

# Timeline of development in Muslim Civilisation 632-1796



<b>632</b>	<b>Ca 635</b>	<b>637</b>	<b>644</b>	<b>654</b>	<b>661</b>	<b>711</b>	<b>Ca 722</b>	<b>Ca 777</b>	<b>780</b>	<b>785</b>	<b>786</b>	<b>787</b>	<b>795</b>	<b>800</b>	<b>801</b>	<b>813</b>
<b>Prophet Muhammad</b> dies and Abu Bakr becomes first caliph (head of state).	<b>Al-Shifa bint Abdullah</b> is appointed by Caliph Omar as the first female Muhtasiba (state official-inspector) over the city of Medina.	<b>Islam</b> spreads to Persia, Palestine, Syria, Lebanon, and Iraq, and later to Egypt.	Arabia sees its first <b>vertical windmill</b> built in Medina.	Islam reaches most of <b>North Africa</b> .	<b>The Umayyad</b> dynasty rules the caliphate from <b>Damascus</b> .	<b>Islam</b> reaches <b>Spain</b> .	<b>Jabir ibn Hayyan</b> is born. Chemist, druggist, and physician who lived and worked in Kufa, Iraq.	<b>Astrolabe</b> maker and astronomer <b>Al-Fazari</b> dies.	Mathematician <b>Al-Khwarizmi</b> is born. His book <i>Algebra wal Muqabala</i> developed modern algebra. The word <b>algorism</b> comes from his name.	<b>King Offa</b> mints a Gold Mancus coin, imitating the gold dinar of <b>Caliph al-Mansur</b> .	Caliph Harun al-Rashid establishes the <b>Library of Wisdom</b> in Baghdad.	Building begins of the <b>Great Mosque of Córdoba</b> .	First mention of a <b>paper mill</b> in Baghdad.	Caliph Harun al-Rashid presents Charlemagne with a <b>water clock</b> that strikes the hour.	<b>Zubaida</b> , wife of Harun al-Rashid, endowed and supervised the construction of <b>numerous wells and caravanserais</b> along the Hajj route from Baghdad to Makkah.	Caliph al-Ma'mun expands the library of wisdom into the <b>House of Wisdom</b> ; the translation movement intensifies.

<b>980</b>	<b>973</b>	<b>972</b>	<b>970</b>	<b>965</b>	<b>957</b>	<b>950</b>	<b>936</b>	<b>913</b>	<b>900</b>	<b>887</b>	<b>880</b>	<b>872</b>	<b>864</b>	<b>859</b>	<b>858</b>	<b>850</b>	<b>828</b>
<b>Ibn Sina</b> (Avicenna) is born. His most famous books are the medical <i>encyclopaedia Canon of Medicine</i> and the science encyclopaedia <i>The Book of Cures</i> .	<b>Al-Biruni</b> is born. An astronomer, mathematician, geographer, and the author of numerous books. Developed semi-empirical trigonometric formula to measure the earth's circumference.	Fatimids establish <b>Al-Azhar Mosque</b> , eventually becoming a university.	<b>Labna</b> , a mathematician and scientist, was appointed secretary to Caliph Al-Hakim in Córdoba, Spain.	Physicist <b>Ibn al-Haytham</b> is born. His discoveries and theories revolutionised optics.	Cartographer and writer <b>Al-Masudi</b> describes his visit to the oil fields of Baku.	<b>Al-Farabi</b> from Baghdad dies. A philosopher and musician, he invented the ancestor of the violin.	<b>Surgeon Al-Zahrawi</b> (Abulcasis) is born in Córdoba. Inventor of numerous surgical instruments, and author of the novel illustrated voluminous surgical book.	Abbasid Caliph Al-Muqtader issues the <b>first licensing regulation for medical practice</b> . He established Al-Muqtadiri hospital and his mother established Al-Sayyida Hospital - both in Baghdad.	Beginning of <b>Fatimid rule</b> in North Africa.	<b>Abbas ibn Firnas</b> , multi-faceted pioneer of unpowered flight, dies in Córdoba, Spain.	Physician and inspector of Baghdad hospitals <b>Sinan ibn Thabit ibn Qurra</b> is born. He started mobile hospital services for rural and Bedouin areas.	<b>Ahmad ibn Toloun</b> , Abbasid governor of Egypt, establishes a hospital in Cairo known to be the first to include a department for mental diseases.	<b>Al-Razi</b> (Rhazes) is born. A physician, chemist, and medical teacher, he is considered the "father of clinical and experimental medicine."	<b>Fatima al-Fihriya</b> establishes <b>Al-Qarawiyn mosque</b> in Fez, which became the earliest university in existence.	Astronomer <b>Al-Battani</b> is born. He determined astronomical measurements with accuracy.	<b>Banu Musa brothers</b> publish their <i>Book of Ingenious Devices</i> .	<b>Abu Mansur</b> opens Al-Shammasiyah Observatory, near Baghdad.

