

Early Settlement in Ancient China

Archaeologists believe that the first people to live in China, lived in caves more than 500,000 years ago. Remains of these people were found in the 1920s in the northeastern part of China. These cave dwellers are known today as either Peking (pay-king) man or Beijing (bay-jing) man. They were probably nomads who lived by hunting, gathering, and fishing. They made tools and may have used fire.

As people in China turned to farming, they began to settle mostly on the North China Plain in Inner China. They grew crops and lived in villages near the Huang He, marking the start of settled Chinese society.

It's not surprising that early farmers chose this area to live in due to the North China Plain's plentiful water, fertile soil, and moderate climate. In contrast, both the Tibetan Plateau and the Northeastern Plain in Outer China were too cold and dry to grow crops. The Northwestern Deserts were also too dry. The Chang Jiang

Basins were wet and fertile, but heavy rains may have made farming difficult.

Different Regions, Different Ways of Life

Although most early inhabitants settled on the North China Plain, some people did live in the other geographic regions. Ways of life for settlers in these regions developed quite differently.

Life in Outer China

Mainly because Outer China did not provide good farmland, fewer people settled there than in Inner China. The Tibetan Plateau was not suitable for cultivating crops, but herders could successfully raise livestock, especially yaks.

The people who resided on the plateau were nomads who had to migrate frequently to find new grazing land. The animals they herded supplied many of the nomads' needs. They ate meat from the yak, and made butter and yogurt from yak milk. People used yak wool to make the

heavy clothing that they needed to survive the cold climate. They also wove yak hair into material for tents.

In the Northwestern Deserts, the only permanent communities were on the oases where residents built homes out of mud and grew cotton and wheat. Their main foods were wheat noodles, bread, and mutton.

The Northeastern Plain was too cold and dry for bountiful farming, but its prairie grass supported livestock. Early inhabitants of this region were also nomads. They raised sheep, goats, cattle, and horses. Because they were constantly migrating to find grass for their animals, they lived mostly in tents. Their main food was meat. They often invaded the North China Plain to retrieve needed supplies. Eventually, the people of Inner China built the Great Wall to protect themselves and keep these invaders out.

Life in Inner China

The fertile land of Inner China supported larger, more settled populations on the North China Plain. Farmers grew mainly wheat and millet. In addition to

raising cattle, sheep, oxen, pigs, and chickens, they herded cattle, water buffalo, and horses. Settlers built permanent homes out of rammed earth (soil tightly packed to make solid walls).

The Chang Jiang Basins had limited farmland and lacked grazing land for animals such as cattle, but rice thrived in this warm, wet area. As early as 10,000 B.C.E., settlers could grow rice in the river valley. They also raised pigs and poultry. Nearby seas provided plentiful seafood. People established permanent houses so that they could settle in one place and tend their animals and crops.

The Shang Dynasty

In ancient times, most of China's early farmers settled on the North China Plain, near the Huang He (Yellow River). The Shang dynasty was one of China's earliest dynasties. This dynasty ruled the area centered in the Huang He valley.

Multiple clans, or extended families, controlled different sections of ancient China. Rival clans frequently fought each other. Sometimes, one clan became powerful enough to rule all of ancient China and begin a dynasty. The Shang was one example of such clans. Although the dates are debated, some scholars suggest the Shang dynasty ruled from 1750 to 1040 B.C.E.

For hundreds of years, Western scholars considered the Shang dynasty a legend. Stories about some mysterious markings on animal bones hinted that the Shang might have been the first Chinese to develop a system of writing. However, archaeologists still had no solid evidence that the ancient culture had ever existed.

Then, in 1899, a Chinese scholar found some bones that had writing on them. He thought that they might be Shang oracle bones, or animal bones and turtle shells with inscriptions carved on them. In ancient times, many people believed that these objects could predict the future.

Later, in the 1920s, the ruins of a Shang city were discovered at Anyang (ahn-yahng). Archaeologists unearthed many artifacts from these ruins. You will learn what these artifacts reveal about Shang civilization.

