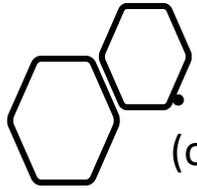


Industrialization Effects

1: Working Conditions: Mines

- Coal was brought up the surface in very primitive ways. Whole families worked at the mines. The father and the boys hewed the coal (cutting the coal from seams with a pick). The mother and girls 'hurried' (carried) the coal to the surface by climbing a spiral staircase with a basket, filled with coal, on their backs. It was held in place by a strap around the front of their heads. This often made their hair at the front wear away, creating a bald spot.
- Small children had to work in coal mines without candles (if the family was too poor to buy candles) and were beaten by miners if they fell asleep. Young girls had to pull sledges or carts with coal all day long, deforming their pelvic bones and causing a lot of deaths during childbirth. Children did not get any sunlight, physical activity (apart from work) or education, which led to deformities and a shorter than average length.
- Frequent accidents, damp conditions, and the constant breathing of coal dust made the average miner's life span ten years shorter than that of other workers. Many women and children were employed in the mining industry because they were the cheapest source of labor.
- In some mines, both the coal and the miners were brought to the surface in wooden buckets which were pulled up the shaft. Sometimes the miners just had a rope to hold on to. Rope breaks often led to miners plunging to their deaths.





Child "hurriers"
(often girls) working in
mines. They 'hurried'
(carried) the coal to the
surface by climbing
with a basket, filled
with coal, on their
backs.



2: Working Conditions: Factories

- To increase production, factory owners wanted to keep their machines running as many hours as possible. As a result, the average worker spent 14 hours a day at the job, 6 days a week without paid holidays or vacations.
- People did not have many break times, there was usually only one hour-long break per day.
- Work in a factory was fast-paced and focused on production. No chit chat was allowed and those who still had family in rural areas could not head home to help with the harvest if they wanted to keep their jobs.
- Industry also posed new dangers for workers. Factories were seldom well lit or clean. Machines injured workers. A boiler might explode or a drive belt might catch an arm. And there was no government program to provide aid in case of injury.
- Safety hazards were everywhere, machines didn't have any safety covers or fences and children as young as 5 years old were operating them. Iron workers worked in temperatures of 130 degrees and higher every day. Accidents on the job happened regularly.
- Factories were dusty, dirty and dark – the only light source was sunlight that came in through a few windows. Because the machines ran on steam from fires, there was smoke everywhere. Many people ended up with eye problems and lung diseases.
- Due to a high unemployment rate, workers were very easily replaceable and had no bargaining power with employers. There was an increase in population and landowners enclosed common village lands, forcing people from the country to go find work.
- Wages were very low, women and children received less than half the wages of men and had to work the same amount of time.



3: British Labor Laws

1833 Factory Act:

- Children banned from working in textile factories under the age of nine.
- 9 - 13 year olds limited to 9 hours a day and 48 hours a week.
- 13 - 18 year olds limited to 12 hours a day and 69 hours a week.
- All children under eleven to have two hours education a day.

1842 Mines and Collieries Act

- All women and children under 10 were banned from working underground.
- No one under 15 years was to work winding gear in mines.

1844 Factory Act:

- Minimum age for working in factories reduced to 8 years old.
- 8 to 13 years old to work a maximum of six and a half hours on weekdays and only six hours on Saturday
- 13 to 18 year olds to work a maximum of 12 hours a day and the same applied to women.
- Safety guards had to be fitted to all machines.
- Three hours education a day for children.

1847 Fielder's Factory Act:

- 10 hour day introduced for under 18's and for women.

