

History of the key mills

Conditions in the mills

TN
TEACHER'S NOTES

TITLE SLIDE

In this lesson you will find out what it was like to be a child who worked in one of the cotton mills along the River Maun in the early 18th-century.

We will learn about the long hours they worked, the basic food they ate and the harsh punishments they received. We'll also find out about some of the games the children might have played on their one day off a week.



SLIDE 2

RECRUITMENT OF ORPHANS

Before the textile factories (or 'mills'), came along, children had worked to help support the family and to learn skills that would equip them for adulthood; typically the boys would help with farm tasks and the girls with domestic duties. In Sutton-in-Ashfield, children would have assisted with cotton spinning in the home. This was known as a cottage industry.

Child labour really increased when the Industrial Revolution began in the late 1700s. Although the cottage industries continued for some time, the introduction of the cotton-spinning mills meant that people started to work shifts and be paid for their time, rather than for how much they produced.

In Sutton, many children from London's workhouses were sold to work in Sutton Mill, in return for food and lodgings. The children had to sign a contract that essentially made them the property of the factory owner. By 1799 as many as one-third of factory workers were pauper apprentices.

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SLIDE 3 HOW MANY CHILDREN WORKED IN THE TEXTILE MILLS?

Data from a parliamentary report in 1819 indicates that 54.5 percent of the workforce in the cotton mills were under 19, and 4.5 percent of workers were under 10 years of age.¹ By 1833 the trend continued with roughly 10 - 20 percent of the workforce in the cotton, wool, flax, and silk mills under 13 years of age. The employment of young people between the age of 13 and 18 was higher than for younger children, comprising roughly 23 to 57 percent of the work forces in cotton, wool, flax, and silk mills.²

According to the British Census, in 1841 there were 44,833 boys and 62,131 girls under 20 employed in cotton manufacture. By 1851 cotton manufacture was still one of the main occupations with 33,228 boys and 37,058 girls under 20 recorded as doing this work.

In 1837 the Mansfield mills were employing 20-25 percent of Mansfield's population which would have been between 1,958 - 2,447 people. If we assume that roughly a third of these were children that would mean about 700-800 children worked in the mills in Mansfield and Sutton at that time.

By 1851 over half of the working population (some 58 percent) of people who worked in Mansfield were employed in the manufacturing industry, compared with only 6 percent in agriculture. 81 percent of all workers in Sutton-in-Ashfield were in manufacturing and 69 percent of all those employed in manufacturing were employed in Framework Knitting.

In 1861, Herbert Greenhalgh (Field Mill & Stanton Mill) employed 59 men, 221 women, 82 girls and 20 boys: a total of 382 employees.

By 1901 the number of people who worked in the Mansfield mills (of which there were now 15) employed over 1,200 people. By then it was illegal to employ children under 11 in a factory.

The historian, Jennings, estimated that there were two women for every man employed within the mills.

SLIDE 4 CONDITIONS IN THE COTTON MILLS

Conditions in the cotton mills (and other factories) were harsh. The great writer and social commentator, Charles Dickens, called these places of work the 'dark satanic mills'.

People regularly worked a 12-14-hour day, many of whom were children and women, who were cheaper to employ than men.

Children were useful because their size allowed them to get into small places often to fix broken machinery. They were also easier to manage and control and importantly, they could be paid less - usually 10-20 percent of what an adult was paid.

There were lots of accidents with many children getting maimed, or even dying, as a result of getting caught in the machinery. Children were also treated badly in the factories, often getting beaten and verbally abused by their supervisors.

Lack of sleep caused a lot of accidents because the children made mistakes or went to sleep and fell into a machine - in those days dangerous machinery was not fenced off. Machinery often ran so quickly that fingers, arms and legs could easily get caught. As well as getting crushed in or under machinery and losing body parts, gas explosions and fires stole lives.

The air quality was also a threat to children's health - they breathed in fumes and toxins which caused illness and chronic conditions such as tuberculosis and lung cancer. Eye inflammation, deafness and body deformities were also common.

¹Freudenberger, Herman, Francis J. Mather, and Clark Nardinelli. "A New Look at the Early Factory Labour Force." *Journal of Economic History* 44 (1984): 1085-90.

²Tuttle, Carolyn. "A Revival of the Pessimist View: Child Labor and the Industrial Revolution." *Research in Economic History* 18 (1998): 53-82.

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WHAT WORK DID CHILDREN DO IN THE MILLS?

