Improving Historical Thinking Skills through Source-Based Instruction
Paige K Solomon, Norfolk Collegiate

LOC TPS World History/ AP World History
The role of Muslim intellectuals in shaping Western knowledge
9-12 Grades
Periods 3 and 4

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This activity is sponsored in part by the Library of Congress Teaching with Primary Sources Eastern Region Program, coordinated by Waynesburg University.

Two to three class periods of 45 – 60 minutes
Description of activity: Students examine documents highlighting the important role of Muslim scientists in advancing medical knowledge, then they analyze essays by modern historians.

Activity Goals
Focus Question: To what extent and in what ways did the Muslim world preserve and advance medical knowledge?
Context: Periods 3 (600-1450) and 4 (1450-1750)

Objectives: Students should be able to identify and explain important contributions of Muslim scientists and intellectuals in the field of medicine. They should also be able to explain the preserving and advancing of knowledge and the benefits of cultural and intellectual exchange. Students should be able to discern arguments in the work of contemporary historians and weigh them for historiographic importance.

Virginia SOLs

WHI.1 The student will improve skills in historical research and geographical analysis by
a) identifying, analyzing, and interpreting primary and secondary sources to make generalizations about events and life in world history to 1500 A.D. (C.E.);
b) using maps, globes, artifacts, and pictures to analyze the physical and cultural landscapes of the world and interpret the past to 1500 A.D. (C.E.);
d) identifying and comparing political boundaries with the locations of civilizations, empires, and kingdoms from 4000 B.C. (B.C.E.) to 1500 A.D. (C.E.);
e) analyzing trends in human migration and cultural interaction from prehistory to 1500 A.D. (C.E.);

WHI.8 The student will demonstrate knowledge of Islamic civilization from about 600 to 1000 A.D. (C.E.) by
a) describing the origin, beliefs, traditions, customs, and spread of Islam;
d) citing cultural and scientific contributions and achievements of Islamic civilization.

STANDARD WHII.1a, b, d, e
The student will improve skills in historical research and geographical analysis by
a) identifying, analyzing, and interpreting primary and secondary sources to make generalizations about events and life in world history since 1500 A.D. (C.E.);
b) using maps, globes, artifacts, and pictures to analyze the physical and cultural landscapes of the world and to interpret the past since 1500 A.D. (C.E.);
d) identifying and comparing political boundaries with the locations of civilizations, empires, and kingdoms from 1500 A.D. (C.E.) to the present;
e) analyzing trends in human migration and cultural interaction from 1500 A.D. (C.E.) to the present;

STANDARD WHII.2e
The student will demonstrate an understanding of the political, cultural, geographic, and economic conditions in the world about 1500 A.D. (C.E.) by
e) citing major technological and scientific exchanges in the Eastern Hemisphere.

STANDARD WHII.6a
The student will demonstrate knowledge of scientific, political, economic, and religious changes during the sixteenth, seventeenth, and eighteenth centuries by
a) describing the Scientific Revolution and its effects.

AP World History Historical thinking skills - synthesis, interpretation, comparison, author’s purpose, contextualization
Key Concepts 3.1.III

Assessment: Students will answer analysis questions for each document and complete a formative assessment identifying and explaining ways in which Muslim intellectuals and scientists have preserved and advanced medical knowledge and the benefits of those contributions.

Activity Details
Primary Sources: see below
Procedure: Students will investigate and examine the primary sources. They will answer the analysis questions provided and then respond to the formative assessment prompt. Ideally, the teacher would discuss the sources before asking students to complete the assessment tasks. The final step would be to have students complete the summative assessment as a short answer questions. Formative assessment task #2 and the summative assessment may be omitted depending on available time, appropriateness for the class, etc.

What you will need before implementing: This lesson would be most effective with computer access for all students. The documents, directions, and chart should shared digitally with all students (in Google Doc.s or another format). This activity could be accomplished with paper copy of the materials for each student.
On Anatomical Procedures
Galen
Translated by Hunayn ibn Ishāq al-ʻĪbādī
original written circa 151–201, this version published between 1500-1599
https://www.wdl.org/en/item/9712/

What can you infer from the background provided on this source?
Trace the evolution of this text.
Who was Galen and why was he so important?
In what ways did he have a lasting impact on Western medicine?
Put this source into historical context.
What role did Muslim intellectuals and scientists play in shaping Western knowledge?