<b>987</b>	<b>999</b>	<b>1009</b>	<b>1050</b>	<b>1065</b>	<b>1066</b>	<b>1085</b>	<b>1091</b>	<b>1096</b>	<b>1099</b>	<b>1110</b>	<b>1126</b>	<b>1140</b>	<b>1145</b>	<b>1154</b>	<b>1186</b>	<b>1187</b>	<b>1197</b>
<b>Sutaita al-Mahamli</b> , a female mathematician and expert witness in courts, dies in Baghdad.	Building begins of Bab Mardum Mosque in Toledo, which uses a <b>unique form of rib vaulting</b> .	Astronomer <b>Ibn Yunus</b> dies in Cairo, leaving thousands of accurate records, including 40 planetary conjunctions and 30 lunar eclipses.	<b>Constantine the African</b> moves from Tunisia to Salerno, initiating the transfer of Islamic medicine to Europe.	The <b>Nizamiyya madrasa</b> , the first school in Baghdad, is established by Nizam al-Mulk, the Seljuk minister who appointed distinguished philosopher and theologian Al-Ghazali as a professor.	The Norman Conquest of England begins with the arrival of <b>Muslim motifs</b> and ideas gained from Muslim Sicily.	Christians capture Toledo, subsequently becoming an important centre of <b>translations of scientific works</b> from Arabic into Latin.	Abu Marwan <b>ibn Zuhr</b> (Avenzoar) is born in Seville. A pioneering surgeon, he wrote <i>Al-Taysir (Book of Simplification of Therapeutics and Diet)</i> .	The first <b>Crusades</b> begin.	Cartographer <b>Al-Idrisi</b> is born. He produced a <b>world map</b> for Norman King Roger II of Sicily.	<b>Ibn Tufail</b> , is born. Andalusian polymath, author of <i>Hayy ibn Yaqzan</i> - said to have influenced the famous novel Robinson Crusoe.	<b>Ibn Rushd</b> (Averroes) is born. An accomplished Andalusian polymath, philosopher, physician, jurist, mathematician and scientist. His ideas influenced European philosophy.	<b>Daniel of Morley</b> travelled to Toledo to discover Muslim learning. He brought books for teaching at the University of Oxford.	<b>Jabir ibn Aflah</b> invents an observational instrument known as the <b>torquetum</b> , a mechanical device to convert between spherical coordinate systems.	Nur al-Din Zangi establishes <b>Al-Nuri Hospital</b> in <b>Damascus</b> , a large teaching hospital.	<b>Queen Dhaifa Khatoun</b> is born in Aleppo, Syria. She was the daughter-in-law to Saladin, and a <b>supporter of science</b> and learning.	Salah al-Din al-Ayyubi, known in the West as <b>Saladin</b> , regains Jerusalem. He established <b>Al-Nasiri Hospital</b> in Cairo.	Botanist <b>Ibn al-Baytar</b> is born in Málaga, Spain. He wrote a famous pharmacopeia.

