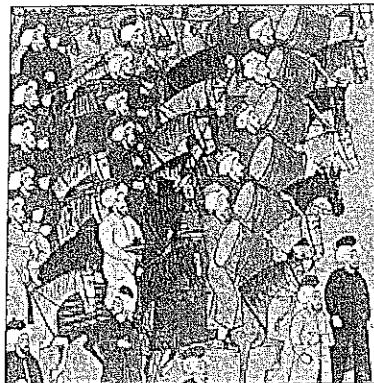


## The Rise of the Ottomans (Overview)

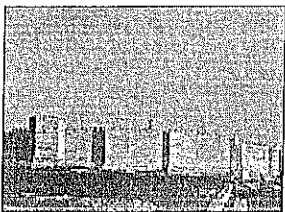
The Ottomans started as one Turkish tribe among many in Asia Minor (the peninsula that forms most of modern Turkey) during the 13th century AD. From those humble beginnings, they rose to establish a powerful empire that lasted for centuries. A dramatic interweaving of cultures fostered by war, trade, and ethnic migration, the Ottoman Empire eventually stretched across the Near East and much of Europe.



### Origins

Asia Minor has always been a crossroads of cultures. During the 11th to 15th centuries, tribes in Asia Minor found themselves in the middle of an ongoing power struggle between the waning Byzantine Empire to the northwest, the Seljuk Turks to the east, the Il-Khanid dynasty of Mongols farther to the east, and the Mamelukes of Egypt and Syria to the south.

Trade was also a major factor in shaping the society, politics, and economy of the region. As the bridge between Asia and Europe, Asia Minor was crossed by caravan routes and peppered with merchant towns. Riches from much of the world collected there: spices, precious metals, fine textiles, coffee, and more. The wealth brought in by trade would fuel the rising Ottoman Empire for centuries. Trade also brought a great mixture of peoples. Turkish peoples mixed with Greeks, Arabs, Mongols, and even Chinese, who all brought their own religions, cultures, and languages to the peninsula.



The Seljuks ruled over Asia Minor until the 13th century, when their collapse left the tribal groups of the peninsula to compete for power. Osman I, ruler of a principality near Byzantine territory, immediately started to extend his influence over the surrounding lands and tribes. Military might and politically advantageous marriages quickly cemented his control. Osman's location in north-central Asia Minor also gave his tribe a tremendous advantage. They were very near the Dardanelles and within striking distance of the Bosphorus—two straits that were gateways to Europe.

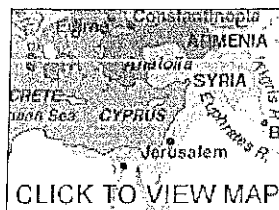
Osman and his followers, who later became known as the Ottomans, claimed territory under the *ghazi* tradition, the struggle to advance the power of Islam. As Osman's strength and notoriety rose, he drew more soldiers willing to fight for their faith—as well as for booty—under the Ottoman banner.

### Early Expansion

Around 1324, the year of Osman's death, the Byzantine city of Bursa fell to the Ottomans. From that base, their empire would expand in all directions. In the 1340s, Orhan, Osman's son and heir, subjugated the Turks in southern Asia Minor. The Ottomans also gained a foothold in Europe in the 1350s when they conquered the Gallipoli Peninsula. Over the next decades, they advanced both east into Asia Minor and west into Europe. The Ottomans captured Byzantine Adrianople (renamed Edirne) around 1361. At that point, the Ottomans were poised to make tremendous gains.

Part of the Ottomans' success was due to the Janissaries, an elite corps of soldiers formed from the youths of conquered lands in Europe. Trained in the Islamic tradition, those former Christian soldiers became the best

standing army of the medieval world. In contrast to the tribal armies of the time, whose loyalties and skills were often questionable, the Janissaries were highly professional and intensely loyal to the sultan (the leader of the Ottoman state), whom they protected against ambitious tribal leaders. As a reward for their loyalty and military successes, in time Janissaries received lands and administrative advances. Eventually, some Janissaries occupied high levels of government.



Over the rest of the 14th century, the Ottomans advanced across Asia Minor and the Balkans; they subjugated various groups and made vassals of numerous Serbian and Bosnian princes. Those princes struggled to ward off the Ottoman advance until the decisive Battle of the Maritsa River in 1371, when the Ottomans defeated a Serbian force of 70,000 men and solidified their control over the Balkans.

## Administration of the Empire

The Ottoman Empire combined elements of Byzantine, Islamic, and Persian governmental systems with Turkish traditions to form a very practical bureaucracy. As the Ottomans expanded into Europe, they left existing systems in place to administer the conquered lands. Often, the Ottomans allowed distinct law codes to exist side by side. Even though the legal and religious foundation of the empire was Islam, the Ottomans respected local traditions, as long as the people remained obedient to the overarching Muslim authorities.



