The Industrial Revolution Comes to Life: Coalbrookdale's Interactive Census of 1861

A study unit based around the interactive application at <u>www.activehistory.co.uk</u>

The approach to Coalbrookdale appeared to be a veritable descent to the infernal regions. A dense column of smoke arose from the earth; volumes of steam were ejected from the fire engines; a blacker cloud issued from a tower in which was a forge; and smoke arose from a mountain of burning coals which burst out into turbid flame. In the midst of this gloom I descended towards the Severn, which runs slowly between two high mountains, and after leaving which passed under a bridge, constructed entirely of iron. It appeared as a gate of mystery, and night already falling, added to the impressiveness of the scene"

Italian visitor, 1787, Wolverhampton Chronicle, 1790

"The flaming furnaces and smoking limekilns [which] form a spectacle horribly sublime, while the stupendous iron arch, striding over the chasm presents to the mind an idea of that fatal bridge made by sin and death over chaos, from the boundaries of hell to the wall of this now defenseless world."

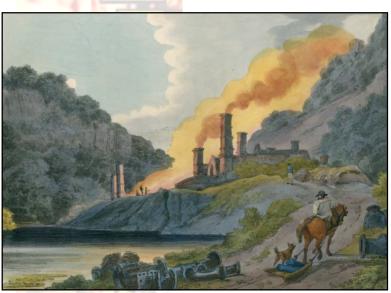
Charles Hulbert, A History and Description of the Country of Salop, 1837

or HELL?

The Coalbrookdale Interactive Census of 1861

History is all about bringing the past to life. This activity allows you to do this is in an unusual and interesting way.

Coalbrookdale, a small town in Shropshire, England, was at the heart of the Industrial Revolution: a place of blast furnaces, roaring forges and busy factories. Its iron bridge (see cover) – the very



first ever made – still attracts visitors from all over the world. Thomas Telford, Josiah Wedgwood, Richard Trevithick, James Watt, Matthew Boulton and John McAdam were just some of the British engineers and entrepreneurs who came to Coalbrookdale.

Was Coalbrookdale a hell on earth? Or was it an industrial wonderland?

You can decide for yourself by interacting with the 1861 Census (government survey). A search engine allows you to ask your own questions, rather than just read through sources in the textbook. What jobs did people have? Were houses overcrowded? Did many children go to school? You're the detective!

Task	Tick here when completed
Introduction: How the interactive census works	
Task 1: Who am I?	
[Finding your way around the database]	
Task 2: The Vital Statistics!	
[Gathering evidence about what life was like from the census]	
Task 3. True or False?	
[The strengths and weaknesses of the census as a historical source]	
Task 4. Classroom Debate	
[Conclusions on whether life was good or bad in Coalbrookdale]	
Your Report:	
What was Life like in Coalbrookdale during the Industrial Revolution?	

Your studies will be directed by a series of tasks listed below.

How the Interactive Census Works

The database works with a menu system that allows you to construct a question (or 'query') for the computer to answer.

1. A simple search

A simple search consists of three elements: the Variable, the Operator, and the Value.

	, 1. Variable	2. Opera	tor	3. Value					
/				(Variable 2	DR	Typed Value <u>suggest</u>)			
/	Occupation 💌	includes	<			iron	Gol		

_/ Here are s	some examples.		
Variable	Operator	Value	Result
Occupation	INCLUDES	Iron*	Gives an overview of all the people whose job title has the word "iron" in it.
Christian Name	=	Mary*	Provides a list of all people living in Coalbrookdale in 1851 whose Christian name is Mary
House Size	<	Family Size^	Will inform you how many people live in houses too small for the size of their family

* This is a "Typed Value" – in other words, it is typed in directly.

^ The is a "2nd Variable" – in other words, another variable from the database.

