

Introduction: The Great Exhibition

Britain went through enormous changes between 1750 and 1900 and became the world's first industrial nation. In the summer of 1851 an enormous display of industrial goods was held in London. This Great Exhibition was a celebration of the new factories that had been built and the industrial changes that had taken place in the past century.

What can we learn from the Great Exhibition about Britain at the time?

Britain exhibits her greatness

The Great Exhibition of 1851 was the idea of Queen Victoria's husband, Prince Albert. It became an opportunity for British manufacturers to show off their goods and the quality of their craftsmanship. The exhibition displayed over 100,000 items and these showed how Britain clearly led the world in technology and engineering. The exhibition was held in a magnificent building called the Crystal Palace (Source A). During the six months that it was open, over 6 million people visited the Great Exhibition to marvel at the progress that had been made since the eighteenth century. It was not only the rich who visited; some factory owners even gave their workers a day off and paid for both the trip and the admission. Ordinary people were able to get to London from all over the country using the newly-opened railways.

A vision of progress

The Great Exhibition naturally led many people to admire the enormous achievements of British industry. It encouraged people to be proud of the rapid progress that had been made. We can find many examples of talk and comment about such improvement and progress.

Source B

'If we look back to the condition of the people as it was in 1800 and then look around us at the signs of greater comfort and respectability it is hardly possible to doubt that in England there has been successful improvement. This improvement is enjoyed to some degree or other by every class of men.'

G. R. Porter, *Progress of the Nation*, 1851

Source A

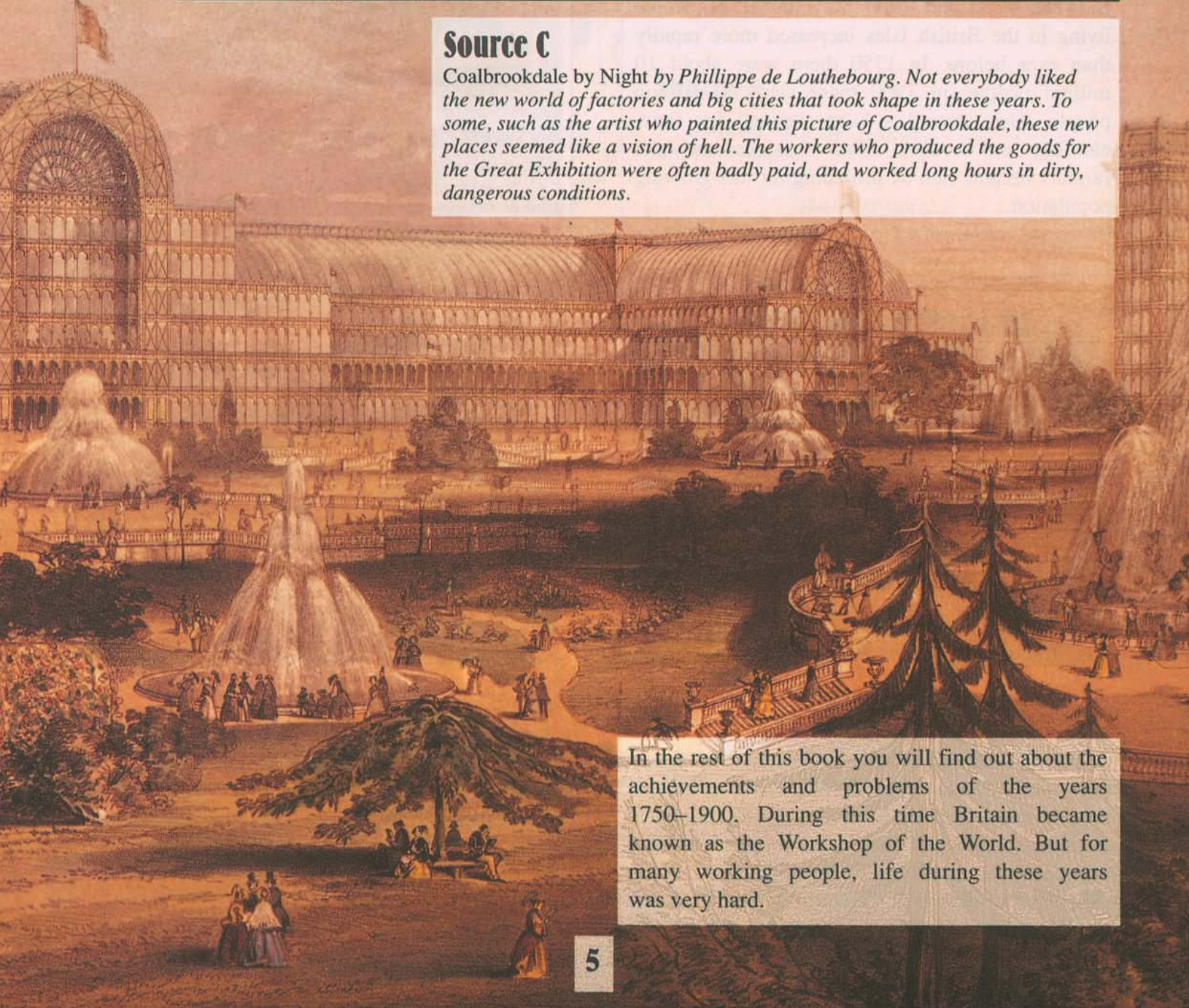
The Crystal Palace. It was made entirely of glass and iron. The exhibits ranged from industrial machinery to household goods.

