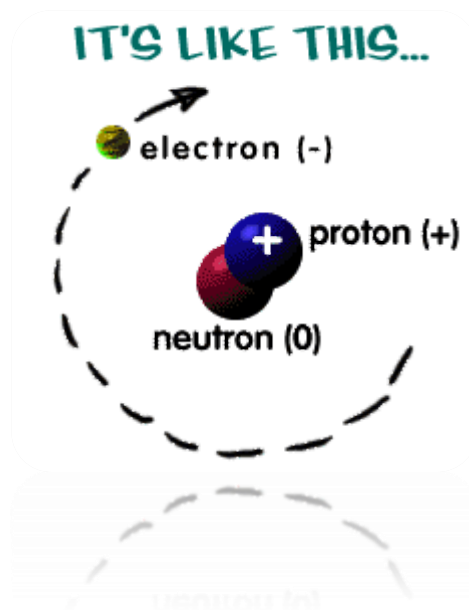


## STRUCTURE OF THE ATOM

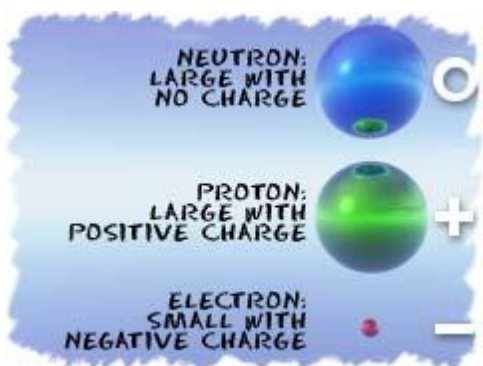
Atoms are the basis of chemistry. They are the basis for everything in the Universe - matter is composed of atoms as well. However, there are pieces of matter that are smaller than atoms. An atom consists of three basic particles:

- electrons,
- protons
- neutrons.

The **protons** and **neutrons** are always in the center of the atom. Scientists call the center region of the atom *the nucleus*. The **electrons** are always found whizzing around the center in areas called *orbitals*.



You can also see that each piece has either a "+", "-", or a "0." These symbols refer to the charge of the particle.



- The **electron** always has a "-", or negative, charge.
- The **proton** always has a "+", or positive, charge.

If the charge of an entire atom is "0", or neutral, there are equal numbers of positive and negative pieces. *Neutral* means there are equal numbers of electrons and protons.

- The third particle is the **neutron**. It has a neutral charge, also known as a charge of zero. All atoms have equal numbers of protons and electrons so that they are neutral. If there are more positive protons or negative electrons in an atom, you have an *ion*.