

Information for Teachers

Introduction

At Cromford Mills we aim to engage learners in enjoyable, experiential and interactive learning experiences to enhance and deepen an understanding of the significance of Cromford Mills and the life and times of Sir Richard Arkwright. Through a variety of activities including tours, talks, hands-on making activities and role play linked to curriculum subjects and beyond we offer learning experiences that develop skills including investigation, enquiry, questioning and analysis. The site is considerably relevant to the teaching of History, Geography, English, Science and Design and Technology. This resource focuses on the History curriculum with suggested cross curricular links.

Recognised as part of Derwent Valley Mills UNESCO World Heritage Site, Sir Richard Arkwright's Cromford Mills is significant as the first successful water-powered cotton mill and influential factory system. The design of the mills, the machines, the factory working processes were replicated across the world, influencing industrial developments and contributing to the wealth of the British economy.

Resource

Designed for Key Stages 1 and 2 this resource supports the teaching and learning of 18th and early 19th century life, Arkwright's role in the industrial revolution, social working and living conditions and the significance of Cromford Mills. Sectioned into downloadable documents for pupils and teachers the resource covers the following topics:

- Sir Richard Arkwright: life and work
- The factory system: living and working conditions
- The construction of the Mills and water power
- Industrialisation and transport

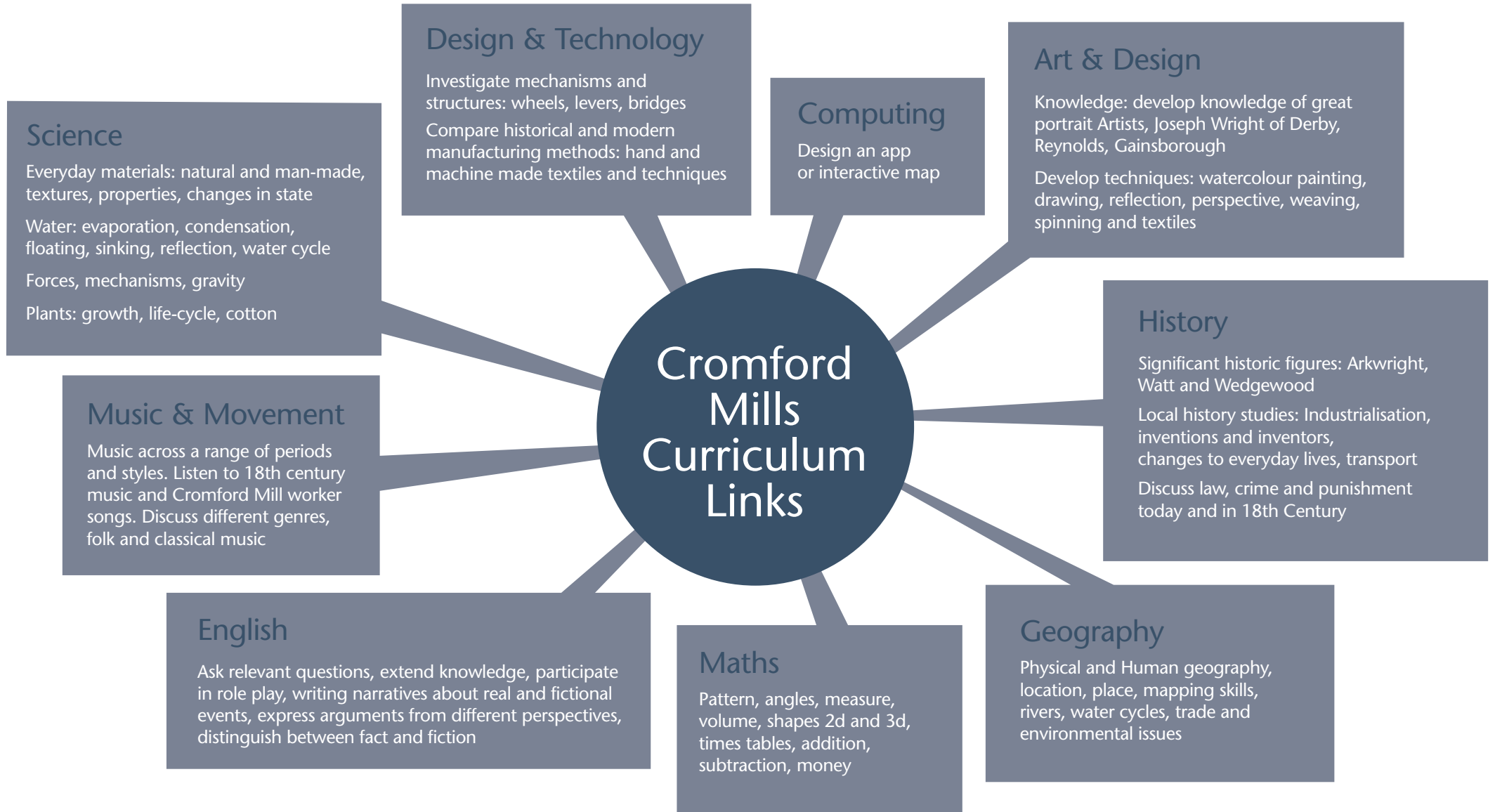
We recommend that this pack is used in conjunction with a visit to Cromford Mills but it can also be used as a stand-alone resource.

