadn't really industrialized. These countries didn't see a big growth in exports.

Chart shows exports in Britain increasing dramatically in 1750; conversely, Spain, the Netherlands, and France, had not increased exports (some, decreased).

04:44

Chart shows decrease in percentage of people working as farmers in all the countries shown

We can also look at the dramatic decrease in the percentage of people working as farmers around 1800. This drop occurred in several European countries, including Britain and others that industrialized after it. This chart shows the percentage of people employed as farmers dropping quickly in Britain around 1750, when their Industrial Revolution began. We can see the same change happening a little later in the Netherlands, Italy, and France as they industrialized. The change happened even later in Poland, which industrialized last among these countries. About 12% of Poland's people still work as farmers today.

05:19

An animated map shows the growth of emissions – growth spread slowly first, then more rapidly

Finally, we can also see industrialization by looking at the growth of CO₂ emissions from 1750 forward. These emissions came mostly from factories and other industrial sources. As we can see, emissions rose first in western and central Europe, especially in Britain. But it started slowly. Even in Britain, industrialization was still quite limited between 1750 and 1800. Then, it began to rise more rapidly, and other parts of Europe and the United States began to industrialize. Other regions followed more gradually.

05:50

An animated map shows the location of all of the mentioned countries

Another way to understand the impact of industrialization is to zoom in a bit closer and look at change in specific regions. In this unit, we will examine many places in that way, including Britain, the United States, Japan, India, and Egypt. The transformations brought by industrialization looked different in each of these regions.

Contrasting artworks are shown: one shows the region as a bustling city with large buildings; the other shows just a few ships at sea, surrounded by mountains.

06:40

Drawings of a woman working at a row of large, steam-powered machines

07:24

Colby Burnett

Detailed drawing of military boats and writing in Japanese

Black and white photo of the five men in suits

08:05

Kim Lochner

Photo of Hirobumi Ito, Prime Minister

Black and white photo of a Japanese factory

08:45

*Artwork shows artisans in India weaving by hand; a painting depicts an Imperial band amid fearful children and peasants
Painting of wealthy folk in a city, wearing elaborate clothing and sitting in a carriage; photos show workers in filthy, crowded conditions*

In Japan, for example, industrialization started late, but when it started in the 1860s, it advanced rapidly. Before this period, Japan's government tried to limit the influence of foreign trade and ideas. Nagasaki was the only trading port legally open to foreign merchants. While Japan walled itself off, the Industrial Revolution was rapidly transforming other societies, like Britain.

Beginning in the late 18th century, British industry had introduced steam-powered machines that produced cloth, textiles at an enormous rate. This gave it a big trade advantage. New railroads and steam-powered ships allowed British goods to move a lot faster. Other advances followed, and a second wave of industrialization began in new regions of the world. Countries on the European continent, as well as the United States soon industrialized to compete with Britain. These countries not only adopted British innovations, but added their own in areas like industrial chemistry and electricity.

So Japan missed out on the first wave of industrialization. It was also a latecomer to the second wave. The visit of a squadron of American steam-powered warships in 1853 changed this. The Japanese government was alarmed at the growing military superiority of industrializing states as evidenced by the American fleet. Soon, the Japanese government began to embrace change. They sponsored the study of science and industry with rapid results in some areas. Japan's first iron factory was built in Nagasaki in 1861. Five local men traveled to London to study British machinery and kick off the industrial transformation of Japan. Upon their return, they sparked an industrial revolution of their own.

The pace of change was still quite slow in Japan. Some of the government resisted industrialization. Then, in 1868, a political upheaval led to new leadership and a system that favored rapid modernization. This was the Meiji Restoration.

Hirobumi Ito, one of the men who had traveled to London, became the first prime minister of the new Meiji government. Factories went up quickly, including naval yards and coal mines in and around Nagasaki. Peasants and fishermen were pulled in to these factories as workers. The city had permanently transformed into an industrial center.

Change was not rapid everywhere in the world, nor for everyone. And it didn't only go in one direction. As you'll see in this unit, Egyptian industrialization took off and then stalled. Some regions, like India, saw a decline in production during the Industrial Revolution. Imperialism, which we'll discuss in a later unit, played a big role in these regional differences.

People living in the same place also experienced the Industrial Revolution differently. The wealthy generally benefited from it, but workers often paid the costs. Many workers lived in crowded conditions and labored in filthy, dangerous jobs. Women's experiences were different from men's, and rural people different from those living in cities. But while these differences existed, nobody can deny that the global impact of the Industrial Revolution was vast. It was truly revolutionary.

*Colby Burnett and Kim
Lochner in conversation*

So much change.

And in such a short time, my head is spinning.

But when you head spins, does it go in the opposite direction?

Oh, my God, I thought we said no more Australia jokes!