- What does this building suggest about the importance that was attached to the Great Exhibition?

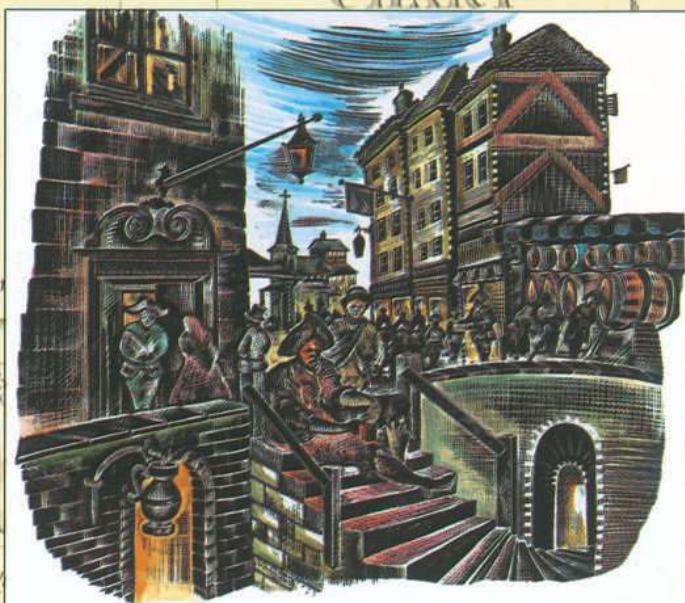


Source C

Coalbrookdale by Night by Phillippe de Louthebourg. Not everybody liked the new world of factories and big cities that took shape in these years. To some, such as the artist who painted this picture of Coalbrookdale, these new places seemed like a vision of hell. The workers who produced the goods for the Great Exhibition were often badly paid, and worked long hours in dirty, dangerous conditions.



In the rest of this book you will find out about the achievements and problems of the years 1750–1900. During this time Britain became known as the Workshop of the World. But for many working people, life during these years was very hard.



