Old Stone Age (Palaeolithic)

The earliest humans
The earliest evidence of humans visiting Britain comes from excavations at Happisburgh (pronounced hazeboro) on the Norfolk coast, a site 800,000 to 1 million years old. The flint implements discovered in sediments there have been dated by organic remains and fossils found in the same strata.

The tools found at Happisburgh are characteristic of the early part of the Palaeolithic period or Old Stone Age and are said to belong to the Acheulian flint culture (named from the type site of St Acheul in Northern France where they were first studied). This pear-shaped or oval design of hand axe dominated flint toolmaking culture, unchanged, for more than a million years.

An Acheulian hand axe found at Happisburgh is illustrated below together with an artist’s impression of what the people and their settlement may have looked like.
One million years ago, the last great ice age was at its height and much of Britain, Northern Europe and North America were still covered by glaciers. Even the part of Britain not covered in ice would have been an Arctic wasteland of permanently frozen ground, with little if any vegetation.

Over the next million years, the ice receded and returned in a series of interglacial periods, some lasting tens of thousands of years. During these warmer interglacials, early humans journeyed north from Spain and Southern France, following game herds and living off the land. Some of them settled in Britain.

Britain remained an Arctic wasteland for much of the last 1.6 million years. But temperature fluctuations meant occasional warm spells, or interglacials, where the climate improved enough to tempt early humans back from time to time, in search of game. After the settlers of Happisborough, though, nearly half a million years pass before there is evidence for the next early human settlement in Southern England.
**Boxgrove humans**

The next signs of human settlement in Britain comes from the village of Boxgrove, a few miles from Chichester in Sussex, where extensive remains of early habitation have been uncovered, dating back more than half a million years.

The early humans who settled at Boxgrove were *Homo heidelbergensis*. They, too, made flint tools and weapons and, like their ancestors of half a million years earlier, they made pear-shaped or oval hand axes. One of their tools is pictured below.

The Boxgrove site has revealed one fascinating glimpse of life in Palaeolithic times in the form of the working floor of the site. The photo below shows the floor littered with discarded flint flakes that have been struck from the tool or tools that Boxgrove Man or Woman made. But they have fallen in a pattern which shows that the flint knapper was either kneeling or sitting with his or her legs apart while working. The waste flakes have fallen into the V-shape and were left where they fell so long ago.

---

*Above left,* an artist's impression of Boxgrove man. He belonged to the ancestor species *Homo heidelbergensis.* *Above right* is an example of the hand axe or biface made by Boxgrove man - notice the similarity to axes being made half a million years earlier. *Left,* a flint working floor has been uncovered at Boxgrove - the flint chips laying where they fell half a million years ago.
Britain became extremely cold again soon after the period of Boxgrove man, half a million years ago, so humans probably left Britain altogether for the next 200,000 years.

The next big interglacial warm spell lasted from around 300,000 until 200,000 years ago and saw the flint tool industry develop at sites such as Clacton in Essex and Barnfield Pit in Kent. Illustrated right is an Acheulian type hand axe found in river terrace gravels of the River Medway at Aylesford in Kent. Axes of this type have been found, often in great numbers, especially in Southern England. It is likely that these handaxes are in the region of 100,000 to 200,000 years old.

Arctic conditions returned once again and Britain cooled between 200,000-130,000 years ago, followed by another interglacial between 130,000 and 110,000 years ago - but humans don’t seem to have come back on this occasion. In fact, from 180,000 down to 60,000 years ago there is no evidence of human occupation in Britain.

From 60,000 to 40,000 years ago Britain became grass land with giant deer and horse, woolly mammoth, woolly rhino and carnivores such as sabre-toothed tigers.

**Neanderthal people**

Neanderthal people arrived in Britain around 40,000 years ago in the later Palaeolithic period. Neanderthal men and women made the same kind of biface tools, often referred to as hand axes, that earlier humans had been making for the previous million years. Their occupation lasted for around 10,000 years, but by 30,000 years ago, Neanderthals had become extinct, replaced by modern man.

Neanderthals may have become extinct because of competition from modern humans - Cro-Magnon Man - or because they were absorbed by intermarriage. A recent study of Neanderthal DNA from skeletons found in a cave in Croatia, has shown that modern Eurasian humans have inherited between 1 per cent and 4 per cent of their genes from Neanderthals, showing that the two interbred to a previously unexpected extent.

During this late Palaeolithic period, humans - both Neanderthal and modern man - continued to make Acheulian hand axes. The one pictured below, from West Sussex, dates from 30,000 to 40,000 years ago and was made by a Neanderthal man or woman. Yet it is identical in design to that of Boxgrove man 550,000 years ago, and early Palaeolithic man up to 1 million years ago.
Neanderthal hand axes tend to differ slightly in design from the usual oval shape in having a flattish base, referred to sometimes by the French phrase ‘bout coupé’ or referred to as ‘Coygan’ type axes after a cave in Carmethenshire in which Neanderthal remains were discovered in the 1960s.