3 7

2. A sophisticated search

It is then possible to narrow or broaden the search using the AND / OR functions:

Age > 12 AND Age < 20	Tells you about all the teenagers in the town by first listing all those people aged more than 12 years old, then searching within those results for people aged less than 20.
Town of Birth = Wellington OR Town of Birth = Madeley	Tells you how many people were born in two of Shropshire's largest districts by listing all those who were born in Wellington, then adding to those results with those born in Madeley.



3. The Graphing function

 When you are given the results of your search, you can organize the results using the "Draw Graph Based on" function.

• This is really useful when you have lots of results which you want "tidied up".

Search	ו Re	sults	for "	'Occi	upa	atic	on i	nclu	ides i	iron"				"Create Gra	oh of these	results based	on occupatio
activehi	storyso	. Wi	The	Coalbro	okda	ale C	ensu	s of 18	51	active	ustory, ou			active history of the	The Coalbrookda	ale Census of 1851	active history could
Conduct a	a Fresh	Broad	en this (OR)	Search			withir Its (Al	n these ND)	Cre		aph of these Its based on on		_			Occupation Iron moulder Labourer in iron works	Figure / Percent 029 (38%) 011 (14%)
									<u> </u>			1				Iron grate dresser	006 (8%)
SEARC	CHQUER	Y: occupat	ion incluc	des iron					<u> </u>	Christian N Sumame			-			Grate fitter in iron work	s005 (7%)
TOTAL	NUMBEI	R OF MATO	HES FO	R THIS SE	EARCI	H: 76 /	/ 559 (1	4% of th	e total cens	Family Po Marital Sta						Fitter in iron works	004 (5%)
Address	Christian	Sumame		Marital	Sex	Age		Family	Occupation	Sex Age	Birth					Pattern maker in iron works	003 (4%)
Westgate	Name Alfred	Hacker	Position Son	Status Unmarried	Male	15	size 6	Size 6	Assistant in	House Siz	e 📃				★	Model maker in iron foundry	002 (3%)
cottages Coalbrookdale	Isaac	Toddington	Lodger	Married	Male	27	2	2	iron foundry Brass iron	Family Siz	on 👘					Iron worker	002 (3%)
Dale house	William	Fot	Son	Unmarried	Male	33	-	-	founder Clerk in iron	Town of B County of						Clerk in iron foundry	002 (3%)
cottage Westgate	William	Hacker	Head	Married	Male	43	6	6	foundry Clerk in iron	Address	Wanvidishire					Pattern making apprentice in iron work	s ⁰⁰¹ (1%)
cottages Coalbrookdale	Thomas	Boycott	Head	Widowed	Male	75	3	4	foundry Clerk in iron works	Little wenloo	Salop					Office assistant in iron works	001 (1%)
Hauleys row	John	Taylor	Head	Married	Male	52	7	7	Eitter in iron	Madeley	Salop					Manager of cupola in iron foundry	001 (1%)
Bawdy bank	Thomas	Wikes	ь	Unmarried	Male	32	9	9	Filthers In Jacob	Sheffield	Yorkshire					Letter carrier for iron works	001 (1%)
Jesamin cottage	George	Hacker	Head	Married	Male	37	8	9	Citizen in inco	Bradford	Nottinghamshire					Ironmaster	001 (1%)
Nailors row; coalbrookdale	George	Oakes	Son	Unmarried	Male	18	5	6	Fitter in iron works	Madeley	Salop					Irongrinder	001 (1%)
Forge	George	Humphries	Son	Unmarried	Male	31	4	4	Courses 644	Madeley	Salop					Iron smith and fitter	001 (1%)
Forge	Isaac	Humphries	Son	Unmarried	Male	33	4	4	C	Madeley	Salop					Iron moulder assistant	001 (1%)
Coalbrookdale	Vincent	Aston	Head	Widowed	Male	56	2	2	Grate fitter in	Madeley	Salop		t			Furnace fitter in iron works	001 (1%)
									Grate fitter in							Clerk in iron works	001 (1%)

Example 1: What sorts of jobs did people do in the iron industry?