Key Questions

The following questions introduce the areas of study explored within this resource:

- Who was Richard Arkwright and why was he significant?
- What is the importance of Cromford Mills?
How are the mills linked to the Industrial Revolution?
- What was it like to work at the mills and live in Cromford?
- What leisure activities would workers have participated in?
- What other important inventions were made during the 18th and 19th centuries?
- When was the railway and canal developed at Cromford?
How did transport affect the development of the industrial age?
- How did the lives of people change?
Were they improved or made worse?
- What was the reaction to Arkwright, his machines and his factory mill system?
- How did technological developments influence the pace of the industrial revolution and what concerns and issues were raised in the 18th century?

Curriculum Links



History Curriculum Links

This section describes relevant links to the National Curriculum History Programmes of Study and offers example History schemes of work for Key Stage One and Key Stage Two.

Additional resources to support lesson preparation and delivery are offered in the form of Information Sheets for teachers describing the history of the Mills and life of Sir Richard Arkwright and Source Packs containing historical quotes and images for pupils to use during lessons and for their own research projects.

An illustrated activity booklet is also available for pupils to use either pre or post-visit to the Mills. Please contact the Education Department for further information.

Key Stage 1: Significant Individuals

This scheme of work explores:

- The lives of significant individuals (Arkwright) in the past who have contributed to national and international achievements (technological, industrial, political and economic). Comparing life in different periods (18th, 19th and 20th century)
- Significant historical events, people and places in their own locality.

Pupils will:

- Develop an awareness of the past, using common words and phrases relating to the passing of time.
- Know where the people and events they study fit within a chronological framework and identify similarities and differences between ways of life in different periods.
- Use a wide vocabulary of everyday historical terms.
- Ask and answer questions, choosing and using parts of stories and other sources to show that they know and understand key features of events.
- Understand some of the ways in which we find out about the past and identify different ways in which it is represented.

Key Stage 2: Industrialisation a significant turning point in history

This scheme of work explores:

- Local History Study: a study of an aspect of history or a site dating from a period beyond 1066 that is significant in the locality
- Study of an aspect of a theme in British history that extends pupils' chronological knowledge beyond 1066: a significant turning point in British history.

Pupils will:

- Note connections, contrasts and trends over time and develop the appropriate use of historical terms.
- Regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance.
- Construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources

Themes include local history, industrialisation, growth of 19th century technology, manufacturing, transport, productivity, mass production and changes in working conditions and trades as well as looking at daily lives of ordinary working people.

Key Stage 1: History Scheme of Work

Significant Individuals

- The lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare life in different periods.
- Significant historical events, people and places in their own locality.

