

## Mini Lesson Day 1: Imperial China

**Overview:** This is the first of a series of 8 mini-lessons to connect the idea of innovation to 7th grade social studies content standards. These materials are intended to tack onto the end of whatever day the teacher covers standard 7.07 as a summary activity for standards, 7.03, 7.06, and 7.07. They may also be taught at the end of the year as course review materials.

### **Social Studies Content Standards:**

7.03 Summarize agricultural, commercial, and technological developments during the Song Dynasties, and describe the role of Confucianism during the Song.

7.06 Summarize the effects of the Mongolian empires on the Silk Roads, including the importance of Marco Polo's travels on the spread of Chinese technology and Eurasian trade.

7.07 Analyze the achievements of the Ming Dynasty and reasons for its isolationism, including building projects (e.g., the Forbidden City and reconstruction of the Great Wall) and Zheng He's sea voyages.

### **Social Studies Practices:**

SSP.04 Construct and communicate arguments citing supporting evidence to: Demonstrate and defend an understanding of ideas, compare and contrast viewpoints, illustrate cause and effect, predict likely outcomes, devise new outcomes or solutions

SSP.05 Develop historical awareness by: Recognizing how and why historical accounts change over time, perceiving and presenting past events and issues as they might have been experienced by the people of the time, with historical empathy rather than present-mindedness, evaluating how unique circumstances of time and place create context and contribute to action and reaction, identifying patterns of continuity and change over time, making connections to the present

SSP.06 Develop a geographic awareness by: Using the geographic perspective to determine relationships, patterns, and diffusion across space at multiple scales (e.g., local, national, global), determining the use of diverse types of maps based on their origin, structure, context, and validity, analyzing locations, conditions, and connections of places and using maps to investigate spatial relationships, analyzing interaction between humans and the physical environment, examining how geographic regions and perceptions of regions are fluid across time and space

### **SEL Standards:**

3A.2 Recognizes multiple points of view or perspectives in a situation

3C.2 Recognizes the similarities of different cultures and social groups

3C.3 Recognizes the value of different cultures and social groups

**Objectives:** I can identify innovations of Imperial China and how we still use them today by answering source-based questions.

I can determine who had influence in Imperial China.

**Materials:**

*Innovations and the Voices that Shaped our World* packet

Large laminated map of school's neighborhood (provided by the Civic Design Center)

Mini pictures of innovations - laminated to tape or pin to maps

**Launch: Transition to Innovation Connections**

In order to transition from content focus to a local context, teacher can ask: Have you noticed any city innovations from Imperial China in our world, in Nashville, or in our neighborhood?

**Procedure: Connecting Innovations**

- 1) Pass out the *Innovations and the Voices that Shaped Our World* packet and have students turn to the Imperial China page.
- 2) Have students get out their instructional materials from the Imperial China unit to reference while they complete the assignment.
- 3) Have students complete the Imperial China portion of the packet where they will examine visuals showing examples of the legacy of Imperial China, identifying how the innovation changed Imperial China and the world and how we still use it today. They will also identify who the voices of power were that drove the innovations.

***Possible Teacher Discussion Prompts and Student Responses (Teacher prompts can be verbally presented in dialogue or selected and added to text boxes at the bottom of each page)***

- Paper

■ **Student:**

- Before the invention of paper, bones, tortoise shells, and bamboo slips were all used as writing surfaces, but the Chinese thought they could create something better. They first attempted to use silk to make paper, but they were not satisfied. Besides, silk was better used for other purposes.
- In 105 A.D. Cai Lun invented a better paper from worn fishnet, bark and cloth and presented his creation to the Emperor of the Han Dynasty. These raw materials could be easily found so large quantities of paper could be produced.
- The paper making technique was exported to Korea in 384 A.D. A Korean Monk then took this skill with him to Japan in 610 A.D.
- During a war between the Tang Dynasty and the Arab Empire, the Arabs captured some Tang soldiers and paper making workers.

Thus, a paper factory was set up by the Arabs.

- Through the Arabs' trade along the Trans-Saharan trade route, Africans and Europeans then mastered the skill. The first paper factory in Europe was set up in Spain.

- **Teacher Scaffolds and Guided Questions:** Let's quickly go around the room and state the huge number of ways we use paper. What would our world be like without paper? How did this innovation process occur? What types of strategies were Chinese people using before the invention of paper? How did they have to revise their process after they identified their need and began their innovation process? Have you ever had an idea that you started but had to re-plan midway through the project, like early Chinese innovators who tried to use silk?