A Shang Capital City

When archaeologists began excavating the ruins at Anyang in 1928, they learned a great deal about the Shang culture. These ruins were the remains of one of the royal cities of the **Shang dynasty**. The city included a palace, a temple, and houses. There were also workshops for artisans who created objects made of metals, pottery, stone, and jade.

The king's palace sat on a platform. The palace was built of mud-plastered walls held up by wooden posts. Beneath its foundations, archaeologists found human bones. The bones suggest that the Shang performed human **sacrifices** when they constructed a new royal house.

Human sacrifices were also part of Shang burials. While excavating at Anyang, archaeologists found at least

nine royal tombs. Each tomb had a large pit with ramps leading down to it from the north and south. When a king was buried, slaves, servants, and animals were led down the ramps into the pit. There, they were sacrificed as part of the Shang belief that the king must continue to be served in the afterlife.

This belief in life after death is likely the reason that metal vessels and containers of food were also buried with or near Shang kings. The treasures found in royal tombs include many weapons, carved jade ornaments, bone carvings, pieces of pottery, stone sculptures, and even chariots.

The artifacts unearthed at Anyang reveal some interesting facts about Shang beliefs and ways of life. Let's find out what conclusions scholars have drawn about this ancient civilization, starting with the Shang government.

Shang Government

The Shang government was led by a powerful king. To extend his power, a king established smaller kingdoms led by his younger brothers and nephews. When a king died, his power was often preserved when it passed to a younger brother or son.

Shang kings depended on strong armies to maintain their rule and to defend and expand their kingdoms. The kings took part in almost constant warfare with their enemies and fought to keep other **clans under control. Prisoners of war were used as laborers and in human sacrifices.**

The king's armies were especially powerful because Shang nobles had weapons made of **bronze. The Shang were among the first civilizations in the world to discover how to make bronze from a mixture of copper and tin.**

Shang armies were made up of large numbers of foot soldiers, archers, men mounted on horses and elephants, and fighters in chariots. The chariots were two-wheeled carts drawn by horses. Three soldiers rode in each chariot. The driver stood in the middle, with a spear

carrier to his left and an archer to his right. Shang armies must have been a terrifying sight to their enemies.

Shang Social Classes

Shang society can be divided into six social classes. The king and his relatives were in the highest class. Below them were the nobles, artisans, traders, farmers, and slaves.

Nobles

After the ruling family, the nobles made up the highest-ranking social class. Nobles fought in the king's armies and supplied them with weapons, foot soldiers, and chariots. In exchange for their military help, the king was unlikely to interfere with the nobles' control over the land.

Shang nobles enjoyed a life of luxury. They lived in great palaces and spent time hunting. We know that the Shang were great hunters because large numbers of wild animal bones have been found at excavation sites. In addition, writings on oracle bones show that the king invited nobles to join him in hunting foxes, badgers, and other wild animals.

The king often gave nobles symbols of power, such as jade discs. The discs might be decorated with a “lucky” creature such as a dragon or tiger. Nobles often mounted the discs on posts in their homes.

Artisans

This talented group formed a small social class that included potters, **stonemasons**, and workers crafting items of bronze and jade. These skilled workers had lower status than nobles but higher status than farmers. Artisans skilled in bronze were especially valued because they made the weapons used by Shang warriors. They also made and decorated containers for the king and his nobles to use in religious ceremonies, or simply as symbols of their wealth.

Traders

Like artisans, those who were traders ranked below nobles but above farmers in Shang society. Scholars believe that the Shang traded extensively. One clue comes from the modern Chinese word for “merchant,” *shang ren*, which could also mean “Shang man.”

During the Shang dynasty, people mostly exchanged goods. The Shang also used cowrie shells, a type of seashell, as money. The shells were valuable because they came from far away. The Shang people had to trade with neighboring regions to get them.

