Inventions That Mattered

Read how four inventions changed life in ancient China.

SS24.7.13c "Describe the significance of Chinese technological advancements, including paper, gunpowder, the compass, and the seismograph."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the names of four Chinese inventions. Circle one detail for each that shows why it mattered to people's lives.

New Ways to Write, Respond, Travel, and Fight

1. Imagine a government messenger carrying reports across ancient China. Before paper became common, people often wrote on bamboo slips or silk. Bamboo was heavy, and silk was costly. By the Eastern Han period, makers were improving paper from plant fibers and old cloth. Cai Lun is traditionally credited with a major improvement around 105 CE. Paper was lighter and generally cheaper than these earlier writing materials. Officials could keep records and send written information more easily, while scholars could copy and share ideas across long distances.

2. Another invention helped officials respond to danger they could not see. In 132 CE, Zhang Heng made a device that detected the shaking from distant earthquakes. Its design indicated the direction of a quake, even when people nearby had not felt it. This early seismograph did not predict earthquakes or measure their exact size. It could alert the imperial court to possible damage far away, so officials could investigate and send help. Knowing about a disaster sooner could matter greatly to people waiting for aid.

3. Chinese inventors also changed travel and warfare. A compass uses a magnetized needle or piece of lodestone to point toward magnetic north. By the Song dynasty, sailors used compasses to find directions when clouds hid the sun or stars. This made long sea voyages easier to navigate. Gunpowder, developed through experiments in China, was later used in weapons such as fire arrows and bombs. It changed battles by allowing armies to attack with fire and explosive force. Over time, knowledge of gunpowder spread beyond China and reshaped warfare elsewhere.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why did paper make it easier to share written information than bamboo slips or silk?

2. How could Zhang Heng's seismograph help people after a distant earthquake?

3. Why was the compass useful to sailors when the sky was cloudy?

4. How did gunpowder change warfare in China and beyond?

3 YOUR TURN

Your own words

Imagine a city in ancient China facing two different challenges. In four sentences, choose two inventions from the passage, invent one specific situation for each, explain how each invention changes what people can do, and compare the two changes.

ANSWER KEY

Inventions That Mattered

GRADE 7 · SS24.7.13c

PART 1 · READ AND MARK

Underline the names of four Chinese inventions. Circle one detail for each that shows why it mattered to people's lives. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why did paper make it easier to share written information than bamboo slips or silk?	**Paper was lighter than bamboo and generally cheaper than silk, making written records easier to carry and share.**
2	How could Zhang Heng's seismograph help people after a distant earthquake?	**It could alert the imperial court to a distant quake and indicate its direction, allowing officials to investigate and send help.**
3	Why was the compass useful to sailors when the sky was cloudy?	**It helped sailors find directions when clouds hid the sun or stars, making sea voyages easier to navigate.**
4	How did gunpowder change warfare in China and beyond?	**It let armies attack with fire and explosive force. Knowledge of gunpowder later spread and changed warfare elsewhere.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

A clerk in a coastal city needs to send new harbor rules to nearby towns, so she writes them on paper. The light sheets make it easier to carry copies to several officials. Meanwhile, a ship captain uses a compass to steer west toward home when clouds cover the stars. Paper helps people share instructions, while the compass helps them find their direction.

Accept other accurate effects stated in the passage. For Part 3, look for two distinct, plausible situations and a comparison of how the inventions helped.