**Atomic Structure Notes**

The nucleus of an atom contains the protons and neutrons

Protons are positive in charge

Neutrons are neutral (have no charge)

Protons and neutrons are about the same size – about 1 amu

Electrons are located outside of the nucleus

Electrons are negative in charge

Electrons are super tiny – about 1/2000 of an amu

To make a neutral atom, there must be an equal number of protons and electrons so that their charges cancel out

The number of protons determines the type of element. If you change the number of protons, you change the element

An ion is an atom with more or less electrons than protons, meaning that it has an overall charge to it

An isotope is an atom whose number of protons stay the same but the number of neutrons changes