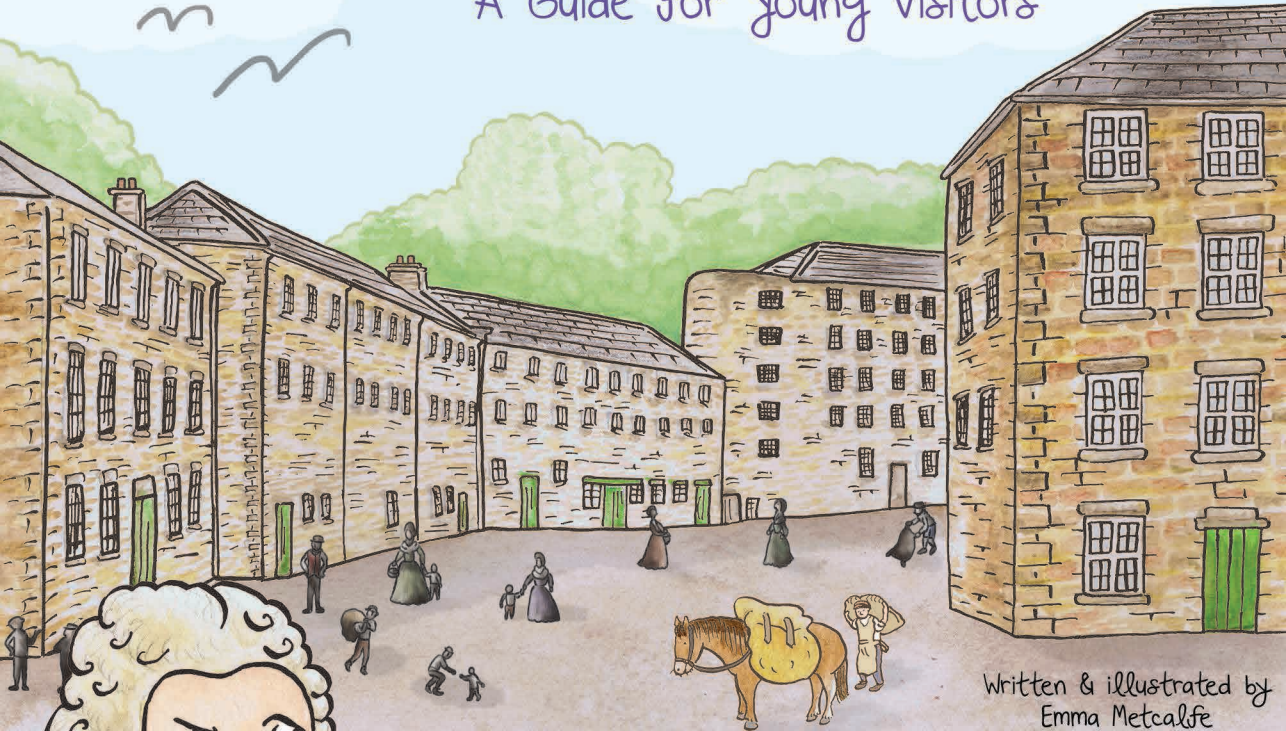


# The Story of Cromford Mills

A Guide for Young Visitors



Written & illustrated by  
Emma Metcalfe



Arkwright Society

AT SIR RICHARD ARKWRIGHT'S CROMFORD MILLS



United Nations  
Educational, Scientific and  
Cultural Organization



Derwent Valley Mills  
inscribed on the World  
Heritage List in 2001



# WELCOME TO CROMFORD

It's 1771 and Richard Arkwright and his partners are looking for somewhere to build a cotton mill. They have come to Cromford, which was a very different place in those days to what it is now.

This site looks promising. There's just the right amount of water to power my mill. Not too much, not too little!

It's close to the road. The rent is cheap too!

But we'll have to build everything from scratch!

People reared their own animals for wool, milk and meat.

Other men worked in nearby lead mines.

This bridge is the oldest thing on site and was here when Arkwright arrived.

Many Cromford men worked as farm labourers.

But it's MILES from the ports! It's us horses who'll have to lug the raw cotton here!

I like a challenge! I'll take it!

People travelled on foot, on horseback or by carriage.



# WHO WAS RICHARD ARKWRIGHT?

Richard Arkwright was born in 1732 in Preston, Lancashire. He was one of thirteen children. He had no formal schooling and started work as an apprentice to a hairdresser. He didn't have much money, but he was clever and worked hard.

Now I have a barber's shop of my own. I make wigs too!



In the 1700s wealthy men and women wore wigs. Some of the wigs were very extravagant!

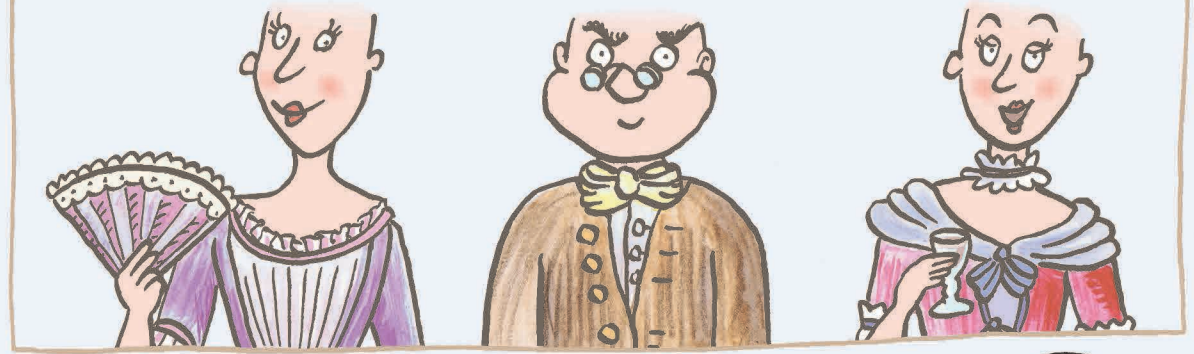


Arkwright was always thinking of new ways to make money.



# Peruke Portraits

Design a peruke (wig) for each of these three customers and draw them in.



Arkwright heard that clothes made from cotton were becoming very fashionable.