The youngest children were employed as scavengers and piecers: working under the machinery to clean up the dust and oil and to gather the cotton that had been thrown off the mule by its intense vibrations. Piecers had to lean over the spinning-machine to repair the broken threads.³

Children often did the most repetitive and tiring jobs in the mills, such as:

- Doffing - taking a full bobbin off the spindles and putting on an empty one
- Cleaning and oiling the machines, often whilst they were still moving (even though this was against the law).⁴

The image in the slide is an illustration from a book serialised in 1840 entitled *The life and Times of Michael Armstrong: Factory Boy*, by Frances Trollope.

The book was the first industrial novel to be published in Britain. Trollope was the first woman to issue her novels in monthly parts at a cost of one shilling a month.

You can read more about the book on the Spartacus website: <https://spartacus-educational.com/IRarmstrong.htm> and it can be purchased on Amazon https://www.amazon.co.uk/Life-Adventures-Michael-Armstrong-Factory/dp/1330936051/ref=cm_cr_ar_p_d_product_top?ie=UTF8

³ <https://celestetmoc.weebly.com/industrial-revolution-childhoods.html#>

⁴ <http://newlanark.org/learningzone/clitp-jobsforchildren.php>

SLIDE 6

WHAT DID CHILD WORKERS EAT?

Children working in the factories were given very little time to eat, usually half an hour for breakfast and lunch, so food needed to be quick to eat.

The food they ate wasn't very nutritious, giving them just barely the energy they would need for their long working hours.

There were no supermarkets, fridges or freezers back then, so people had to shop daily and from several different shops - the butchers, the greengrocers or grocers. Food was often delivered to the door by travelling milkmen, grocers or pedlars.

Common foods and drinks included:

- oatcakes
- solidified porridge
- gruel (a thin soup made from oats or potatoes mixed with milk and water)
- bread and soups
- mutton (cheap meat from older sheep)
- bacon
- potatoes
- apples, pears and berries (depending on the season)
- beer (even for children)
- water (usually polluted)

If they were lucky, they might occasionally get:

- tea (which was more expensive than beer)
- tropical fruits (rarely available)
- milk and dairy products (as these were expensive, many of the children in the factories got rickets - because their bones were too soft from lack of calcium)

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SLIDE 7 PLAYTIME

Only the children from well off families would have had toys such as rocking horses, skipping ropes and model trains.

Working class children would have played out in the streets, playing tag (which had lots of other names, such as touch and tig), hopscotch and playing with a bat and ball.

The children who worked in the mills, would not have been able to afford a ball so would have made their own from old rags and a bat from a piece of wood. Many of them would have been too tired or hungry to play.

Rag dolls made with clothes pegs, paper windmills, marbles and a hoop with stick may have entertained some of the more fortunate children.

SLIDE 8 PUNISHMENTS FOR BEING NAUGHTY

Children in the mills were cruelly beaten for the smallest misdemeanours, or strung up above the noisy machinery to teach them a lesson.

Both boys and girls were often beaten by their masters. If they tried to escape, they would be caught, whipped and returned to the mill. Some would even be shackled with long links and rings up to the hips to prevent them running away again; they would have to walk to and from the mill to work and sleep wearing these.

Productivity in the mills was more important than the children's wellbeing, but because of the long hours, children became very tired and couldn't keep up the speed required by the supervisors. Children were often hit with a strap to make them work faster. In some factories, children were dipped head first into the water cistern if they became too tired to work.

If a child was late or did not reach their quota (the amount of something they had to produce) they would be 'weighted'. This involved an overseer tying a heavy weight around the worker's neck and being made an 'example of' by walking up and down the factory aisles, for up to an hour, so the other children could see them. This could cause serious injuries in the back and neck. Sometimes boys who were late would be dragged naked from their beds holding their clothes, to get dressed there. This was to stop them being late again, even by a few minutes.⁵

Some people claimed that working in factories was beneficial to children and provided necessary income for families. They said that working in the factories was no harder than the work that children had done previously in the cottages, on farms and up chimneys. John Wesley, the founder of Methodism said that child labour prevented idleness and vice.

⁵<https://celestetmoc.weebly.com/industrial-revolution-childhoods.html#>

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ROBERT OWEN AND EARLY FACTORY REFORM

Not all factory owners kept their workers in bad conditions. Robert Owen, who owned a cotton mill in Lanark, Scotland, built the village of New Lanark for his workers. From 1800 to 1825, the cotton mills and village of New Lanark became a model community.

New Lanark had the first primary school, in fact children under 10 years of age were not allowed to work in the mills. There was a house for each family who worked in his mills and the community had access to doctors. The working days were shorter than elsewhere (12 hours with 1.5 hours for meals) and adults could attend evening classes and lectures. He also gave rewards for cleanliness and good behaviour.

