**We're standing on   
​the shoulders of giants.**

**490-460 BC—Democritis--atomos: indivisible object**

**1803--Dalton--father of Atomic Theory, had 5 theories  
1832--Faraday--taught himself with books from his employer, made the electric generator, studied electromagnetism  
1878--Crookes--his invention led to Thomson’s experiments  
1891--Stoney--named the electron  
1897--Thomson--the electron is negative and has an extremely small mass, Plum Pudding Model  
1898--Rutherford--the nucleus is positive and has an extremely small volume, the atom is mostly empty space  
1900--Planck--introduced quantum theory, developed a mathematical constant relating energy to frequency of a wave  
1905--Einstein--miracle year  
1907--Millikan--used the oil drop experiment to determine the electron’s mass and charge  
1913--Soddy--discovered isotopes  
1922--Bohr--developed most of the current theory we use today, electrons orbit the nucleus at energy levels  
1923--de Broglie--introduced the particle/wave duality of an electron  
1932--Chadwick--discovered the neutron  
1933--Joliot-Curie--researched radioactive elements, worked with artificially radioactive elements  
1942--Manhattan Project**