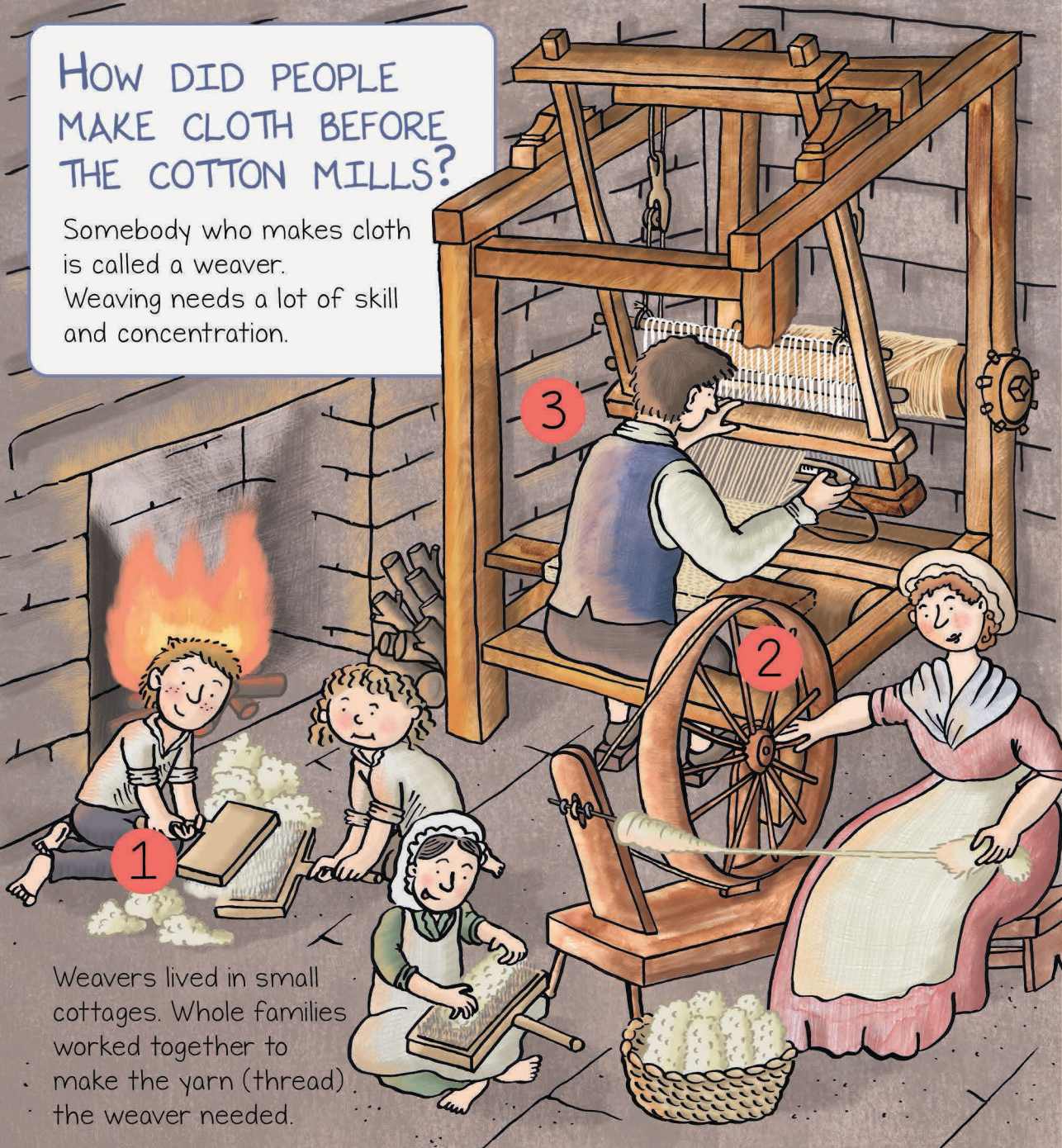
A race was on to invent a machine to make it easier to spin cotton thread.





# HOW DID PEOPLE MAKE CLOTH BEFORE THE COTTON MILLS?

Somebody who makes cloth is called a weaver. Weaving needs a lot of skill and concentration.



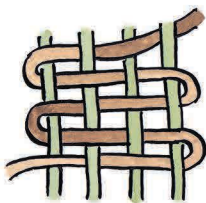
Weavers lived in small cottages. Whole families worked together to make the yarn (thread) the weaver needed.

**1** The cotton starts out as big fluffy clumps. Children brush it to stretch out and untangle the fibres (a bit like brushing your hair). This is called carding.

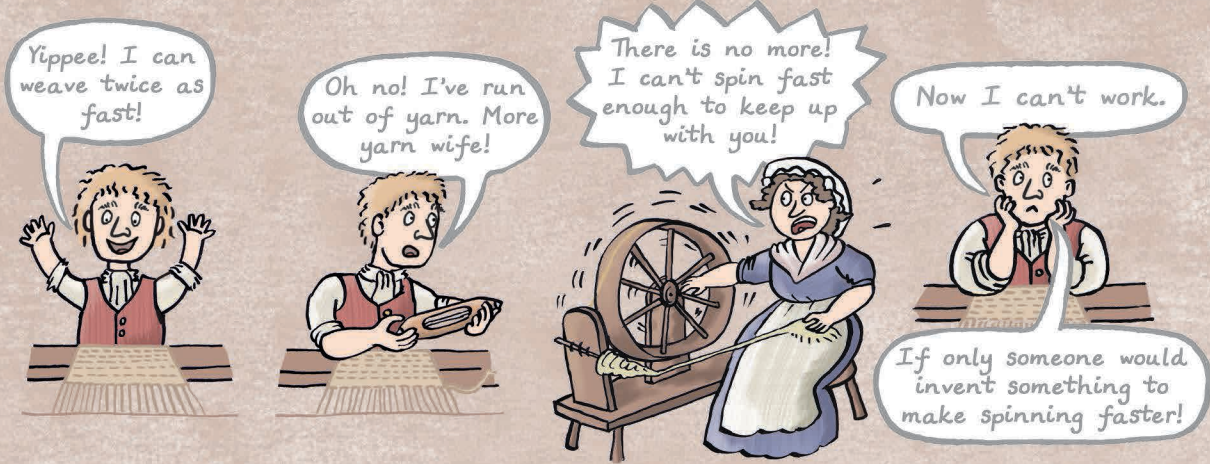
**2** Mother spins the cotton using a spinning wheel. This stretches out the fibres and twists them together and turns a short, fat clump of cotton into strong, thin yarn.

