Teachers' Notes: KS3 Science and Islam

Content outline


Astrolabe HSM inv. 39955

This session will introduce students to the rich heritage of medieval Islam in science and mathematics and show them how science and religion were interwoven in early Islam. The students are introduced to amazing scientific instruments from the Museum's collection such as the astrolabe and qibla indicator. They will learn how Muslim scientists developed these in the service of religion as well as for practical purposes such as time-telling and navigation.

Learning

Students will:

- explore science in a different cultural and historical context
- discover how early Islam supported the development of science and mathematics
- learn about Islam as a religion and the practice of prayer
- explore amazing instruments from the Museum's collection of early scientific instruments from the Islamic world

Curriculum

The session links to the following areas of the curriculum:

Religious Education:

- origins of Islam
- practice of prayer in Islam
- link between science and religion

Science:

- examples of Muslim scientists and mathematicians
- astronomy; measuring and observing the stars
- application of the magnetic compass in the qibla indicator
- the geocentric model used in the astrolabe
- metalwork

Pre-session activities

Explore early Islamic instruments with interactive webpage at https://www.hsm.ox.ac.uk/curate

Explore the Museum's exhibitions online:

- ***Precious and Rare: Islamic Metalwork from the Courtauld***: https://www.hsm.ox.ac.uk/islamicmetalwork

- ***Al-Mizan: Sciences and Arts in the Islamic World***: https://www.mhs.ox.ac.uk/almizan/

Post-session activities

- Make a qibla indicator (or finish the activity begun in session) – see activity sheet
- Explore early Islamic instruments with interactive webpage at https://www.hsm.ox.ac.uk/curate and create a poster exhibit of a selection of objects from the Museum's Islamic collection.

IT set-up requirements and resources

This session would normally be delivered to a whole class using a VDU positioned at the front of the classroom and a link supported by an approved platform such as **Microsoft Teams** or **Google Meet** which can be set up by either the school or the Museum.

The workshop facilitator would normally expect to have a camera view of the classroom and microphone to pick-up sound in order to facilitate Q&A interaction which may need to be supported by the classroom teacher.

The workshop facilitator would normally expect to text the link with the class teacher at an agreed time at least 2 days before the workshop takes place in order to allow time to remedy any IT issues.

Activity resources needing printing would be emailed to the class teacher in advance of the workshop and printed copies should be handed out to the students before the session starts.