The Islamic world made many cultural contributions. These contributions spread throughout northern Africa and southern Europe.

Muslims were travelers that traversed to faraway lands such as Asia, Africa, Rome and lands in-between. They used their knowledge of travel and geography to eventually overcome the Byzantine Empire, Syria, Palestine, the Persian Empire, Egypt, North Africa, Spain and France. These bold warriors were able to conquer such a vast area because many of these conquests had been weakened by constant wars with neighbors and were ready for peace, even if that meant from an outside source. Muslim warriors used efficient fighting methods as well as camels and horses in their cavalry. However, what made these Muslims such effective opponents was their common belief in the Islamic faith. This unity did much to band these warriors together and made them a considerable force on the battle field.

Once a country had been overtaken, Muslim scholarship and culture spread and became a part of the conquered land. In the west, Cordoba, in Spain, would become a center for cultural as well as scientific advancements. In the east, Baghdad, in Iraq, would also become a major center of Islamic learning. In both capitals scholars from far away places would gather to share ideas and new discoveries.

**ADVANCES IN MEDICINE**

Another area in which Muslims made great advances was in health care. Islamic doctors would be among the first to establish hospitals which contained both places for emergency treatment and isolation areas to separate the sick from the healthy. Muhammad Ruzi would be one of the first to study and record important findings in medical encyclopedias, especially with regards to common diseases of the time like measles and smallpox. Ibn Sina would write the *Canon on Medicine*. This huge encyclopedia of medicine included the diagnosis and treatment of many diseases. Furthermore, doctors would also visit the sick in rural areas thus, allowing a greater number of people to benefit from their knowledge.

However, before doctors and pharmacists could practice, they first had to pass an examination. Muslims did not want just anyone practicing in these professions so they were the first to require these professionals to prove they had sufficient knowledge to treat the sick.

Advances in medicine included the treatment of cataracts, a medical condition in which the lens of the eye becomes blurred. They also developed the way of mixing bitter medications with sweet syrups in order to make them easier for the patient to take.

**ADVANCES IN NAVIGATION AND GEOGRAPHY**

Islamic scientists were among the first to study and chart the movements of planets and stars, eclipses and the rotation of the Earth. With this knowledge they were able to pinpoint their exact location on
earth. This proved to be helpful for the Muslim daily ritual of prayer, facing toward Mecca. Later, Muslims developed an improved **astrolabe**, an instrument used to guide sailors, merchants and explorers. Ibn Battuta used the astrolabe to navigate to Africa, India, China and Spain. His journals exist as one of the most treasured primary source accounts of exploration in this era. In addition, cartographers were able to create precise maps based on accounts of travels and distance measured with the astrolabe.

**Advances in Mathematics**

Mathematics would take the numbering system we use today from the Indians, but would add the zero. This system would soon be used all over Europe, and would be called “Arabic” numerals. They also would further the study of **algebra**, which comes from the Arab word restoration. Al-Kwarizmi used these new ideas to write a mathematics textbook which he named al-jabr, the Arabic work for algebra. His textbook is a fundamental text from which modern algebra was derived.

**Literature and Language**

Because many of the **Bedouins**, nomadic Arabs, could not read or write, they developed a rich culture of oral poetry and storytelling. These would include the dangers found in the desert, the glories of battle, and the **chivalry** (the courage, honor, and aid given to those who are weaker by warriors) and romance of the nomadic lifestyle. One of the most famous collections of heroic stories of the time is *The Thousand and One Nights*.

The founder of Islam, Muhammad, could not read or write, but he understood the need of an education. Thus, he would encourage all boys and girls to attend school. Here, they learned to read and write Arabic and learned the **Qur’an**, the Islamic sacred book. Muslim scholars translated Greek and Roman ancient writing into Arabic for study. Thus, both religion and a common language helped unify the empire of Islam.

**Advances in Art and Architecture**

From the Romans, Muslim builders learned much about engineering. However, they took this knowledge one step further by building domed **mosques**, places of worship and delicate ornamental **minarets**, a slender tower from which Muslims are called to prayer.

Because artists were not allowed to create images of God they began to cover the walls and ceilings of their mosques, with elaborate abstract and geometric patterns of painted tiles. This same elaborate style is also seen in decorative Arabic writing called **calligraphy**. This distinct, ornamental decorative style today is known as **arabesque**.
Complete the following questions by using the reading, *Empire of Islam: Cultural Achievements*.

1. What is the main ideas of this reading?

__________________________________________________________________________________________________

2. Copy the sentence from the reading that identifies that Islam encourages academics.

__________________________________________________________________________________________________

3. What was unique about the doctors and pharmacists of the Islamic world?

__________________________________________________________________________________________________

4. Where did the Islamic culture spread?

__________________________________________________________________________________________________

5. Why do you think Muslim artists were not allowed to create images of God?

__________________________________________________________________________________________________

__________________________________________________________________________________________________

6. How do you think an astrolabe will help later explorers?

__________________________________________________________________________________________________

7. Why was Ibn Sina’s *Canon on Medicine* so important?

__________________________________________________________________________________________________

8. What were two centers of Islamic learning that were not on the Arabian Peninsula? Where were/are they located?

__________________________________________________________________________________________________

9. Choose three excerpts from the text that best support the claim that *the Muslim world made long lasting contributions*.

   A._________________________________________________________________________________________________
   _______________________________________________________________________________________________

   B._________________________________________________________________________________________________
   _______________________________________________________________________________________________

   C._________________________________________________________________________________________________
   _______________________________________________________________________________________________

10. What is the most likely definition of the word *cartographer* in the following sentence:

    “In addition, cartographers were able to create precise maps based on accounts of travels and distance measured with the astrolabe.”

__________________________________________________________________________________________________