<b>1347</b>	<b>1332</b>	<b>1330</b>	<b>1325</b>	<b>1311</b>	<b>1293</b>	<b>1267</b>	<b>1260</b>	<b>1256</b>	<b>1255</b>	<b>1254</b>	<b>1250</b>	<b>1233</b>	<b>1210</b>	<b>1206</b>	<b>1202</b>
The <b>Black Death</b> reaches Alexandria and Cairo from Europe.	North African Arab <b>Ibn Khaldun</b> , is born. He is claimed as a forerunner of the modern disciplines of <b>sociology and demography</b> . Best known for his book <i>al-Muqaddimah</i> or Prolegomena ("Introduction").	Giotto's painting " <b>Madonna and Child</b> " uses <b>tiraz</b> , bands of Arabic inscriptions, which mark royal garments and other textiles from the Muslim world.	<b>Ibn Battuta</b> leaves Tangier on his epic 29-year journey.	The Ecumenical Council of Vienne decides to establish <b>schools of Arabic and Islamic studies</b> at universities in <b>Paris, Oxford, Bologna, and Salamanca</b> .	The first <b>paper mill</b> outside Islamic Spain is established in Bologna.	<b>Marco Polo</b> starts his 24-year journey.	<b>Roger Bacon</b> publishes <i>Secrets of Art and Nature</i> praising influences of Muslim scholars.	<b>Ibn abi al-Mahasin al-Halabi</b> writes his comprehensive scholarly and illustrated work on eye diseases, <i>Al-Kafi li al-Kuhl</i> (The Book of Sufficient Knowledge in Ophthalmology).	<b>Queen Eleanor</b> , Castilian bride of King Edward I, brings <b>Andalusian carpets</b> to England in her dowry.	<b>King Alfonso el Sabio</b> establishes colleges and commissions <b>translations from Arabic</b> , including works on clocks and instruments.	<b>Mamluk</b> dynasty rules <b>Egypt</b> after the Ayyubids and later defeats the Mongols.	<b>Ibn al-Quff</b> is born in Karak, Jordan. An Arab Christian surgeon and author, he continued Al-Zahrawi's efforts to develop surgery as independent medical specialty.	<b>Ibn al-Nafis</b> is born. He was a scholar of jurisprudence and doctor who was first to discover <b>pulmonary circulation</b> .	<b>Al-Jazari</b> completes his <i>Book of Ingenious Mechanical Devices</i> .	Leonardo of Pisa, known as <b>Fibonacci</b> , introduces Arabic numerals and mathematics to Europe in his book <i>Liber Abaci</i> .

<b>1354</b>	<b>1383</b>	<b>1385</b>	<b>1405</b>	<b>1432</b>	<b>1452</b>	<b>1489</b>	<b>1497</b>	<b>1513</b>	<b>1543</b>	<b>1558</b>	<b>1564</b>	<b>1571</b>	<b>1577</b>	<b>1604</b>	<b>1606</b>	<b>1611</b>
<b>Emir Mohammed V</b> builds the <b>Lions Fountain</b> thought to be a water powered clock, in the Alhambra, Granada, Spain.	Chemist <b>Maryam al-Zanatiyeh</b> dies in al-Qayrawan in Tunisia.	<b>Serafeddin Sabuncuoglu</b> is born. An Ottoman surgeon, he continued the work of Al-Zahrawi and Ibn al-Quff by writing an independent surgical textbook.	<b>Zheng He</b> starts his seven epic sea voyages from China in the largest wooden ships the world had seen.	<b>Ibn Majid</b> is born in Arabia. Master navigator and writer of literature on celestial navigation, weather patterns and sea charts.	<b>Leonardo da Vinci</b> is born. He was a major contributor to the foundation of the Renaissance.	<b>Koca Mimar Sinan</b> is born. A renowned architect, he built Turkey's <b>Selimiye and Suleymaniye mosques</b> and hundreds more.	<b>Venice</b> publishes a translation of <i>Al-Tasrif</i> by Al-Zahrawi. Basel and Oxford follow suit.	<b>Piri Reis</b> constructs the earliest known map showing <b>America</b> .	<b>Nicolaus Copernicus</b> publishes <i>De Revolutionibus</i> , drawing on the work of Nasir al-Din al-Tusi and Ibn al-Shatir.	The first <b>German, and probably European, observatory</b> is built in Kassel.	<b>Galileo Galilei</b> is born.	<b>Johannes Kepler</b> is born. He improved upon the work of Ibn al-Haytham in his work on optics.	<b>Istanbul observatory</b> of Taqi al-Din is founded. It will close a few years later, in 1580.	<b>Edward Pococke</b> is born. He spent five years in Aleppo learning Arabic; he also translated <i>Hayy ibn Yaqzan</i> , a precursor to Robinson Crusoe.	<b>Edmund Castell</b> is born. He lectured on the use of Avicenna's medical work. For more than 18 years, he compiled a dictionary of seven Asian languages.	Polish astronomer Johannes Hevelius is born. In the frontispiece of his <i>Selenographia</i> (Gdansk, 1647), he depicted <b>Ibn al-Haytham</b> to symbolise knowledge through reason, and <b>Galileo Galilei</b> to symbolise knowledge through the senses.