Farmers

Farmers made up the largest social class in Shang society. They worked small plots of land, growing millet, wheat, barley, rice, fruit, vegetables, and nuts. They did not own the land they farmed since it was under the control of either the king or the nobles. Farmers gave most of their harvest to the nobles, who sent a portion to the king. Farmers could keep only enough food to feed themselves and their families.

Even after the Chinese became highly skilled at making bronze and iron weapons, many farmers continued to use simple tools made of wood and stone. They dug with wooden sticks, weeded with stone-tipped hoes, and harvested grain with stone knives and scythes.

Besides growing crops, farmers learned to raise cattle. They may also have raised pigs and chickens.

Slaves

At the very bottom of Shang society were slaves, many of whom were prisoners of war. They spent their lives building tombs and palaces. When their masters died, the slaves were sometimes sacrificed, in keeping with the Shang belief that slaves should continue to serve their masters in the afterlife.

Shang Religion

Shang religion centered on ancestor worship. The treasures buried in kings' tombs show that the Shang believed in a life after death. They also believed that dead ancestors had the power to help or harm the living. For this reason, the Shang honored their ancestors. As signs of respect, worshippers gave offerings of food, and sometimes made human sacrifices.

The Shang believed that their king's relationship to ancestral spirits had special significance. The king inherited the right to rule from his ancestors. And among

the king's responsibilities was a duty to follow the wishes of his ancestors.

Kings used **oracle bones** to seek their ancestors' advice on important matters such as when to hunt, where to build cities, and whether to go to war. The oracle bones were made from turtle shells or the shoulder blade of a cow. To ask a question, a holy man would make a statement such as this: "Tomorrow is a good day for the hunt." Then he would press a hot needle against the back of the bone. The heat would make the bone crack. The pattern of the crack was believed to be a message, which the holy man or king would translate. The holy man might then carve the message on the oracle bone. Today, these inscriptions reveal valuable information about life during the Shang dynasty.

Shang Writing

The inscriptions on oracle bones are among the earliest known examples of Chinese writing. In Shang writing, as in modern Chinese, characters stand for words rather than sounds. Early Chinese writing contained only

pictographs, images that stand for objects. By the Shang dynasty period, people were also using logographs, characters that stand for words. For example, the character for “good” is a combination of the characters for “woman” and “child.”

Having a written language helped unify the Chinese people. Although spoken language varied from place to place, people of the upper classes used the same written language.

Shang Art

Shang artists showed great skill in working with bronze. Shang artisans made beautiful vessels and other objects. Some bronze vessels had geometric designs and pictures of mythical creatures. The most common picture was an animal mask, later known as a taotie. It might have the horns of an ox, the ears of an elephant, the talons of a bird, the eye of a man, or the crest of a dragon. Some scholars say that these masks were symbols of all the beings in the world.

The Shang also produced remarkable jade pieces. Jade is a very hard stone. Workers made jade objects by sawing, filing, and sanding the stone.

The Chinese may have believed that the qualities of jade represented the qualities of a superior person. The hardness of jade stood for wisdom. Jade was also smooth and shiny. These qualities stood for kindness.

Shang Technology

Working with bronze was an important technology for the Shang. Artisans used bronze to make many tools of war, including arrowheads, spearheads, ax heads, and helmets. The bronze-making skill of the Shang is one of the reasons they were able to remain in power for more than five hundred years.

The End of the Shang Dynasty

The Shang excelled in war, enabling the ruling classes to achieve great wealth. However, in time, these very strengths helped to bring about the end of the dynasty. Constant warfare eventually weakened the military power of the Shang.

The Shang had a system of money, using valuable cowrie shells that they received as part of their extensive trade with neighbors. The Shang king and his nobles spent extravagant amounts of money on their palaces, furnishings, clothing, and even their tombs. Over time, this lavish spending may have weakened the economy. A later king would say that the final blow was the corruption of the last Shang king. Rather than look after his people, he spent all his time on recreational activities like hunting, but no one knows whether this report was true.

