**Han Dynasty (206 BCE – 220 CE)**

During the Han Dynasty, China entered a great age of stability and wealth. Education, literature, and art flourished. New practices, inventions, and discoveries improved people’s lives. The Han dynasty was also known for its military achievements. Han emperors expanded the empire to include parts of present-day Korea and Vietnam. Once Central Asia was under its control, the Han established trade relationships with the West through the Silk Road.

Silk is a material produced from the fibers of a silkworm cocoon. For the ancient Chinese, making silk was difficult and time-consuming labor. During the Han dynasty, the Chinese developed a foot-powered machine that could wind the silk fibers onto a large reel, ready for use. Making silk production more efficient was important because there was a high demand for silk outside of China. The valuable silk trade began during the Han dynasty.

Chinese doctors also made several discoveries about how the human body works. For example, they learned to judge health by listening to a person’s heartbeat or by feeling his or her pulse. The Chinese also discovered that blood circulates from the heart. Western science did not make this discovery until the 1600s C.E.

During the Han dynasty, paper was also invented. The invention of paper changed the way people communicated. It was cheaper to produce paper than bamboo or silk, so more people could now afford writing materials. Paper was also easier to bind together into books.

The Chinese of this period also invented two very useful instruments, the seismograph and the magnetic compass. A seismograph is an instrument for detecting earthquakes. The first Chinese seismograph was a circular machine made of bronze. The machine had a pendulum in the center, surrounded by eight sculpted animal heads. During an earthquake, the pendulum vibrated. The vibration triggered the release of one of eight balls. The ball would then fall in the direction of the earthquake. Using this ingenious machine, the Han were able to detect earthquakes up to several hundred miles away. The magnetic compass is an instrument for determining direction, such as north or south.

**Written By:** Steve Orton, adapted from [The Big History Project](https://school.bighistoryproject.com/bhplive)

**Tang Dynasty (618 CE – 907 CE)**

During the Tang rule China experienced a time of peace and prosperity that made it one of the most powerful nations in the world. This time period is sometimes referred to as the Golden Age of Ancient China.

Many advancements in the areas of engineering and technology were made during the Tang Dynasty. Perhaps the most important was the invention of woodblock printing. Woodblock printing allowed books to be mass produced (like using a stamp). This helped to increase literacy and to pass on knowledge throughout the empire. The first full-length book to be printed was the *Diamond Sutra* in 868.

Another major invention of the time was gunpowder. Although it would continue to be perfected over hundreds of years, gunpowder was mostly used for fireworks during the Tang Dynasty. The people believed that fireworks could help to scare off evil spirits. Other inventions included a ceramic called porcelain, advances in mapmaking, gas cylinders for natural gas, advances in medicine, and advancements in clock making.

The arts flourished during the Tang Dynasty. It was during this time that poetry became an important part of the Chinese culture. Talented poets were well respected and often recited their poetry as entertainment at parties. Paintings were also very popular at this time.

The Tang Dynasty ruled over a vast area that stretched from Korea to Northern Vietnam. It even reached west as far as Afghanistan. It took a very organized government to control all of this territory. The capital city of Chang’an was the largest city in the world at the time with a population of over 2 million.

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**Song Dynasty (960 CE – 1279 CE)**

Ancient China was the most advanced civilization ***in the world*** during the rule of the Song dynasty. It is famous for its many inventions and advances, but eventually collapsed and was conquered by the Mongol barbarians to the north.

The period of rule under the Song dynasty was a time of great advancements and invention. Some of the most important inventions in the history of Ancient China were made during this time. The invention of moveable type allowed for mass printings of documents and books. Millions of copies were made of some popular books allowing books to become affordable to everyone. Other products were printed on paper in great quantities including paper money, playing cards, and calendars.

The Song dynasty also had a strong navy. They built large ships over 300 feet long that had watertight compartments and onboard catapults that could toss huge rocks onto their enemies.

Gunpowder during the Tang dynasty was mostly used for fireworks. The Song used gunpowder in battle. They developed various bombs, rockets, and fire arrows.

The arts flourished under the Song dynasty. Poetry and literature were especially popular with the invention of moveable type and the availability of books to many people. Painting and the performing arts were also very popular. A high value was put on education and many of the nobles were very well educated.

It was during the Song dynasty that rice became such an important crop for the Chinese. Drought-resistant and fast-growing rice was introduced to southern China. This new rice allowed farmers to have two harvests in a single year, doubling the amount of rice they could grow.

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