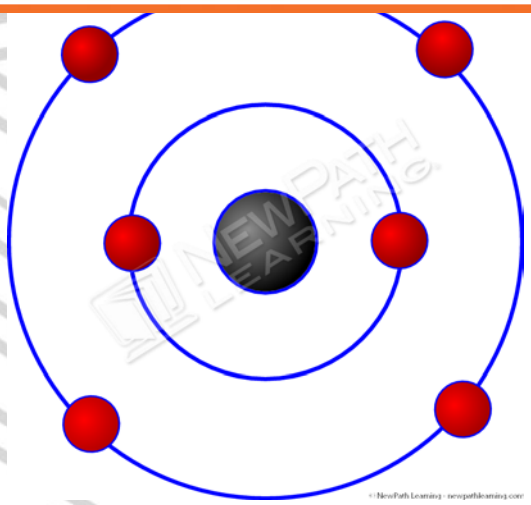
THE PROPERTIES OF ATOMS

An **atom** is the smallest part of an element that has all the properties of that element. In other words, one atom of oxygen behaves like a whole cylinder of oxygen.

History of the Atom

As time has passed, ideas about the structure of an atom have changed. One of the first proposed atomic models was thought of by **J.J. Thompson**. He thought an atom was like a ball with both positive and negative charges in it.

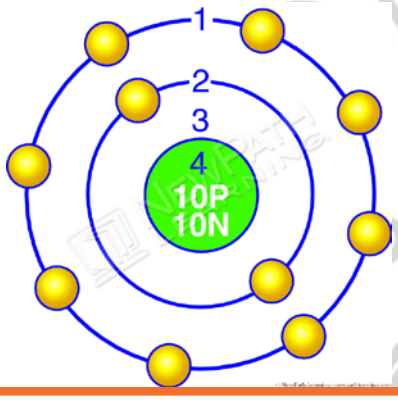
In the earl **ucleus** or positive ce **otons**. According with the negatively round the nucleus.



A few years later, Niels **Bohr** suggested that the electrons had specific paths or orbits as they moved around the nucleus. The movement of these electrons was much like the way the earth moves around the sun.

Current Model of the Atom

The **modern** atomic model which is the current model, suggests that an atom has two particles in the nucleus, a **proton** and a **neutron** or neutrally charged particle. All the mass of an atom is made up with these particles. The total number of protons and neutrons in an atom is called **atomic mass** while the number of protons is called the **atomic number**.



What is ***l atomic***

Electron

The modern model also removes the idea that electrons move only in specific orbits. Instead, there is an **electron cloud** around the nucleus with the electrons moving in various directions.

Lesson Checkpoint:
How does the modern model of the atom differ from the earlier models?