**3** Father weaves yarn using a simple machine called a loom. It works by threading yarn in and out of vertical threads and building up a 'criss-cross' pattern.

Very simple weaving



In 1733 a new invention called the 'Flying Shuttle' had made weaving much faster.



In 1766 Arkwright and his partners came up with a solution, a machine called a **spinning frame**.

Wealthy local men agreed to help build a factory where the new spinning frames could be put to work on a grand scale.



## CAN YOU CHANGE THE WORLD?

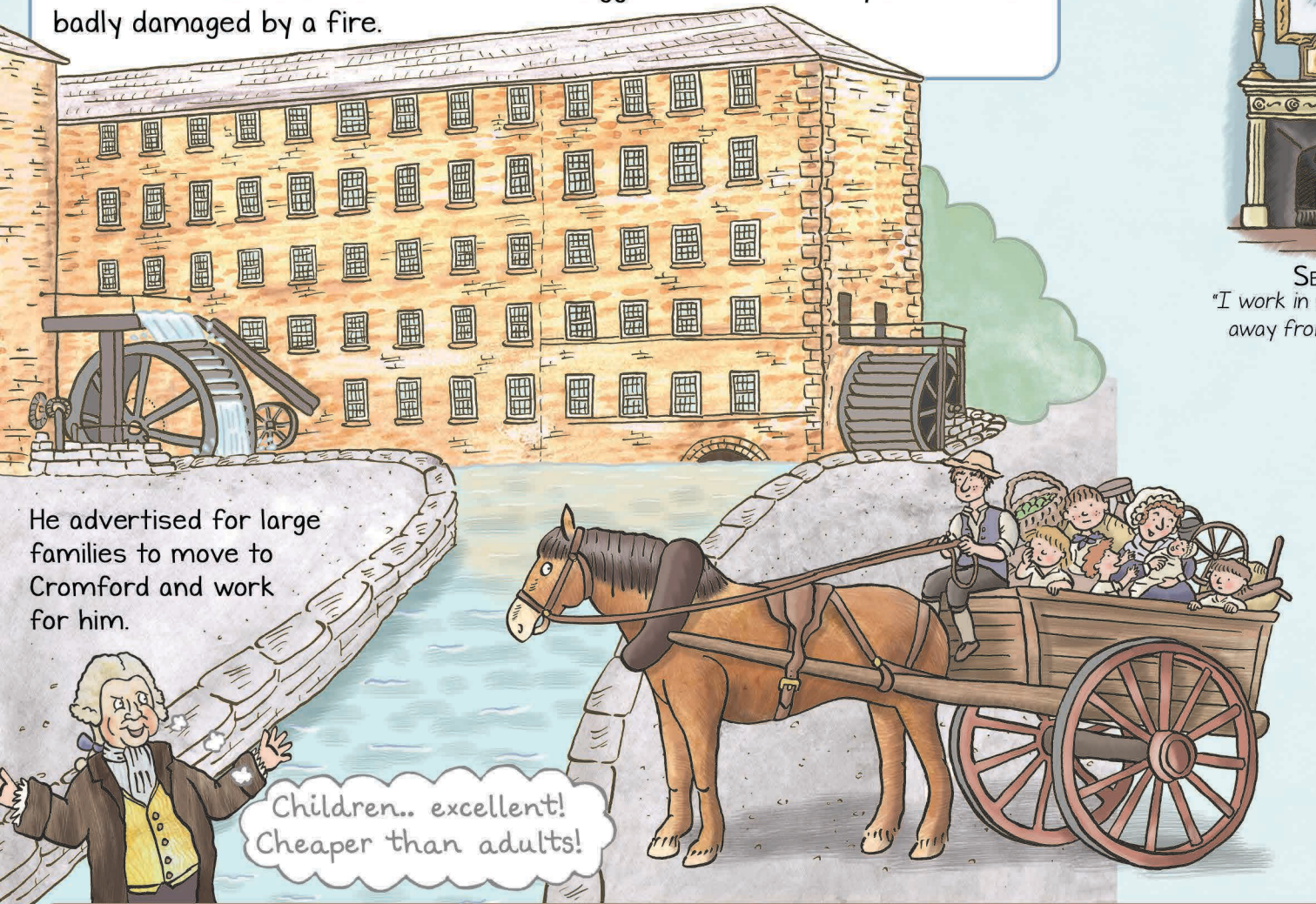
Imagine you're a famous inventor like Arkwright. What sort of machine would you invent? Draw a picture of it or describe it here.



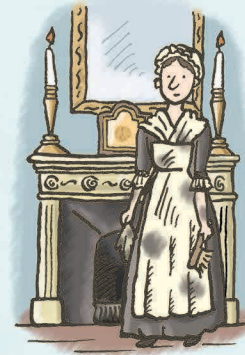


# THE FIRST MILL

Richard Arkwright and his partners started building their first water powered cotton mill in 1771. It used to be much bigger than it is today but it was badly damaged by a fire.



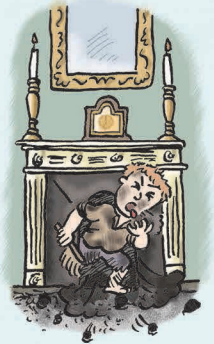
In the 1700s it was normal for children to work. Do you think that these children's jobs would have been better or worse than working at Cromford Mills?