Example 2: What were the most common Christian names at that time?

earch Results = "Show Entire Census"									1		"Create (Graph of th	nese results b	ased on Christ nar	
active	istory,		The	Coalbr	ookda	le Ce	nsus	of 1851	activeb			activelystovysouk	The Coalbro	ookdale Census of 1851	activehistory.co
Conduct Search			iden this (OR)				ithin t s (ANI	hese			1	Conduct a Fresh Bro Search	<u>aden this Search</u> (OR)	Search within these results (AND)	Create a graph of these results based on
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Westgate cottages	John	Harbridge	Head	Married	Male	72 2	2	Accountant	Family Size					Christian	Name Figure / Percen
Coalbrookdale Marnwood	Richard	Wilkinson	Head	Married		38 4	4	-	Occupation Town of Bi		²			Mary	048 (9%)
oottage	William	Hilt	Head	Widowed	Male	69 3	3		County of E					Elizabeth	047 (8%)
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Coalbrookdale	Henry	Weelmar	Lodger	Unmarrie	d Male	23 1	9		London	Middlesex	1000			William	· · ·
Westgate cottages	Alfred	Hacker	Son	Unmarrie	dMale	15 6	6	Assistant in iron foundry	Madeley	Salop	-				039 (7%)
Meadow cottage	Ada	Wylde	Daughter	Unmarrie	d Female	17 7	7	Assistant in mercer's shop	Madeley	Salop				Sarah	032 (6%)
Infant school;	Emily	Gallier	Servant	Unmarrie	dFemale	23 1	2	Assistant school	Ellerton	Staffordshire				Thomas	028 (5%)
coalbrookdale Elms;	Henry	Dickinson	Head	Married		53 2	-	mistress Bank manager	Bolas	Salop				Ann	025 (4%)
coalbrookdale Coalbrookdale	Sarah	Sinkett		Unmarrie					Madeley	Salop				George	017 (3%)
Buildwas road	Harriet	Fewtrill	Daughter Daughter		d Female		8	Barmaid	Astley abbots					Joseph	016 (3%)
neadow inn Hauleys row	Francis	Hauley	Head	Married		20 4 58 3	6	Bladismith	Astiey abbots Madeley	Salop					· · · ·
	Edward	Roden	Head	Married		40 9	9		Madeley	Salop				Henry	016 (3%)
		Roden	Son	Unmarrie		17 9	9		Madeley	Salop				Hannah	015 (3%)
Tea kettle row Tea kettle row	John							Blacksmith							
Tea kettle row Tea kettle row Tea kettle row Eastfield	John William John	Hazeldine	Head Head	Married		32 7 32 7	í.		Madeley Bridgnorth	Salop				Ellen	014 (3%)

Task 1: Who am I? [Finding your way around the database]

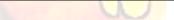
Your teacher will allocate you with a number 1-4. Complete the table matching your number. Go through each table as a class when everyone has finished. **TIP**: In the final box of the table, be as detailed as you can.

1	Search Term	How many people could it be?
I am widowed		
I am less than 40		
years old		
I am male		
I am a tea dealer by		
trade		
Give some details about etc):	it this person (occupation, age, who else	e lives with them

2	Search Term	How many people could it be?					
My occupation has							
something to do with							
iron							
I was born in Madeley							
I am less than 16							
years old							
I live with my uncle							
Give some details abou etc):	t this person (occupation, age, who else	e lives with them					

3	Search Term	How many people could it be?
There are 6 people in my household		
I was born in Salop		
I am 30 years old		
I was born in Much Wenlock		
Give some details about them etc):	ut this person (occupation, age, who els	e lives with

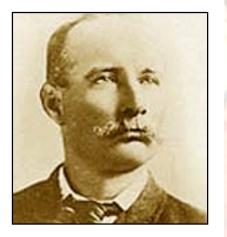
4	Search Term	How many people could it be?
I am over 60 years of		
age		
I am still working		
I live in Tea Kettle		
Row		
I live in a two-		
bedroomed house		
Give some details about	ut this person (occupation, age, who els	e lives with
them etc):		



Who am I? - Captain Matthew Webb

Perhaps the most famous person in the entire database is a child called Matthew Webb. He grew up to be a famous man (pictured).

