

China's Isolation

Chinese civilization developed without much influence from outside cultures. China had a combination of abundant natural resources and a fast-growing population. This helped boost creative growth and innovation over a short period of time. Europeans, drawn by the rich trade goods they had seen from China, arrived at Chinese ports in the 1400s and found a very developed society.

Early in its history, China had connections with Japan, Korea, and India. These were the first countries to acquire new technologies from China and, through different trade networks, spread them throughout Asia and India.

Outside of these regional interactions, however, many of China's early emperors had little desire to travel beyond China and thought little of the goods coming from the foreign lands.

Early European explorers, such as Marco Polo, were amazed by Chinese technology. They returned to Europe and informed their countrymen of this great civilization in the East. Interestingly, even though the Chinese were clearly a technologically advanced people, the Europeans still considered them to be "barbarians." Despite Europeans' feelings of superiority, they recognized that China produced highly desirable goods and sought trade with China. They desired China's brilliant inventions and hoped to borrow from its technology. For their part, the Chinese felt that the Europeans' goods were inferior, or not as good as their own. The Chinese demanded to be paid for their goods with silver or gold. Because of this trade, a lot of gold from the New World ended up in China.

Creativity and Innovation

Chinese inventions are not things that only exist in history books. Many early Chinese inventions are still important today. One of the oldest Chinese inventions is paper. Can you imagine a day without paper? Paper remains have been found in China dating back to the time of Emperor Wu, who reigned between 141 and 87 BCE. Credit for inventing paper often goes to Cai Lun in the year 105 CE, but the material has probably been around for much longer.



This bronze cannon was invented by the Chinese. It is believed to be the oldest yet discovered, dated 1332 CE.

The modern process for making paper is not too different from its beginnings. The fibers of the hemp plant were soaked in water and beaten. These fibers were then thinly strained onto a woven cloth and dried to form a single sheet. Later, other fibers from wood, bamboo, and seaweed replaced the hemp. The invention spread to Korea and Japan and eventually along the Silk Road to the West. China is also the first country known to use paper for toilet purposes! This use of paper began in the mid-1500s. Arab traders were astounded to see something other than water used in this way, and the idea quickly spread.

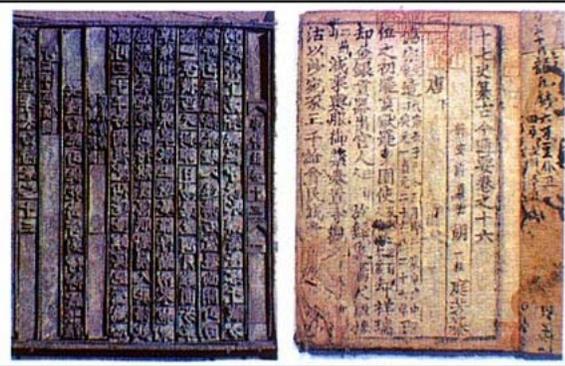
Paper was also used with another innovation: moveable type. Moveable type made printed material more accessible and helped spread literacy. Woodblock printing had been used to create books in China since around 800 CE. The carved blocks could be used multiple times.

Another Chinese invention caused quite an explosion of interest—gunpowder. This invention came from the discovery that saltpeter, a natural mineral, explodes if used in a certain way. The Chinese originally used it to create a potion for a longer life. Their experiments led to terrible burns, and they soon realized that they could put saltpeter to a better use. As early as the 800s CE, the Chinese mixed saltpeter with sulfur and stuffed it into bamboo pieces. These early firecrackers were used to celebrate major holidays such as New Year's Day. Gunpowder, as a weapon, was developed later. The first recipe for military gunpowder comes from a Chinese military manual in 1044 CE.

Gunpowder technology spread along the Silk Road to the Middle East. Once there, the people in the Middle East developed better cannons and explosives. The Europeans did not begin using gunpowder until the mid-1300s!

Innovations Led to Luxury

The Chinese developed hundreds of other innovations, including the compass and the spoon. Some Chinese innovations helped people enjoy lives of luxury. One of the most sought-after Chinese innovations was porcelain. This is a fine type of pottery that can only be made by using extremely high heat. Early forms of porcelain were invented during the Tang dynasty (618–907 CE) The Europeans did not figure out how to produce it until 1709!



© 2005 Instructional Resources Corporation

Movable type and a printed page dated 1403.

Another impressive ancient Chinese invention was silk. This material is mainly used for fancy clothing. Interestingly, it comes from a caterpillar! Around 1300 BCE, the Chinese figured out how to raise silkworms, soak the cocoons in hot and cold water, and extract the silk. The silk threads were then dyed and woven together into a luxurious cloth. This process is still used today.

Silk allowed people in China to dress in fine, beautiful clothing, but it did more than that. Silk allowed China to become very important in terms of world trade. The Chinese exported silk cloth to the West for many centuries. It was not until monks returned to Europe from China in 550 CE with silkworm eggs that Europeans learned the secret to producing silk.

Although Europeans knew about silk and other Chinese goods, it was not until the 1400s that the world really started to learn about China. In 1405 the Chinese admiral Zheng went on an expedition to show China's wealth and power to the world. This expedition is what eventually brought European explorers and traders to China. After that period, China was content to exist in solitude and only allowed limited access to its culture and goods.

The inventions mentioned here, including the use of silk, moveable type, and paper, are only a handful of innovations from China that changed the world. Chinese technology was very advanced and paved the way for many modern inventions. In fact, Chinese innovations helped spur the European exploration of the world. Europe's demand for Chinese goods changed European society. Even today, Chinese innovations have an impact on people living all over the world.

After reading the passage, answer the following questions:

- 1. How did the Europeans view the Chinese in the 1400s?**
 - A.** as culturally superior
 - B.** as enemies with advanced weapons
 - C.** as barbarians with desirable goods
 - D.** as friends with vast resources

- 2. What helped China become technologically advanced early in its history?**
 - A.** an influence from outside cultures
 - B.** an abundance of natural resources
 - C.** a great educational system
 - D.** a creative emperor

- 3. Which of the following explains the biggest impact of moveable type technology on Chinese society?**
 - A.** Books became easier to read because words were the same size.
 - B.** Books became available for more people, and literacy spread.
 - C.** Books became longer and more difficult to read.
 - D.** Books became much more expensive and harder to find.

- 4. The ancient Chinese had many innovations that eventually changed the world. Which inventions do you think had the biggest effect on other civilizations and modern life? Why?**