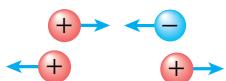


1752

Benjamin Franklin performs the dangerous “kite experiment,” in which he demonstrates that lightning consists of electric charge. He would build on the first studies of electricity performed earlier in the century by describing electricity as having positive and negative charge.

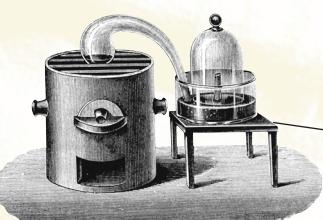
1747 – Contrary to the favored idea that heat is a fluid, Russian chemist **Mikhail V. Lomonosov** publishes his hypothesis that heat is the result of motion. Several years later, Lomonosov formulates conservation laws for mass and energy.

**1740**

1756 – The Seven Year’s War begins. British general **James Wolfe** leads the capture of Fort Louisburg, in Canada, in 1758.



1757 – German musician **William Herschel** emigrates to England to avoid fighting in the Seven Year’s War. Over the next 60 years, he pursues astronomy, constructing the largest reflecting telescopes of the era and discovering new objects, such as binary stars and the planet Uranus.

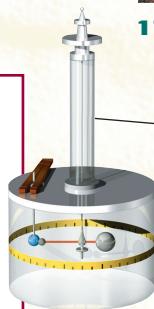
1750

1770 – Antoine Laurent Lavoisier begins his research on chemical reactions, notably oxidation and combustion.

1772 – Caroline Herschel, sister of astronomer **William Herschel**, joins her brother in England. She compiles the most comprehensive star catalog of the era and discovers several nebulae—regions of glowing gas—within our galaxy.



1775 – The American Revolution begins.

1770**1785**

$$F_{\text{electric}} = k_C \left(\frac{q_1 q_2}{r^2} \right)$$

Charles Augustin de Coulomb publishes the results of experiments that will systematically and conclusively prove the inverse-square law for electric force. The law has been suggested for over 30 years by other scientists, such as **Daniel Bernoulli**, **Joseph Priestly**, and **Henry Cavendish**.

1780**1790**