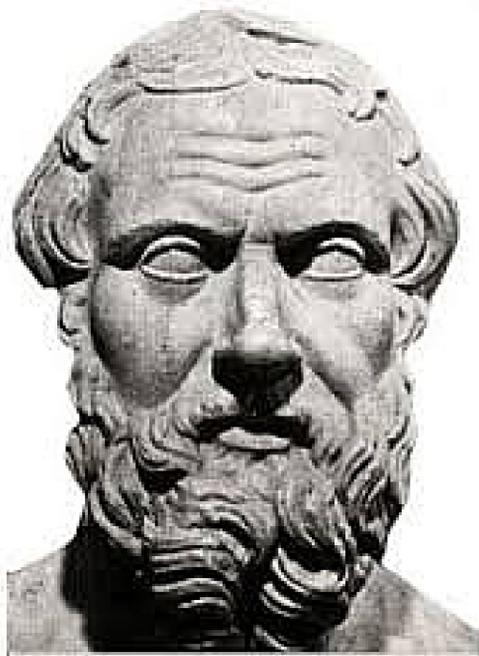


The Story of the **ATOM**

In the beginning there was



then



ATOMOS

Around 400 BC Democritus postulated matter is made of little indivisible particles called ATOMOS and objects were made of unique atomos.

Unfortunately, society did not have the same opinion and dark times ensued.

Dark Ages of the Atom

Imbecile!

Aristotle's fame and popularity prevailed and the idea of atomos was forgotten.