Around 1045 B.C.E., a frontier state called Zhou (joh) rose up against the dynasty. Zhou armies under King Wu caught the Shang unaware, defeating and overthrowing them. One story says that, as Zhou rebels stormed his capital city, the last Shang king ran from the battlefield, put on all his jewelry, and threw himself into the flames of a fire.

Three Chinese Philosophies

After the Shang dynasty, China's next line of rulers belonged to the Zhou (joh) dynasty. Scholars disagree

about when the Zhou dynasty began. Some say it began in 1122 B.C.E., but new evidence suggests that it lasted from about 1045 to 256 B.C.E.

During the Zhou dynasty's later years, different leaders fought for control in China. The country was thrown into disorder, which led Chinese thinkers to ask serious questions about the best way to maintain peace and order in society.

Three very different answers emerged and became separate philosophies known as **Confucianism** (kuhn-FYOO-shuh-niz-uhm), **Daoism** (DOW-iz-um), and **Legalism**. The following scene illustrates the differences between these schools of thought.

Suppose it is 250 B.C.E. The ruler of a small kingdom has sent three advisers to learn about the three philosophies. Upon their return, he asks them, “What should I do to rule well?”

The first adviser has learned about Confucianism, so he tells the king, “Lead by example.” The second adviser

has studied Daoism and says, “If you must rule, rule as little as possible.” The third adviser has learned about Legalism and replies, “Set clear laws and harshly punish those who disobey them.”

In this lesson, you will discover why the three advisers provided such different answers. You will explore Confucianism, Daoism, and Legalism and learn how each philosophy influenced political rule in ancient China.

The Zhou Dynasty

Around 1045 B.C.E., the Zhou, a group of people in northwestern China, moved into the central plains. They overthrew the Shang dynasty and established a new dynasty. For several centuries, the **Zhou dynasty** ruled over a group of states in China. However, in the later years of the dynasty, wars between these states plunged China into disorder.

The Early Years: Stability and Feudalism

After overthrowing the Shang dynasty, the Zhou established their own dynasty to rule over China. To justify

their conquest, they claimed that they had been given the **Mandate of Heaven**, a divine right to rule China.

According to this belief, Heaven was a power that controlled human destiny. The king was the son of Heaven, and as long as he governed his people well, Heaven gave him the right to rule. But if the king did not govern well, Heaven would send signs of its displeasure, such as earthquakes and floods. When the king lost the support of Heaven, others had the right to overthrow him. The Zhou and later groups believed in the Mandate of Heaven.

Using a system of relationships called **feudalism**, the Zhou increased the government's stability. Under feudalism, the king owned all the land and distributed large pieces of it to loyal supporters, called lords. In exchange, these lords sent soldiers to fight against enemies who threatened their king. The lords were rulers of their own lands, or states, and had absolute power over the peasant farmers who worked those lands. Peasants had their lord's protection. In return, they gave a portion of their crops to the lord.

The Later Years: Conflict and Creative Thought

Although feudalism maintained political stability in China for a time, the system began to break down by the 700s B.C.E. The lords of individual states became more ambitious and more powerful. Eventually, the power of some lords rivaled that of the king.

Between about 770 and 453 B.C.E., a number of small states often quarreled with one another. They eventually combined into six or seven larger states that fought for power. These wars brought some 250 years of disorder to China, a historical time often called the Warring States period.



Such unrest led Chinese thinkers to ask important questions about human nature and about how best to govern. Some rulers hired scholars to advise them on how to create order and increase their royal power.

So many ideas were offered that the Chinese later called them the “Hundred Schools of Thought.” The three major schools of thought that emerged were Confucianism, Daoism, and Legalism, each of which had a major influence on Chinese culture. Let's examine their origins, teachings, and influence, beginning with Confucianism.

Confucianism

Confucianism is based on the teachings of Kongfuzi, who is called Confucius (kuhn-FYOO-shuhs) by Western society. This philosophy deeply influenced Chinese government and culture.

