# Valuable Victorians – Workshop Outline READY TO USE

## WELCOME

Meeting Room – sort coats and bags

Usual health and safety briefing

## INTRODUCTION – 10 MINUTES

Meet the workshop leader in character as a factory owner or foreman/woman (costume depending).

*“Hello Children. My name is\_\_\_\_\_\_\_\_\_\_\_\_\_ But you can call me Sir/Miss.*

*Welcome to Calderdale Museum – and this isn’t just any museum, it’s an industrial museum – so I hope you are all ready to be industrious! You need to get jobs and earn your keep…*

*What have you all come dressed as? Well this won’t do at all!*

*Let’s get you ready for a proper days work.”*

Pupils dress in Victorian outfits.

*“Much better! Ready to find jobs now. Poor children have always had to work as soon as their parents could find employment for them, even in the past when there wasn’t always very much work available for them. That has all changed now.**Who has heard of the industrial revolution?”*

Q&A discussion with pupils on the industrial revolution covering the key points;

* the industrial revolution brought lots of new inventions and machines – the steam engine was one of the most important (we will look at that later)
* many machines replaced some of the jobs that people used to do in their own homes - but now people were also needed in factories to look after the machines and keep the factories clean.
* factories were built in towns and cities, so people ended up moving to get jobs. Half the population in Britain lived in cities by the end of the Victorian era.
* by 1850 there were 24 textile mills in Halifax including Dean Clough mill
* the mills brought more jobs and many more people to live here – but housing and public amenities didn’t keep up and the town was a ‘*mass of little, miserable, ill-looking streets*’
* there were so many new jobs that in 1851, more than 500,000 of Britain’s children were working

*“Today we will try you all out at some different jobs which Victorian children would have carried out during the Industrial Revolution – and we will see if you are up to the task! You will become Valuable Victorians!*

*Remember – Victorian children are not allowed to shout, complain, interrupt, annoy, argue, moan, speak too loudly, speak too quietly or disagree with anyone. They should just do exactly as they are told and be cheerful and quiet all the time - and we expect the same of you today!*

*There is a big difference between rich and poor children. Rich children can afford lots of treats like toys, holidays, fancy clothes and they might even get to go to school. But poor children like you need to work hard in the factories, the mines or perhaps even the workhouse. You need to earn money to help support your parents. But don’t get excited – you won’t get paid very much money after all you are still just children doing the simple jobs and not fully skilled workers. Although its not well paid, you will need to work hard and for long hours! But make sure you keep awake and concentrating as the jobs you will be doing may be dirty and dangerous.”*

## INPUT – 15 MINUTES

“Right, first things first - I will talk you through the sorts of work which is available to you.”

Objects to look at/handle – awaiting confirmation and more info.

Objects laid out in three groups – each with a Victorian job advertisement

Discuss the objects in each group, then ask for a pupil volunteer to read out each advert

Info on objects to be added by CIMA Learning Group – see attached sheet Objects for School Workshops

Mining

Miners safety lamp – observe only

Coal sample – could be passed round

Foundry?

Fire wood bundler – observe only

Refractory brick – observe

Brass mould – pass round

Textile mills

Bobbin – pass round

Shuttle – pass round

Pirn winder – observe only

## ACTIVITY – 90 MINUTES

Divide pupils into three groups – 30 minutes at each activity

Each activity will need a museum volunteer to led;

* Mining – meet in mine display
* Textile mills – meet in fleece to piece
* Foundry/Moulding production line – meet in foundry area

Ensure that the teachers/adults know where to take each group at the swap over.

### Activity 1: Mining - Mine Area

### Start in mine area (try to keep as far as possible from the Foundry group)

### Object link – Miners tools on display

### Show a coal sample for the children to pass round – ask them what it is and what it is used for

Coal was the main source of power in Victorian times. It was used for cooking and heating, and for driving machinery, trains and steam ships. It was also and is still used for generating electricity and in the process of making steel.

Steam engines were a very important invention during the industrial revolution as it meant that the energy from coal could be used to power machines in all the big factories using steam. In Calderdale there were lots of textile mills – factories making cloth. Before steam engines were invented these mills relied on the power generated by wind or water wheels.

### How do you think we can produce steam by using coal?

Coal releases heat energy when we burn it. The heat energy can be used for boiling large volumes of water to produce steam. Could show steam engine model, video or image here to expand on how steam engines work? The steam is piped into a cylinder. The steam builds up in pressure which is what causes the pistons inside the cylinder to move backwards and forwards. The piston is attached to a big flywheel which turns and transfers the energy to the mill machine.

### Ask pupils how the coal was collected

Coal needs to be extracted from underground by mining. In the past this was done by people tunnelling and digging to cut out coal using hand tools and bring it to the surface in carts - which were also pulled by people.

### Ask pupils to closely look at the display – what do they think the wood structure is for?

To support the hole or ‘pit’ which was created by the digging, large pieces of timber were used as ‘pit props’. This stopped the ceilings or walls of the pit from collapsing in on the miners. It was still a very dangerous place to work though and cave ins did still happen.

Until the 1840s, whole families including children as young as five worked down mines for up to 12 hours a day.

### If possible – show tools for each job and ask pupils to think about what they might have been used for?

Children usually started working in the mines as ‘trappers’ minding the trap doors to let people through, which was a very boring job and meant the child was sat in the dark most of the time. But it was very important for the ventilation of the whole mine that the trapper ensured the door was closed. Young children might also be employed picking out coals at the pit mouth or by carrying picks for the miners.

A Hewer was usually an adult or strong older child. They had to cut the coal with a hand tool like pickaxe working at the coal seam. They did have a candle or safety lamp so that they could see the coal face they were working on but they might be working in a very small area.

