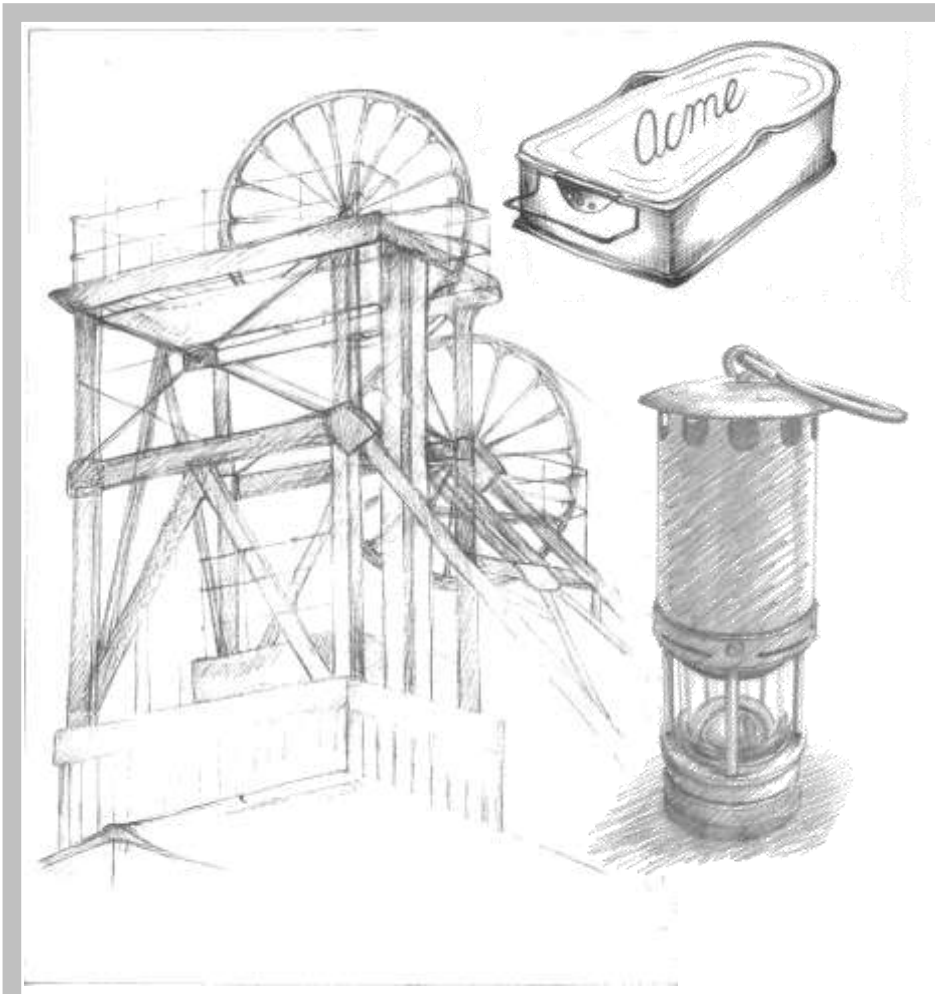
KS2

NATIONAL COAL MINING MUSEUM for England

Discovery Trail



A student work booklet for the
National Coal Mining Museum for England

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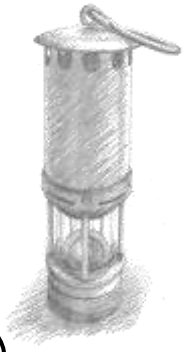


The Lamp Room

At the Lamp Room you will receive your hard hats, batteries and lamps to go underground. At the end of the day, miners would return their lamps, put their batteries onto charge and go to the Pithead Baths.

Make a list of what you were given to wear down the mine

- .....
- .....
- .....

Why do we need a hard hat and lamp to go underground?

.....

When did it become law to wear a hard hat underground?

.....

Tick any items below that are not allowed underground (contraband):

Cigarettes ☐	Mobile phones ☐	Digital watches ☐
Sunglasses ☐	Jewellery ☐	Matches ☐
Lighters ☐	Keys ☐	Wallets ☐

What do all your objects have in common?

.....

Underground

You will be taken underground by a coal miner. He will tell you about the history of mining.

