Origins of metalworking

Modern life is possible because we have metals and we know how to use them. They support our buildings and bridges, allow us to fly, sail and move about, and are fundamental in industry and trade. In the ancient past, metals were unknown. When they were discovered and man learned how to work them, people's lives changed. Metalworking is a science, an art, a hobby, an industry and a trade. Its historical roots span cultures, civilisations, and millennia. The history of metals can be traced back to almost nine thousand years ago, in the Near East. Apart from gold and silver, the first metal to be used was copper, followed by bronze, but iron was the key to civilisation.

In the past, fire, air, earth and water were considered the four elemental substances of our world and only the blacksmith was able to work all four. His material, the black ore, was part of the earth, and water was essential to cool his heated iron and give temper to this red-hot metal. Once ironworking had developed, the tribes armed with iron swords and iron spearheads conquered those armed only with bronze weapons. The people with iron axes and knives built houses more quickly and lived more comfortably than those who had not yet learned how to make iron and steel from the ferrous ore so abundant in most parts of the world. In time, ironmasters developed new techniques and learned to transform useless cast iron into wrought iron by re-smelting it in a deep fire, burning out excess carbon and beating out the impurities.

As time progressed, metal objects became more common and more complex. The need to further acquire and work metals grew in importance. Skills related to extracting metal ores from the earth began to evolve, and metalsmiths became important members of society. Iron and steel were as essential to the progress of man in ancient times as they are today in the space age. This need spread the art of forging iron all over the civilised world and as one region developed a new technique, it spread to other lands through the twin activities of war and trade. The knowledge of working and dominating the black metal was gradually an integral part of the developing civilisation of the ancients, that is why it is very difficult nowadays to discover exactly how, where and when any one particular technique was developed.

axe: *ascia*
to beat out: *eliminare martellando*
blacksmith: *fabbro, maniscalco*
cast iron: *ghisa*
to forge: *forgiare, fucinare*
ore: *minerale*
to smelt: *sciogliere*
to span: *espandersi*
spearhead: *punta della lancia*
to spread: *diffondere*
wrought iron: *ferro battuto*

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1 Complete the sentences.

1. In the past, the four elemental substances of our world were…
2. People's lives changed when they discovered and learned…
3. The people with iron axes and knives built more…
4. In time, ironmasters learned to transform useless cast iron into…
5. The history of metals can be traced back to…
6. The knowledge of working and dominating the black metal became…

2 Answer the questions.

1. Why did the blacksmith embody the four elemental substances of the world?
2. Why was iron the key to civilisation?
3. How did the ironmasters learn to transform cast iron into wrought iron?
4. When did ironworking start?
5. Why did metalsmiths become more and more important?
6. What used to happen as soon as one region developed a new technique in metalworking?

MORE ABOUT IRON

Iron is found in rocks called iron ore. Iron ore is a reddish colour caused by rust (iron oxide). Rust forms when iron combines with oxygen. To get usable metal, iron ore needs to be heated with charcoal to remove the oxygen.
The period known as the Iron Age lasted in Britain for about 800 years (from 750 BC to AD 43). The changes and technological innovations that occurred during this time were as revolutionary as those that have occurred in the last 800 years, from the 13th century to the present day. Iron was used to make weapons, tools and cooking pots; it changed ordinary people's lives, making important things like farming easier.

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