Over time, outside influences also shaped the position of sultan, particularly under Bayezid I, who became sultan in 1389. While previous sultanates had been nomadic, tribal, and *ghazi* in character, Bayezid borrowed Byzantine and Seljuk concepts of the absolute ruler. Under his leadership, "sultan" became a national term. No longer just a tribal leader, the sultan maintained strong control over the military and the administration. Rather than ruling by personality and tribal loyalty, Bayezid ruled by a stable bureaucracy. His reforms would carry the Ottoman Empire into modern statehood, as future sultans adapted his model to maintain a balance of power between themselves and the ruling class.

Bayezid extended the empire's reach as well. He further solidified the Ottoman presence in the Balkans by soundly defeating European crusaders at the siege of Nicopolis in 1396. For the next 50 years, European states were unable to challenge the Ottoman advance.

### A Period of Transition

During those 50 years, the Ottoman Empire experienced a series of growing pains as it expanded, contracted, and expanded again. In 1402, the Ottomans lost the major Battle of Ankara to the Central Asian ruler Timur, which led to a period of instability among the ruling class. The empire also faced internal rebellion and struggled against the economic power of the Italian city of Venice. Nevertheless, the empire's strong organization, powerful military, and wealth kept it healthy.

Then, in the 1440s, the Hungarian general Janos Hunyadi rose to challenge Ottoman dominance in the Balkans. As Sultan Murat II pulled his armies back into Asia Minor, the pope and the Byzantine Empire responded with more Crusades against the Ottomans. In 1444 at the Battle of Varna and in 1448 at the second of the Battles of Kosovo, however, the Ottomans crushed the crusaders. The Christian rulers' hopes were dashed, and the Ottomans regained the initiative.

### The Fall of Constantinople

Throughout its expansion, the Ottoman Empire set its sights on the conquest of Constantinople, the capital of the Byzantine Empire. After its fall during the Fourth Crusade in 1204, the city had been relatively weak and isolated, but it still stood as a powerful symbol of Christian dominance in the region. It also blocked the Ottomans across the Bosphorus, which hindered their trade and military advance.

When Mehmet II became sultan in the mid-15th century, he assembled an unstoppable force to assail the city: a fleet of ships to form a blockade, a castle on the Bosphorus to stop supply through the Black Sea, a series of huge siege cannons, and an immensely large army. In the 1453 siege of Constantinople, the capital fell on May 29. The Ottoman Empire now lay across the bridge between Europe and Asia. From a tiny nomadic tribe isolated on the Anatolian Peninsula in Asia Minor, the Ottomans had grown into the most powerful empire in the Near East.



### The Rise of the Ottomans: Discussion

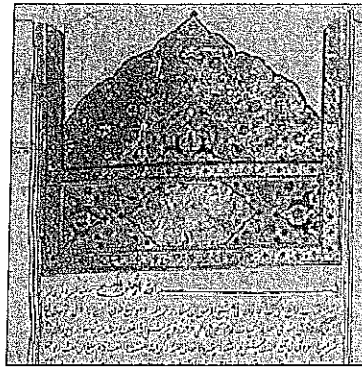
1. What do you think were the most important factors that contributed to the Ottoman rise to power?
2. In what way was the early Ottoman Empire an effective blend of centralized and decentralized rule?
3. Why do you think the fall of Constantinople in 1453 is considered such an important turning point in the history of Eastern Europe and the Near East?

## Islamic Science and Medicine (Overview)

After the collapse of the Western Roman Empire in the fifth century AD, many of the works by ancient Greek scientists and philosophers were lost to Western Europe. By the ninth century, however, an active scholarly and scientific tradition was thriving in the Islamic world. Muslim scholars not only preserved the works of Greek scholarship but also added their own contributions. For more than 400 years, from the eighth to the 13th centuries, the Islamic empire produced the greatest scientific minds west of China.

### Science and Islam

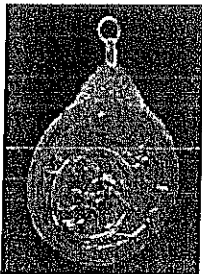
The Muslim prophet Muhammad taught that knowledge and learning were important, and the pursuit of knowledge was highly valued in the Islamic world. The Islamic empire, or caliphate, became a place where science and philosophy thrived. Several early Muslim rulers actively sought out important texts of science and philosophy from ancient Greece (and from India, to a lesser extent) and employed scholars, including Christians and Jews, to translate those texts into Arabic. The texts were then copied and stored in libraries across the caliphate.



Scholars of the Islamic world not only studied the Greek and Indian texts but also sought to verify their contents through experimentation and observation. Muslim scholars wrote many new books that commented and improved on the ancient sources. Muslim scientists systematized knowledge from earlier sources and presented new discoveries and ideas.