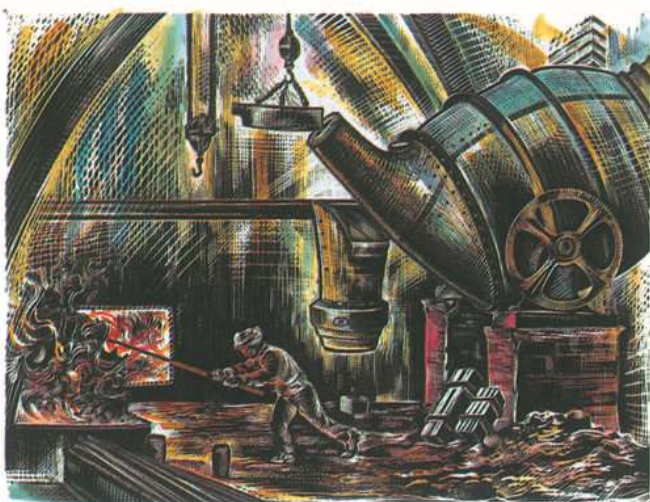
The population grew quickly

Between 1750 and 1900 the number of people living in the British Isles increased more rapidly than ever before. In 1750 there were about 10 million people; in 1900 there were 40 million people. This created a huge demand for food, clothing and houses. Many businessmen and farmers became rich by providing for this growing population.



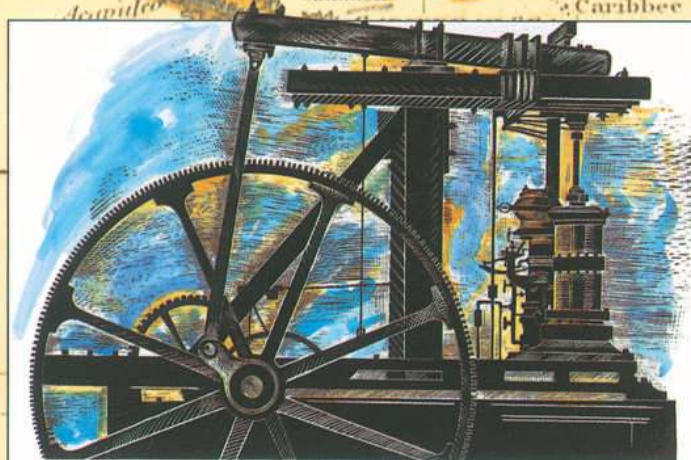
Farming is improved

Farmers became more efficient. They were able to make bigger profits by providing food for the growing population. However, although farmers grew rich, farm workers were very badly paid.



Industry

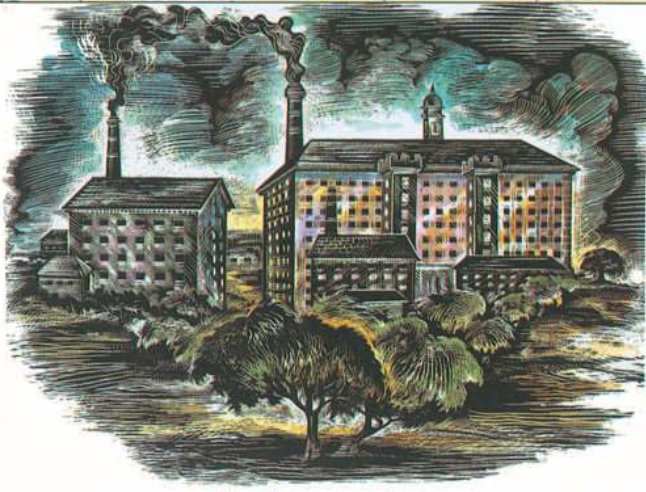
After 1750 British industry grew rapidly. It was particularly successful in making cotton goods, in making iron and steel and in mining coal. Britain's engineering also led the world for most of the nineteenth century. By 1851 Britain could truly be called the 'workshop of the world'.



Power

In 1750 Britain's energy needs were provided for by the use of wind, wood, water and animals. By 1900 most power depended on the use of coal: four tonnes of coal were used in each year for every man, woman and child. The development of steam power had transformed transport and industry.

Of the World



Factory system

In 1750 most people in manufacturing worked in their own homes or in small workshops. Very little large machinery was used. The growing use of water and then steam power meant that large numbers of workers could be employed in one place. In the nineteenth century large factories became more common.



Britain's Empire

In 1750 Britain already possessed colonies. The most important of these were in North America and the West Indies. After a war with France, Britain won control of India. Although the USA won its independence in 1783, the Empire continued to grow. By 1900 nearly 400 million people and one-fifth of the world's land were ruled by Britain.