A. Do some research using the census about the young Matthew Webb (family, occupations and so on). List your findings here.





B. Do some research using the web about the man that Matthew Webb grew up to be (his life, achievements, death). List your findings here.



Task 2: The Vital Statistics! [Gathering evidence about what life was like from the census]

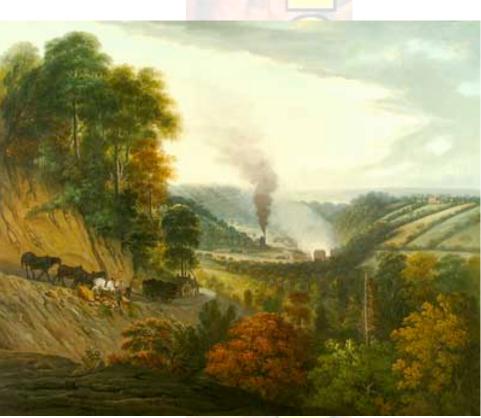
Part 1: Working without the computers

1. Start by filling in all the "Search term" boxes in the tables. Your teacher may choose to do the first few as a class exercise, then ask you to work alone or in pairs to work out the rest.

2. Your teacher will now tell you the correct search term for each box. Award yourself a mark each time you get one absolutely right! Your teacher might give rewards for the highest scores!

Part 2: Working with the computers

3. Now, log on to the Coalbrookdale Interactive Database at <u>www.activehistory.co.uk</u> and proceed to complete the rest of the table. Your teacher may wish to allocate different parts of the table (A-G) to different members of the class to start with. Once you have finished your allocated part of the table, move on to another part of it.



Coalbrookdale in the Morning by William Williams



A. Marital Status					
The Facts: Who is the youngest married person? How old is she?	Search term:	Answer:			
Your Deduction: Why do you think she married so young?	Answer:				
The Facts: Who is the youngest widower?	Search term:	Answer:			
Your Deduction: What could have happened to his partner?	S				

B. Address		
The Facts: How many people lived in Tea Kettle Row?	Search term:	Answer:
Your Deduction: Was this one of the wealthier parts of town? How do you know?		
The Facts: One family has 14 people in it. Give some details about them.	Search term:	Answer:
Your Deduction: Were these people quite wealthy? How do you know?	D	

C. Family position		
The Facts: How many heads of family are there in total?	Search term:	Answer:
Your Deduction: Why are some women actually described as "head of family"?	66	
The Facts: How many lodgers are in the town?	Search term:	Answer:
Your Deduction: Do you think that these lodgers were having a good life? Use evidence.		

D. Age		
The Facts: Who was the youngest person in full time work?	Search term:	Answer:
Your Deduction: Why do you think they were working despite their young age?		
The Facts: Give the name and occupation of someone over the age of 70 who still works.	Search term:	Answer:
Your Deduction: Why do you think they continued to work despite their old age?		

E. Sex / Occupation:		
The Facts: List some jobs that people did that included the word "iron" in the job title.	Search term:	Answer:
Your Deduction: Do these jobs suggest life was good or bad for men?		
The Facts: What sorts of jobs did women have in Coalbrookdale?	Search term:	Answer:
Your Deduction: Do these jobs suggest life was good or bad for women?		

F. Town / County of Birth:			
The Facts: How many people were born in the town of Sheffield (Yorkshire)?	Search term:	Answer:	
Your Deduction: Why do you think they may have moved into Coalbrookdale?			
The Facts: What percentage of people were born locally (ie the county of Salop?)	Search term:	Answer:	
Your Deduction: Is this lack of movement around the country a good thing or a bad thing for communities?			