**SERVANT:**  
"I work in a big house, far away from my family."



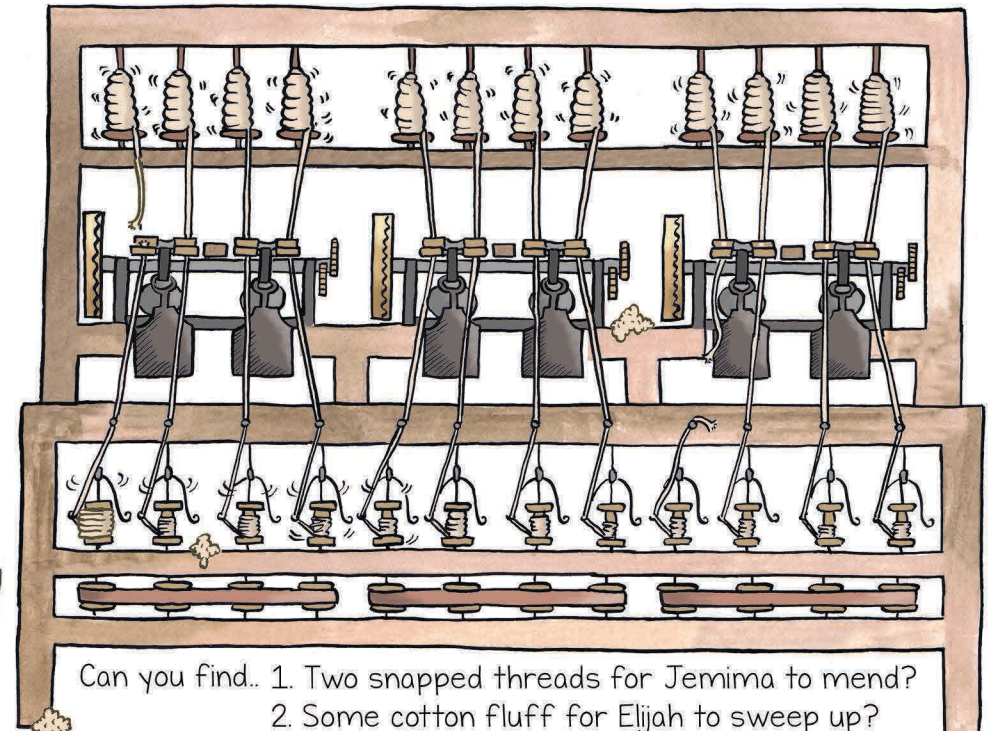
**MINER:**  
"I haul carts of coal in the dark, or open trap doors to let the carts through."



**CHIMNEY SWEEP:**  
"I climb up chimneys & try not to get stuck!"



Look carefully at this picture of Arkwright's spinning machine...



- Can you find..
1. Two snapped threads for Jemima to mend?
  2. Some cotton fluff for Elijah to sweep up?
  3. A full spool of yarn for Esther to change?

## WHAT DID CHILDREN DO AT THE MILL?

Arkwright's new machines were easy enough for children to operate. He employed hundreds of child workers.



**Jemima Holehouse**

Age: 10  
Job: Piecer  
"I tie together threads that have snapped."

**Elijah Watson**

Age: 7  
Job: Scavenger

"I clean up cotton scraps from the machines and the floor."



**Esther Horrobin**

Age: 9  
"I replace full spools of yarn with empty ones."





# CHILDREN AT CROMFORD

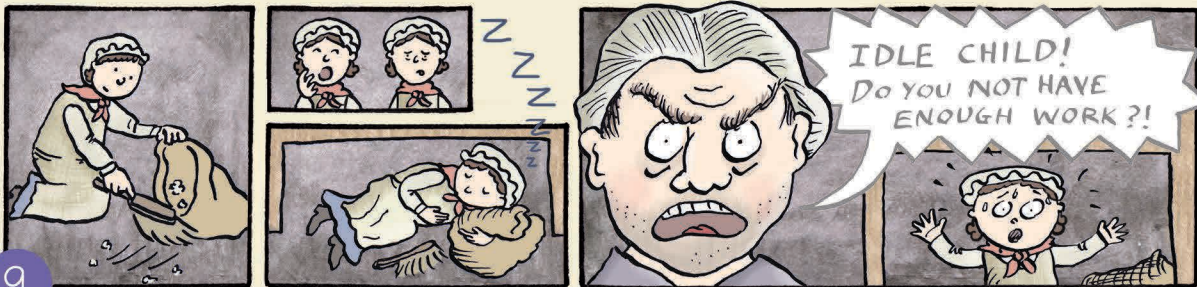
Cromford children didn't go to school like you do today. They had to make do with a few lessons at Sunday school on their only day off. They spent most of their time working, even eating all their meals at the mill!

I'm 7 years old and it's time for me to start work at the mill.

Mill workers didn't own clocks so a bell tells them it's time to go to work.

DING DING! DING DING! DING DING! DING DING!

Hurry up! We'll be in trouble if we're late!



There were strict rules and overseers kept a close eye on workers to make sure that there was no slacking! Workers were fined if they broke the rules.

## Rules at the Mill

- Any workman coming into this factory drunk  
3 pence
- Any person smoking tobacco or having a pipe  
2 pence
- Any spinner found with his window open  
1 penny
- Any spinner found dirty at his work  
3 pence
- Any spinner heard whistling  
2 pence

Look at the rules and write down how much each worker will have to pay.