Robert had managed a cotton mill in Manchester at the age of 21. He realised then that people worked harder and were more productive if they had better welfare (were looked after better) and were happier.

Robert presented his ideas for more humane working conditions to parliament and influenced Sir Robert Peel (a British Conservative MP who became Prime Minister, twice and was also Home Secretary twice) to present the first Factory Act to parliament in 1802 - called "The Factory Health and Morals Act". Peel was motivated as a fever had swept across one of his factories due to poor management and hygiene. The Act was mainly aimed at the cotton and wool mills

and called on factories to ensure that factories were clean and properly ventilated and that workers were provided with at least two outfits of clothing. It also banned children under the age of 9 from working in the mills and those between 9-13 were only permitted to work 8 hours a day, older children up to 18 years a maximum of 12 hours a day. In reality, the conditions in the mills did not change very much as nobody was checking that factories were abiding by the new law.

The Cotton Fabrics Regulation Act, 1819, set the minimum age of workers to 9 years old and working hours to a maximum of 12 hours per day. Similarly, this Act did little to improve the plight of children in the mills, as there were no inspectors to enforce the law, so factory owners carried on treating their workers badly.

There's a fun animated education video about the influence of Robert Owen on You Tube called Factory Watch (using the music of Baywatch!): <https://www.youtube.com/watch?v=DimdZpZJTmY>

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SLIDE 10

HERBERT GREENHALGH, FIELD MILL

Little is documented about the specific conditions for child workers in the mills in Sutton and Mansfield in the 1800s, but we can assume that they would have had their fair share of tyrant supervisors, as well as more humane overseers.

There are accounts of Herbert Greenhalgh, the mill owner at Field Mill who provided his workers with time off to pursue sports and leisure; indeed, he established the very first Field Mill Football Team. He was also one of the first millers in the area to afford his workers with a Sunday school, in order to aid their moral education.

When Herbert Greenhalgh took over the management of his father's mills in Mansfield (Field Mill, Stanton Mills and later Little Matlock) he gained a reputation for being a kind and considerate employer; contrary to reports of many other mill owners according to the government's inspectors.

The 1861 census tells us that Greenhalgh employed 59 men, 221 women, 82 girls and 20 boys, (a total of 382 employees), which shows that the employment of children was waning by this time. These figures also indicate that the operation of factory machinery was rapidly becoming the work of women; many of their husbands would still be at home operating their framework knitting machines or working on the land.

For his silver wedding anniversary Greenhalgh's employees presented him and his wife with an illuminated address (a beautifully hand-written and framed piece of writing), which expressed gratitude and admiration for his 'large hearted generosity and kindly consideration'.

When he served as the chairman of the Board of Guardians (looking after the workhouse) he always ensured the generous treatment of the poor.

Herbert Greenhalgh reflects a better type of factory owner who realised the benefits to all of treating factory workers more humanely.

SLIDE 11

THE FACTORY ACT 1833

It wasn't until 1833 that the government introduced a new Factory Act which really made a difference to conditions in the mills for child workers. The main change was that young children had to attend school for two hours a day, six days of the week.

Until then most child workers would not have been able to read or write. Getting an education was a privilege of the rich who could afford to pay school fees, or a governess in the home. Also, poor families would have relied on the income earned by every family member, so if a child attended school, they would have lost the money they earned.

Holidays were also introduced, but people didn't get that much time off: children and young people were given all day on Christmas Day and Good Friday as holiday and eight half days in the year, and that is all. The rest of the time they were at work or school. These were children as young as five.

The Factory Act (1833) involved the appointment of inspectors to make sure that factories were abiding by the new regulations, as previous attempts to improve conditions had been ignored.

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SLIDE 12 THE FACTORY ACTS OF 1833

The Factory Act of 1833 made the following a legal requirement:

- The working day was to start at 5:30 am and cease at 8:30 pm.
- A person aged 13-18 was only permitted to work a maximum of 12 hours per day
- A child aged 9-13 was not employed beyond any period of nine hours
- Children under 9 were not allowed to work at all (children as young as 3 had been put to work previously)
- It was illegal to employ anyone between the hours of 8:30 pm to 5:30 am
- Children were to attend school for at least 2 hours during the day
- The government appointed paid factory inspectors to enforce the law and ensure that people were following child work guidelines, making sure acts were carried out and compiled with.