A Getter was also done by an adult or strong child. The Getter gathered the coal up produced by the Hewer and put it into wooden sleds to be taken to the surface.

A Hurrier wasone of the toughest jobs for anybody, let alone a child. Hurriers were normally aged about six to eight years old. They wore a wide leather ‘gurl’ belt with a swivel chain attached and were harnessed into this with the free end of the chain to a sled. They then had to crawl through the small tight passages of the mine for as far as a mile – the passages were so small that you couldn’t stand up.

At the coal face the sled was loaded with coal. The Hurrier then had to scrabble and crawl back to the surface pulling the sled loaded with coal. They would have to do it lots of time during their12-hour shift. Sometimes an even younger child would act as the ‘thruster’ pushing the sled from behind with their hands or even their forehead.

Hurrier activity

Timed activity – each pupil can have a go – using a lantern with tealight to find coal and add to their sack and pull it through the mine passage way.

*Could try it in the dark?*

Discuss with the class how it felt to be working in the darkness and small spaces – would they like to do that job for 12 hours a day instead of school?

## Activity 2: Textile Mills – Fleece to Piece

### Object link – spinning jenny

Children had a variety of jobs in the textile mills, usually the unskilled work which could be very boring and repetitive like tying ends of cotton all day. They were used to fetch and carry baskets of cotton or bobbins from room to room. They had to carry pails of water from the well to the spinning rooms, to keep the floors damp to prevent the threads from breaking.

It wasn’t a nice place to work. The machines were very loud and they thundered relentlessly all day long. The workers had to move quickly to keep up with the machinery. Workers could be fined or sacked for falling behind.

Children worked long hours (14 hours a day, with one day off) and sometimes had to carry out some dangerous jobs like cleaning machines while the machines were kept running even though this was against the law because it was so dangerous and there were lots of accidents. The smallest children were best for this job.

### Show spinning frame – best to demonstrate doffing

Piecers had to stand at the spinning machines repairing breaks in the thread

Scavengers, crawling beneath the machinery to clear it of dirt, dust or anything else that might disturb the mechanism. So you can see how dangerous they could have been.

The spinning rooms could be very hot, which was to prevent the threads from breaking. The air was also thick with cotton fluff which would get caught in your eyes and your throat and it could be very hard to breathe. The floors were often covered in water or oil from the machines so children usually worked barefoot.

Many of the different machines in the cotton mill needed to be doffed. Doffing requires speed and dexterity rather than strength. Are you fast enough with your fingers to be doffers? Anyone know what it is?

### Show bobbins (full and empty)

A doffer is someone who removes [bobbins](https://en.wikipedia.org/wiki/Bobbin), [pirns](https://en.wikipedia.org/wiki/Pirn" \o "Pirn) or [spindles](https://en.wikipedia.org/wiki/Spindle_(textiles)) holding spun fibre such as cotton or wool from a [spinning frame](https://en.wikipedia.org/wiki/Spinning_frame) and replaces them with empty ones.

When the bobbins on the spinning frames were full, the machinery stopped and the doffers would change all the bobbins as quickly as possible so that the machinery could be restarted. This might take place 4 or 5 times a day with hundreds of bobbins needing to be replaced. One of the other jobs that the doffers need to do was record how many bobbins had been replaced. This could be Doff time and date, along with the doffer's initials. They might also have had to grease the machines and clean up the waste that is left over from the machine at the end of the day.

**Doffing activity**

**Timed activity - https://www.youtube.com/watch?v=QzybFwn96Tw**

## Or use peg boards to text finger dexterity – see Andy

## Activity 3: Foundry – Machines that made machines gallery/Halifax Room?

### Start at Foundry display

### Object link – wooden pattern

Casting is the process where a liquid is poured into a mould. Casting usually involve metals like iron, which are heated until they change state from a solid to a liquid so that they can be poured into the mould.

The mould is a hollow in the shape of the object you are trying to make. When the liquid is allowed to set or solidify, we call it a casting. It is then taken out of the mould (or maybe even the mould is broken to get it out). If the casting has any imperfections it can be sanded or shaved – this is called fettling. To avoid having to do too much fettling it is important to make the mould as good as possible.

One way to make a mould is to use sand! This is called sand moulded casting. The sand could be mixed with clay and water to make it suitable for creating a mould. It is contained in boxes with two halves called flasks – the top half is called the cope and the bottom half is called the drag. A pattern of the object to be casted is made by a pattern maker – these can be made from wood and are usually a bit larger than the final object will be as the hot metal will contract when it cools.

Activity in the Halifax Room

Using small boxes of sand (flasks) create your moulds (could use associated objects e.g. cogs to create the shape)

Tampen down the wet sand

Use plaster of paris (as the hot metal) – suggest making a big bowl and allowing pupils to spoon the plaster carefully into their ‘moulds’

The plaster will take about half an hour to set so ensure pupils add their initials to the top of the plaster

## PLENARY – 5 MINUTES

In character gather class together and review learning. What did they think of the jobs children had to do? What do they think life was like for children?

### Show Object - Pay tins

Could potentially ‘pay’ the children using chocolate coins and discuss how much children would have earned – In 1850 many children earned about 6 shillings per week (30p)

Share with pupils why young children ceased working,

The Factory Act in 1833 prohibited the employment of children younger than nine years of age and limited the hours that children between nine and 13 could work. The Mines Act in 1842 raised the starting age of mine workers to 10 years. By the end of Queen Victoria's reign, almost all children were in school up to the age of 12.

Hand Washing for all pupils.

Visit shop and depart.

## POST VISIT ACTIVITIES

Write your own job advert for each of the jobs