

British Museum Showcases Muslim World's Extraordinary Legacy

By: Karen Dabrowska

Visitors to the 1001 Inventions: Discover the Muslim Heritage in Our World, at London's Science Museum are greeted by a 20 ft high replica of a spectacular clock designed in 1206 by the inventor Al-Jazari.

Checking out the displays



It incorporates elements from many cultures, representing the different cultural and scientific traditions which combined and flowed through the Muslim world. The clock's base is an elephant, representing India; inside the elephant the water-driven works of

the clock derive from ancient Greece. A Chinese dragon swings down from the top of the clock to mark the hours. At the top is a phoenix, representing ancient Egypt. Sitting astride the elephant and inside the framework of the clock are puppets, wearing Arab turbans.

1001 Inventions was created by the Foundation for Science, Technology and Civilisation (FSTC), a British based non-profit, non-religious and academic organization. It is sponsored by the Abdul Latif Jameel Foundation

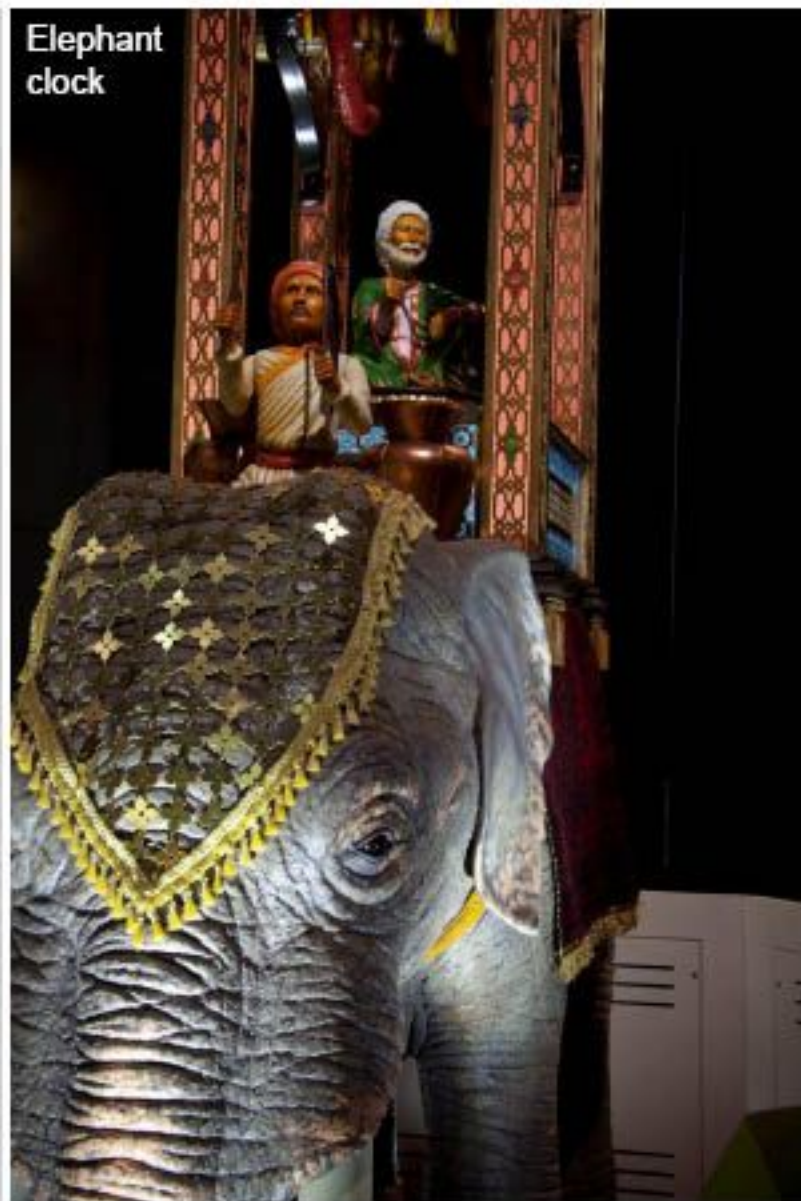
a British charity established in February 2009 to support the arts, education, economic development and to tackle social/financial exclusion through numerous projects

The exhibition opened on 21st January and received more than 15,000 visitors in its first week. It will be open until 25th April. A global tour that will visit the world's most respected museums and centres of learning over the next four years is planned.

A film Inventions and Secrets, screened in conjunction with the



Elephant clock



exhibition, shows students in a museum who are asked about the research the contribution of the dark ages to civilisation. They discover that during the period

known as the dark ages in Europe, the Muslims were in the forefront of science and inventions as famous Muslim figures emerge from the pages of an old book and lecture the students.

