

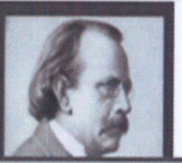







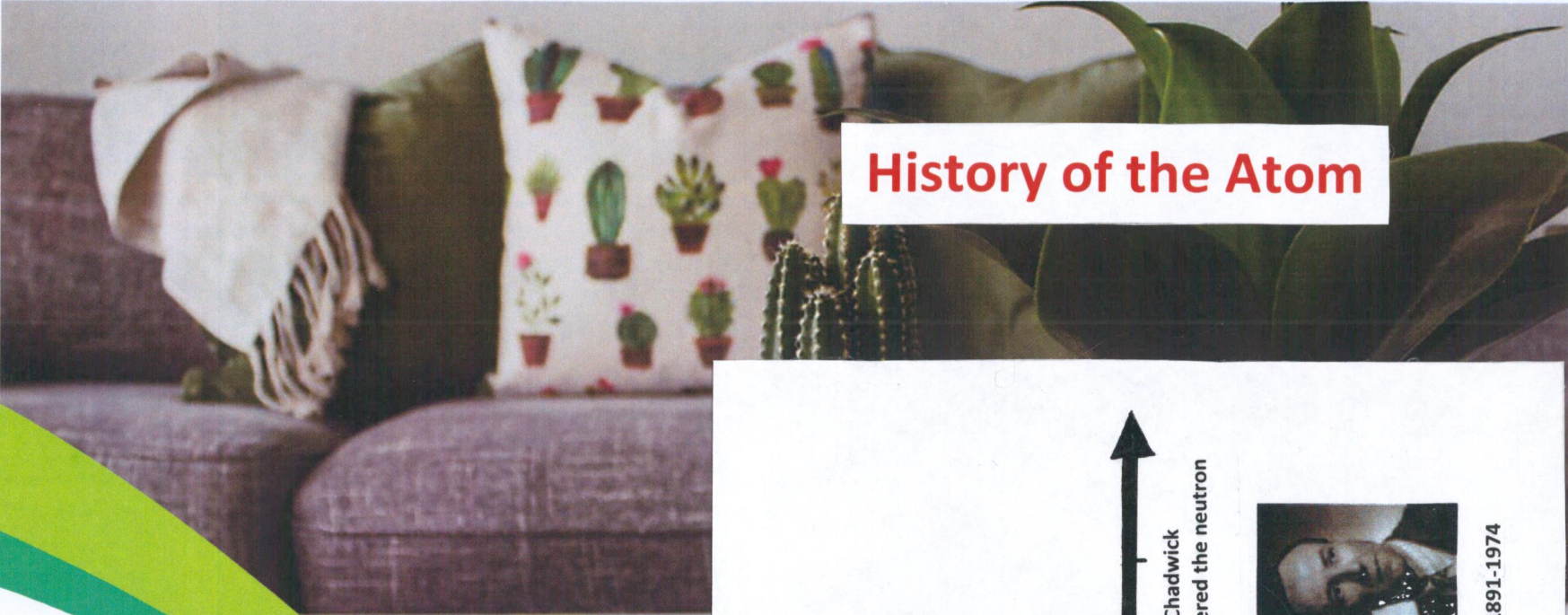


List of the most important scientists who helped to develop the structure of the atom and models that show the development in the structure of the atom.

 Dalton	1803 	"Billiard Ball" Model Dalton proposes the indivisible unit of an element is the atom.
 Thomson	1904 	"Plum Pudding" Model Thomson discovers electrons, believed to reside within a sphere of uniform positive charge (the plum pudding model).
 Rutherford	1911 	Rutherford Model Rutherford demonstrates the existence of a positively charged nucleus that contains nearly all the mass of an atom.
 Bohr	1913 	Bohr Model Bohr proposes fixed circular orbits around the nucleus for electrons.
 Schrodinger	1926 	"Electron Cloud" Model In the current model of the atom, electrons occupy regions of space (orbitals) around the nucleus determined by their energies.



History of the Atom



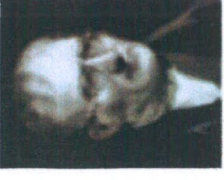





The importance of the atomic structure:

The importance of the atomic structure is to establish that all matter is made of tiny particles, a discovery that led to amazing scientific breakthrough in areas from modern chemistry to nuclear energy.

The importance of atomic theory examines the core idea behind the theory, how it developed and the many ways that atomic theory has influenced daily life, culture, science and societal change.

Atomic structure determines:

1. Bonding (valence) – including strength, angle.
2. Magnetic Properties.
3. Electrical Conductivity.
4. Spectrum of radiation.
5. Chemical reaction rates, directions.
6. To understand some phenomena such as atomic light emission and absorption.
7. Roentgen and X rays.
8. The promise of Nano medicine.

 Democritus 1 st Atomic Theory	460-370	 Antoine Lavoisier Makes a number of Contributions to the field of chemistry	1743-1794
 John Dalton Proposes his atomic Theory in 1803	1766-1844	 J.J Thomson Discovers the electron	1856-1940
 Ernest Rutherford Performs the Gold foil Experiment in 1909	1871-1937	 Neils Bohr Bohr Model 1913	1885-1962
 Erwin Schrodinger Electron cloud Model in 1926	1887-1961	 James Chadwick Discovers the neutron	1891-1974