Task 3. True or False?

[The strengths and weaknesses of the census as a historical source]

Introduction

• History is all about bringing the past to life. Historians use sources for this, but sometimes fill gaps using their imagination. In this task, you will separate fact (what can be proven) from fiction (what has been invented).

Task 1: Verifying (=checking for truthfulness)

Below are 4 accounts based around the evidence of the Coalbrookdale Census.

- Your teacher will give each student a letter (A-D) corresponding to one account.
- 1. Highlight any facts in your account which you think can be checked.
- 2. Use the database to correct any points which you find to be inaccurate.

A. Mary Sudrass

"I live at the parsonage in Coalbrookdale with the vicar, John Hayes, who comes from Bristol. I refused to tell those nosey census people whether I am married, and so rumours have started in Coalbrookdale that we are secret lovers. In fact, at my age (I'm 55) I'm really not interested in that sort of thing. I'm actually his housekeeper. There are two other servants at The Parsonage: Fanny (the cook) and Emily (the housemaid). Neither is married: in fact, there isn't a single servant in the town who is married. To be honest, neither of them is good-looking anyway. If they find themselves a husband they'll give up their job. But that's only if their husbands are able to get work – over the past 10 years lots of immigrants have come into the area from Yorkshire, taking our best jobs and breeding like rabbits. I don't know what the world's coming to!"



B. Joseph Fogherty

"I came here from my homeland of Ireland 2 years ago. At that time work was scarce in Ireland, and Coalbrookdale needed skilled civil engineers like me to build bridges and machinery. Most of the people here are really friendly, although some are a bit nasty to us "foreigners". There are over 70 other people who weren't born in the local county of Salop, which shows that people are using the new railways to move wherever they can find work. I can't afford a place of my own, so I lodge at the moment with the Beardshaw family. I live in a little outhouse with a friend of theirs, Laura Robbins. It's alright, I suppose, but I'm hoping to start my own business next year and find my own place. I certainly don't want to be a lodger when I'm 70 years old, like Ann Goodwin down the road. That would be too depressing!"

C. Henry Jones

"I'm 10 years old but I've already been working for 2 years! My dad, Richard, is an ironworker, and I'm working with him at his factory. It's tough work. Most boys my age go to school and I wish I could, but my family are too poor. I have seen several men killed at work and it gives me nightmares. One man, Benjamin Rowley, was burned alive when he fell into the molten iron earlier this year. My mother and sister don't have any paid work – a woman's place is in the home, after all. Women like that Sarah Webb, who go out to work each morning even though they are married, are a disgrace. Anyway, we earn enough to get by - our house is just the right size and we don't need to get lodgers in to cover the rent for Mr Owen, whose family has owned the street where we live for ages. He's a pretty decent chap – my dad gets on well with him because he's a brewer and like everyone here he likes a drink or two after a hard week's work!"

D. Sarah Rowlands

"I am a 19 year old governess – a private tutor – to the Webb family as the Eastfield Estate. Mr and Mrs. Webb are both doctors, and the wealthiest couple in Coalbrookdale. Apart from me, the Webbs have another three servants living with them: Sarah the cook, Esther the housemaid and Jane the scullery girl. We're all about the same age and we get on well together. Mr. and Mrs. Webb have 8 children – 5 sons and 3 daughters, and because they come from a wealthy family they all go to school. Most children have to go to work at a really young age. Altogether, then, there are 14 people in the family, making it the largest in town".

Task 2: Reflection (=thinking further)

1. What types of things cannot be verified (=checked for truth) using the census?



2. What other sorts of evidence could historians use to verify these points?

Type of Evidence	Useful for finding out
Diaries	
Photographs	
Maps	
Doctor's Records	
Buildings	
L	

3. What are the advantages and disadvantages of historians using their imagination to fill gaps in the evidence?

Advantages are...

