In this chapter we will look at the great technological changes that took place in Britain during the eighteenth and nineteenth centuries. These changes completely reshaped the way in which food, clothing and other necessities were produced. New materials and sources of power, along with new forms of transport, transformed a society that had not changed dramatically since the Middle Ages. This transformation is the source of many of the features of our way of life today. Britain provided an inspiration for the other countries of Europe and North America, which soon experienced industrial revolutions of their own. In more recent times, countries such as China and India are making their own transitions to modern industrialised nations.

Why industrial ‘revolution’?
The term Industrial Revolution was first popularised by the English historian Arnold Toynbee in the late 1870s and early 1880s. Historians such as Toynbee looked at the society in which they lived and compared it with what they knew of English society a little over a hundred years earlier. To these observers the nature and speed of the changes they documented were ‘revolutionary’ because they brought about radical changes in the way many people lived. So how do we know about the changes that occurred during the period in history known as the Industrial Revolution?

Inventions and patents
Early in the eighteenth century, farming in Britain was carried out largely as it had been for hundreds of years. The processing and manufacture of goods took place on a small scale in local villages and small towns. By the middle of the nineteenth century, new methods of crop management, animal husbandry and new inventions had completely transformed the agricultural landscape. Clothing and other goods were no longer made by hand in homes or small workshops but in factories using large machines. We know about these changes because the creators of new inventions took out patents on their inventions. Patents could be issued only when the inventor submitted a full written description of their invention, and many of these descriptions survive today. By the mid nineteenth century, steam was driving machinery of all types. We can trace the development of steam power by examining the models of early steam engines that still exist, and the diagrams and descriptions submitted by their inventors when applying for patents.
Chapter 2: The Industrial Revolution (1750–1914): (I) Technology and progress

Contemporary writers

Many of the creators of new farming methods wrote books and pamphlets publicising their methods. Other writers of the time wrote first-hand accounts of the improvements in agriculture they had observed. By the mid nineteenth century, writers were also commenting on working conditions in newly built factories and life in the rapidly growing cities. Clearly, some very dramatic changes had occurred within people’s lifetimes, and writers of the time were keen to document these changes.

Census figures

When the first complete population census of England and Wales was taken in 1801, the population was measured at 8.8 million. By 1881 the population had virtually tripled to 25.9 million. Never before in history had population growth on this scale been recorded over such a relatively short period of time. These same census figures show a change from a predominantly rural population, engaged mainly in farming, to an urban population, engaged mainly in employment in manufacturing.

Paintings and drawings

In the eighteenth century, British artists were famous for producing paintings of country landscapes. By the early nineteenth century, artists began to record scenes of the new industrial towns that accompanied the Industrial Revolution. These often contrasted dramatically with the peaceful calm of the country scenes, showing billowing smoke from factory chimneys and the busy activity of the industrial town. Changes in transport, such as the development of railways, also attracted the attention of artists. Many paintings and drawings were produced to celebrate these new developments.

ANALYSIS AND USE OF SOURCES

1. Examine Source 1. What evidence is there in this picture of the types of changes brought about by the Industrial Revolution?
2. What impression of the new industrial towns do you believe the artist of Source 1 was trying to create for viewers of this work?
3. What evidence can you see in Source 2 that a completely new form of transport was being celebrated?

PERSPECTIVES AND INTERPRETATIONS

4. Using examples from the information provided above, explain why late nineteenth-century historians believed the changes of the previous hundred years were a revolution.

Activities

animal husbandry breeding and caring for livestock, usually in a farm environment
patent a legally enforceable right to make or sell an invention. Patents, usually granted by government, protect an inventor’s idea from being copied.
rural population people living in the countryside rather than in towns or cities
urban population people living in cities or large towns