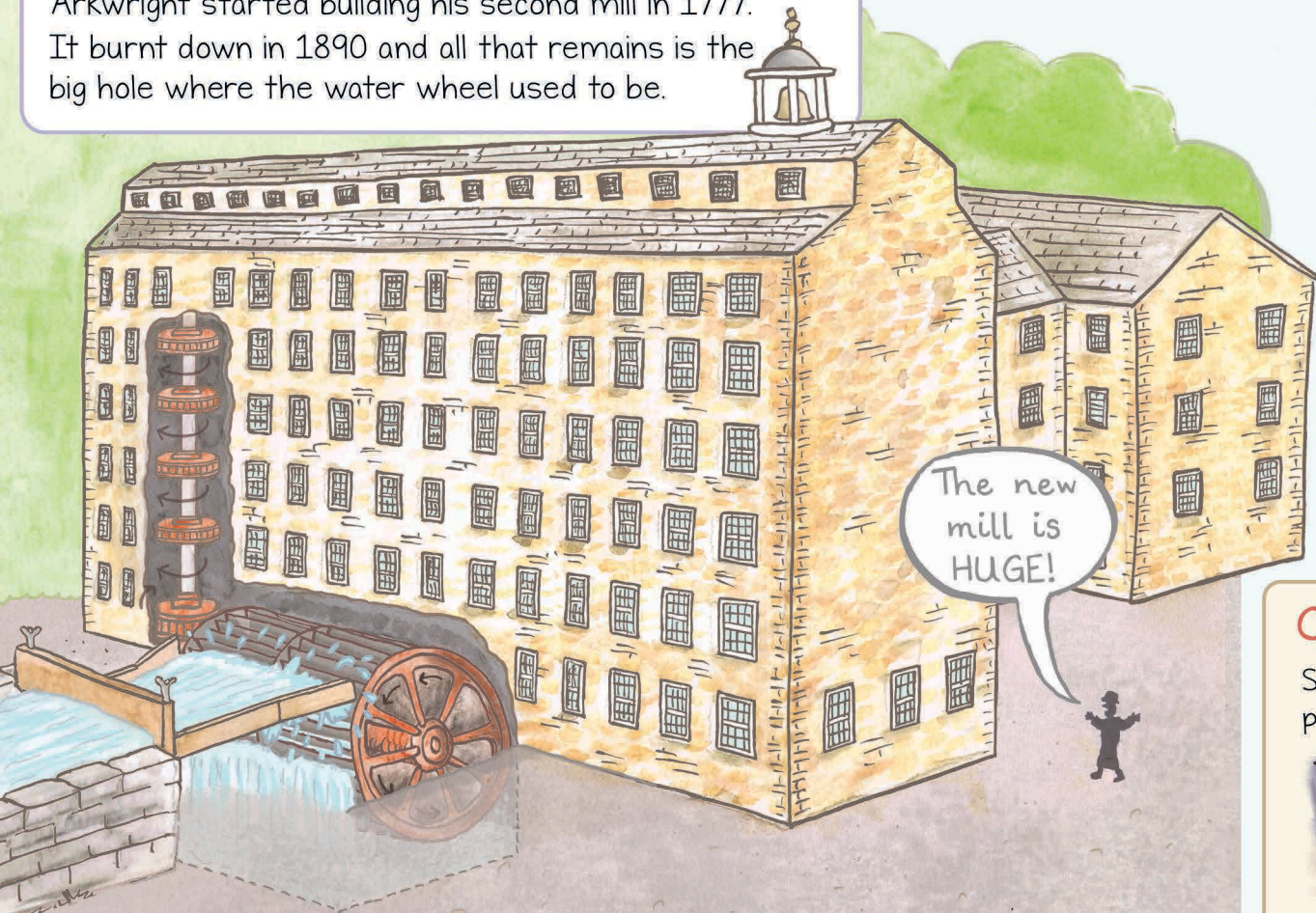
Name	Fine
Henery Fogg	___ pence
Edwin Wagstaff	___ pence
Jesse Fox	___ pence
Elizer Dickerson	___ pence
Lydia Watterfall	___ pence





# THE SECOND MILL

Arkwright started building his second mill in 1777. It burnt down in 1890 and all that remains is the big hole where the water wheel used to be.



The new mill is HUGE!

Richard Arkwright also invented other machines which made it easier and faster to prepare the fluffy raw cotton for spinning.

spinning

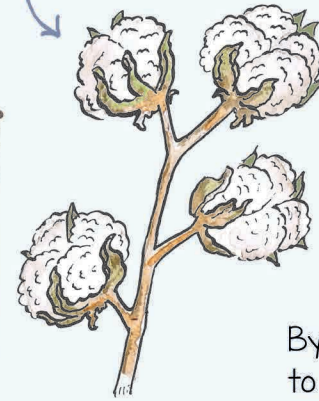
I used to card the cotton by hand but now I use this machine. It's much faster but it's hot and noisy work!



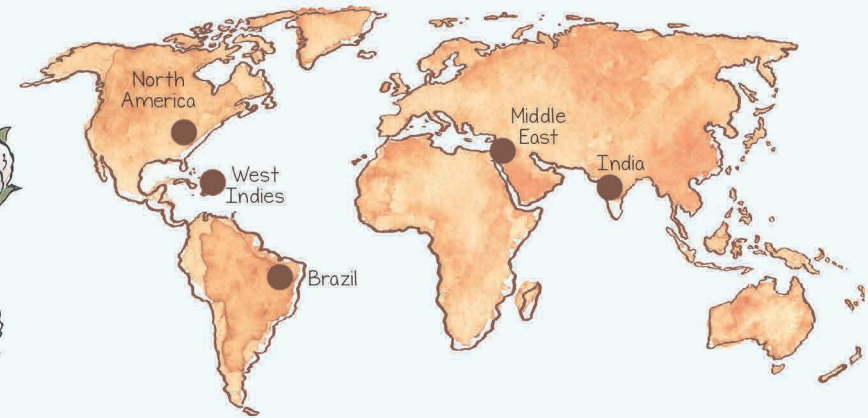
Fires destroyed most of the records of what went on at the mills so we don't know for certain where Cromford's raw cotton came from.

## Cotton Plant

fluff protects the seeds



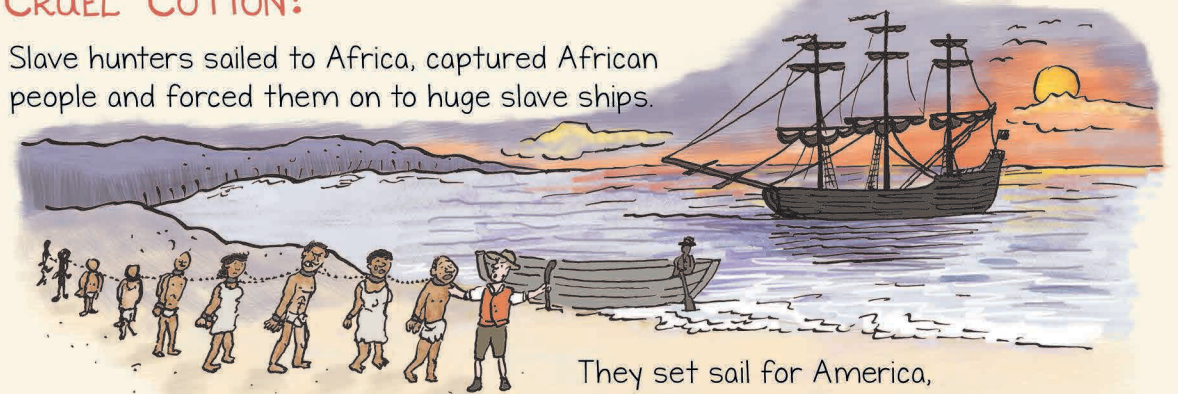
## Cotton Growing Regions of the World



By the 1800s America was the largest supplier of cotton to Britain. American cotton was grown using slave labour.