Before the tour begins, you will be asked to leave your contraband behind. As you get into the cage, you will be given a check which tells us how many people are underground at one time. Then, you will descend the 140 metre mineshaft. Until the 1970s, the cage was powered by the steam winding engine. Now it is powered by electricity.

What did it feel like going down the mineshaft in the cage?

……...

Make a list of machines and objects you saw underground.

- ……
- ……
- ……
- ……

A picture of the winding mechanism.

Would you have liked to work underground? Give reasons for your answer.

……

Can you name this object and describe what is it was used for underground?

……

……

Pithead Baths

Mining was a very dirty job, and miners often worked all day in hot, wet and dirty conditions. Before the 1930s, very few miners' houses had hot running water or a bathroom. All water had to be boiled over the fire or in the copper to fill the bath placed in front of the fire. The Caphouse baths were opened in 1938.

Why were showers needed at mines?

……

Why were there two lockers for each miner in the clean and dirty areas?

……

Complete the sentence

"No money……"

Wages Office

After a hard week's work this is where the miners would be able to collect their pay. Before the 1960's, wages varied from pit to pit, from seam to seam within the pit and from job to job. This system encouraged miners to move from pit to pit looking for better pay and conditions

Do you think it is fair that different pit jobs had different rates of pay?

Explain your answer?……...

……

Which jobs got paid the most before the 1960s?……

……

Steam Winding Engine House

The building houses a steam engine built by Davy Bros. Ltd of Sheffield in the 1870s. It is the only dated building at Caphouse Colliery where the date stone records both the date, 1876, and the owner, E.L.K. Emma Lister Kaye was the owner of the colliery from1871, until her death in 1905.

How was the winding engine powered?

.....

.....

.....

.....

Why were the materials used to make the winding engine chosen?

.....

.....

How do you think miners were pulled up and down the shaft before cages were invented? (see right for a clue)

.....

.....

What source of energy is used today to lift and lower the cage?

.....

Stables

Horses and ponies have been used at coal mines for many years.

At first they worked above ground transporting coal for local use, and at many small mines, providing power for the horse-driven winding gins. The first records of ponies being used underground appear in the 18th century. They replaced women and young children working down the mine from 1842.

What are the names of the Caphouse pit ponies?

……..

……..

……..

……..

What were pit ponies originally used for?

……

……

Why are pit ponies not used underground today?

……

……

Do you think it was fair to use the ponies underground?
Explain your answer.

……

……

Orientation Area

A pair of tights, 'Izal' toilet paper, disinfectant and dyes can all be found in one of the display cases. What do they have in common?

.....

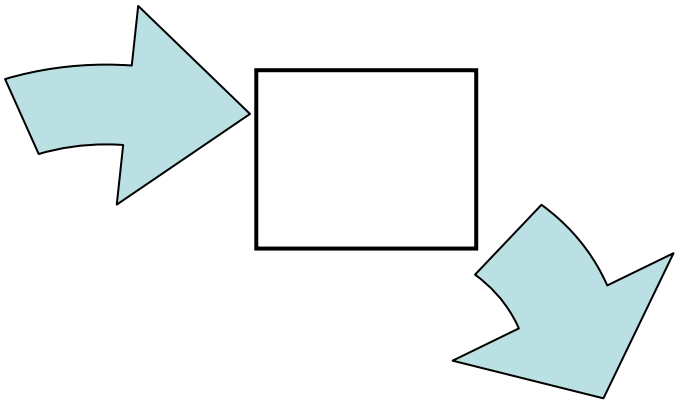
.....

.....