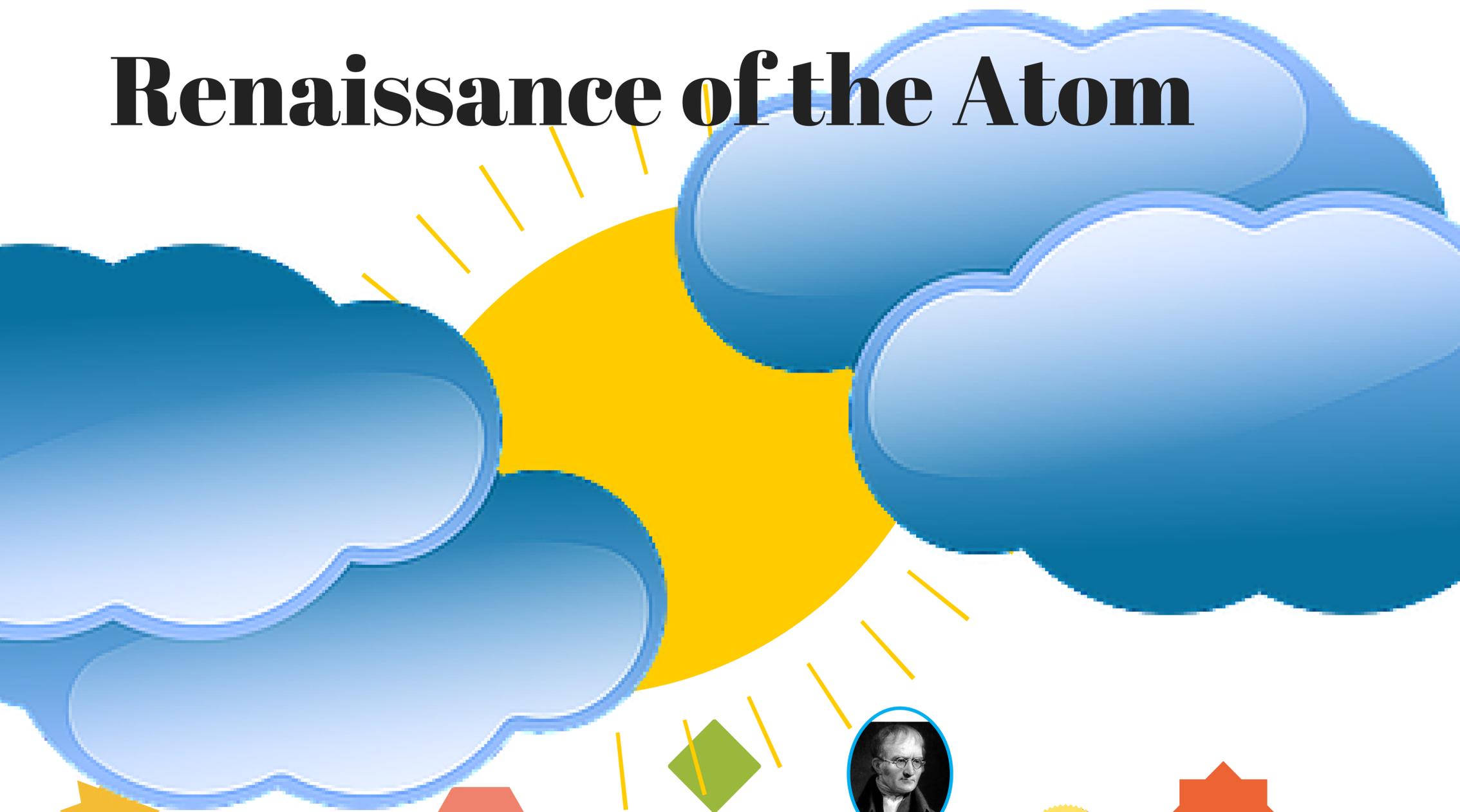


For the next

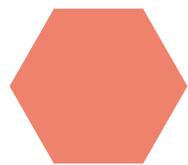
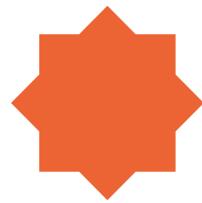
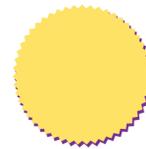
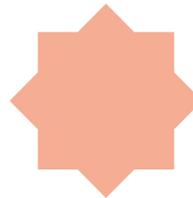
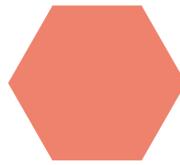
2000

Years

Renaissance of the Atom



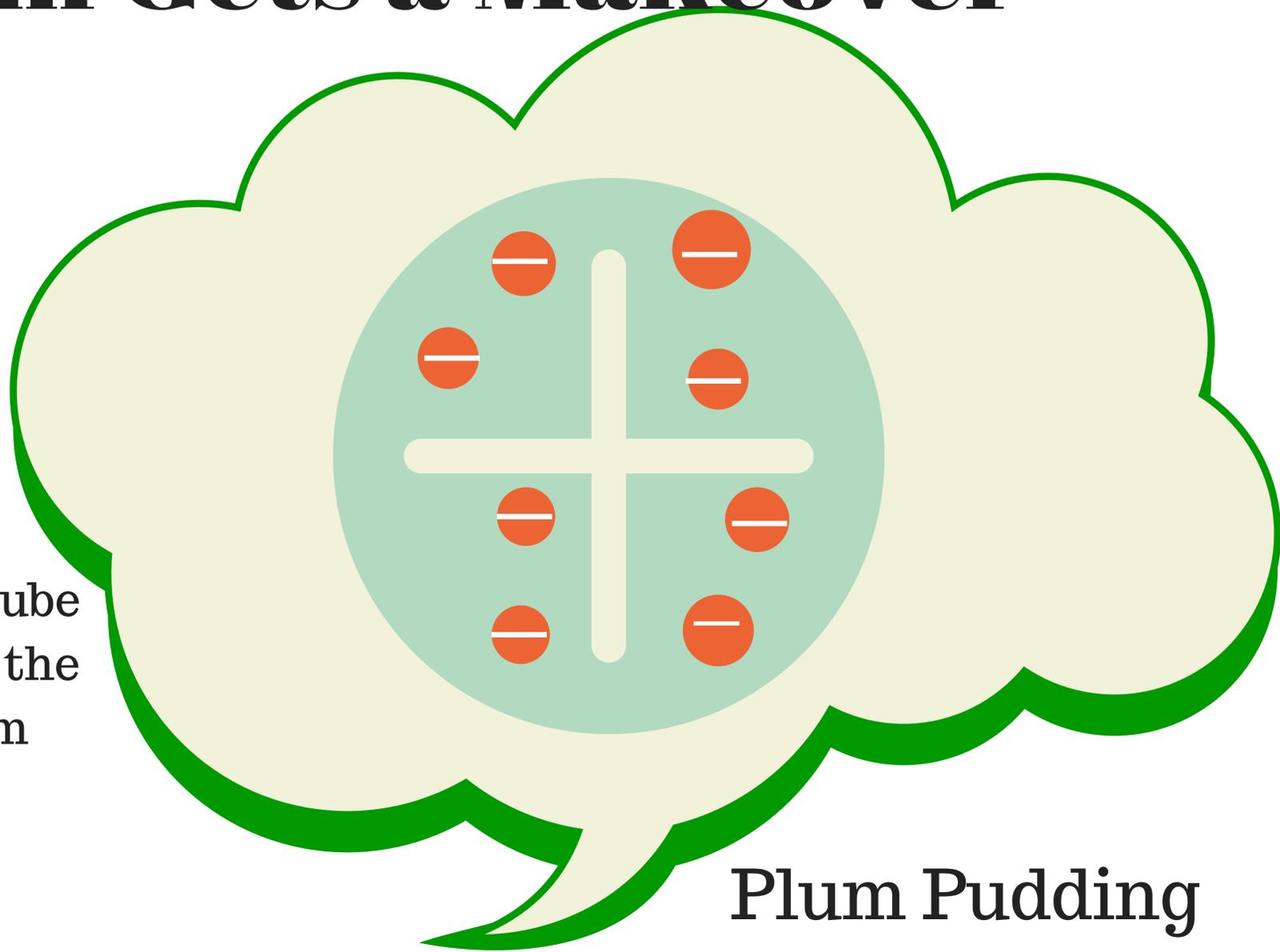
John Dalton wore many hats. In 1803, while working with gases, Dalton postulated that matter is comprised of indivisible atoms. However, unlike Democritus, the atoms can combine to make new substances.