Disadvantages are...

Homework / Extension Task

Produce your own account of a person from Coalbrookdale that could be added to this worksheet.

Stage 1: Choose a person at random from the database and gathering as many "facts" about that person as you can.

Stage 2: Next, turn this into an account as if that person is speaking to the reader.

Stage 3: Next, change a few of these facts into deliberate mistakes.

Stage 4: Finally, try to add some of your own "fiction" to the account to bring it to life!



Task 4: Classroom Debate "What was life like Coalbrookdale in 1861?"

Stage 1: Your teacher will organise the class into two groups: "GOOD!" and "BAD!". Work in pairs to produce 3 questions and supporting evidence for your opponents - ON SCRAP PAPER.
Stage 2: Your group leader will ask each pair to read out their questions. Then, the group will vote on the three best questions overall. Write these into the appropriate table.

Stage 3: Your teacher will ask each group leader to read out their three questions and supporting evidence. The opposing team should copy these into the correct table.

Stage 4: Each group now has to prepare responses to the questions they have been given. They have to decide how to best organise this task. At the end of this stage, each member of the group should have written responses in their table.

Stage 5: The teacher will now ask a random person from the "Good" group to answer the first question, then a random person from the "Bad" group to answer their question. The process is continued, with the rest of the class taking notes, until the discussion is completed.

• Your teacher might reward the best speakers or the best team based on quality of argument and evidence.

	A. Question from the "GOOD" Group	B. Response from the "BAD" group
1.	Is it not true that life for men was good?	
	Our evidence for this is that	0
	6 4 9	75
2.	Is it not true that life for women was good?	
	Our evidence for this is that	
	18 1	0
3.	Is it not true that life for children was good?	
	Our evidence for this is that	
		J
		100

	A. Question from the "BAD" Group	B. Response from the "GOOD" group
1.	Is it not true that life for men was bad?	
	Our evidence for this is that	
2.	Is it not true that life for women was bad?	(8)
	Our evidence for this is that	
	No. 1	
3.	Is it not true that life for children was bad?	6
	Our evidence for this is that	
	5	CQ,

Conclusions

1. What was the best argument suggesting that life in Coalbrookdale was bad?

2. What was the best argument suggesting that life in Coalbrookdale was good?

4

- 3. Could both arguments be correct? Explain your answer.
- 4. Who had the worst life: men, women or children? Explain.
- 5. Who had the best life: men, women or children? Explain.

Written Report "What was life like Coalbrookdale in 1861?"

Instructions

• You are now ready to write your report on Life in Coalbrookdale during the Industrial Revolution.

• The following writing frame can be used as a guide, but please feel free to change it if you like!

• Your teacher will give the best marks to students who (a) Include plenty of evidence from the census, (b) Present their work neatly, and (c) Make an effort to do some extra research about the Industrial Revolution in general, and Coalbrookdale in particular, using the internet and the library.

1. Introduction: The importance of Coalbrookdale and the Census

Coalbrookdale was important during the Industrial Revolution because... The Census of 1861 does not tell us some things, for example... For these things, historians would have to use other sources like... However, it does provide us with lots of other information, for example...

<u>Tip</u>: Task 3 is particularly useful here – this is where you considered the strengths and weaknesses of the census as a source of information.

2. There were some good things about life in Coalbrookdale.

Firstly,... Secondly,... Thirdly,... Fourthly,... Finally,...

3. However, there were some bad things about life in Coalbrookdale too.

Firstly,... Secondly,... Thirdly,... Fourthly,... Finally,...

<u>Tip</u>: Try to cover a nice, wide range of themes here – jobs, living conditions, working conditions – both for men, women and children. Give specific examples of real people, families and jobs whenever you can to bring the census alive!

4. Overall, from the evidence of the census,

I think that [men / women / children] had the best life because... I think that [men / women / children] had the worst life because...

<u>Tip</u>: Give a few examples here, don't just answer in single sentences!