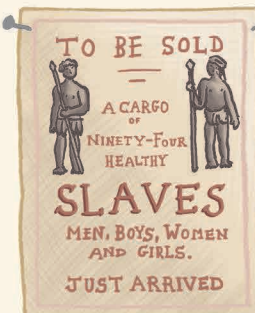
## CRUEL COTTON?

Slave hunters sailed to Africa, captured African people and forced them on to huge slave ships.



They set sail for America, but many slaves died on the long voyage.

Slaves were bought and sold like property and put to work on huge cotton and sugar farms called plantations. Slaves were not paid meaning that growers could produce cotton very cheaply.



Cheap cotton allowed many British mill owners to become very rich but caused terrible suffering to millions of people.





# SECRETS & SPIES

Arkwright gave permission for other mill owners to use his designs in exchange for payment.

He soon became a rich man...

... and guarded the secrets of his technology carefully.

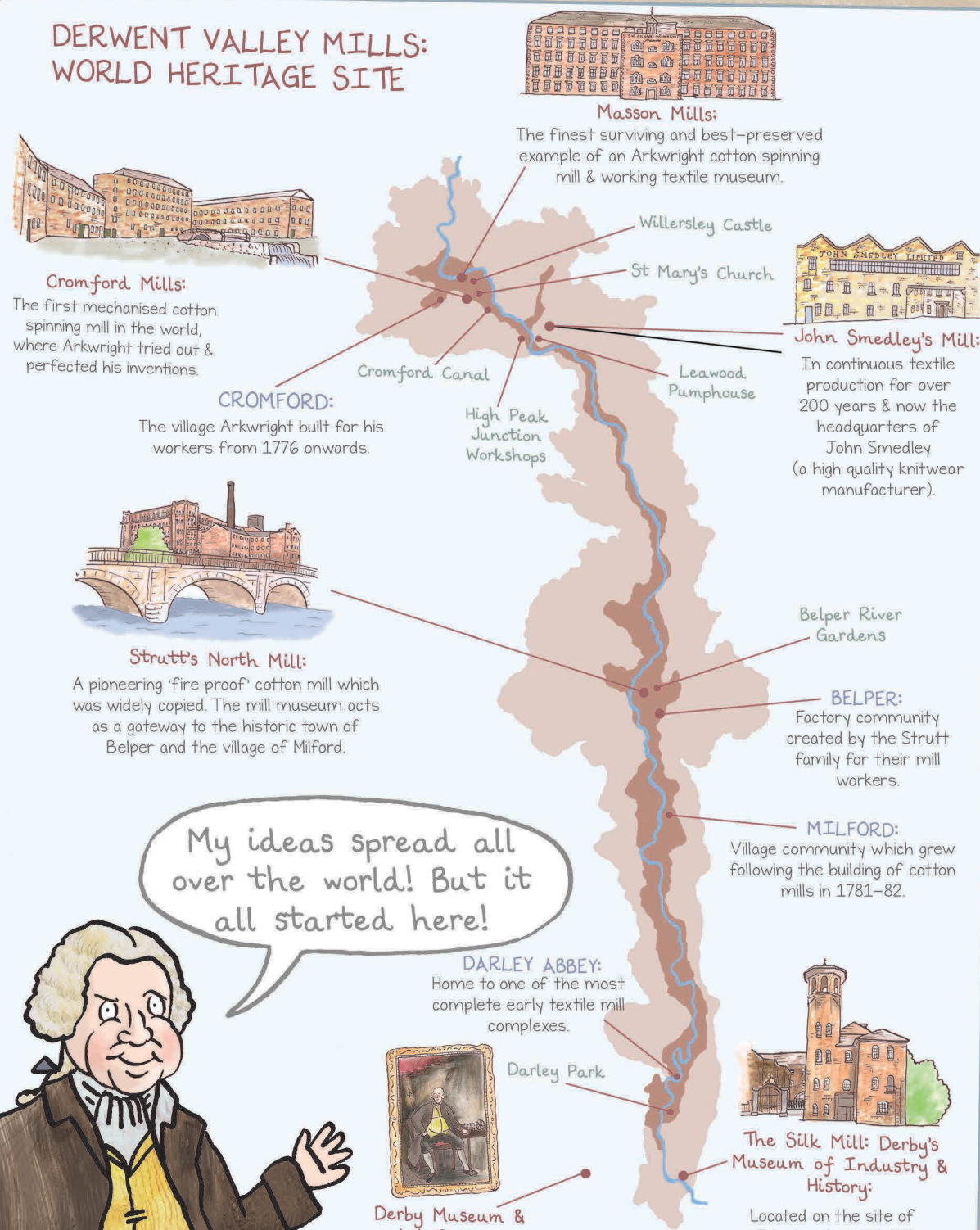
**Find the spy!** Arkwright is suspicious that he has a spy at the mill! Crack the code to find out who it is...



+ ● \* × + ◆ ↔ \*\* ◇ × ▲ ■ \*\* ? ↔ ○ ▲ \*\* ●  
 \* □ ▲ ⊙ ⇄ ◆ ▽ × ↻ ■ ⊙ ▽ \* ○ ↻ ◆ + ▽ ⊗ ⊕ ◆ ◇ \* ⊞  
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Arkwright used his wealth to buy shares in over 100 mills owned by other people. He became even richer and his ideas spread throughout Derbyshire, Great Britain and then all over the world!