The Founder of Confucianism

Confucius lived from about 551 to 479 B.C.E. He was born in the small state of Lu, in eastern China. He experienced firsthand the disorder that erupted when lords fought for power. Between 722 and 481 B.C.E., his own state was invaded many times.

Confucius deeply respected Chinese traditions, such as reverence for ancestors and learning. However, he also realized that society and government needed to evolve if peace and order were to exist. Specifically, rulers needed to govern wisely. Confucius wanted to educate men of good character to serve society as honest and fair government officials.

The Teachings of Confucianism

The goal of Confucianism was to achieve a just and peaceful society. Confucius taught that society worked well when all people used standards of good behavior in their roles and in their relationships with others.

According to Confucianism, there are five basic relationships between people: ruler and subject, husband and wife, father and son, older sibling and younger sibling, and friend and friend. All people must respect and obey those who are above them in status. In particular, they must respect their elders. In return, those with authority, such as rulers, fathers, husbands, and older siblings, must set a good example. They should be kind, honest, wise, and faithful. Confucius instructed, “Do not do to others what you would not want done to you.”

Daoism

The second great philosophy to emerge from China's time of trouble was Daoism (also spelled Taoism). Like Confucianism, it attempted to provide answers to the difficulties that prevented right living and good government.

The Founder of Daoism

According to tradition, the great sage, or wise man, of Daoism was Laozi (low-dzuh). His name is sometimes spelled “Lao-tzu.” Laozi was said to be the author of a work called the *Dao De Jing* (dow duh jing). The English version of the title is *The Classic of the Way and Its Power*.

Some modern scholars think that Laozi was a real man who lived in the late 500s B.C.E., while others believe that he was merely a legend. Regardless, historians agree that the *Dao De Jing* was actually written over time by many writers.

Old stories of Laozi's life describe how he came to write the *Dao De Jing*. These stories explain that Laozi worked as an adviser to the Zhou court for many years. When he was 90 years old, he grew tired of government work and decided to leave China. When he arrived at the Chinese border, a guard recognized him. Upset that the great teacher's wisdom would be lost to China, the guard asked Laozi to record his thoughts prior to his departure. So Laozi sat down and wrote a small manuscript of only 5,000 characters, the *Dao De Jing*.

The *Dao De Jing* preached a return to a simple and natural way of living. Here is an example of one passage:

If you do not want your house to be molested by robbers,

Do not fill it with gold and jade.

Wealth, rank, and arrogance add up to ruin,

As surely as two and two are four.

The Teachings of Daoism

Daoism was based on the ancient Chinese idea of the Dao (dow), or “the Way,” which was thought to be the force that gave order to the natural universe. Daoism taught that people gained happiness and peace by living in harmony, or agreement, with the way of nature.

To Daoists, nature is full of opposites, like life and death, or light and darkness. True harmony comes from balancing the opposite forces of nature, called **yin and yang**. *Yin* translates to “shaded,” and *yang* translates to “sunlit.” In the same way, human life is a whole made up of opposites. It is impossible to have good without bad, beauty without ugliness, or pleasure without pain.

The Daoists taught that people followed the way of nature by living simple lives of quiet meditation. Notice, the Daoists instructed, how nothing in nature strives for fame, power, or knowledge. Similarly, people should neither feel self-important nor work to gain possessions or honors. Instead, they should accept whatever comes, like a blade of grass that bends when the breeze blows.

The Daoists believed that everyone must discover the Dao for themselves. Too many laws and social rules conflict with the way of living naturally and following the Dao. According to these teachings, the best rulers were those who ruled the least. The *Dao De Jing* says, “Governing a large country is like frying a small fish. You spoil it with too much poking.” It also tells rulers to be weak and let things alone.

Legalism

The third major philosophy that came out of China's time of trouble was Legalism. Although very different from Confucianism or Daoism, it offered new answers about how to solve problems that interfere with order and good government.

The Founder of Legalism

Legalism was based on the teachings of Hanfeizi (hahn-fay-dzoo). Hanfeizi (also spelled Han-fei-tzu) lived from 280 to 233 B.C.E. and was a prince of the royal family of the state of Han. He lived to see the end of the Warring States period and of the Zhou dynasty.

