Song Dynasty (China)

AP World History Themes and internet data analysis

• Place the four, separated scenes from Kaifeng, the Northern Song Capital, in what you believe is the correct order.
• Briefly describe what you think is happening at each number of the following scent.

Arched Bridge

1.
2.
5.
6.
9.
11.
13.

Gate

1.
2.
15.

Busy Street

8. Type of shop
9. Purpose of the building
11.
12.

• Go to the Song Dynasty in China (960-1279) Columbia University website at: http://afe.easia.columbia.edu/song/
• Click on the Cities tab
• Check the correct order of the four Kaifeng, the Northern Song Capital. If this is to hard to see. I will give the answer.
• Check your answers regarding the various activities on you city scenes by going to the “Arched Bridge” scene, then “Explore Scene.”
• Go to the main page text and “urbanization,” then “explore the scene” for the Gate scene activities, then scroll left to find examples of the Busy Street scene as you explore the internet site.
Urban Functions – Kaifeng

Cities serve as a variety of functions (purposes, or reasons for existing). These can include:
- Retail/trade
- Manufacturing
- Education (technical or religious training, university, monastery, etc.)
- Administration (local, regional, or national political capital)
- Transportation hub
- Military – barracks, training centers etc.
- Scientific research
- Tourism and/or recreation
- Services for tourists, traders, merchants, and other travelers
- Cultural center – theaters, music venues, art galleries, etc.
- Financial center (money lending, tax collection, banking, insurance, stock exchange, etc.)
- Medical and/or hospital
- Retirement center

The more types of functions a city has, the larger tend to be. By the end of the Song Dynasty, Kaifeng was probably close to a million in population, while Paris and London were smaller than Bend—around 30,000 to 80,000.

1. What evidence do you find for different functions of Kaifeng? List each function and the supporting evidence.

2. Read the enclosed documents and navigate through and explore the internet program to answer the questions below related to the AP World History themes.

   **AP World Themes**
   - Impacts of technology and demography (population issues) on people and environment

   2. Read about the development of moveable type and printing in the handout “Technology on the Cutting Edge: Books in Print” and by going to the main scene of the internet site and “printing” in the text.

   How did the combination of paper making, moveable type and the increased number of books and literacy (including some peasants) probably change the following? (Explain your reasoning.)

   a. Quality of government civil servants/officials

   b. Efforts to slowly reduce malaria in warmer, wetter southeastern China

   c. Encouraging peasants to try planting faster growing, hardier, Champa rice – for two crops per year
3. **Iron production**: In what year did Europe catch up with or equal the amount of iron produced in China and India?

4. From a hypothesis of at least three factors that explain why China produced much more iron than Europe in 1078.

5. How did the mass production of cheap iron improve agricultural production and the lives of peasants?

6. **Canals**: Why did the Chinese build a canal connecting the southern Song capital/international port Hangzhou with the northern Song capital Kaifeng?

7. What impact did the canals have on iron production and distribution of iron tools and weapons?

8. It was too cold to grow rice in northern China, so what other purpose might the canals have served?

9. What impact did the water-driven spinning machines (wound silk thread onto smaller wooden bobbins or spools along the bottom of the machine) have on the cost of production of silk textiles?

10. What impact did the water-driven spinning machines have on the volume of silk textiles traded along the silk roads and Indian Ocean trader routes?

11. Explore the internet site (“economic growth,” etc.).
   - What were three other important technological breakthroughs or inventions of the Song Dynasty?
   - List each and briefly describe what socio-economic class (merchants, peasants, etc.) or institution (government, military, etc.) the invention probably affected, and why.

12. Think back to the **arched bridge** and the poster of the Han dynasty river town. Go to NOVA site to see how advanced the arched “Rainbow” bridge in Kaifeng was in civil engineering and the attempt to rebuild it recently. (main page, “economic growth” in text, “NOVA builds a rainbow bridge”)
   - What characteristics of the “Rainbow” bridge made it ahead of its time?
b. Do you think it is aesthetically pleasing? Why or Why not?

13. Population line graph (handout)
   a. What was the approximate population of the Song Dynasty at the beginning and end of the Dynasty?
   b. By what percent did population increase during the dynasty?
   c. What evidence indicates reasons why population increased so dramatically? Look for evidence for disease control and public health.
   d. What other factors may have led to population increases?

14. Why do you think (hypothesis) population decreased so dramatically during Yuan/Mongol Dynasty conquest of the Song Dynasty?