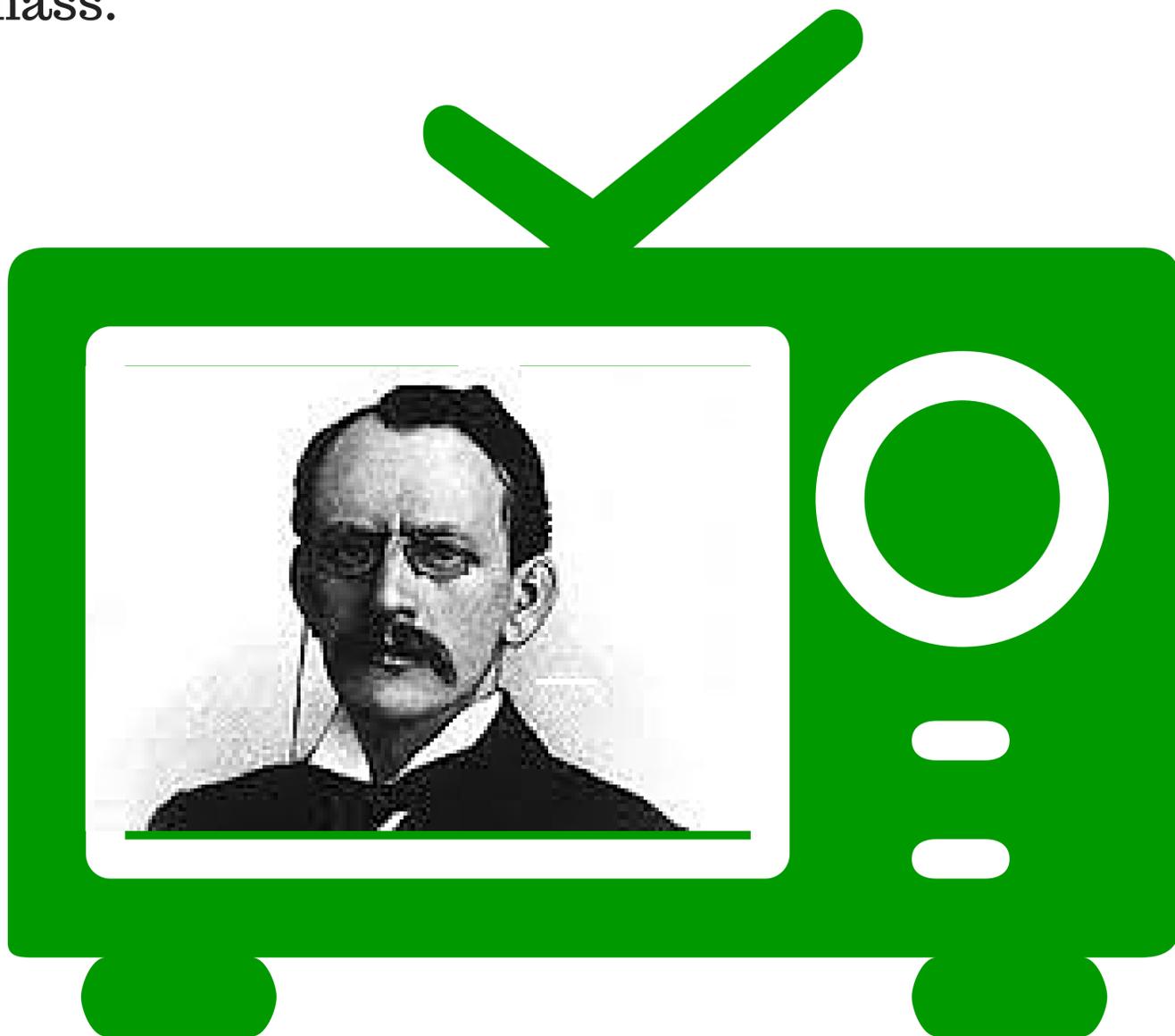
As industry began to revolutionize, the atom underwent its own revolution.

