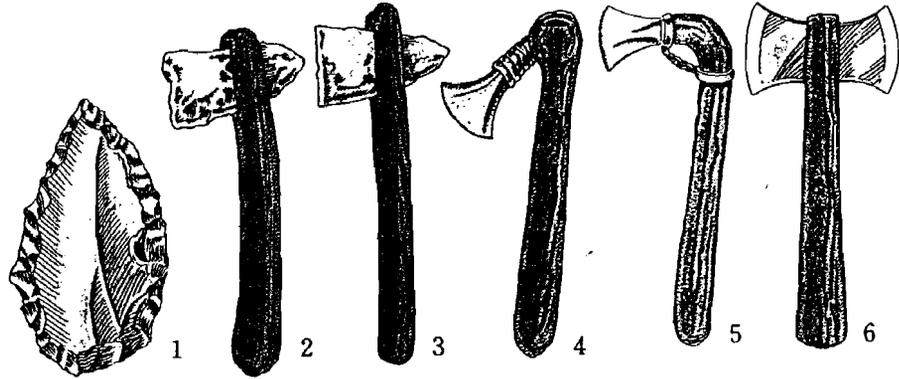


Figuring Out a Date

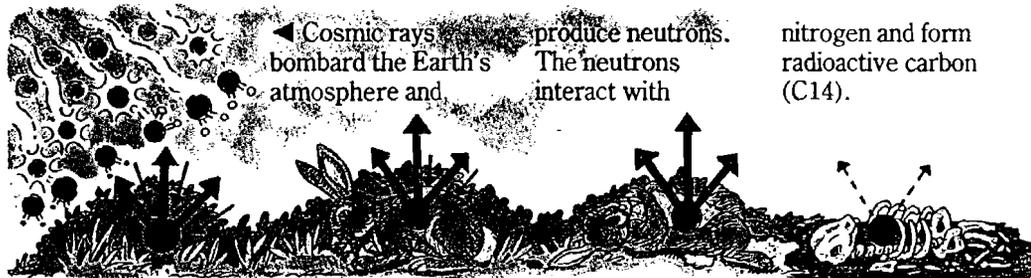
Archaeologists cannot always immediately give a date for some things they find. One way archaeologists try to figure out dates is by comparing kinds of materials used to make things. Early people used stone tools. Eventually, people discovered metal, which was better than stone, and they began using that. Archaeologists know that stone was used before metal because they find stone in deeper layers in the stratigraphy.



How the ax developed:

1. The first axes were held in the hand.
2. Polished stone axes were used by the earliest farmers to clear land.
3. The first bronze axes copied the stone ones
4. Bronze axes developed to fit in wooden handles.
5. A new development used a loop to hold the ax to the handle.
6. A strong modern ax has a steel head.

In the 1940s, there was a revolution in archaeology. An American chemist named Willard Libby discovered a new method for dating objects from the distant past, called radiocarbon, or carbon-14 dating. It is based on the scientific principle that all living things contain a certain amount of radioactive carbon. Once a living thing dies, carbon begins to decay. Scientists know that half of the carbon decays in 5,730 years. Measuring how much radioactive carbon is present in a sample gives a date. This kind of dating can be used for rocks, pottery, and glass. Charcoal is always a good sample for radiocarbon dating.



▲ Plants take in this radioactivity through carbon dioxide. Animals and humans take it in when they eat plants.

▲ In living plants and animals, the amount of C14 is constant. Dead plants and animals don't take in C14. Radioactivity gradually decreases.

▲ It takes 5,730 years for half the radioactive carbon to decay.

▲ The remaining radioactive carbon can be accurately measured in wood and other plant remains and in animal and human bone.