Learning	Activities	Outcomes	History Curriculum	Resources	Subject Links
Identify significant changes to a local area over time: 18th, 19th, 20th century	Discuss the images showing Cromford (or another location, or a city) during 18th, 19th and 20th century. What is new, what is missing, what has changed? Sequence images.	Know that an area changed, sequence changes, identify old and new features. Develop chronological knowledge.	Identify similarities and differences between ways of life in different periods.	Source Pack 1 - images of Cromford in 18th, 19th century Or use images showing your own locality in different centuries	Geography: use basic geographical vocabulary, use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features
Introduce Richard Arkwright as a significant historical figure and understand why he is significant	What can we find out about Richard Arkwright from a portrait? Discuss portraits of Richard Arkwright, costume, wig, pose, setting, objects depicted. What did he invent and build? Discuss cotton and costume. Compare with another inventor e.g Wedgewood	Analyse a pictorial source, ask and answer questions. Use historical terminology. Talk about what Arkwright invented and built	Address historical questions of significance, roles and portrayals of people, lives of significant individuals in the past	Source Pack 2 2A: Portrait of Sir Richard Arkwright by Joseph Wright of Derby 2B: Mills and Machines Information Sheet 1: Sir Richard Arkwright	Art and Design: Make your own portrait, think about the posture, expression, objects to describe the sitter
Compare Arkwright with other significant historical figures in different periods of time	Tell the story of Arkwright and the Mills using the powerpoint. Pupils research and compare Arkwright with other inventors over time, 19th and 20th century e.g. Edison. Match the inventor to the invention, sort old and new inventions	Talk about Richard Arkwright as a significant person and other roles of significant historical figures e.g industrialists, scientists	Know where the people and events they study fit within a chronological framework, know key historical figures, understand how inventions change lives	Information Sheet 1: Sir Richard Arkwright Children's Illustrated Guide to Cromford Mills Develop knowledge of Cromford Mills and Arkwright's ambitions/role	Design & Technology: What would you invent? Geography: water cycles, streams and rivers Science: properties of materials, sinking and floating, energy and forces English: guided reading using the children's illustrated guide available from Cromford Mills

Key Stage 1: History Scheme of Work

Learning	Activities	Outcomes	History Curriculum	Resources	Subject Links
Develop knowledge of worker's roles at Cromford Mills and Arkwright's ambitions	<p>What would it have been like to work at the mills? How did ordinary people live and work? Open the envelope with advert sent by the Mill Manager to your school inviting children to work at Cromford Mills.</p> <p>Discuss the mill advert. Write questions to ask the mill manager during the visit.</p>	Ask and develop questions for the visit using knowledge and information they have learnt. Understand that children worked in mills.	Devise questions and analyse sources	<p>Information Sheet 2: Life at Work and Home</p> <p>Source Pack 2: Cromford Mill Advert</p>	<p>Geography: devise a simple map of Cromford/the Mills; and use and construct basic symbols in a key.</p> <p>Maths: develop numerical skills, count windows, times tables, factory costs, addition and subtraction</p>
<p>VISIT CROMFORD MILLS</p> <p>Know and find out about why Cromford is a significant part of Arkwright's work. Know the role of workers at the mills</p>	<p>Children of The Mills: Meet the mill manager, learn about Arkwright, working conditions, where you would live, education and Sunday school. Differences between then and now</p>	Working conditions in the mills, the role of children. Know how Arkwright managed the mill and the people who worked there.	Understand some of the ways in which we find out about the past and identify different ways in which it is represented.	VISIT to Cromford Mills	English: ask relevant questions, extend understanding and knowledge, hypothesising, imagine and explore ideas
Explain working and living conditions	<p>Structure and write a story or create an annotated drawing of a child working in Arkwright's mills, what did they see, hear? What did they do, eat, wear? Describe how the mill has changed the village and what people do.</p>	Describe the conditions in the mills, the role of children and ordinary people lives.	Understand some of the ways in which we find out about the past and identify different ways in which it is represented. Understand cause and consequence	<p>Information Sheet 2</p> <p>Source Pack 4</p> <p>A: Worker's Housing B: Social Conditions C: Festivals</p>	<p>English: Writing real and fictional narratives</p> <p>Music: different types of music 18th century folk and classical. Listen to the Cromford Mills song.</p>
Summarise why Richard Arkwright was a significant figure and how his work changed the area and beyond?	<p>Summarise why Arkwright was so important. Activities could include a newspaper report, an annotated map of Cromford, a storyboard.</p> <p>Write a postcard to your friend about meeting the mill manager, explain what you learnt.</p>	Sequence events and give reasons why Arkwright is significant	Know where the people and events they study fit within a chronological framework	Select resources from Source Packs	English: writing about real events, writing for different purposes, writing real and fictional narratives

Key Stage 2: History Scheme of Work

Industrialisation. A significant turning point in history

- Industrialisation, the growth of end of 18th and early 19th technology, manufacturing, transport, productivity, mass production, changes in working conditions and trades, daily lives of ordinary working people. This could be linked to:
- A Local History Study: an aspect of history and/or a site dating from a period beyond 1066 that is significant in the locality
- Study of an aspect or a theme in British history that extends pupils' chronological knowledge beyond 1066: a significant turning point in British history.

