

## 6.1 Scientific and Technological Advances, c. 975 – 1775 AD

**Instructions:** Working in teams, research each of these developments and answer questions 1-3.

1. Which scientific or technological developments do you consider most important in this period (select three)?
2. Why do you make these choices?
3. In your opinion, is there a pattern in these scientific and technological developments? Explain.

975	Arabs bring arithmetic notation to Europe
c. 1000	Mathematicians in India recognize the importance of zero Chinese perfect their invention of gunpowder Potatoes and maize cultivated in Peru
1050	Astrolabe arrives in Europe from the East
1090	Chinese develop water-driven mechanical clock
1125	Earliest European descriptions of the mariner's compass
1151	China uses gunpowder as weapon
Late 1100s	European builders use pointed arches and the flying buttress in construction of cathedrals
1224	Arab scholars create a geographical encyclopedia
1233	Coal mined near Newcastle in England
1313	German friar develops a form of gunpowder
1403	Chinese scholars assemble an encyclopedia with over 20,000 volumes
1400s	Italians use perspective in painting; Flemish develop oil paints.
1445-1450	Gutenberg printing press and Bible in Germany
1492	German geographer constructs terrestrial globe
1502	German develops first watch
1510	Leonardo da Vinci of Italy designs horizontal water wheel
1512	Copernicus argues earth and planets revolve around the sun
1522	Dürer designs a flying machine for use in war
1540	Ether produced from alcohol and sulfuric acid
1546	Mercator argues earth has magnetic poles
1550	Development of trigonometric tables in Europe
1570	Bell foundry built in London
1596	Galileo of Italy invents the thermometer
1600	Dutch opticians experiment with telescopes
1619	William Harvey of England describes circulation of blood
1657	Dutch scientist designs first pendulum for clocks
1665	Isaac Newton invents differential calculus; experiments on gravitation
1668	Leeuwenhoek develops microscope
1690	French inventor devises pump system powered by steam
1714	Fahrenheit develops mercury thermometer
1717	Lady Mary Wortley Montagu introduces inoculation against small pox into England
1718	English patent for silk making machine
1733	English patent of flying shuttle loom
1740	New European process for smelting steel
1752	Benjamin Franklin discovers lightning conductor
1753	Linnaeus invents system for classifying living things

1764-1775 James Watt of England develops the steam engine

## Scientific and Technological Advances, c. 1050 - 1775 AD

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1764-1775	James Watt of England develops the steam engine