The introduction to the exhibition explains that for a thousand years, Muslim civilisation stretched from southern Spain as far as China. From the 7th onwards, scholars of many faiths built on the ancient knowledge of the Egyptians,

Greeks and Romans, making breakthroughs that paved the way for the Renaissance. From about 700 to 1700, many of history's finest

scientists and technologists were to be found in the Muslim world. From Moorish Spain across North Africa to Damascus, Baghdad, Persia and all the way to India, scientists in the Muslim world were at the forefront of developments in medicine, astronomy, engineering, hydraulics, mathematics, chemistry, map-making and exploration.

The exhibition is divided into seven zones highlighting the Muslim contribution to the home, school, market, hospital, town, world and universe. Each zone has a life size model surrounded by information

about the Muslim contribution and leading Muslim personalities and inventors. More than 40 information exhibits are brilliantly illustrated with photos, maps, diagrams and illustrations. The exhibits contain a wealth of information and create a penetrating flash of insight into Muslim civilisation in its heyday.

The home zone has a model of a traditional Muslim house and courtyard with photos of houses from Kadhimiya, Baghdad, in 1900. The education zone features a model of the House of Knowledge in Baghdad where ancient works, including the writings of Aristotle,

Exploring the Muslim world



Inventions Exhibition at the Science Museum



were translated. There is also a life-size, wooden water wheel which greatly assisted agriculture. The Muslims created the world's first soft drink, sherbet, a juice of crushed fruit, herbs, or flowers. Muslims developed a variety of juices to make their Sharab, an Arabic word from which the Italian sorbetto, French sorbet and English sherbet were derived. Over a thousand years ago, Muslim schools and universities had study circles with groups of students gathered around a professor who was seated on a chair or kursi. It is this notion that evolved into a professional

position, the chairperson. Muslim charitable institutions provided the first scholarships to support students.

Muslim agriculture was a sophisticated affair and they developed irrigation technology, crop rotation, and many other systems which all led to an available supply of fresh produce all year round. Using windmills, waterwheels and experimenting with plants and crops have opened the way for revolutions in agriculture, engineering and automated machinery, that provided a civilisation without starvation. They created a saleable

production cycle that catered not only for small villages, but also for three continents!

The first organised hospital was built in Cairo in 872CE. The Ahmad ibn Tūlūn Hospital treated and gave free medicine to all patients. It provided separate bath houses for men and women and a rich library. Al-Zahrawi introduced more than 200 surgical tools in his medical encyclopaedia.

In architecture, many European buildings today feature domes, vaults and rose windows on cathedrals and churches, and

arches in train stations. These, along with majestic tents, kiosks and conservatories, elaborate gardens and ornate fountains, were developed and perfected by the Muslims and flowed into Europe 1,000 years ago, via Southern Spain and Sicily. Even the spires and mighty dome of St. Paul's Cathedral in London may have been influenced by Islamic designs.

Muslim explorers journeyed to the far-flung corners of their world in spectacular voyages of discovery. From Ibn Battuta walking, riding



Islam's contribution to medicine

Screenshot from the educational film



and sailing over 75,000 miles, through Zheng He sailing the oceans and navigating to Mecca. Muslim explorers pre-dated Christopher Columbus and Vasco da Gama in their quests. The scale of their journeys is illustrated on a number of maps.

The world was made more visible thanks to map-making men like Piri Reis, the great Turkish admiral. On their journeys, Muslim travellers devised unique navigational devices, tools for defence - and attack - and learnt about the natural wonders of their world.

The most striking exhibits include:

- A model of an energy

efficient and environmentally-friendly Baghdad courtyard house;

- A large three metre reproduction Al-Idrisi's 12th century world map;

- Model of Zheng He's Chinese junk ship - originally a 15th century wooden super structure over 100 metres long.

- Medical instruments from a thousands years ago, many of which are still used today;

Outside the main exhibition is a small display of exhibits drawn from the Science Museum's own collection.

They include a 10th Century alembic for distilling liquids, an astrolabe for determining the

geographical position (and the direction of Mecca - important for Muslims uncertain which way to face when praying).

Also on display is an algebra textbook published in England in 1702, whose preface traces the development of algebra from its beginnings in India, through Persia, the Arab world and to Europe.

Dr Susan Mossman, project director at the museum, says: «There is a whole area of science that is literally just lost in translation. «Arabic and Muslim culture

particularly is a little-known story in Britain. This is a real opportunity to show that hidden story.»

She says the hands-on exhibition suits the museum's style, which she describes as «heavy-duty scholarship produced in a user-friendly way and underpinned by academic research».

She adds: «We are opening people's eyes to a new area of knowledge - a cultural richness of science and technology that has perhaps been neglected in this country.»