The world's merchant

Britain was an important trading country before 1750. Its goods were sold to Europe, America, Africa and Asia. After 1750 the value of Britain's trade grew rapidly: between 1750 and 1900 the value of Britain's exports grew 15 times. Ports such as Bristol, Liverpool and Glasgow grew in size and wealth.



Transport

The speed of travel changed dramatically after 1750, when the average speed on a long journey had been only four miles per hour. Better roads, new canals and, above all, the railways meant that people and goods could move much more quickly. The journey from Edinburgh to London had once taken seven days or more. In 1900 the same journey took ten hours.

1 Population growth and urbanisation

Many of the changes in Britain between 1750 and 1900 were linked to a great increase in population. The sources in this unit show you when, where and by how much the population grew.

What happened to Britain's population between 1750 and 1900?

Population

One of the most basic changes that took place in Britain between 1750 and 1900 was a huge increase in population. There were nearly five times as many people at the end of the period than at the beginning. At the same time there was a move from the countryside to the towns. Between 1750 and 1800 the population of Manchester increased from 18,000 to 90,000 people.

No one is quite sure why the British population started to increase dramatically after 1750. It used to be thought that improved medicine reduced the death rate. Recently historians have decided that there is little evidence to support this. Instead they think that there was a rise in the number of babies being born.

During the eighteenth century the proportion of the population who were unmarried fell and women got married slightly earlier. These changes in marriage led to a rise in the birth rate.

The rise in population and the move to the cities played a part in the other changes of this period. More babies eventually meant more workers for the new industries that developed after 1750. A larger population also led to a rise in the demand for food and factory goods. People in towns and cities did not make their own food and clothes in the way that many country people did, so the move to the cities encouraged people to spend more money in the shops.



The Family of Alfredrick Smith Hatch, 1871 by J. Eastman Johnson.

Source A

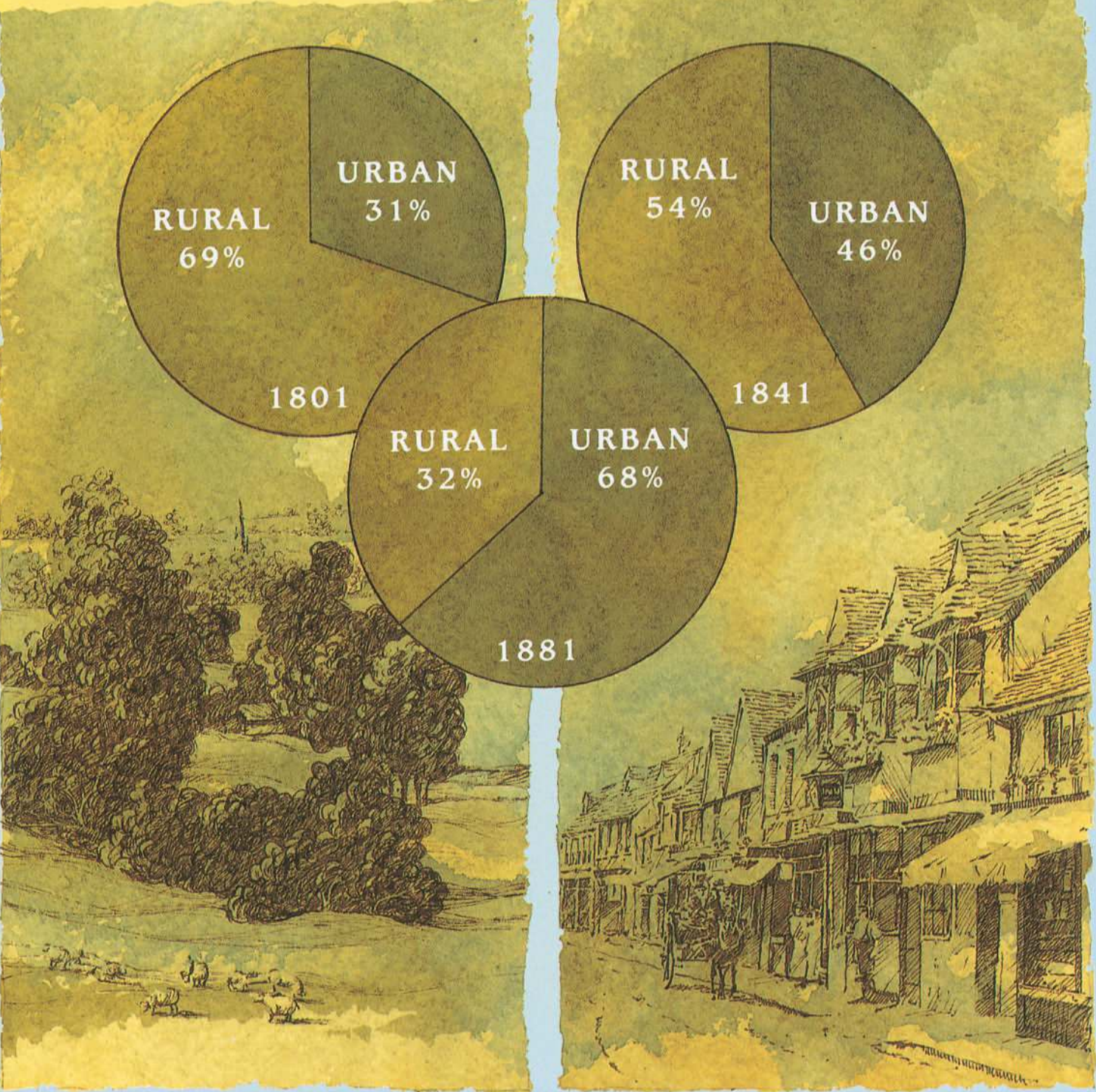
These figures show how and when the population of the British Isles grew:

Year	England	Wales	Scotland	Ireland	Totals
1701	5,100,000	450,000	1,000,000	2,700,000	9,250,000
1751	5,800,000	500,000	1,200,000	3,200,000	10,700,000
1801	8,700,000	600,000	1,600,000	5,000,000	15,900,000
1851	16,800,000	1,200,000	2,900,000	6,500,000	27,400,000
1871	21,300,000	1,400,000	3,400,000	5,400,000	31,500,000
1901	30,500,000	2,000,000	4,500,000	4,500,000	41,500,000

John Wilkes, *United Kingdom: A Social and Economic History of Modern Britain*, 1984

Source B

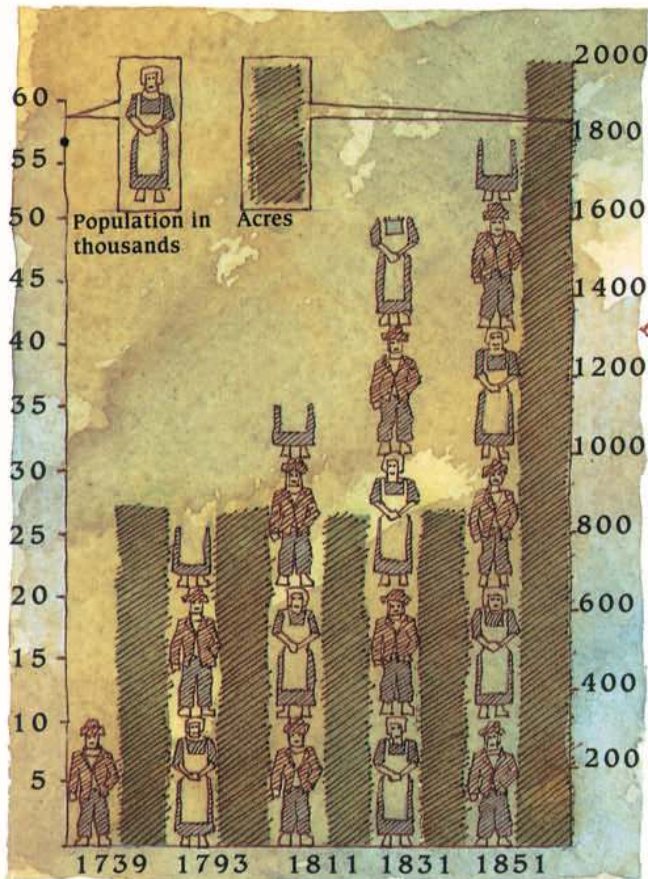
Pie charts showing changes in the balance of population between towns and countryside in Great Britain:





Source C

This map based on original maps produced in 1744 and 1844 shows the changes which occurred in the city of Nottingham, over a period of 100 years.