Learning	Activities	Outcomes	History Curriculum	Other Curriculum	Resources
Historical Context: Analyse industrial changes to a local area over time: 18th, 19th, 20th century	Discussion in small groups about changes that occurred in your local area during 18th, 19th and 20th century. Give a short presentation describing the changes. Compare older images with current images	Identify changes over time and in different periods. Begin to identify and discuss cause and consequence	note connections, contrasts and trends over time and develop the appropriate use of historical terms	Geography: identify topographical features and how they have changed over time	Source Pack 1: images of Cromford or gather images showing changes over time to your schools locality.
Introduce Cromford Mills as a significant place and begin to explore Arkwright's role in industrialisation	Use the Powerpoint to tell the story of Arkwright, his trades, his patent, invention and how far his ideas spread. Who helped him? What challenges did he face and what support did he get? What was the social reaction to these mills and his wealth? Organise the sources to show different views	Learn about the impact of Arkwright's achievement and impact on people's lives	Address and devise historically valid questions about change, cause, analyse a range of sources, begin to develop an understanding of industrialisation	Art: create portraits using a range of media, research 18th century portraiture What countries did Arkwright's factory system spread too? Find the countries on a map and discuss the extent of Arkwright's influence	Powerpoint: Cromford Mills introduction Information Sheet 1: Sir Richard Arkwright Information Sheet 2: Life at Work and Home Source Pack 2: 2, A: Portrait of Sir Richard Arkwright 2, B: Mills and Machines Source Pack 3 3, D: Reactions to Arkwright
Develop increased knowledge of Cromford Mills as a significant place and begin to explore the factory system	Pre- Visit Activity: Open envelope sent by mill – an advert for mill work. What is the advert for? What does it tell us about the mill? What does it tell us about Arkwright?	Analysis of sources to gather information Address historical questions Infer information about how the mill was run and who was involved.	Address and devise historically valid questions about change, cause, analyse a range of sources, begin to develop an understanding of industrialisation	English: Write a job description or application for a role at the mill. Geography: Look at images of the mill and the water courses. Describe and understand key aspects of physical geography, rivers, water cycle	Pack 2, C: Cromford Mill Advert Information Sheet 2: Life and Work Information Sheet 3: Mill Construction and Water Power Source Sheet 3 Information Sheet 2 and 3

Key Stage 2: History Scheme of Work

Learning	Activities	Outcomes	History Curriculum	Other Curriculum	Resources
Investigate the impact of the mill on people and place. Interpret information from a range of sources accounts, buildings, objects, images and role play interpretations	CROMFORD MILLS VISIT On arrival each pupil is given the name of a prospective working child. They will receive a tour of the mill and village, learning about the roles of children and working conditions, interactive and discussion activities.	Know and can describe: everyday lives of people, why Arkwright is remembered and what changes he made to the locality and beyond. Can recognise different historical viewpoints.	They should understand how our knowledge of the past is constructed from a range of sources note connections, contrasts and trends over time	Geography: Follow up research on rivers, trade and water cycle compare with Masson Mill Computing Activity: Create a digital map of your visit to Cromford	Prepared questions to interview the mill manager Information Sheets 1 - 4 Source Pack 2 and 3
To analyse information from sources about workers lives at Cromford Mills compared to other mills	What do the sources tell us about the working conditions at the Cromford compared to other mills? Discuss why you think the conditions were like that at Cormford?	Understand the working conditions of children in mills compared to Arkwright's Cromford mills	Construct informed responses that involve thoughtful selection and organisation of relevant historical information	Music: study and listen to songs written by mill workers. Compare folk and classical music rhythm, instruments, pattern and sound	Information Sheet 2: Life and Work Source Pack 3
Explain how the mills affected the lives of working people	Write a historical account about a child working at Cromford mills e.g. from viewpoint of a child, an inspector, a family member. What would children do, where would they eat, sleep, did they go to school, church, did they have time to play, what would they see, hear?	Describe the working conditions in Arkwright's mill, the working and home life of adults and children.	Construct informed responses, selection and organisation of historical information. Know and understand how knowledge of the past is constructed	English: writing narratives about others, real and fictional	Information Sheet 2 Source Packs 2 - 3 Cromford Mills Illustrated Children's Guide
Summarise why Richard Arkwright a significant industrialist and how his work changes the local area and beyond?	Debate why Arkwright was significant, what changes did he make and how far did his ideas travel? the mills, houses, increase cotton spinning production, use of natural energy	Consolidate knowledge and understanding about industrialisation and Social change	Link the story of Arkwright to a significant turning point in history (industrialisation)	English/drama communication, sequencing	Information Sheets 1 - 4 Source Packs 1 - 4