SLIDE 13 THE FACTORY ACT OF 1844

The Factory Act of 1844 was even more stringent (the rules were stricter for factories):

- The Act further reduced the hours of work for children between 8-13 to six and a half a day, either in the morning or afternoon
- Young people and women were to have the same hours - not more than twelve for the first five days of the week (with one and a half hours for meals), and nine on Saturday
- Certificates of age and school attendance, in the case of children, were to be granted in future only by surgeons appointed for the purpose
- Accidents causing death or bodily injury were to be reported to surgeons, who were to investigate their cause and report the result to the inspector
- The factory was to be thoroughly washed with lime every 14 months
- A Register was to be kept in which the names of children and young persons employed were to be entered

After further campaigning, one of the final regulations that the British parliament passed was the Ten Hour Bill of 1847, which:

- Limited the hours of labour of both women and children in factories and textile mills to ten hours per day. These ten hours could only be worked between six in the morning and six in the evening

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SLIDE 14 FURTHER FACTORY REFORM IN THE LATE 18TH-CENTURY

The Factory Extension Act of 1867 ensured that any industry employing 50 or more people did not overwork children and women. The focus of those in favour was now not only on improving the working conditions for children but to give them the opportunity for schooling.

In 1870 The Education Act (also known as the Forster Act) said that there had to be a school in every town and village. 'School Boards' of local people built and ran the new schools. Families paid a few pennies a week to send their children, though not all children went to school.

The textile operatives, besides being the first to benefit from the factory laws, had by then also organised a powerful and well-disciplined trade union to represent their interests. They successfully influenced the passing of the Factory Act in 1874 which took half-an-hour a day off textile factories alone, leaving all others still subject to the settlement of 1850.

The fifth Chimney Sweeping Act of 1875 finally ended the work of the climbing boys, forcing the use of machines.

By 1880, the law said that all children aged 5

to 10 must go to primary school, so every child would receive at least a basic education.

It wasn't until the Factory Act of 1891 that factories were legally required to fence off machinery. Two other important aspects of the law were that:

- employers were prohibited to employ women until 4 weeks after having a baby
- the minimum age of a child who could work in the mill was raised from ten to eleven.⁶

Under the Elementary Education (School Attendance) Act of 1893 the age of leaving school was increased to 11 and the right to education was extended to deaf and blind children.

In 1899 the leaving age was increased again to 13.

It wasn't until the Fisher Education Act of 1918 that education became compulsory up until the age of 14 years.

HANDOUTS

- HM_L4HO1:** The life of a child mill worker
- HM_L4HO2:** Child labour: two schools of thought
- HM_L4HO3:** Images of child mill workers
- HM_L4HO4:** Evidence presented to Michael Sadler
- HM_L4HO5:** Robert Owen's address to community of New Lanark

⁶ <https://celestetmoc.weebly.com/industrial-revolution-childhoods.html#>

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LEARNING ACTIVITIES

1. Class discussion

Having reviewed the Teacher's Slides engage pupils in a discussion about the life of a mill worker. Here are a few prompts:

- There was no compulsory education until the early 1900s. After learning about how children were treated in the mills, do you think school would have been preferable (to working in the mills)?
- Was the diet a factory worker in the 19th century healthy or not?
- Would it have been possible to play or have fun if you were a child mill worker?
- Robert Owen believed that people can be encouraged to form better habits and be more productive if they are given comfortable housing and the opportunity to learn. Was he right?

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LEARNING ACTIVITIES

2. Handouts 1, 2 and 3

Distribute Handouts 1 and 2 - The life of a child mill worker and Child labour: two schools of thought.

Divide your class into pairs and get them to take the role of a pessimist (who disagreed with child labour) and an optimist (who was in favour of children working in factories).

Get them to argue their case.

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LEARNING ACTIVITIES

3. Handout 3

Look at the images of children working in the 19th-century mills (Handout 3).

- How old do you think the children look?
- What were their jobs?
- Can you list the hazards to their health and safety in the picture?

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LEARNING ACTIVITIES

4. Handout 4

Review the extracts from evidence presented to the parliamentary committee then write a diary entry from the perspective of a mill worker who is your age.

What hours do you work, how are you treated by your supervisor?

If you get any time off on a Sunday, what might you play with your friends.

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LEARNING ACTIVITIES

5. Handout 5

Pretend that you are Robert Owen - the father of socialism, who spearheaded factory reform.

Write a letter to the mill owners in Mansfield and Sutton describing your new model community in New Lanark.

Explain some of your ideas about providing opportunities to learn and participate in music and creative activities to make workers happier, more productive and less likely to get drunk or misbehave.