15. How did China’s population compare to Europe’s from 400 BCE to 1975 CE?

   Systems of Social structure and Gender structures

16. What different socio-economic classes seem to exist in Kaifeng?

17. What groups of people seem to have more status and prestige? Evidence?

18. Read the “Women’s Life” handout and “social changes” of the internet site main page.
   a. What were the most difficult general events in the lives of females in Song China?
   b. What might have been the high points of their lives?
   c. What evidence do you find in the scroll that portray the lives of women in the Song Dynasty?
   d. Do they seem to reflect the descriptions of women from the handout and internet text?

   Cultural and Intellectual Developments

19. What evidence is there religion or religious activity?
20. What seems to be the common forms of entertainment? Does entertainment seem to vary by different socio-economic classes?

Impact of Interactions among major societies
21. What evidence is there of Long distance interactions in Kaifeng with other cultures?

22. Main page, “economic growth,” “Watery Kingdom: China’s Mariners from Antiquity to the Ming Dynasty”
   a. What cultures did the Song learn from in the building of large ships/junks?
   b. What were the two main purposes of the large numbers of junks built and maintained during the Song Dynasty?

23. What important role did Hangchow (Southern Song Capital) play in long distance interactions with other cultures?

Relationships of Change and Continuity over time
24. Do you think a porcelain factory in Kaifeng might have looked like the on in later Ming Dynasty (1368-1644)? Why or Why not? (is internet to search for Ming Dynasty porcelain factory)

25. Was the Song Dynasty sophisticated and advanced enough to be considered the world’s “first modern culture?” Why or why not?
3. TECHNOLOGY ON THE CUTTING EDGE: BOOKS IN PRINT

INTRODUCTION:

During the Song, the population boom and the economic revolution went hand in hand with technological innovation. The Song is known for technological and scientific achievements of all kinds that are still familiar to us today: gunpowder, vaccinations, the canal lock, as well as many other inventions and advances in science and mathematics came about during the Song. But perhaps the invention that had the broadest impact on Chinese civilization was the invention that made the dissemination of knowledge of all kinds possible: printing and manual type. Of course, by the Song dynasty China already had a long scholastic tradition reflected in countless histories, volumes of poetry, and tomes of philosophy known as the “classics.” In previous periods, texts had been recorded on a variety of materials: inscriptions on bone, stone tablets, carving (many of which still exist today), folding bamboo books, and bound paper books copied by hand. However, it wasn’t until the Song that books on any variety of subject matter were printed and distributed in large quantities. While printing did not become mechanized during this period, the mass production of books via improvements in printing technology, had an enormous impact on Song China. Scholars trace growth of the scholar-official class, the spread of knowledge in a variety of fields, and the rise of literacy among the common people to improvements in printing technology achieved during the Song.

The invention of movable type was no small feat. The Chinese language commonly uses about 7,000 characters, and scholars used additional, obscure characters in their writings. The printers who were in charge of typesetting, proofreading, and finishing the texts had to have a specialized knowledge of language and linguistics in order to do their job correctly. Printing studios might make 20 pieces of type or more for a single character used often in the language. It wasn’t uncommon for a single print job using movable type to require several thousand characters. Nonetheless, the improvements in printing contributed not only to the number and speed with which books were printed, but to the breadth of information available in print. Before the mass production of texts via this new technology, printed materials were limited to major works destined for the hands of scholars and to Buddhist amulets and sutras for the devout. Thanks to major developments in printing, information on all kinds of topics was available for more sectors of China’s growing population. Later dynasties continued to use both movable type and woodblock technology, and to refine it by experimenting with other materials that further improved the quality and possibilities in printing. Over 400 years later, Johannes Gutenberg reinvented movable type in Germany in 1450, after which it spread to other areas of Europe.

