

Education

Teacher's Kit

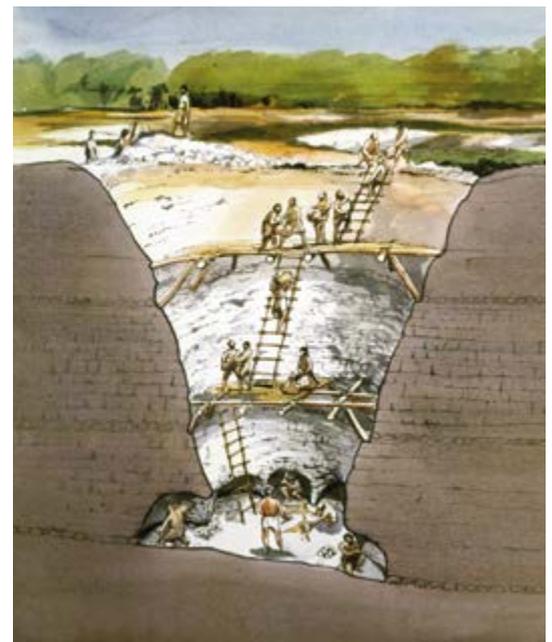
Extractive industries include all those which involve digging out some useful mineral from where it is naturally found, and so location is dependent on the local geology. Typical minerals include: coal, metallic ores, all types of stone and hard-core for building, slate for roofing, limestone and chalk for iron-smelting, lime-burning and cement, clay for bricks, tiles and pottery, sand for mortar and glass-making, and gravels for concrete.

Broadly speaking, minerals may be removed from the ground by digging down over a large area which is called quarrying and is used to extract minerals near the surface, or digging a hole in the ground and branching out from it, that is, mining, which is suited to deep-laid minerals. However these terms are somewhat elastic: open-cast mining is really a form of quarrying and clay, gravels and sand are usually described as being dug from a 'pit'. The three main forms of mining are:

- **Bell-pits**
In use from Neolithic times to the nineteenth century. In these a shaft was sunk into a seam fairly near the surface, and the miners then dug out the mineral as far as they dared, often leaving large pillars to hold the roof up.
- **Day-pits**
Drift-mines: probably equally ancient, where an outcropping seam was followed as far into the hillside as was feasible. At a later date horizontal galleries might be dug to reach a known or hoped-for seam.
- **Shaft mines**
Certainly in use in coal mines in Leicestershire by the fourteenth century. A shaft was dug down to a deep seam, and then galleries were excavated from the pit bottom to remove as much mineral as was safe. Where possible audits (tunnels) would be dug to drain out water into a valley: if this was not possible the water would have to be pumped out usually by water or steam power.



Grimes Graves Neolithic Flint Mines, Norfolk
© Historic England Ref: NMR 15717/27



Grimes Graves Neolithic Flint Mines, Norfolk
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Activity

Looking for mining evidence in your area



Honister Slate Mine, Cumbria
© Historic England Ref: N071583



Ironbride, Shropshire
© Historic England Ref: M891005



Bestwood Winding Engine, Nottinghamshire
© Historic England Ref: N071548



Mining cart at Honister Slate Mine, Cumbria
© Historic England Ref: N071928

Most mining sites have come to the end of their working life and there may be little in the way of surviving structures. There are different types of mines all around the country. Ask pupils to look for evidence in your local area in the form of pits, quarries, slag and other waste heaps. Can they find out more about the history of mining in your area?

Ask them to think not just about the structures, but the people that would have been involved. How recently did the mining stop? Is it still carrying on?

It may be that there are still working mines in your area that you could visit, such as the National Coal Mining Museum (ncm.org.uk) based at Caphouse Colliery in Wakefield, or in Cornwall, the Geevor (geevor.com) or the Poldark (poldarkmine.org.uk) tin mines.

Follow this link for a resource pack produced by the Ironbridge Gorge Museum Trust Education Department which accompanies the brick-making workshops available at Blists Hill Victorian Town.

ironbridge.org.uk/assets/Uploads/resource-brick-making.pdf