Like Confucius, Hanfeizi was very concerned with creating peace and order in society. However, he did not think that the Confucian teachings about proper behavior were the answer. Many of his ideas survive today in a book named after him, *Hanfeizi*.

The Teachings of Legalism

Those who followed Legalism believed that most people are naturally selfish. Left to themselves, Legalists declared that people will always pursue their own self-interest and cannot be counted upon to have a good influence on one another. Therefore, it was not enough for rulers to simply set a good example. Instead, they should establish strict laws and enforce them, either with rewards for good behavior or with harsh punishments for bad behavior. Civil servants

should be monitored carefully and punished for not performing well, while people who criticize the government should be banished to China's far northern frontier.

In Hanfeizi's time, rulers were frequently overthrown. To solve this problem, Hanfeizi instructed that rulers must have absolute power supported by military might. Rulers should trust no one, not even their own relatives. Hanfeizi wrote, “He who trusts others will be controlled by others.”

The Han Dynasty

The Han (Hahn) dynasty arose because the Chinese people were unhappy with the harsh, Legalist rule of the Qin. After the first emperor's death, they rebelled against the Qin.

Liu Bang (LEE-oo bahng), a rebel who had gained control of the Han kingdom, conquered the Qin army and ended the Qin's fourteen-year reign over China. He then established the Han dynasty, which lasted from about 206 B.C.E. to 220 C.E., under numerous rulers.

Over time, Han emperors began to change the way China was ruled. Gradually, they incorporated Confucian ideals of moral behavior into Chinese government.

Under Han rule, China had a golden age, or a long period of stability and wealth. Education, literature, and art flourished, while 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, in part due to new technologies. Once Central Asia was under its control, the Han established trade relationships with the West.

In this lesson, you will explore warfare, government, agriculture, industry, art, medicine, and science under the Han dynasty. You will see how the accomplishments of the Han dynasty improved daily life in China.

Warfare

The Han excelled in warfare. Their military methods and new weapons helped them expand their dynasty. At

its height, the [Han dynasty](#) reached west into Central Asia, east to present-day Korea, and south to present-day Vietnam.

The Han dynasty had a large and well-organized army. All men from about the ages of twenty-five to sixty had to serve two years in the army. Historians estimate that Han armies had 130,000 to 300,000 men.

New technologies helped the army. Advances in iron making improved the strength and quality of armor. Han ironworkers produced a kind of fish-scale armor that flexed and moved with the body. The Han were among the first people to make iron swords. The strength of iron allowed skilled workers to fashion longer swords that soldiers could use to swing at an enemy from a safer distance.

Another favorite weapon of the Han was the crossbow. A crossbow is made of two pieces of wood in the shape of a cross. A string is attached to each end of the horizontal piece of wood. When that string is pulled back and released, an arrow is shot.

The Han invented the kite and used it in clever ways for military purposes. According to one legend, a Han general once used a kite to measure the width of a heavily guarded wall. Kites were used to send messages from one part of an army to another. They were also used to frighten the enemy. Kites with bamboo pipes were flown over enemy camps at night. Enemy soldiers would hear a ghostly noise coming from the darkness above them. It sounded like “*fu, fu*” (“beware, beware”). The alarmed soldiers often ran away.

Government

The Han emperors made significant improvements in Chinese government. They adopted the centralized government established by Emperor Qin Shi Huangdi. But they softened the harsh ruling style of the Qin emperor and brought Confucian ideas back into government.

Han emperors needed many government officials to help run the vast empire. The government of China during this time functioned as a **bureaucracy**. A bureaucracy is a large organization that operates using a fixed set of rules and

conditions. At each level of the bureaucracy, people direct those who are at the level below them.

The highest-level Han officials lived in the capital and gave advice to the emperor. Lower-level officials lived throughout the empire. They had many responsibilities, such as overseeing the maintenance of roads and canals. They also had to make sure that, in case of famine, enough grain was produced and stored.