Source D

Population and living space in Nottingham, 1779–1851.

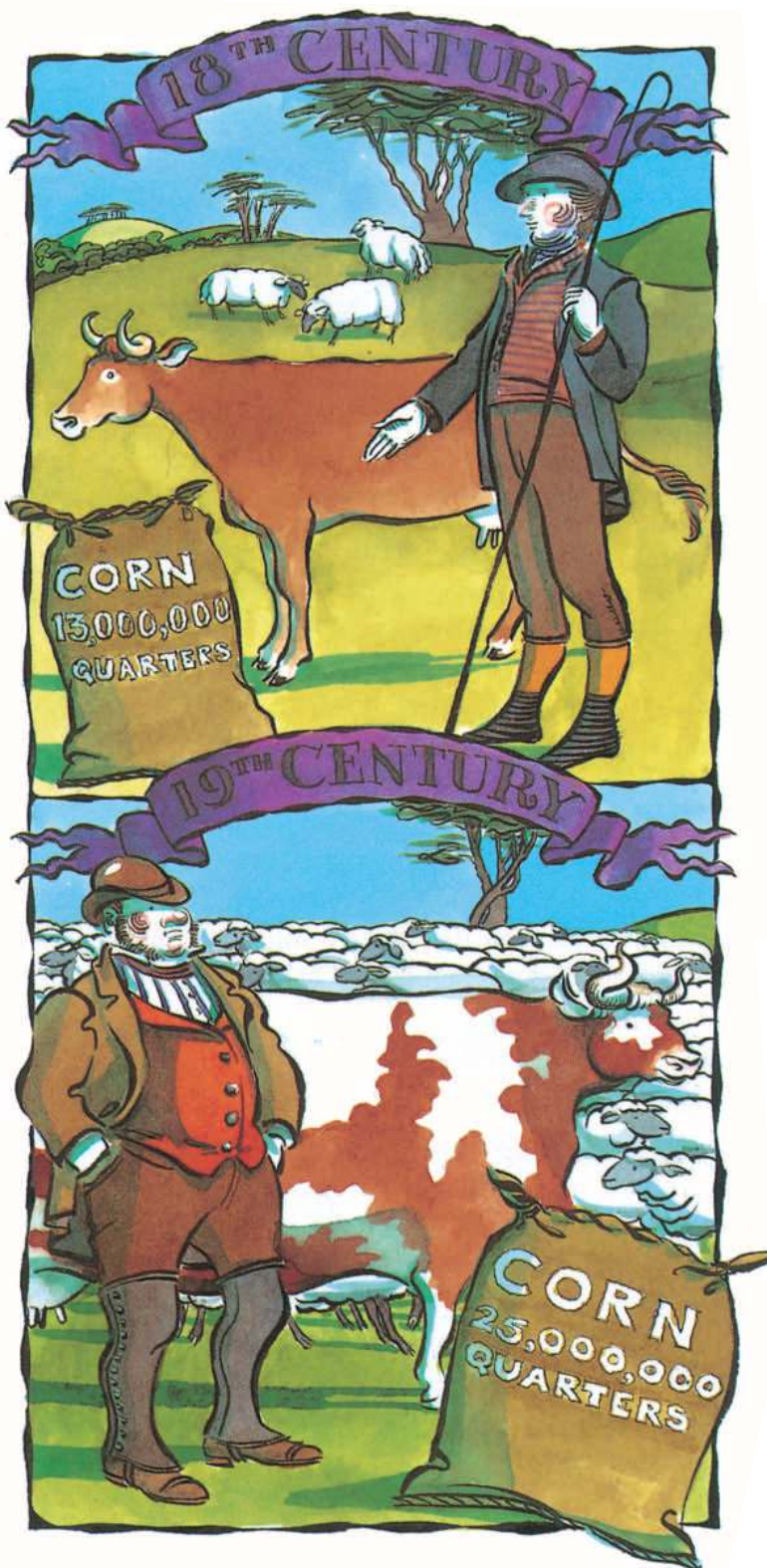
- 1 Look carefully at the plan of Nottingham.

a What are the main differences between the Nottingham of 1744 and Nottingham in 1844?

b What suggestions can you make about how the lives of the people of Nottingham might have changed as a result of these differences?

