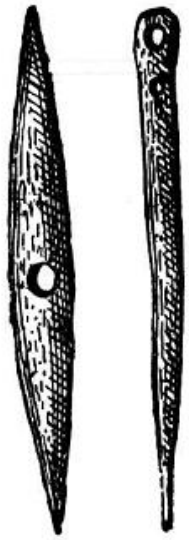
one for each immediate family. While many people wrongly use the term *caveman* to apply to all prehistoric humans, Neanderthal is regarded as the first true caveman.

Clothing

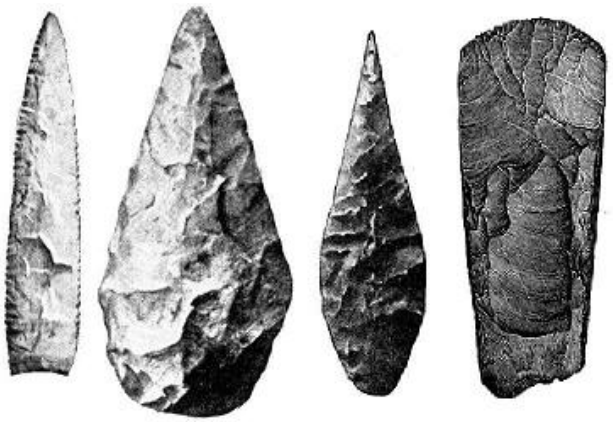


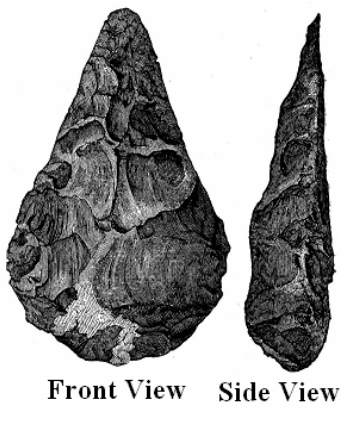
Living in cold climates made staying warm a matter of survival. Neanderthal learned to make his own clothes, boots, and mitts out of animal skins. Clothing was also valuable during hunting because it gave his skin some protection from cuts and scrapes. Who knows, he might have discovered the art of sewing. For thread, he would have used any string-like material he could find or make from animal parts or even tough plants. For the needle, he would have used a fish bone, which was sharp, small, and strong. To thread the needle he would punch a tiny hole in it.

For all we know, Neanderthal may have been the inventor of clothing. Nowadays, most clothes are made out of cloth, not animal skins. Most cloth today is woven out of plant fibers such as cotton, insect fibers, such as silk, or animal hair such as wool. However, cloth weaving wasn't discovered until 8,000 years ago, long after Neanderthal became extinct.

Tools

As with all prehistoric humans, tools were essential to Neanderthal's survival. He learned how to make more tools and better tools than anyone before him. In addition to hand axes, handled axes, choppers, scrapers, and chisels, he made various knives for scraping and cutting of animal hides, and for carving wood, ivory, and antlers. He made different sizes of hole-punchers or awls for making small holes in various materials. He improved the art of *precision flaking*, which allowed him to make small tools with sharp blades for delicate cutting.





To achieve the precise shape he had in mind, he had to hit the right kind of rock with the right tool at the right angle with the right amount of force. This required much skill, which required much practice. Also, he needed many tool-making tools, which he made. For precision flaking he used hammers made of softer materials such as bone and antler. By tapping or pressurizing the rock with the soft hammers he can control how the chip breaks off.

As mentioned earlier, Neanderthal made stone-tipped spears for hunting animals. Although he was inventive in tool-making, the tools he made, for some reason, had not changed much during the last 100,000 years of his existence, thereby indicating a lapse in creativity. The next species to come along, Cro-Magnon, was far more inventive.

Making Fire

Finding a fire and transferring it to your campsite is a relatively simple idea. However, discovering how to make fire from scratch is much more complex. Being able to make fire was especially beneficial in northern climates. Although we are not sure if Homo erectus knew how to make fire, we are certain that Neanderthal did. Fire-making tools had been found with his remains.

Had Neanderthal not been able to make fire, he would not have been able to live in the freezing, northern climates of Europe. He used fire to stay warm, cook food, keep predators away, and possibly smoke meat for preservation. Also, he used torches to herd large animals, such as horses and woolly mammoths, over cliffs.

We don't know the circumstances under which early man discovered how to make fire. One possibility is that while knapping tools he discovered that striking certain rocks together generated sparks. Grasping the connection between sparks and fire, he struck the rocks harder until he could ignite dry grass or wood shavings with the sparks. When struck, rocks containing iron generate lots of sparks.

Another possibility is that he noticed that sticks become hot when they are rubbed. Grasping the connection between hotness and fire, he rubbed the sticks harder and harder until they were hot enough to ignite dry, flammable material.

Whichever method he discovered first, it was ingenious, and we can only imagine how immensely excited he was at his invaluable discovery. No longer did he have to find an existing fire. No longer did he have to keep his fire going all day and night, every day. No longer did he have to carry hot coals around when he traveled. He could travel far and not worry about not having a fire to cook food, keep warm, and scare predators away. With this innovation, his ability to survive reached a new height.