The Atom Gets a Makeover

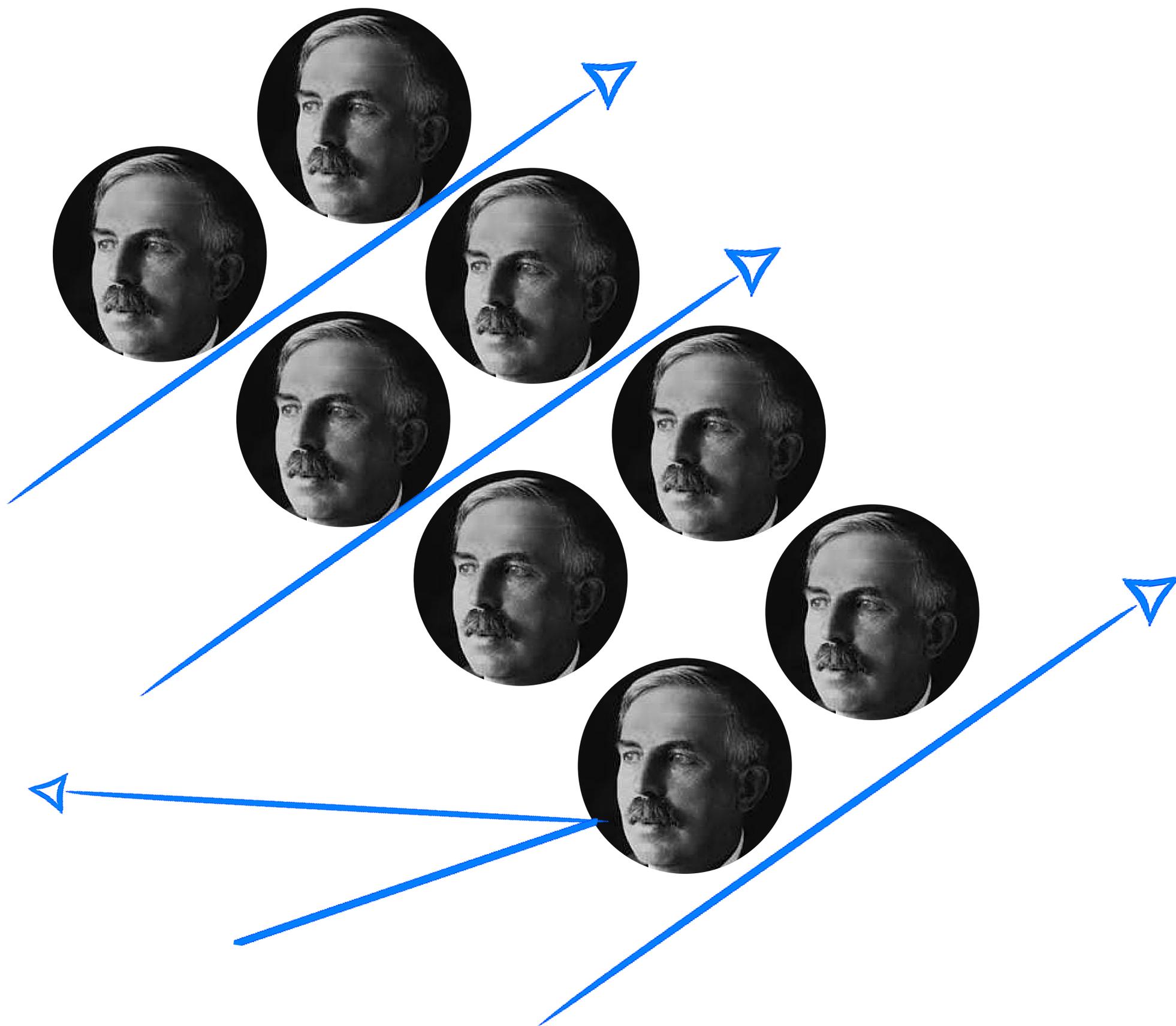
In 1897, JJ Thomson used a cathode ray tube and discovered that the atom is not a uniform singular mass, but rather made up of negative particles suspended in a positive mass.



