

astronomy

introduction

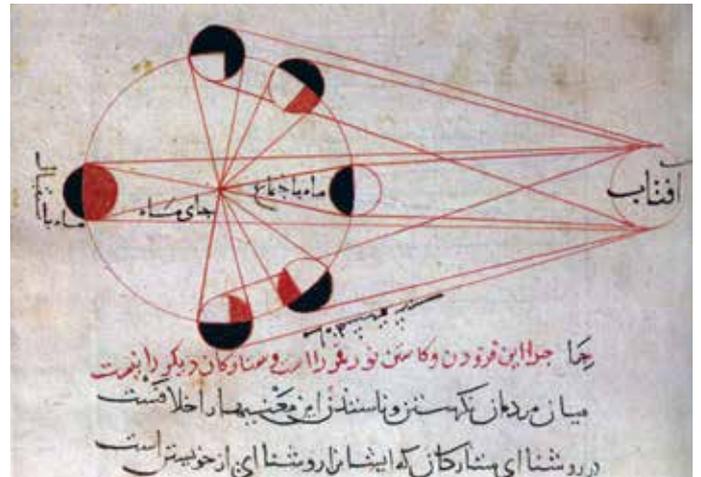
Since the arrival of Islam in 7th century Arabia, Muslims have spent a lot of time looking up at the stars... and there are some very practical reasons why. For example, the times of the five daily prayers that practising Muslim should try to perform are dictated by the position of the sun in the sky. So being able to understand and predict the sun's movements was really important. Also, each of the daily prayers should be performed facing in the direction of Mecca (which is in modern-day Saudi Arabia). Before the invention of portable compasses, the direction of Mecca was established by observing the position of either the sun or the moon in the sky in relation to the observer. As a result of these, and many other factors, Muslim contributions to the development of astronomy are amongst the most important in human history. Figures such as Al-Battani, Al-Biruni, Ibn Yunus and Ibn Rushd made revolutionary discoveries about our solar system through their scientific observations, and astronomers today owe a massive debt of gratitude to these early Muslim pioneers.

questions to think about

- Name a significant moment in history that would have been impossible without astronomy.
- How does astronomy help us understand the ocean?
- How has using the stars to navigate helped explorers?
- How might knowing about other planets help humanity in the future?
- How has space travel helped us understand our planet better?
- How have inventions for space travel been used in everyday life?



An 18th-century Persian Astrolabe



An illustration from al-Biruni's astronomical works, explains the different phases of the moon.

where to find out more

- Find out what's happening now in space travel: <https://www.nasa.gov/audience/forstudents/index.html>
- Find out all about Hubble: <http://hubblesite.org/>
- Astronomy games: <https://kidsastronomy.com/>
- Learn more about the stars: https://downloads.bbc.co.uk/tv/stargazinglive/sgl_starguide_with_links2013.pdf
- Learn more about Islamic inventions and contributions to astronomy: <http://www.1001inventions.com/astrolabes>
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