<b>1796</b>	<b>1792</b>	<b>1725</b>	<b>1721</b>	<b>1682</b>	<b>1678</b>	<b>1664</b>	<b>1656</b>	<b>1650</b>	<b>1642</b>	<b>1634</b>	<b>1633</b>	<b>1627</b>	<b>1616</b>
<b>Edward Jenner</b> tests inoculation with cowpox.	Tripoli ambassador in England <b>Cassem Aga</b> writes about the widespread practice of <b>smallpox inoculation</b> in North Africa and is elected a fellow of Royal Society in London.	Moroccan ambassador to London <b>Mohammed Ben Ali Abgali</b> is elected a <b>fellow of the Royal Society</b> in London.	<b>Lady Mary Montagu</b> tests smallpox inoculation in Britain, having witnessed the practice in Turkey.	Moroccan ambassador to London <b>Muhammed Ibn Haddu</b> is elected a <b>fellow of the Royal Society</b> .	<b>John Greeves</b> publishes a paper in the Royal Society <i>Philosophical Transactions</i> on Egyptians' use of large ovens to hatch thousands of chicken eggs at a time.	At the request of Hevelius, the <b>Royal Society</b> agrees to <b>translate</b> the astronomical manuscript of <b>Ulugh Beg</b> from Persian to Latin in its entirety.	Scientist and astronomer <b>Edmund Halley</b> is born. He translated Arabic editions of Greek mathematics and researched observations of <b>Al-Battani</b> .	<b>Turkish</b> merchants bring <b>coffee</b> to the United Kingdom.	<b>Isaac Newton</b> is born. He kept a copy of the Latin translation of Ibn al-Haytham's <i>Book of Optics</i> in his library.	<b>King Charles I</b> requests that the Levant Company send home <b>Arabic manuscripts</b> on every ship returning to England.	<b>Lagari Hasan Celebi</b> flies with the aid of rocket in Istanbul.	<b>Robert Boyle</b> , England's most famous chemist, is born. He sought Arabic manuscripts and had them translated.	<b>John Wallis</b> is born. He was a renowned mathematician and member of the Royal Society in London. He translated and lectured on the work of Arabic mathematicians.

For a few centuries from the seventh onward, the Muslim world stretched from southern Spain as far as eastern China. During this period scholars, male and female and of many beliefs, endeavored to build and improve upon ancient knowledge. They made breakthroughs that led to an incredible expansion of knowledge and prosperity - deservedly named a golden age of civilisation.

Follow the timeline to trace the progress of mathematics, science, architecture, exploration, education, and medicine to see how ideas and knowledge migrated from the East, paving the way for the European Renaissance - another golden age of development.