



SPHERE

Fostering Civil Discourse and Diverse Viewpoints for Every Classroom

Peak Human: The Abbasid Caliphate

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Lesson Overview

During the Islamic Golden Age, which lasted from roughly 750 CE to 1258 CE, scholars in the Muslim world made remarkable advancements in mathematics, astronomy, medicine, engineering, and philosophy. In his book *Peak Human*, Johan Norberg describes these advancements and the economic system of free trade, liberty, and property rights that enabled them.

In this lesson, students will explore how the Abbasid Caliphate's economic and political system supported an era of unprecedented prosperity known as the Pax Islamica.



THE MINARET AND MOSQUE WALL OF THE GREAT MOSQUE OF SAMARRA, BUILT BY THE ABBASID CALIPH AL-MUTAWAKKIL CIRCA 850 CE, REFLECTS THE ABBASID EMPIRE'S ADVANCED ENGINEERING AND INNOVATIVE DESIGN. AT THE TIME OF ITS CONSTRUCTION, IT WAS THE LARGEST MOSQUE IN THE WORLD.

PC:FAKHRI MAHMOOD, [HTTPS://COMMONS.WIKIMEDIA.ORG/WIKI/FILE:SAMRRAA_05.JPG](https://commons.wikimedia.org/wiki/File:SAMRRAA_05.JPG)

Warm-Up

What was the Abbasid Caliphate?

- Many students in Western countries may not have studied the Islamic world before. To build essential background knowledge, watch this [video](#) and answer these questions:
- Explain the alliance Muhammed formed from the diverse communities on the Arabian Peninsula.
- What is a “caliph”?
- Make an inference. What is a “caliphate”?
- Which 2 powerful empires were wholly or partially conquered by Muslim forces within decades of Muhammed's death?
- Describe the geographical reach of the Umayyad Caliphate.
- Which ancient city became the Umayyad capital?
- How did the Abbasid family claim legitimacy over the Umayyads?
- Which capital city was purpose-built by the Abbasids? What was the source of its incredible wealth?
- Why was succession a contentious issue for the Abbasid Caliphate?
- In a few sentences, identify the factors that led to the downfall of the Abbasids in 1258.

Questions for Reading, Writing, and Discussion

Read pages 141–145 of the book *Peak Human*, then answer the following questions:

- Cite evidence from the text to describe what made the Abbasid Caliphate a “vast free trade” area.

Factors that made the Abbasid Caliphate a “vast free trade” area	Specific evidence
Geographic reach	
Economic principles	
Technological innovations	

- Note 5 specific ways individuals could exercise their property rights in the Abbasid Caliphate.
- What was the primary motivator for businesspeople engaging in the Abbasid economy?
- Unlike many rulers, the Abbasids did not enact price controls. How did this help the empire's economy?
- What aspects of Islamic culture supported trade and commerce?
- How was Islamic slavery (c. 1450 CE–1900 CE) different from slavery in classical Greece and Rome (c. 500 BCE–500 CE)?
- What traditional rights did Muslim women have that were, until recently, uncommon in other societies?
- The excerpt discusses 2 instances when further innovation was blocked in the Muslim world: women's rights and corporate law. In your own words, explain some of the long-term consequences of this stagnation.

Extension Activities/Homework

• Al-Biruni's Mathematical Genius

Muslims are required to pray toward Mecca. As Islamic society spread over vast areas during its Golden Age, it became more challenging for believers to accurately orient themselves on the earth's surface.

In 240 BCE, an ancient Greek mathematician and astronomer named Eratosthenes convincingly demonstrated that the earth was round and provided one of the first known scientific estimates of its size.

Over a thousand years later, the Persian polymath al-Biruni devised an ingenious method of measuring the earth's circumference.