2 What happened to the population of Britain between 1750 and 1900? Use information from the sources to support the points that you make.

2



Source A

A modern British historian considers how farming changed:

'Total corn output rose from about 13 million quarters (a quarter is 28 lb) in 1700 to nearly 15 million in 1750, to 19 million in 1800, and 25 million in 1820. The numbers of sheep increased from 11 million in 1688 to 26 million by 1820. The weight of individual cattle rose by about one quarter between 1700 and 1820.'

P. Mathias, *The First Industrial Nation*, 1983 edition

Source B



This aerial photograph shows the effects of enclosure on the traditional strip-farming method of agriculture.

Enclosure

In the Middle Ages many villages had their land divided into two or three enormous fields. Each field was sub-divided into a great number of tiny strips. Each farmer would have strips scattered across the fields. In the period 1500–1750 many of these open fields were enclosed – reorganised into more compact, hedged fields. There was a further increase in enclosure from 1750 onwards.

A government report in 1794 revealed many of the problems associated with traditional methods of farming:

- Progressive farmers had little chance to try new methods because, since *all* the farmers had to agree to any changes, an obstinate tenant had the power to stop any improvements.
- A farmer's land could be scattered over a large common field which meant that he had to travel two or three miles to visit it all.
- It was impossible for farmers to try to improve their animal breeds when the animals were mixed in with those of their neighbours.

After enclosure many rough grazing areas were ploughed up and on enclosed land the amount of grain produced from a field often increased. Both these factors led to more food being produced. However, the scale of enclosure was limited. Only in the English Midlands was there a very intensive move to enclosure in the years after 1750. In Ireland, Scotland and Wales most farms had always been enclosed and even in England only about a quarter of the land was actually enclosed between 1750 and 1900 – the rest had been enclosed earlier.

Changes in arable farming

In the Middle Ages farmers regularly left fields without planted crops once every three or four years. This was called leaving fields fallow. In the eighteenth century many farmers abandoned this approach and, instead, used a rotation of different crops each year. In this way more land was kept in use and extra feed was grown for animals.



Source C

The most famous crop rotation of the years 1750–1900 was the Norfolk rotation made popular by the writer Arthur Young:

'No fortune will be made by farming unless a sound rotation of crops is used. That which has been chiefly adopted by the Norfolk farmers is:

- | | |
|-----------|----------|
| 1 turnips | 3 clover |
| 2 barley | 4 wheat |

Arthur Young, 1771

To enrich the soil and grow more crops farmers made more use of a method called marling. This involved mixing in clay on light sandy soils. On heavy clay soils farmers got a similar effect by adding chalk or lime.