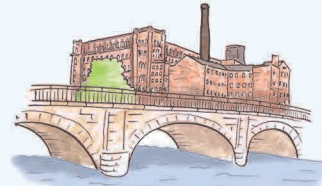
## DERWENT VALLEY MILLS: WORLD HERITAGE SITE



**Masson Mills:**  
The finest surviving and best-preserved example of an Arkwright cotton spinning mill & working textile museum.



**Cromford Mills:**  
The first mechanised cotton spinning mill in the world, where Arkwright tried out & perfected his inventions.



**Strutt's North Mill:**  
A pioneering 'fire proof' cotton mill which was widely copied. The mill museum acts as a gateway to the historic town of Belper and the village of Milford.



**Derby Museum & Art Gallery:**  
Home to paintings by Joseph Wright which are relevant to the story of the Derwent Valley Mills.

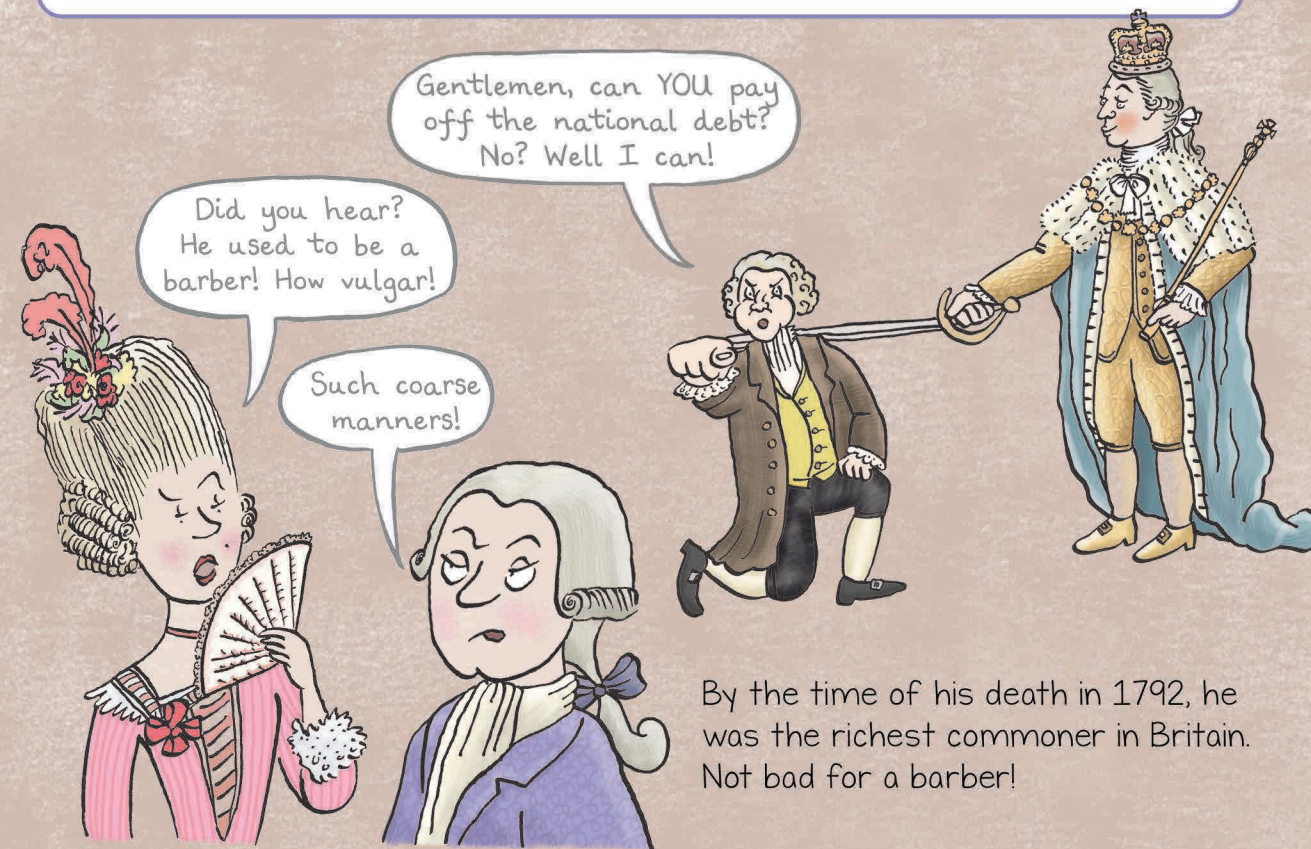


**The Silk Mill: Derby's Museum of Industry & History:**  
Located on the site of John Lombe's Silk Mill of the early 1720s - England's first 'modern' factory.



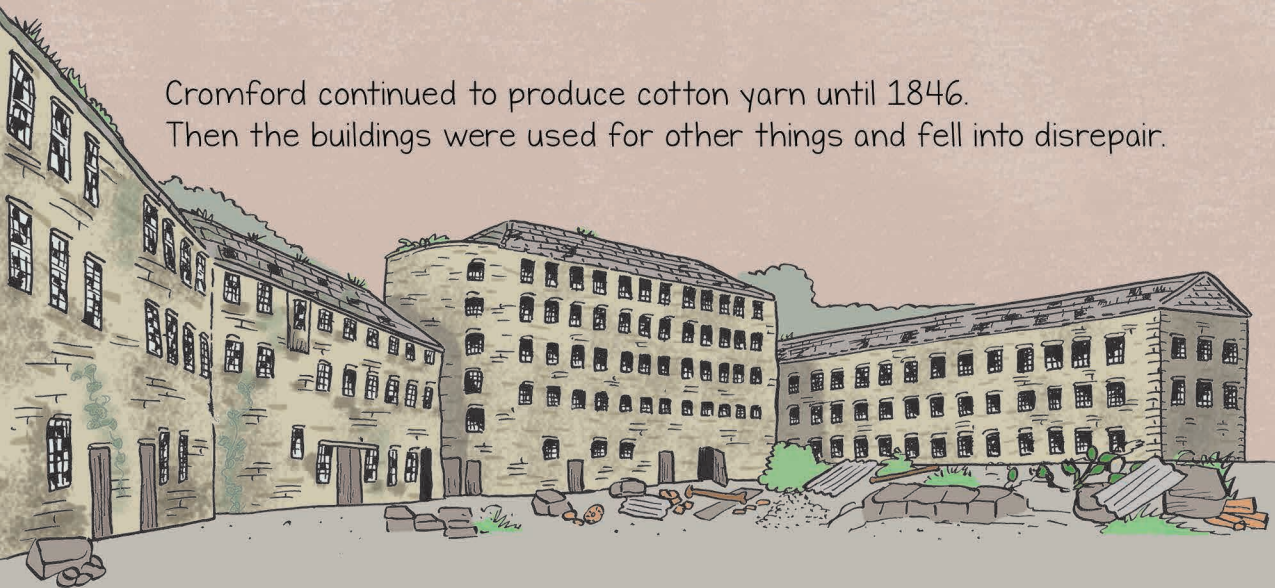
# WHAT HAPPENED NEXT?