Refer to this essay for more information on Galen and early Muslim scientists:
"Science is of Two Kinds: One Attends to the Soul, the Other Attends to the Body" by George Saliba, Professor of Arabic and Islamic Science, Department of Middle East and Asian Languages and Cultures, Columbia University, New York, and Distinguished Visiting Scholar, Kluge Center, Library of Congress
https://www.wdl.org/en/themes/islamic-science/medicine/
*Ashrīḥ-i badan-i insān* (The anatomy of the human body) or *Tashrīḥ-i Manṣūrī* (Manṣūr’s anatomy)
Manṣūr ibn Muḥammad ibn Ilyās
circa 1393–1409, recopied 1700s
[https://www.wdl.org/en/item/9719/](https://www.wdl.org/en/item/9719/)

Browse the diagrams in the book and read the item detail carefully.
What was the purpose of this book?
What impact did it have?
What might account for the Persian stylistic influences?
Put this in historical context. Compare to medical knowledge in other parts of the world in the 14th century.
What A Physician Cannot Afford to Ignore

ʻAbd Allāh ibn Aḥmad Ibn al-Bayṭār wrote the foundation of this book in the 1200s, which was added onto by Ibn al-Kutubī in the mid 1300s. Recopied by Ibn ʻAbd al-Nabī Muḥammad Ibn ʻAbd al-Nabī in 1682.

https://www.wdl.org/en/item/4328/

Read the item detail for this book.

What evidence does this source provide for Muslim accomplishments in medical knowledge?
Compendium of Works on Medicine by Avenzoar and Averroes
Taysīr fi 'l-mudāwāt wa 'l-tadbīr (Practical manual of treatments and diets) by Ibn Zuhr (Avenzoar) as well as al-Kulliyāt fi al-ṭibb (The general principles of medicine) by Ibn Rushd (Averroes)
Edited by Hieronymus Surianus
1530
https://www.wdl.org/en/item/10673/

Read the item detail for this book.
In what language was the original written?
What is the language of this translation?
When was this introduced into Christian Europe?
Explain the historical context and significance of this work.
What important connection was there between the intellects and scientists of the Muslim and Christian worlds in the late Middle Ages?

Formative assessment task #1:
Identify and explain the ways in which Muslim intellectuals preserved and advanced medical knowledge. What were the benefits of this cultural and scientific exchange?
Formative assessment task #2:

Read the following excerpt from essay “Islam’s Forgotten Contributions to Medical Science” http://www.muslimheritage.com/article/islam’s-forgotten-contributions-medical-science and answer the questions provided.

In the introduction to his book, al-Zahrawi pointed out that good practice in surgery requires a sound knowledge of anatomy [9]. He also emphasized his religious convictions as a Muslim believer. Al-Zahrawi, as well as many of his colleagues, would have considered the study of anatomy not only as indispensable to their professional advancement, but also as a means to understand the wisdom of God's design and, in particular, the perfection of the human being, God's supreme creation [10]. This mode of thinking was best expressed by the 12th-century physician and philosopher from Muslim Spain Ibn Rushd, known in Latin as Averroes, who stated: "He who is engaged in the science of anatomy, increases his belief in God [11]."

However, the anatomical study of the human body was problematic because it required dissection. A number of scholars — religious scholars in particular — seem to have been opposed to the practice since it implied mutilation of God's most noble creation. The medical texts on the other hand — particularly those of the 12th and 13th centuries — make frequent references to dissection, both animal and human, and include detailed descriptions of the practices involved. For a discussion of the complex issue of human dissection in the medieval Islamic world, see Savage-Smith [12].

The important point here is that dissection of the human body seems to have been a controversial issue, but that those involved in the debate did not feel a need to hide their opinions. This is just one example of the intellectual open mindedness in early Islamic times. The receptiveness to new ideas included the heritage of the pre-Islamic world, such as the writings of Galen, which entered the realm of Islam from the 9th century on through systematic translations into Arabic. In the same way as the heritage of the ancients was studied with great respect, non-Muslim scientists, Jews and Christians in particular, played important roles in the scientific community. It was the open, non-dogmatic atmosphere that encouraged people to engage in debate, share ideas and seek new knowledge by asking questions and examining evidence.

1. What is the authors’ main assertion in this passage?
2. What conflict within Islam does this highlight?
3. What were the consequences of that conflict within the Muslim world?
Summative assessment task:

Short Answer Question
Read the following essays and answer the analysis questions below.

http://www.library.yale.edu/neareast/exhibitions/exhitmedicine.html
Muslims' Contributions to Medieval Medicine & Pharmacology

http://www.muslimheritage.com/article/arabic-roots-scientific-revolution
Arabic Roots of the Scientific Revolution

A: Identify the main arguments these historians are making.
B: How are they similar? How are they different?
C: To what extent could one argument be more important in the historiography of the Islamic world? Explain with specific evidence.