

Ancient China

Name: _____

Core: _____

Inventions and Technology

History >> Ancient China

The Ancient Chinese were famous for their inventions and technology. Many of their inventions had lasting impact on the entire world. Other inventions led to great feats of engineering like the Grand Canal and the Great Wall of China.

Here are some of the notable inventions and discoveries made by the engineers and scientists of Ancient China:

Silk - Silk was a soft and light material much desired by the wealthy throughout the world. It became such a valuable export that the trade route running from Europe to China became known as the Silk Road. The Chinese learned how to make silk from the cocoons of silkworms. They managed to keep the process for making silk a secret for hundreds of years.

Paper - Paper was invented by the Chinese as well as many interesting uses for paper like paper money and playing cards. The first paper was invented in the 2nd century BC and the manufacture later perfected around 105 AD.

Printing - Wood block printing was invented in AD 868 and then moveable type around 200 years later. This was actually hundreds of years before the invention of the printing press by Gutenberg in Europe.

The Compass - The Chinese invented the magnetic compass to help determine the correct direction. They used this in city planning at first, but it became very important to map makers and for the navigation of ships.

Gunpowder - Gunpowder was invented in the 9th century by chemists trying to find the Elixir of Immortality. Not long after, engineers figured out how to use gunpowder for military uses such as bombs, guns, mines, and even rockets. They also invented fireworks and made great beautiful displays of fireworks for celebrations.

Boat Rudder - The rudder was invented as a way to steer large ships. This enabled the Chinese to build huge ships as early as 200 AD, well before they were ever built in Europe.

Other - Other inventions include the umbrella, porcelain, the wheelbarrow, iron casting, hot air balloons, seismographs to measure earthquakes, kites, matches, stirrups for riding horses, and acupuncture.

Source: www.ducksters.com

Chart of the top inventions of both dynasties:

Inventions of Tang and Song China			
	Date	Description	Impact
Porcelain	Late 700s	Bone-hard, white ceramic made of a special clay and a mineral found only in China	Became a valuable export—so associated with Chinese culture that it is now called “china”; technology remained a Chinese secret for centuries
Mechanical clock	700s	Clock in which machinery (driven by running water) regulated the movements	Early Chinese clocks short-lived; idea for mechanical clock carried by traders to medieval Europe
Printing	Block printing: 700s Movable type: 1040	Block printing: one block on which a whole page is cut; movable type: individual characters arranged in frames, used over and over	Printing technology spread to Korea and Japan; movable type also developed later in Europe
Gunpowder	800s	Explosive powder made from mixture of saltpeter, sulfur, and charcoal	First used for fireworks, then weapons; technology spread west within 300 years
Paper money	1020s	Paper currency issued by Song government to replace cumbersome strings of metal cash used by merchants	Contributed to development of large-scale commercial economy in China
Magnetic compass (for navigation)	1100s	Floating magnetized needle that always points north-south; device had existed in China for centuries before it was adapted by sailors for use at sea	Helped China become a sea power; technology quickly spread west

These dynasties are AFTER the Han Dynasty, but their achievements are important.

Source

<https://sites.google.com/site/qingmingscroll//rsrc/1431796598334/start-here/technological-advancements/Tang-Song%20inventions%20chart.png>

Chinese Inventions and Discoveries

ESSENTIAL QUESTION In which aspects of Chinese life did the Han make great advances?
China had a large and growing population to feed. Because agriculture was so important in China, most of the really important inventions during this period came about in agriculture.

Agricultural Improvements Chinese inventions made life easier for farmers and made more grain available for trade. For example, a better plow and farm tools helped increase crop production. The invention of a collar harness allowed horses to pull heavy loads. The wheelbarrow made it easier for farmers to move heavy loads by hand. Watermills used river power to grind grain. In a land of mostly farmers, these inventions were valuable.

Paper In A.D. 105, paper was invented in China. Before that time, books were made of costly silk. The inexpensive paper was made from a mixture of old rags, mulberry tree bark, and fibers from the hemp plant. Inexpensive paper made books available in a country that valued learning. Paper was important for a bureaucratic government that kept many records.

Silk Silk is beautiful and long lasting. It can be dyed brilliant colors. Because it was rare, it became an excellent trade product. Silk allowed the Chinese to get silver and gold from lands to the west of China. At one time, one pound of silk was equal to one pound of gold. Getting gold and silver was important to China because it did not have rich deposits of either mineral.

Why It Matters Now . . .

Ancient cultural patterns continue to influence life in China and elsewhere.

Source: McDougal Little Online Textbook