Richard Arkwright built many more mills, not just in Derbyshire, but in Lancashire and even Scotland. He was knighted by King George III in 1786. When some of the King's courtiers sneered at him, this is what he said...



By the time of his death in 1792, he was the richest commoner in Britain. Not bad for a barber!

Cromford continued to produce cotton yarn until 1846. Then the buildings were used for other things and fell into disrepair.

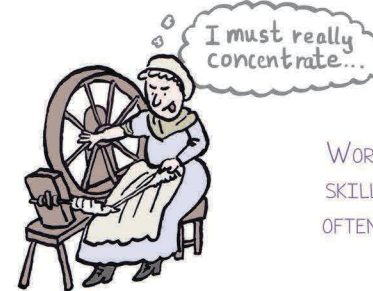
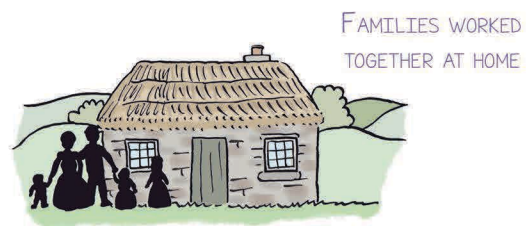


Today they have been repaired and restored and Cromford is part of the Derwent Valley World Heritage Site.

# How did Arkwright change the way people worked?

Gradually, other inventors came up with newer, faster machines, but Arkwright's ideas live on, even today.

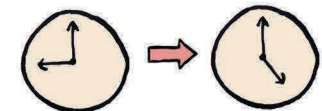
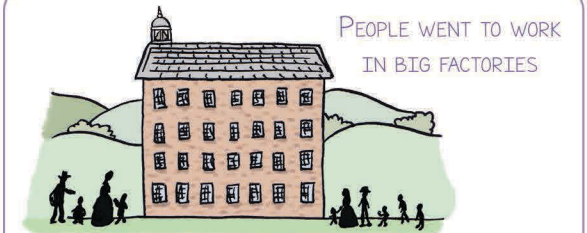
## BEFORE



PEOPLE WORKED AS MANY HOURS AS THEY NEEDED



## AFTER





# EXPLORING CROMFORD: THE FACTORY VILLAGE

The mills reached their peak in the 1790s, employing 800 people. Cromford was changing from a quiet country hamlet into a bustling community. In order to attract workers to Cromford, Arkwright built houses for their families.

**St Mary's Church, 1786 onwards**  
 Built as a private chapel for the Arkwright family, but later opened up to the local community.



**Market Place, 1790**

Built so Arkwright's workers had somewhere to go shopping for all their favourite things. He attracted traders by offering prizes to those who sold the most.



**Cromford Canal, 1790s**

This allowed goods to be transported by water instead of by road. It is 23km long and was hand dug by men with shovels and wheelbarrows!



**The Village Lock-up**

This contains two small, gloomy cells in which to shut away troublemakers!



**Greyhound Hotel, 1778**

The Greyhound Hotel was built for Richard Arkwright to give travellers and visitors to his mill somewhere to stay. It was built to impress!

Three cheers for Sir Richard!



**North Street, 1776**

Arkwright built these houses especially for his workers. They offered a much better standard of living than most country people were used to, with vegetable gardens and pigsties.

A new home for us!



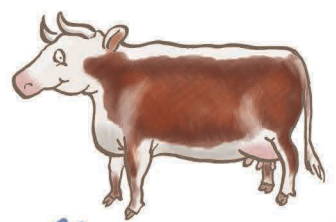
Arkwright knew that it was important to keep his workers happy.



He put on an annual festival when workers paraded around the village, then returned to the mill for a feast of buns, ale, fruit and nuts.



He also awarded prizes to his best workers, such as..



"milch cows worth from £8 to £10 each"



# Cromford Mills Map

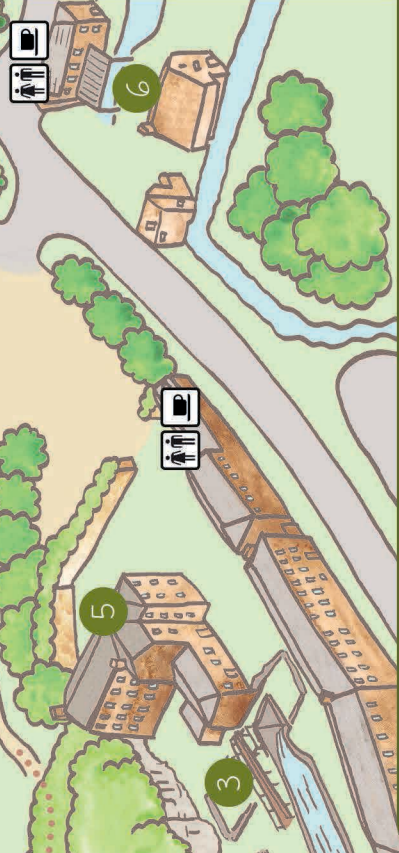


RIVER DERWENT

SCARTHIN ROCK

MILL LANE

to Cromford Village



- 1 Bridge
- 2 First Mill
- 3 Second Mill & Wheel pit
- 4 Mill Manager's House
- 5 Second Mill Annexe
- 6 Cromford Canal Wharf
- 7 St Mary's Church
- 8 View of Willersley Castle
- 9 View of the Mill site



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