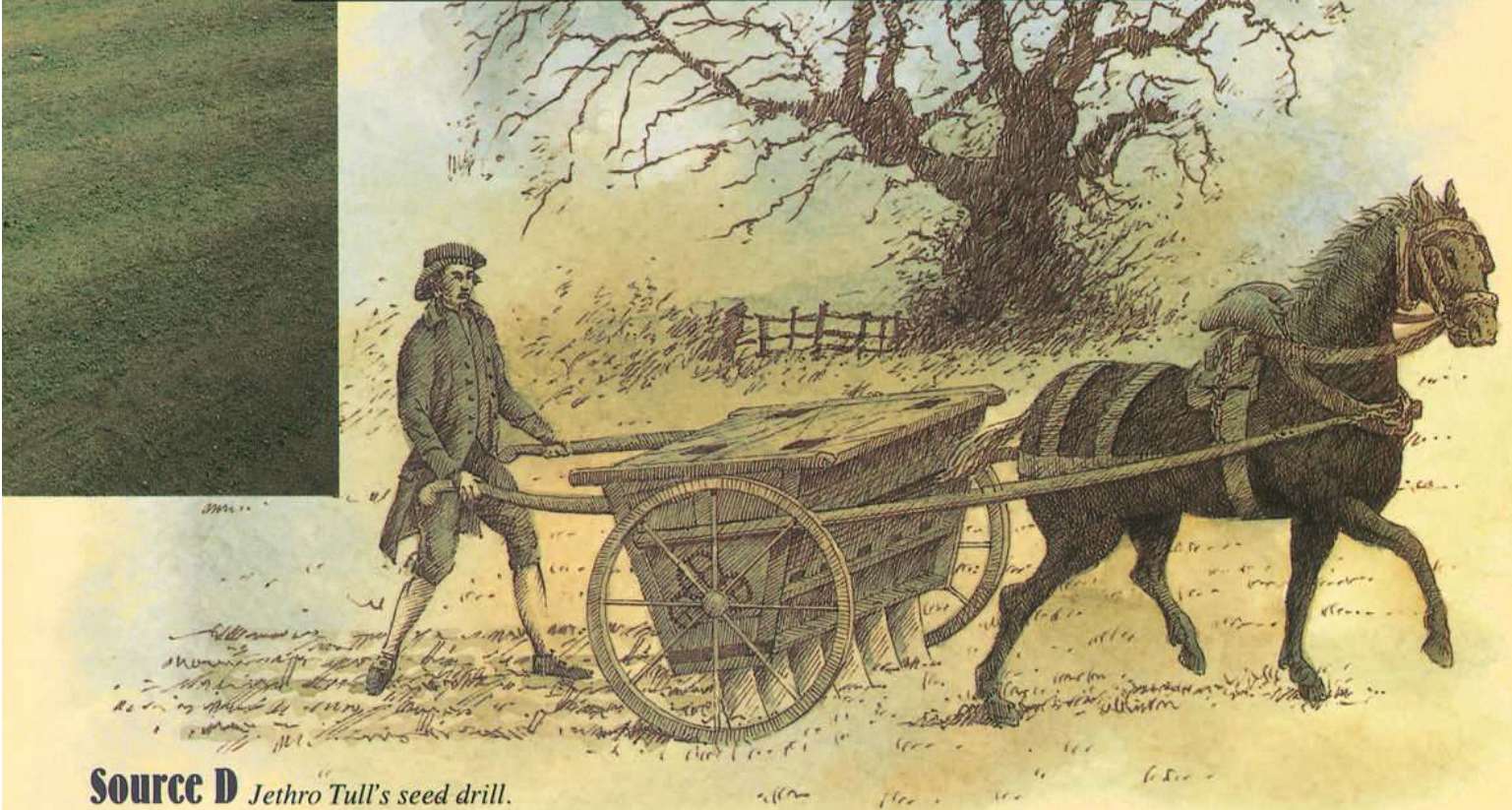
Selective breeding

Influenced by the growing interest in pedigree horses and dogs, many farmers also took an interest in the selective breeding of farm animals. One of the most famous of these new breeders was Robert Bakewell. He managed to produce a new, larger sheep called the New Leicester. This sheep had a long fleece and produced a lot of mutton. Between 1700 and 1800 the weight of farm animals at Smithfield Market more than doubled.



Source E

Mr Healey's Sheep
 by W. H. Davies.



Source D

Jethro Tull's seed drill.

New machines

In the first half of the eighteenth century Jethro Tull invented a seed drill which sowed seeds in straight lines and covered them up in one operation. Previously seed had been sown broadcast which meant that it was simply thrown onto the surface of the earth by hand. What advantages would Tull's method have?

In the nineteenth century ploughs continued to be improved. Machines for threshing corn had begun to be developed in the 1790s. At first these were powered by hand or by horse. In the nineteenth century steam power was adapted to provide the power for much farm machinery, including ploughs and threshing machines.