Plum Pudding Model



The Nucleus Strikes Gold



As the enlightenment of the atom continued, Ernest Rutherford, in 1899, experimented with gold foil and discovered the atom is not a solid mass but rather a large positive mass surrounded by lots of empty space.

The Electron Finds a Home

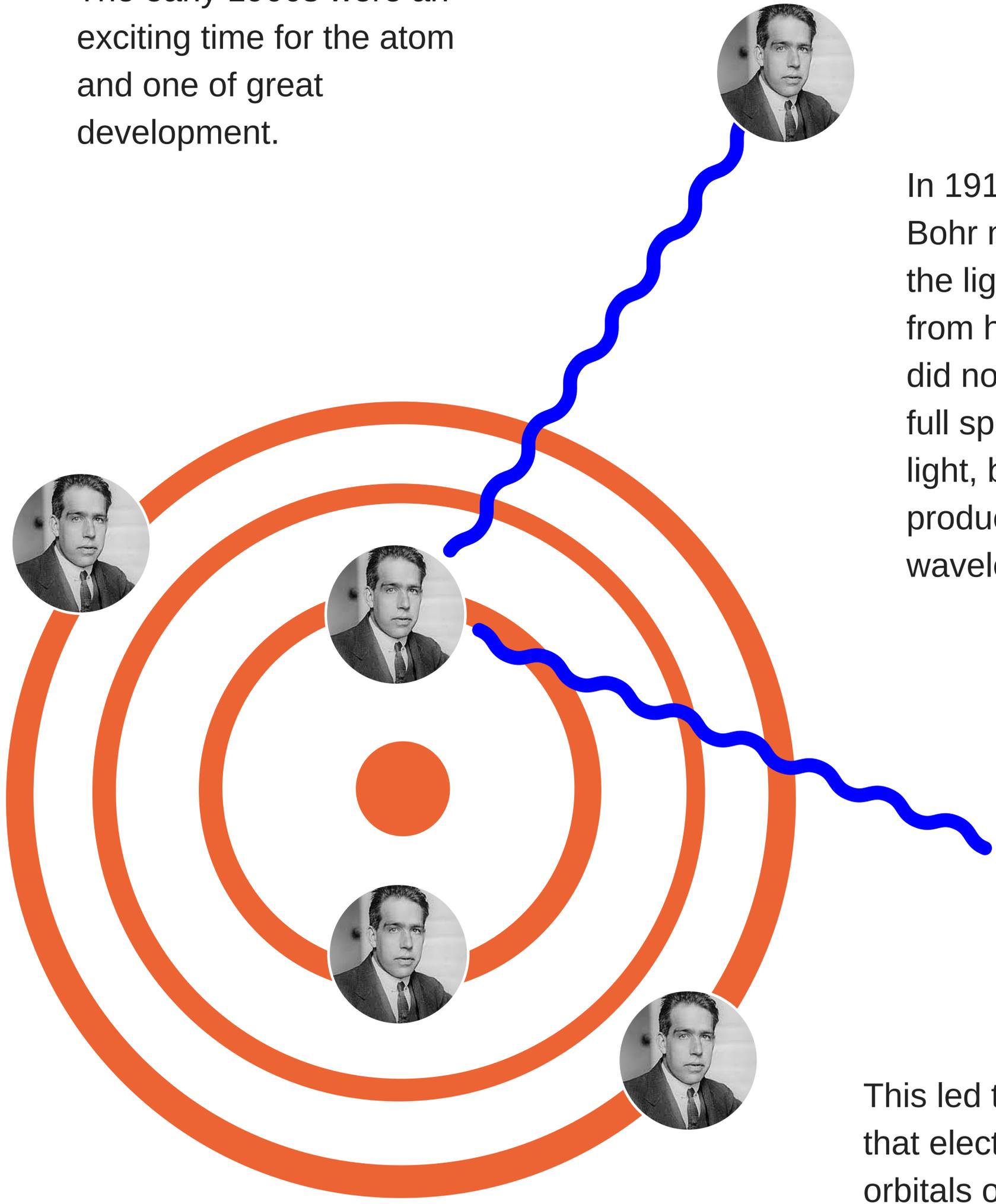
The early 1900s were an exciting time for the atom and one of great development.



