
WATER


Earth


WIND


fire

1600

1700

1800

1900

2000

Approximately 400 BC

Democritus first used the word atomos and said these are the smallest indivisible pieces of matter

1662 – Robert Boyle

Scientist who determined that pressure and volume of a gas have an INVERSE relationship at constant temperature

1752 – Ben Franklin

Conducted extensive research in electricity and then in June 1752 he attached a metal key to the bottom of a dampened kite string and flew the kite in a storm-threatening sky. A succession of sparks jumping from the key to the back of his hand showed that lightning was indeed "electrical" in nature.

1785 – Antoine Lavoisier

Law of Conservation of Matter

The total mass of the products of a chemical reaction is always the same as the total mass of the starting materials consumed in the reaction.

Often remembered as the Father of Modern Chemistry.

1848 – Lord Kelvin

Developed a temperature scale having a value of absolute zero. Absolute zero, or 0 K, is the lowest temperature on his scale, and at this temperature, molecular energy is at a minimum. This would correspond to –273.15°C on the Celsius scale. When writing temperatures in the Kelvin scale, the degree symbol is omitted and merely the letter K is used.

1913 – Henry Moseley

Observed and measured the **X-ray spectra** of various elements (mostly metals) that were found by the method of x-ray diffraction through crystals. He developed a systematic mathematical relationship between the wavelength of the X-rays produced and the positive charge in the nucleus of the elements that were used. This has become known as **Moseley's law**. The positive charge in the nucleus became known as the **atomic number**.

1644 – Evangelista Torricelli

Italian scientist who figured out how to create a sustained vacuum, which led him to discover the principle of the mercury barometer to measure pressure

1742 – Anders Celsius

Swedish astronomer who established the Celsius temperature scale, which has 100 degrees between the freezing point (0°C) and boiling point (100°C) of pure water at sea level

1784 – Joseph Priestley

Discovered a gas that burned a candle and called it de-phlogisticated air, which scientists later renamed **OXYGEN**

1811 – Amedeo Avogadro

Two equal volumes of gas, at the same temperature and pressure, contain the same number of molecules. He even proposed that some gaseous elements must be diatomic, and he was right!!!

1909 – Robert Millikan

Oil Drop Experiment allowed him to determine the charge and mass of an electron

- Mass of electron = 9.04 x 10–28 g
- Charge of electron = –1.5924 × 10–19C

(within 1% of currently accepted value)

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