List of Resources

Information Sheet	Source Pack	Source Sheet Content	Source Type
1. Sir Richard Arkwright: His Life and Work	Pack 2, Sheet A	Portrait of Sir Richard Arkwright by Joseph Wright of Derby 1790	Image
	Pack 2, Sheet B	Image of water frame invention, mill and carding machine	Image
	Pack 2, Sheet C	Cromford Mill Advert for workers 1781	Newspaper
2. The Factory System: Living and Working Conditions	Pack 3, Sheet A	Plan of a Worker's House Description of houses by J Farray 1811 – 16	Report Publication
	Pack 3, Sheet B	Accounts of children working at the mills by Joseph Farington 1790 Richard Arkwright Jr speaking to select committee 1816	Diary Report
	Pack 3, Sheet C	Mill worker festival and celebration and workers Song about the Mill, Derby Mercury 1778	Newspaper
	Pack 3, Sheet D	'An impartial representation of the case of the Poor Cotton 1780 Spinners' Ralph Mather Letter to newspaper about protecting cotton mills 1779 Account of rewarding workers, Syllas 1788 Report of Arkwright's death 1792	Pamphlet Newspaper Diary Newspaper
3. The construction of the mill and water power	Pack 4, Sheet A	Image of first mill Waterwheel 19th century Drawing of second mill waterwheel Diagram of watercourses	Image and map Image Diagram of watercourses
	Pack 1	Image of site before Mill construction Image of the Mills c18th century Image of workers cottages c late 19th, early 20th century	Image Image Image
4. Industrialisation and Transport	Pack 4, Sheet B	Account of the roads Change to route of the road Images of transport	Diary Report Images

Chronology

Lifetime of Sir Richard Arkwright

23 December 1732	Richard Arkwright born
Late 1740s	Apprentice Barber and wig making business
31 March 1755	Marries Patience Holt
19 December 1755	Son Richard is born
6 October 1756	Patience Holt dies
24 March 1761	Richard Arkwright marries Margaret Biggins
20 December 1761	Birth of daughter Susannah
1762 - 1764	Arkwright owns Black Boy Public House, Bolton
1769	Arkwright obtains his first patent for the spinning frame
1769	Arkwright buys land for his first mill at Hockley, Nottinghamshire
1770	Samuel Need and Jedidiah Strutt partner with Arkwright
Early 1770s	Margaret Biggins leaves Arkwright
1771	Partners decide to build their first water powered spinning mill at Cromford
1775	Arkwright gains second patent for a carding machine
1776	Construction of a seven storey second mill
1777	The first rows of workers' houses are built
1777	Greyhound Hotel built (originally named The Black Dog)
1778 - 1783	Building of other mills by Arkwright at Bakewell (1778) Wirksworth (1780) Gressbrook (1783).
1779	Rioters attacks Arkwright's mill in Lancashire, steps taken to protect Cromford
1782	Arkwright purchases Willersley Castle
1785	Construction of Weavers Workshop (building 28)
1785	Arkwright's second patent invalid. Mill owners could now use his machinery/design without having pay.
1785	Sunday School started by Arkwright
1786	Arkwright is Knighted
1789	Sir Richard Arkwright works on Cromford Canal Bill
1790	Village lock up created with two small cells floor in a concerted cottage
1792	Sir Richard Arkwright dies

After Sir Richard Arkwright

1790s	Cromford Canal Wharf is developed by The Cromford Canal Company
1795	24 hour working at Cromford Mills ends
1796	Richard Arkwright Jr moves into Willersley Castle
1796	Cromford Canal Wharf open
1796	Construction of Mill Managers House
1797	St Marys Church opens
1821	Cast iron aqueduct replaces wooden structure
1824 - 1830	The Cromford and High Peak Railway is constructed
1826	Last profit made at Cromford Mills
1837	Miners divert water into Meerbrook Sough
1839	Richard Arkwright junior loses Cromford Sough water rights
1843	Richard Arkwright junior dies (worth 3.25 million)
1890	Second mill destroyed by fire
1895	Buildings 1,8,9,10 and 14 leased to a Laundry other parts of the site are used as a Brewery and as storage
1924 - 1925	Arkwright family sells the site to Cromford Colour Works
1925	Arkwright family moves out of Willersley Castle
1979	Arkwright society purchases most of the mill site