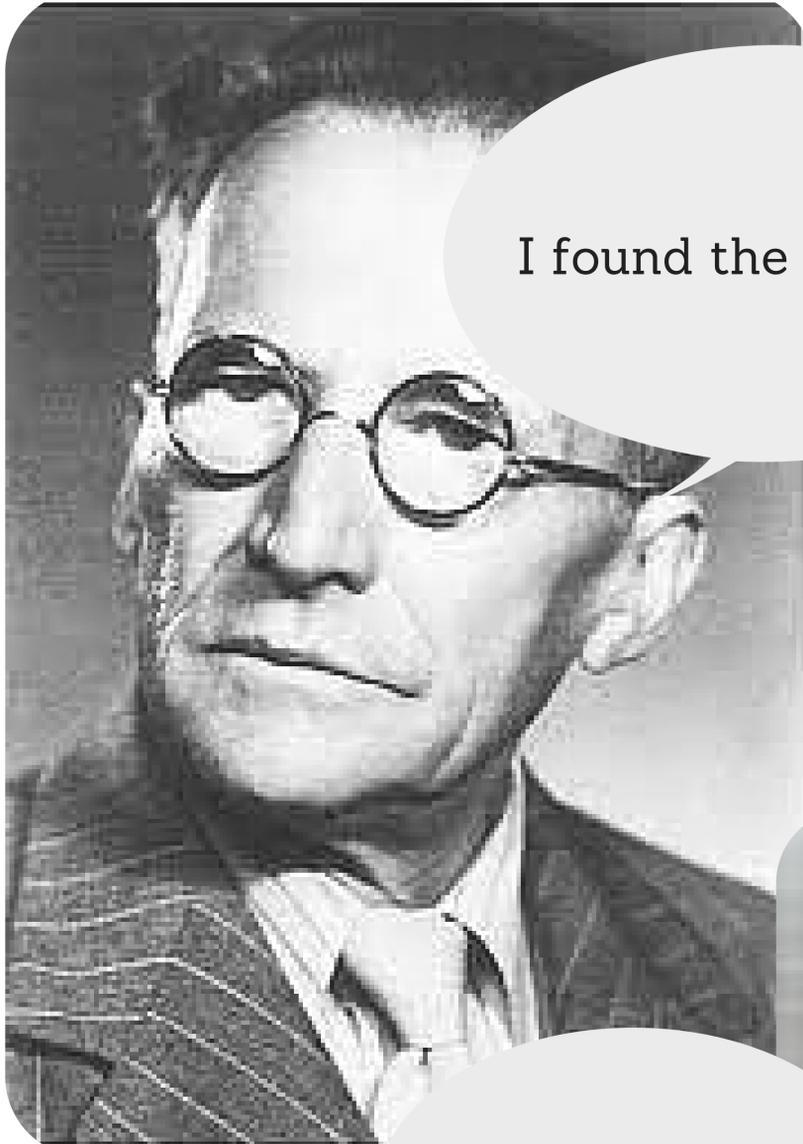
In 1913, Niels Bohr noticed that the light emitted from hydrogen gas did not produce a full spectrum of light, but only produced certain wavelengths.



This led to the discovery that electrons reside in orbitals of certain energies.