### Mathematics, Astronomy, and Cartography

Some of the most significant advances made by scholars in the Islamic caliphate were in the area of mathematics. In the early ninth century, al-Khwarizmi (from whose name the word "algorithm" was derived) wrote two particularly influential books. In one, he explained the Indian system of writing and calculating using 10 digits, which is the basis of the way the world writes and uses numbers today. In the other book, he explained a system of solving problems that is the basis of what is now algebra.



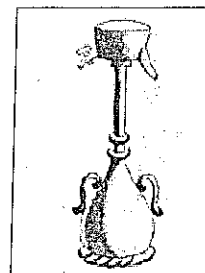
Muslim scholars also added to the Greek foundations in geometry and trigonometry. In geometry, they made much greater use of algebra to solve geometric problems. In trigonometry, they achieved much greater precision than in previous calculations, and they expanded and refined the framework to include the trigonometric functions (sine, cosine, and tangent) used today.

Furthermore, Muslim scholars improved the precision of instruments for astronomical observation. Those advances, combined with improved trigonometric calculations, resulted in high-quality astronomical data. Al-Battani, one of the most famous astronomers of the period, worked and wrote around AD 900. The quality of his observations and explanations was so high that his work was still influential at the time of the famous European astronomers Nicholas Copernicus and Galileo, more than 600 years later. In addition, Muslim scholars applied their advances in trigonometry and astronomy to mapmaking and predicting the times of sunrises and sunsets.

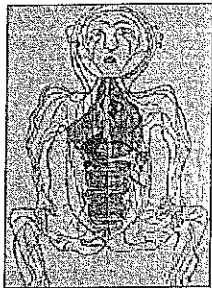
### Physics and Chemistry

Eleventh-century Muslim scholar Ibn al-Haytham made important advances in the study of optics. He rejected the Greek idea that vision emanated from the eye and introduced the concept of the eye's reception of reflected rays of light. He contributed to scientific understanding of both reflection and refraction (where light is bent when it passes through water or glass).

Chemistry at the time of the caliphate was alchemy: a mixture of chemistry and a belief in magical transformation. While Islamic alchemists never could turn silver or lead into gold, they made many advances and improvements in the tools and techniques of chemistry. They knew how to distill liquids, purify metals, and make very accurate measurements of weight. Alchemical techniques were also used to produce various chemicals that did not occur naturally, some of which were used in medicine.



Islamic scientists studied plants primarily for their use in agriculture and medicine. The Arabs had access not only to the Mediterranean herbal medicines known to the Greeks but also to medicinal plants from India and China.



Islamic medicine took as its starting point the works of Greek physicians, including Hippocrates and Galen of Pergamum. The anatomical theory and basis of medicine followed the Greek tradition, with noteworthy advances made in understanding the functioning of the eye and the circulation of blood to and from the lungs.

More dramatic differences from the Greek tradition were evident in the structure of medical treatment. Hospitals with adjoining medical schools and libraries were built and maintained by the government, and treatment was free to all citizens. Those hospitals began the practice of keeping records on their patients and their care. Advances were made in surgical treatments, including the use of anesthesia, and in understanding diseases and how they

were transmitted.

### Legacy of Islamic Science and Medicine

During the 11th, 12th, and early 13th centuries, the Muslim scientific community was seriously disrupted by the loss of major centers of learning in Spain to the Christians and by the loss of Baghdad to the Mongols. In addition, some historians cite a change in the philosophy of Islam—toward a more strictly religious world view—as a contributing factor in the decline of Islamic science.

Nevertheless, during the centuries when Arabic was the language of scholarship, the traditions and learning of many different countries were collected into a unified body of knowledge and refined and extended to include new and important ideas. The Muslim world became a storehouse of knowledge, a library for ancient texts, and the home of a living community of scholars.

Scientific and scholarly knowledge from the Islamic world made its way to Europeans in a variety of ways. In Spain, Christian and Muslim kingdoms existed side by side for many years, which provided opportunities for Europeans to study with scholars trained in the Islamic caliphate. As Christians drove the Muslims out of Spain, Arabic texts fell into Christian hands and were translated into Latin, which became the new language of scholarship in Europe. Those texts included not only the works of Arab scholars but also Arabic translations of many ancient Greek texts that had been lost to the European world. Similar contacts took place in Sicily. Ultimately, the knowledge from those sources helped to spark the European Renaissance.

### Islamic Science and Medicine: Discussion

1. How would you describe Muslim scholars' view of the work produced by ancient Greek philosophers, mathematicians, and scientists?
2. How would you describe the role of the golden age of Islamic science and medicine in the development of science and medicine in Europe? How might European science have been different without Islamic contributions?
3. What do you think were some of the most important contributions made by Islamic science and medicine from which people continue to benefit today?