<table>
<thead>
<tr>
<th>Place</th>
<th>Date when manufacture of paper began</th>
<th>First report of water-wheels driving the pulping process</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHINA</td>
<td>AD 100</td>
<td></td>
<td></td>
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<tr>
<td>TIBET</td>
<td>AD 650</td>
<td></td>
<td></td>
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<tr>
<td>INDIA Buddhist</td>
<td>AD 670</td>
<td></td>
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<td></td>
<td>Delhi Sultanate</td>
<td>After 1258</td>
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<td></td>
<td>Bengal</td>
<td>1406</td>
<td></td>
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<tr>
<td>CENTRAL ASIA Samargand</td>
<td>AD 751</td>
<td>AD 1041</td>
<td>Chinese workmen in 751</td>
</tr>
<tr>
<td>OTHER ISLAMIC COUNTRIES</td>
<td>Bangladesh</td>
<td>AD 794</td>
<td>Possibly paper imported from Tibet</td>
</tr>
<tr>
<td></td>
<td>Cairo</td>
<td>AD 850</td>
<td>Probable Chinese workmen at first</td>
</tr>
<tr>
<td></td>
<td>Damascus</td>
<td>c.1000</td>
<td>Existence of paper mills known, but dates uncertain</td>
</tr>
<tr>
<td></td>
<td>Tripoli</td>
<td>c.1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sicily</td>
<td>c.1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fez (Morocco)</td>
<td>c.1050</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jativa (near Valencia, Spain)</td>
<td>1151</td>
<td>Jativa was under Christian rule from c.1238</td>
</tr>
<tr>
<td>EUROPE Spain</td>
<td></td>
<td></td>
<td>See under Islamic countries</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>1276</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sicily</td>
<td>1326</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Italy, Fabriana</td>
<td>1390</td>
<td></td>
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<tr>
<td></td>
<td>France, near Ambert</td>
<td>1390</td>
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<tr>
<td></td>
<td>Germany, Nuremberg</td>
<td>1390</td>
<td></td>
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<tr>
<td></td>
<td>England</td>
<td>c.1490</td>
<td></td>
</tr>
</tbody>
</table>

Sources: compiled from data quoted by Teien Tsuen-Hsulin, al-Hasanin and Hill, Liu Guojun and Zheng Rusi, also Jean Gimbel.
Figure 1  Impression of a blast furnace in the Hebei iron-working region, with four men working the bellows to supply the blast.

The drawing is based on the earliest known picture of a blast furnace in China, dating from 1334, but with shapes and proportions based on other illustrations and discussion of furnace types by Hartwell, Needham, and Wagner.

(Illustration by Clare Hemstock)

Table 4: Estimates of iron production per head of population

Standard units are metric tons of pig-iron equivalent, but the following figures are "broad-brush" estimates in which discrepancies in units or pig-iron conversion factors make very little difference.

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Date</th>
<th>Total iron production (tons per year)</th>
<th>Iron production per head of population (kg per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of early production levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China (Song Empire: see chapter 1)</td>
<td>1078</td>
<td>125,000*</td>
<td>1.4* (or more)</td>
</tr>
<tr>
<td>Europe (excluding Russia)</td>
<td>1500</td>
<td>60,000*</td>
<td>1.0* (maximum)</td>
</tr>
<tr>
<td>Eighteenth-century production levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>c.1750</td>
<td>200,000*</td>
<td>1.0* (+0.4)</td>
</tr>
<tr>
<td>India</td>
<td>c.1750</td>
<td>200,000*</td>
<td>1.0* (+0.5)</td>
</tr>
<tr>
<td>Russia</td>
<td>1793</td>
<td>202,000*</td>
<td>5.0* (much lower in 1750)</td>
</tr>
<tr>
<td>Europe (excluding Russia)</td>
<td>1796</td>
<td>420,000*</td>
<td>4.0</td>
</tr>
<tr>
<td>(excluding)</td>
<td>1806</td>
<td>700,000*</td>
<td>6.0*</td>
</tr>
</tbody>
</table>
Figure 2  Map of North China showing the relationship of the Hebei and Henan iron industry to the canal system and the Song dynasty capital at Kaifeng.

A pioneer set of five pound locks was built at Huaiyin in AD 983. Elsewhere, changes of level were managed by double slipways or flash locks. The later part of the Grand Canal was constructed at the end of the thirteenth century after Beijing had become the capital of all China.
Figure 10  Reconstruction of the 'great water-driven spinning machine' shown in figure 9, together with the water-wheel which drove it. Wang Zhen's book gives details of the water-wheel, but not of how many machines it drove, so that part of the drawing is conjectural.

(Illustration by Hazel Cotterell)
A Woman's Life

What could the average woman in the Song dynasty expect her life to be like? Although her life might look and feel very different depending on her family's status, she could expect to go through certain stages in life. She would spend the early years of her childhood in her mother's skirts, left to play until the age of five. If she was from a well-to-do family, her mother might begin to bind her feet at five. Footbinding was the practice of bending a girl’s toes under her feet and wrapping them into tight bundles before swaddling them in tiny embroidered shoes. Footbinding was widely practiced from the Song through the early 20th century. Men found a girl's tiny feet erotic—they were a sign of her fragility and femininity. Mothers bound their daughters’ feet in the hopes that they might find suitable husbands. The process was extremely painful and it made walking a great distance impossible.