The Electron Complicates the Atom



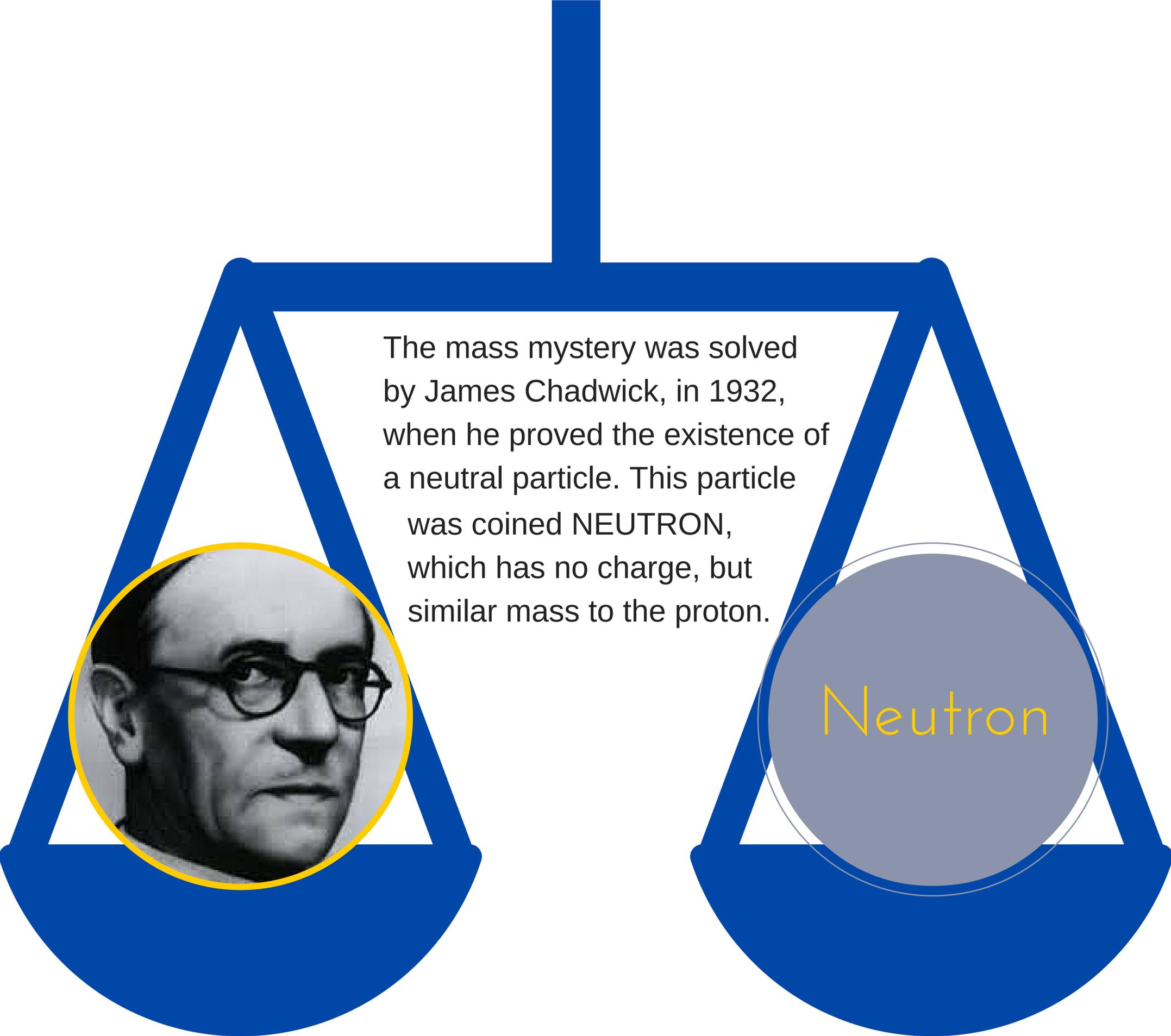
I found the electron!!



But do you know how
fast it is moving?

In 1925, Erwin Schrodinger and Werner Heisenberg developed the Electron Cloud model, which shows the areas of probability of finding an electron of certain energy. This is the model we use today.

The Mass Mystery is Solved



The mass mystery was solved by James Chadwick, in 1932, when he proved the existence of a neutral particle. This particle was coined NEUTRON, which has no charge, but similar mass to the proton.

Neutron

The story of the atom continues...