Learn more about the early Stone Age and see examples of Palaeolithic flint tools in the Palaeolithic Gallery of The Stone Age Tools Museum

Middle Stone Age (Mesolithic)
End of the Ice Age
About 12,000 years ago, major changes took place. The great Pleistocene Ice Age, which had lasted 1.6 million years, came to an end. The polar ice caps retreated back to their present day level and the climate in Britain warmed up, making it an attractive hunting ground once more.

The Ice Age ends - glaciers melted, sea level rose and Britain returned to a warm climate
But the dramatic change in climate led to equally radical changes to toolmaking technology. The land became re-forested, so that instead of large, cold-adapted animals like woolly mammoths, woolly rhinoceros, elephants and reindeer, small agile game appeared - roe deer, boars, goats. New methods of hunting were required. The ready availability of wood meant that carpentry became a common activity - not just felling trees, but building wooden structures such as fishing platforms and wooden bases for tents - possibly even wooden walled structures.

The Mesolithic people responded to these challenges by creating the first new flint tool designs to be seen in a million years.

First, they reversed the traditional method of flint knapping. They largely dropped the practice of removing waste flakes from a core and using the trimmed core as the tool. Instead they developed the art of removing large, useful flakes and discarding the core. They then retouched the edges of the flakes to make tools such as scrapers and knives. (see picture below)

Recreation of the lives of Mesolithic people, some 10,000 years ago. Climate changes led them to invent new kinds of flint tools such as the tranchet adze for carpentry and Microliths for use tipping arrows, and for hafting in wooden handles as saws or sickles.
They did continue to make some core tools, but these were long thin tools known as tranchet adzes (see picture) carpentry tools that could be resharpened when they became blunted by removing another ‘tranchet’ or crosswise flake across the bottom edge of the tool.

One form of carpentry which Mesolithic people engaged in was the construction of fishing platforms, the remains of several of which have been found - for example in a Irish peat bog, and underwater off the Isle of Wight.

In the later Mesolithic, their ingenuity became even greater. They devised the microlith - tiny, razor sharp flakes, many of which could be slotted into a wooden handle to make knives, saws and sickles. The way of life of Mesolithic people, as nomadic hunters following herds of game, was very similar in essence to the way of life of the Native American tribes of the great plains, such as the Sioux or Cherokee, before the arrival of European settlers. They probably used tents made of animals hides supported on long wooden poles.

The Mesolithic people also invented hunting using arrows tipped with flint arrowheads, though they probably used a stick (atlatl) to launch their arrows rather than a bow. However, the Mesolithic arrow head was not tanged or barbed, but straight, like a miniature knife edge. The Mesolithic revolution lasted from around 12,000 years ago, when the ice began to melt, until around 6,000 years ago, when humans ceased to be nomadic hunter gatherers and first domesticated animals, and planted crops, thus becoming the first farmers and the first humans to adopt a settled way of life. The Neolithic, or New Stone Age, had begun.

Learn more about the middle Stone Age and see examples of Mesolithic flint tools in the Mesolithic Gallery of The Stone Age Tools Museum
The New Stone Age (Neolithic)

Farming begins
A settled way of life and warmer climate led to rapid advances. Humans began to make pottery (previously they used woven baskets lined with pitch to contain food and water). They invented bows to fire their arrows, and they designed better arrow heads that were tanged and barbed.

One very famous hoard of such flints is that discovered in a Neolithic grave in Amesbury, Wiltshire, of an individual who became known as ‘the Amesbury Archer’ because of the large number of arrowheads in his tomb (see illustration below).

Neolithic people reverted to making pear-shaped hand axes from flint cores, as in the Old Stone Age, but this time, the axes were polished by being rubbed on a sandstone rock. Because flint is very hard, this polishing process would have taken a long time and a lot of effort - certainly days, probably weeks. It suggests a people who now lived in one place, and had time on their hands as they waited for their crops to grow and tended their animals.

Like their Mesolithic ancestors, Neolithic people also used arrows to hunt, but they invented the bow to fire them and they invented more complex barbed and tanged arrow heads (see right).

Left: Neolithic arrow head found on the South Downs. Right: arrow heads found in the burial of the ‘Amesbury Archer’.
The polished hand axe pictured here is characteristic of the Neolithic period and represents a return to core tools after the widespread use of flake tools in the Mesolithic. It was found by a farmer on his land in the Sussex Downs. It is perfectly possible that farming has been carried out in the same spot for as much as six thousand years.

Around 3,300 BC, some five thousand years ago, humans in Europe discovered how to smelt ores of copper and tin to make the first bronze ornaments and tools. The Bronze Age had begun and the million-year long Stone Age was at an end.

Learn more about the New Stone Age and see examples of Neolithic flint tools in the Neolithic Gallery of The Stone Age Tools Museum

Richard Milton 2012
The Stone Age Tools Museum