One key improvement made by the Han concerned the way civil servants, or government workers, were hired. Before the Han dynasty, social status determined which government officials got jobs. The Han, however, based their choices on ability and knowledge. To become officials, young men had to pass a long, difficult civil service exam. It was based on the principles of classic Chinese writings. The candidates had to learn five books by heart. Legend says that the men then had to spend several days taking the exam in tiny rooms. All the while, they were watched by guards to prevent cheating.

Once hired, civil servants were not allowed to serve in their home districts. This rule was intended to prevent officials from giving special favors to friends and relatives. Every three years, civil servants could be promoted or demoted depending upon an evaluation of their work.

Agriculture

Farmers in ancient China faced a number of difficulties. Several important advances made in agriculture during the Han dynasty improved their lives.

Han farmers were expected to grow enough food to feed their families and to help stock the shared granaries, or grain storehouses. In addition to growing crops, farmers had to make their own clothing, build their own homes, and give one month of unpaid labor to the government for building projects like canals and roads. Hard as this life already was, floods and drought often destroyed crops, presenting farmers with yet another challenge.

One invention that helped farmers was the chain pump. The chain pump made it easier to move water from low irrigation ditches and canals up to the fields. Workers used

pedals to turn a wheel, which pulled a series of wooden planks that moved water uphill to the fields.

The Han skill in ironwork also came to the farmers' aid. The Chinese were the first to learn how to pour melted iron into molds. This process enabled them to make strong iron plows. Han plows were designed to push the dirt away from the row being plowed so that the soil would not pile up in front of the plow.

Additionally, the Han invented the wheelbarrow. The Chinese wheelbarrow had one large wheel in the center. Goods were carried on either side of the wheel. It was much easier for farmers to push a heavy load in a wheelbarrow than to carry it on their backs or in buckets suspended from a pole across their shoulders.

Art

During the Han dynasty, a key advance was made in art—the invention of paper. Paper was the ideal material for calligraphy, which is the art of fine handwriting. Calligraphy was important in Chinese culture. It was a style of writing

especially valued for its natural flow, as if inspired by nature.

Chinese scribes used some of the same tools and techniques as painters did. They wrote their characters by painting them with a brush and ink. Characters were created by one or more strokes, drawn quickly in a particular order. The ideal stroke created both delicate and bold lines. Paper was perfect for this art because of the way it absorbed the ink.

Before the invention of paper, the Chinese wrote on silk. Although silk could easily be rolled into scrolls, it was very costly. People also wrote symbols vertically on bamboo strips. To make books, they tied a series of strips together in a bundle. Bamboo was less expensive than silk, but it was bulky and awkward to use.

The invention of paper, in about the first century C.E., not only benefited calligraphers but also 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.

A variety of materials were used to make paper. They included silk fibers, hemp, bamboo, straw, and seaweed. These were boiled into a soupy pulp. A screen was dipped into the pulp and then pulled out. When the pulp dried on the screen, the result was paper.

Medicine

The practice of medicine during the Han dynasty involved some ideas and treatments that are still used in traditional Chinese healing today. The ancient Chinese believed that illnesses occurred when the forces of yin and yang in the body were out of balance, so healers tried to restore the natural balance of these opposite forces.

One technique Chinese healers developed for this purpose was acupuncture. In acupuncture, thin needles are inserted into specific parts of the body with the intention of rebalancing the forces of yin and yang. Acupuncture is believed to be useful for curing illnesses that strike quickly, like headaches.

A second healing technique was moxibustion. In this method, a moxa—a small cone of powdered leaves or

sticks—is placed on or near the skin and burned. The heat is believed to reduce pain and promote healing. This technique is used to treat long-term diseases, such as arthritis.

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 pulse is the little throb in your blood vessels caused by the contraction of your heart as it pumps blood through the body. The Chinese also discovered that blood circulates from the heart, through the body, and back to the heart. Western science did not make this discovery until the 1600s C.E.