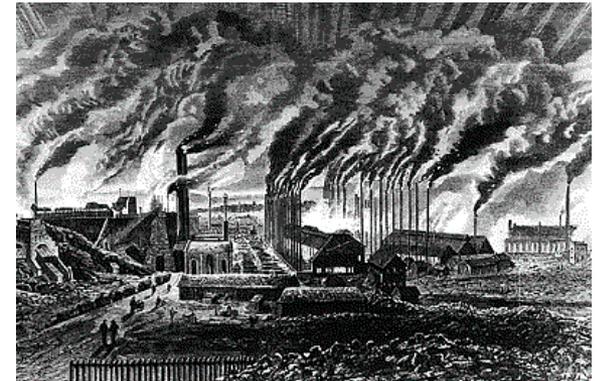
4: Living Conditions

- Because England's cities grew rapidly, they had no development plans, sanitary codes, or building codes. Moreover, they lacked adequate housing, education, and police protection for the people who poured in from the countryside to seek jobs. Most of the unpaved streets had no drains, and garbage collected in heaps on them. Workers lived in dark, dirty shelters, with whole families crowding into one bedroom.
- Sickness was widespread. Epidemics of the deadly disease cholera regularly swept through the slums of Great Britain's industrial cities. In 1842, a British government study showed an average life span to be 17 years for working-class people in one large city, compared with 38 years in a nearby rural area.
- In the rush to build houses, many were constructed too quickly in terraced rows. Some of these houses had just a small yard at the rear where an outside toilet was placed. Almost as soon as they were occupied, many of these houses became slums. Most of the poorest people lived in overcrowded and inadequate housing.
- Sanitary arrangements were often non-existent, and many toilets were of the 'earth closet' variety. These were found outside the houses, as far away as possible because of the smell. Usually they were emptied by the 'soil men' at night. These men took the solid human waste away. However, in poorer districts, the solid waste was just heaped in a large pile close to the houses. The liquid from the toilets and the waste heaps seeped down into the earth and contaminated the water supplies. These liquids carried disease-causing germs into the water. The most frightening disease of all was cholera.



5: Cholera

- The disease was greatly feared by everyone because it spread very quickly and was not confined to any one social class. It could strike anyone, from the poorest to the wealthiest and the noble.
- A cholera victim was first stricken with violent sickness and diarrhea. This caused intense dehydration (loss of body fluids). Over 50% of the people who contracted the disease died, often within 24 hours of showing signs of the first symptoms. In the early part of the 19th century the method of transmission of cholera was not known. Many people thought that it was caused by poisonous, foul-smelling air. It was only in 1849, when an epidemic killed over 70,000 people, that Dr. John Snow discovered that the cholera bacteria were contracted from polluted water.
- In an attempt to contain the disease, Health Boards were set up to establish better standards of sanitation. Local government officials were told to clean up the towns and cities. They were instructed to provide for the removal of solid waste heaps and other household wastes, to clean the streets (particularly of the large amounts of horse manure) and to whitewash houses wherever possible.





NOTICE.

PREVENTIVES OF

CHOLERA!

Published by order of the Sanitary Committee, under the sanction of the Medical Council.

BE TEMPERATE IN EATING & DRINKING!

Avoid Raw Vegetables and Unripe Fruit !.

Abstain from COLD WATER, when heated, and above all from *Ardent Spirits*, and if habit have rendered them indispensable, take much less than usual.

6: The Crystal Palace

- The Great Exhibition of 1851 in London was conceived to symbolize this industrial, military and economic superiority of Great Britain. The British felt that it was important to show their technological achievements right alongside those of "less civilized" countries that they had imperialized.
- The Great Exhibition was held in Hyde Park in London in the specially constructed Crystal Palace. The Crystal Palace was a huge iron goliath with over a million feet of glass. It was important that the building used to showcase these achievements be grandiose and innovative. Over 13,000 exhibits were displayed and viewed by over 6,200,000 visitors to the exhibition. The millions of visitors that journeyed to the Great Exhibition of 1851 marveled at the Industrial Revolution that was propelling Britain to be the greatest power of the time. Among the 13,000 exhibits from all around the world were the Jacquard loom, an envelope machine, tools, kitchen appliances, and a reaping machine from the United States. The objects on display came from all parts of the world, including India, Australia and New Zealand.
- The Crystal Palace itself was almost outshone by the park in which it stood, which contained a magnificent series of fountains, comprising almost 12,000 individual jets. The largest of these threw water to a height of 250ft. Some 120,000 gallons of water flowed through the system when it was in full play.
- The park also contained unrivaled collections of statues, many of which were copies of great works from around the world, and a geological display which included a replica lead mine and the first attempts anywhere in the world to portray life-size restorations of extinct animals, including dinosaurs. Crystal Palace Park was also the scene of spectacular Brock's fireworks displays.