It was commonly said that at the age of seven, girls learned to thread a needle and boys went off to school. In other words, at this age both groups began their preparation for adulthood. Seven-year-old boys of elite families began their long years of preparation to take the civil service examination by memorizing at least 20 characters a day. Girls of the same age began to learn the crafts of spinning, weaving, and embroidery from their mothers. These skills would prepare a girl to join her parents-in-law's household, where she would be expected to contribute to the household possibly by spinning thread to trade or by weaving the family's clothes. At 15, a girl officially became a woman at the Festival of the Dead's coming of age ceremony. Hairpins would be placed in a girl's hair to symbolize her passage into womanhood. Young men of the same age received a cap to wear.

A typical woman could expect to be married shortly after this ceremony to a man from a family of her parent’s choosing. Once the marriage was agreed upon by the two families, the girl would be sent to live with her husband in the house of her mother- and father-in-law. She became a member of her husband’s family for life and had little or no contact with her own family from that day forward. Her duties in her new household were to be a filial daughter, a chaste wife, and a good mother. Her parents-in-law might punish her for any number of infractions; the most egregious included disobedience, sterility, jealousy, illness which might prevent her from childbearing, chattering, and the misappropriation of the family property (Gernet 1962, p. 165). If her husband’s family was affluent, her husband might take on concubines whom she would be forced to accept without showing even a hint of the jealousy she probably felt. While a woman might know what was expected of her, fulfilling all of these duties in addition to running her portion of the household, rearing children, and weathering the storms created by concubines and family politics, couldn't have been easy.

The most important relationship and the one she probably derived most happiness and security from was the bond she shared with her children, and particularly her sons (Ebrey 1993, p. 8). Boys were often the most hoped for and, considering marriage customs, we can understand why—a son would stay with his mother for his entire life. When a son married, he would stay in the household he was born into and his bride would come to live with him there. Having a little girl was often bittersweet; mothers knew they would someday have to give up their daughters when they got married.

The average woman spent most of her time in the home or “inner quarters”; in fact, it wasn’t seen as proper for her to venture outside more often than she needed to (Ebrey 1993, pp. 22-24). For wealthy women with servants, this wasn’t very often. Rural women might spend a great deal more time outside, tending to chores. Most women contributed to the livelihood of the household unless they married into elite or wealthy families in which case a woman might spend her time in leisurely activities. Women who worked in the home spun thread, wove cloth for clothes, taxes or cash, and did embroidery. Wives of lower class merchants might help run the business by keeping accounts or serving customers (Gernet 1962, p. 165). The nature of work a woman might do to contribute to the household income was closely tied to the economic class of the family and its needs.

Divorce was not unheard of but remarriage for women in the Song was generally looked down upon. Marriage usually lasted, and even a widow was expected to live out her days in service to her parents-in-law.
Song Modernization? 960-1279

Modernization
- Britain, later W. Europe industrialization
- steel production
- commercialization (banks, currency, trade, joint stock companies)
- urbanization
- technological innovations

Song Modernization

steel production 700 years before W. Europe
more than all of W. Europe in 1800

urbanization
- Kaifeng and Hangchow both over million
- Paris and London 30-80,000
- variety of functions, entertainment

foreign policy - Murphey p. 101
gave up Tibet, Korea, Vietnam, NW
- rational,
- more focus on domestic issues

good gov't
- only 1/3 civil servants in Han and Tang Dynasty from civ serv exams
- moveable, woodblock printing
- more taking exam - all civ. servants from exams
- checks and balances
- no eunuchs or family members

commercialization
- junks, other maritime technology
- increased sea trade
- silk, tea, porcelain, paper main exports
- canals w/ locks, not railroads
- workshops w/ looms, pottery wheels, (not factories yet)
- paper money

tech. innovations
- looms
- water powered mills, water pumps
- bridges
- steel tools and weapons (gunpowder for weapons)
- movable type printing
- farm machines (cultivators, threshers, irrigation)

arts
- landscape paintings
- porcelain,
- poetry, literature

NeoConfucianism

really revival of Confucianism
- humans basically good
- need education and good role models

continued Tang elimination of Buddhism
- challenge to Confucianism and traditional family

footbinding
- started, but limited to upper classes, generally
video "Confucius to Mao" first 16 min.
- compared to Eur. witch executions and female labor