

What are flint and chalk?

FLINT

Flint is a hard, shiny stone found in lumps in the chalk rock of the Brecks. It is much harder than chalk and does not dissolve in water so is often left as flint pebbles when the chalk weathers away. The Brecks has a lot of these pebbles.

The flint was made in the sea 70 million years ago. Some of the creatures, which lived then, had spines and shells made of a chemical called silica. The animals died and the silica from their bodies became part of the rock that we now know as flint.

Flint is a useful rock

The people of the Brecks have been using flints for thousands of years. They used it to make (top, to bottom): **arrowheads;** **axe heads;** **scrapers;** and, **knives.** The first farmers made most of their tools from flint.

One of the largest and best-known Neolithic flint mines and flint workings in Britain is Grime's Graves - about three miles Northeast of Brandon.

This place was given its name by the Anglo-Saxons who thought



that the place was connected with the devil (one of whose names was "Grim"). "Graves" means hollows or workings.

Grimes Graves

Around 4000 years ago, Neolithic miners dug hundreds of deep shafts down into the chalk to reach the supply of good quality flint. They dug flint out from tunnels (galleries) which spread out from the bottom of each shaft like the spokes from a wheel. The mining was the earliest major industry in East Anglia.

Grime's Graves was first excavated by a vicar - Canon W. Greenwell - in 1870. He proved that these previously unexplained hollows in the ground, were, in fact, infilled flint mines. He discovered a shaft 40 feet (12.2m) below the surface. Altogether 700-800 pits and shafts have been found. We guess that a team of 20 men could have dug a shaft in 100 days, and a smaller group of men would have spent about 40 days removing the flint. The pits were filled in after use.

The only tools were deer bones and antlers

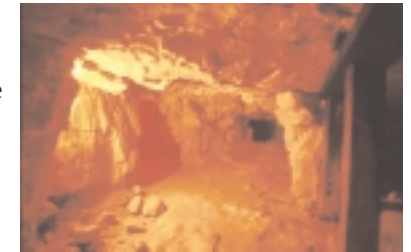
The tools used to dig out the pits were probably wooden shovels, or shovels made from the shoulder blades of deer. The flint was dug out with picks made from red deer antlers (right). In total, 244 antlers were found in two pits



and we guess that 50,000 may have been used over the whole period. The miners used a small stone as a hammer to put pressure on the pick.

Not a job for the claustrophobic!

Galleries for mining the flint spread out from the main shaft like the spokes of a wheel. Some were 7 ft (2.1m) wide and 5 ft (1.5m) high, but there were smaller ones only 2 - 3 ft (0.6 - 0.9m) high so the miners had to lie on their sides to extract the flint. Small chalk cups have been found. These could have been filled with fat and used as lamps when miners were working in the galleries.



Neolithic art in the gallery

The figure of a woman, roughly carved in chalk was found at the base of a shaft. In front of it was a triangular heap of mined flint, with a chalk lamp opposite and seven red deer antlers. This may represent an offering to an "Earth Goddess" to ensure a good supply of flint in the next pit.

The flint the neolithic people dug out was used to make axes and tools of all kinds. These were exported to the rest of Southern England along ancient tracks such as the Icknield Way. Grimes Graves was the equivalent of a Stone Age industrial estate.

Early pit closures

Grime's Graves ceased to be operational after 1,000 BC when metalworking was invented.