Watch this [video](#) from 11:03 to 24:07 to learn about al-Biruni's incredible scientific discoveries, then answer the following questions:

- What were the specific reasons that Islamic leaders and scholars wanted to know how steeply the earth curves?
- By the 11th century, what cultural movement made mathematical texts available in Arabic to Islamic scholars like al-Biruni?
- What device did al-Biruni use to calculate the angles between the mountain, sea level, and the horizon? What else could this technology be used for?
- Which 2 fields of mathematics did al-Biruni apply to calculate the height of the mountain?
- In your own words, summarize how al-Biruni used his knowledge of mathematics to solve a practical problem for millions of Muslims.

- **Write an Essay on the Use of Fake Islamic Images**

It is difficult to obtain authentic pictorial representations of scientists from the Islamic Golden Age. Most online images are fanciful fabrications.

Nir Shafir, a professor at the University of California, San Diego, and the author of an article titled "Forging Islamic Science," states, "These fake miniatures and objects are the product of a well-intentioned desire: a desire to integrate Muslims into a global political community through the universal narrative of science."

Dr. Shafir's article addresses the modern use of forged images purporting to depict Islamic science in textbooks, posters, and museum and library collections.

Use evidence from the article and your background knowledge to write a 500-word essay (about 2 pages, double-spaced) in which you answer some of Dr. Shafir's questions about these images:

- Why do we reject the real, material remnants of the Islamic past for their confected counterparts?
- What exactly is the picture of science in Islam that we hope to find?
- What happens when we start fabricating objects for the tales we want to tell?
- Do we tell stories from the objects we collect, or do we collect objects to tell the stories we desire?

- **Investigate Islamic Architecture**

- Islamic civilization has produced some of the world's most vital and historically significant buildings. In this activity, you will use the acronym "FACTS" to describe an Islamic structure. "FACTS" stands for Form, Aesthetics, Context, Technology & Techniques, and Space.

F – Form: What is the overall shape and style (modern, classical, gothic, Islamic, etc.) of the building? How does its form reflect its intended use?

A – Aesthetics: In your opinion, is the building beautiful? What materials were used (stone, glass, brick, wood, etc.)?

C – Context: What are the surroundings of the building (urban, rural, historical site, etc.)? How does the building reflect a particular culture, era, or location?

T – Technology & Techniques: What construction techniques were used (arches, domes, minarets, etc.)? Were the construction methods innovative for the time in which the building was made?

S – Space: Is the building comfortable and usable for its purpose? How are the rooms and courtyards placed? How does it incorporate light, water, or the natural landscape?

- Choose 1 of the following Islamic structures:

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| • Kaaba, Mecca, Saudi Arabia | • Great Mosque of Cordoba, Spain |
| • Dome of the Rock, Jerusalem, Israel | • Hassan II Mosque, Casablanca, Morocco |
| • Great Mosque of Damascus, Syria | • Al-Azhar Mosque, Cairo, Egypt |
| • Alhambra, Granada, Spain | • Friday Mosque of Isfahan, Iran |

- Blue Mosque, Istanbul, Turkey
- Qutub Minar, Delhi, India
- Taj Mahal, Agra, India
- Create a Google Slides or PowerPoint presentation about your chosen structure. On the first slide, introduce the building, including the time of construction, location, and original purpose. On subsequent slides, describe the structure in detail using the "FACTS" method. Include visuals on every slide and create as many slides as necessary. Present your slideshow to the class and be prepared to answer questions from the audience.

Example slideshow text:

- **Introduction:** The Great Mosque of Samarra, Abbasid Empire, was built between 848 CE and 851 CE by Caliph al-Mutawakkil. It is famous for its spiral minaret, known as the Malwiya Tower, and was the largest mosque in the world at the time of its construction.
- **Form:** Large-scale mosque with a unique spiraling minaret.
- **Aesthetics:** Simple, geometric patterns with brickwork. Today, it is considered austere and beautiful. It was originally decorated with geometric and floral designs, reflecting Islamic traditions.
- **Context:** A dominant landmark that expressed Abbasid power, located in a desert landscape near the Tigris River.
- **Technology & Techniques:** Mud-brick construction; massive prayer hall with rows of columns.
- **Space:** Open courtyards and prayer halls suited for thousands of worshippers.