- Woodblock Printing and Movable Type

- **Student:**

- Inspired by engraved name seals, Chinese people invented fixed-type engraved printing around 600 A.D.; however, this printing technique was an expensive and time-consuming process because each carved block could only be used for a specific page of a particular book. One single carving mistake could ruin the whole block.
- During the Song Dynasty, Bi Sheng, an inventor, invented movable, reusable clay type after numerous tests. Single types (letters) were made and picked out for printing certain books. These types could be used again and again for different books. Because of the large number of different characters (letters) in the Chinese written language, this technique did not have a dramatic impact at the time. However, today, this typesetting technique is regarded as a revolution in the industry.
- About 200 years later, Marco Polo traveled from Italy to China and encountered this moveable-type. As he journeyed home on the Silk Road and shared his ideas, the technique spread to Korea, Japan, the Middle East and Europe and advanced the development of world civilization, making reading and writing more common.

- **Teacher Scaffolds and Guided Questions:** Why were movable type and woodblock printing so innovative? What did people have to do before these inventions? How would these new processes have helped with the spread of good and ideas through cultural diffusion? Do you know of any printing organizations in Nashville? <screenprinting for t shirts, Hatch Show Prints, newspaper printing would all count> Do we still line up stamps like this? What do we do instead? <Keyboard, typing, printing using a printer> What would our world be like without computers or keyboards? Can

anyone think about any in-between steps between woodblock printing with movable type and today's computer keyboard and printer? <Printing press, typewriter, desktop, even extending into tablets and cell phones>

- Compass

- **Student:**

- During the Warring States period, a device called a Si Nan became the forerunner of the compass. A Si Nan was a ladle-like magnet on a plate with the handle of the ladle pointing to the south. In the 11th century, tiny needles made of magnetized steel were invented. One end of the needle points north while the other points south. The compass was thus created.
    - The first person recorded as using a compass for navigation was the famous Chinese sailor Zheng He, who made seven major ocean voyages between 1405 and 1433. The compass greatly improved a ship's ability to navigate over long distances.
    - The compass was introduced to the Arab world and Europe between 960 and 1127. Once navigation became safer, maritime (sea-related) contact increased, as trade using boats became safer and easier. This invention also opened up the oceans for exploration and led to the discovery of the New World.

- **Teacher Scaffolds and Guided Questions:** What does a compass tell us? How would a compass have helped the Chinese at the time? What is the equivalent of the compass in our world today? What additional information do we need to know in our world today? How have additional innovations led to further improvements to the compass?

- Gunpowder (optional - see note above materials)

- **Student:**

- In Chinese, gunpowder is called huo yao, meaning flaming medicine. Unlike paper and printing, the birth of gunpowder was quite accidental. It was first invented accidentally by alchemists (scientists) while attempting to make an elixir (potion) of immortality. It was a mixture of sulphur, saltpeter, and charcoal. At the end of the Tang Dynasty, gunpowder was being used in military affairs as the Tang attempted to expand their empire. During the Song and Yuan Dynasties, frequent wars spurred the development of cannons, and fire-arrows shot from bamboo tubes. All of these weapons used gunpowder and showed the new invention to the enemies of the Chinese.
    - In the 12th and 13th centuries, gunpowder spread to the Arab countries through trade on the Silk Road. After that, it reached Greece, other European countries, and finally all over the world.

Within 100 years, Islamic and European armies were developing weapons using gunpowder.

- **Teacher Scaffolds and Guided Questions:** Where do we see gunpowder in our world today? What about in addition to guns? (fireworks originally used gunpowder) What are the many ways and places we see it being used? How does it affect our world? Are all innovations positive?

### **Closing/Reflection:**

1. Students share out ideas from final reflection page with partners or group - can state writing and verbally expand ideas or show drawn response.
2. Class adds examples of Chinese innovations in their neighborhood to the large-scale neighborhood map anchor chart.
  - a. Possible Script: *We have done an awesome job connecting the innovations of the Imperial Chinese world and our world today. In our last activity we are going to identify where we still see evidence of Chinese innovation in our neighborhood. Let's take these mini pins with pictures on them and attach them to our neighborhood map in places where we already know we have modern day versions of these innovations.*
  - b. Students place pins/tape pictures of innovations in identified areas: Where could we mark on our map as a place where the innovation of paper has really changed or influenced our neighborhood? <schools, stores - money, bookstores, offices, businesses (receipts), etc. What about movable type/woodblock printing? <Anywhere with a computer, any newspaper, Hatch Show Prints, any letterboards or major signage> Compass? <bus stop - follows a certain route, neighborhood boundaries>

### **Differentiation:**

- Teacher should read reflection questions out loud for worksheets and brainstorm strategies
- Strategic Grouping/Partnerships
- Scaffolded Teacher Prompts