Islam’s "Golden Age"

The period from about A.D. 750 to 1200 is often called the Islamic Golden Age. During this period, many advances were made in economics, literature, art, philosophy, history, science, and mathematics. Many scholars believe that the Renaissance might never have occurred without these Muslim achievements.

**Chemistry**  Consider just a handful of Muslim accomplishments. Jabir Ibn Haiyan (ca. 721-ca. 815) is generally considered the father of chemistry. He used systematic experimentation, invented many types of laboratory equipment, and developed a number of chemical substances and reactions.

**Astronomy**  Persian astronomer ’Abd Al-Rahman Al Sufi (903–986) observed the Andromeda galaxy, thus becoming the first to record a star system outside our own galaxy. His Book of Fixed Stars strongly influenced European astronomers. He translated many Greek astronomy texts into Arabic. Muslims also improved the astrolabe, a navigational tool used to determine one’s location by looking at the position of the stars and sun.

**Medicine**  Muslim medical scholars translated Greek medical books into Arabic. They also developed many tests to study and treat a wide variety of diseases. They specialized particularly in ophthalmology (the study of the eye). Ibn Al-Naphis (1213–1288) explained the basic principles of blood circulation. Muslim hospitals pioneered the practices of diagnosis, cure, and future prevention; emphasized hygiene and healing; and were open 24 hours a day.

**Mathematics**  In mathematics, a great advance was the introduction of “Arabic” numerals, which originated in India but were relayed to Europe by Muslims. The Arabic numeral system, based on place values and a decimal system of tens, was much easier to use for calculations than the older Roman system. Muslim mathematician Al-Khwarizmi (ca. 780–ca. 850) wrote the first book on algebra. Muslims translated and improved upon Egyptian, Hebrew, and Greek geometry. Trigonometry is also a mostly Muslim creation.

**Directions:** On a separate sheet of paper, answer these questions.

1. **Evaluating**  Which Muslim achievement do you think has had the greatest impact on your life? Explain.

2. **Drawing Conclusions**  Use your knowledge of Islam to tell some reasons why astronomy was important to Muslims.
Teaching Strategies for Different Learning Styles

The following activities are ways the basic lesson can be modified to accommodate students' different learning styles.

**English Learners (EL)**

Have students list the Muslim scholars mentioned in the article and write a sentence or two about why each is famous.

**Verbal/Linguistic; Intrapersonal**


**Visual/Spatial**

Show students some examples of Islamic art, with particular emphasis on architecture and the designs used to decorate walls, books, and rugs. Then have students create their own samples. Remind students that Muslim artists are forbidden to show images of Muhammad or the events of his life.

**Logical/Mathematical**

Ask students to research more about the achievements of Islam’s golden age using the categories given in the first paragraph of this article. They should create a table that lists and explains at least three achievements in each category.

**Kinesthetic**

Ask students to build a simple astrolabe. (Search Building an astrolabe online to find models for students to use.) Then ask them to explain and demonstrate their creations in class.

**Advanced Learners**

Ask students to theorize about some factors that helped bring about a “golden age” of Islamic culture: the encouragement of scholarship within Islam; geographic unity; the development of paper; a unified language. Students should discuss the impact of these and other factors in a three-page paper.

**Visual/Spatial; Interpersonal**

Divide students into four groups—one for each century from the ninth to the twelfth. Then have groups construct a time line of major developments in learning or culture made by Muslims in their assigned century.

**Auditory/Musical**

Bring to class some examples of music and chants used in Muslim worship. Play the recordings for the class, and then ask students to describe them—the notes used, differences in rhythm and tone, emotional impact, and so on. Write students’ comments on the board, and encourage them to compare and contrast the recordings.

**Below Grade Level**

Ask students to examine the photos and illustrations of Muslim culture from the chapter of their text without reading the captions or words. Tell them to look closely for details. Then have them write in their journals what they can learn about Islam and Muslim culture from the pictures.