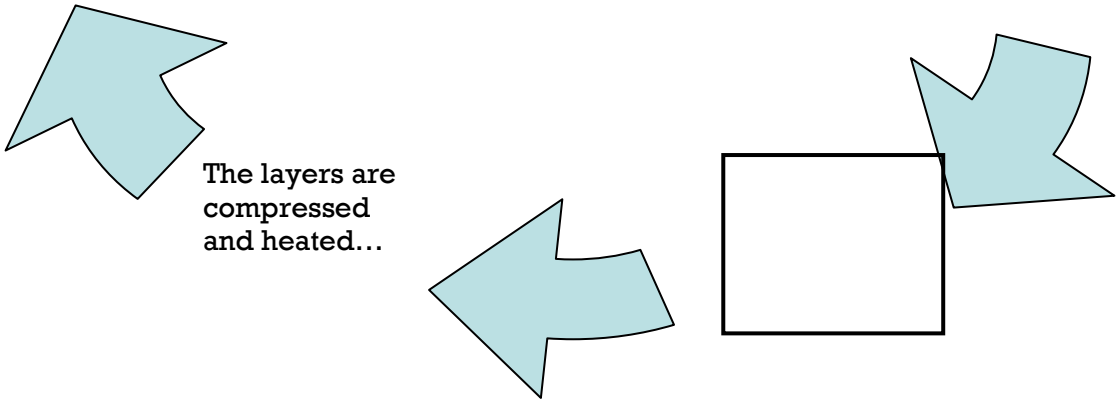
What is coal?

Complete the diagram to show how coal is formed

Marshy forests thrive on earth millions of years ago…



More trees fall into the swamps creating more layers…



The layers are compressed and heated…

Mining Lives Gallery

This is an example of a typical kitchen from the 1940s. One like this would have been in many miners' homes.

Can you spot 3 differences between this kitchen and your kitchen at home?

.....

.....

.....

Strikes

Look at the brass rubbing plates and the display. Write down your own slogan for a strike badge. Use a symbol that gets your message across.

Unions

What does NUM stand for?

……

Miners often had banners to represent their local pit.

Can you design your own mining banner or one for your school?

Sports and Leisure

Find the nipseys and sticks.
Draw diagrams to show how this game was played:

1842 - A Faithful Picture?

This gallery looks at women and children working in the mines during Victorian times, and the 1842 Act, which prevented them from working underground.

What happened in the year 1842?

……

……

How many people worked in mining in the 1840s?

……

What jobs did women and children do underground?

……

What dangers did women and children face when working underground?

……

……

Do you think the Act was a good thing?
Explain your answer

……

……

……

……

Coal Interface Gallery

This gallery looks at the technology of working underground, from ventilation and lighting, to extracting the coal with large modern machines.

Look at the candle, safety lamp, cap lamp and fixed electric lights through the binoculars. Which one provides the most effective light source and why?

……

……

What different types of power have been used underground?

……

……

……

Explain how the JOY 3L Cutter worked (part of this one
is missing!)

……

……

Look at the hand tools section.
How has mechanisation improved a miner's job?

……

……

Answers

The Lamp Room
Hard hat, battery, cap lamp
To provide protection and light
1958
Cigarettes, lighters, mobile phones, watches with batteries, matches
They are all capable of providing a spark that could cause an explosion

Underground
Machines/objects underground could include: wooden and hydraulic pit props, ventilation doors, signs, conveyor belt, Dosco Road header (cut the road ways), coal loading machines
Snap tin – used for keeping sandwiches away from rats and mice

Pithead Baths
To allow the miners to go home clean at the end of their shift
To keep their clean and dirty clothes separate
"No money, no soap"
Colliery coal face workers

Steam Winding House
Steam
Steel and cast iron, strong, and components can be precision manufactured e.g. pistons
By a rope and chain called a windlass
Electricity

Stables
Eric, Ernie, Patch, Robbie, (Colonel is a type of horse used above ground)
To transport the coal from the coal face to the shaft bottom, and move materials
Machines can do their job

Orientation area
All made from coal derivatives
Marshy forests - Gradually submerged by water - More trees fall into the swamps - the layers turn to compost as they rot - the layers are compressed and heated - coal

Mining Lives
Only cold running water, kitchen range, few electrical appliances e.g. no fridge, toaster etc.
1867 – Reform Act gives men the vote, 1871 – Trade Union Act recognises trade unions as legal organisations, 1893 – The Great Lockout, 1926 – The General Strike, 1947 – Nationalisation of the coal industry, 1984 – Miners strike and formation of Union of Democratic Miners.
National Union of Miners

1842 Gallery
Women and girls were banned from working underground, and boys under 10 years
150,000
They pushed and pulled tubs of coal from the coalface to the shaft bottom. Some children worked as trappers, opening and closing the ventilation doors

Coal Interface
Mains supply electric lighting provides constant and strong lighting
Electricity, compressed air
The machine's two drums turned at 25 revs per minute. It could cut 25 tonnes of coal per minute.