

Atom study guide

by Vincent Russell

...with help from the internet

The atom

- In 1805 a man named John Dalton had the first ever theory of atoms, stating that they were unique and can join together to form chemicals.

The atom

- Many decades later, numerous scientists discovered various parts of the atom including; the electron, the proton, the neutron, and the size of each part.

Modern atom

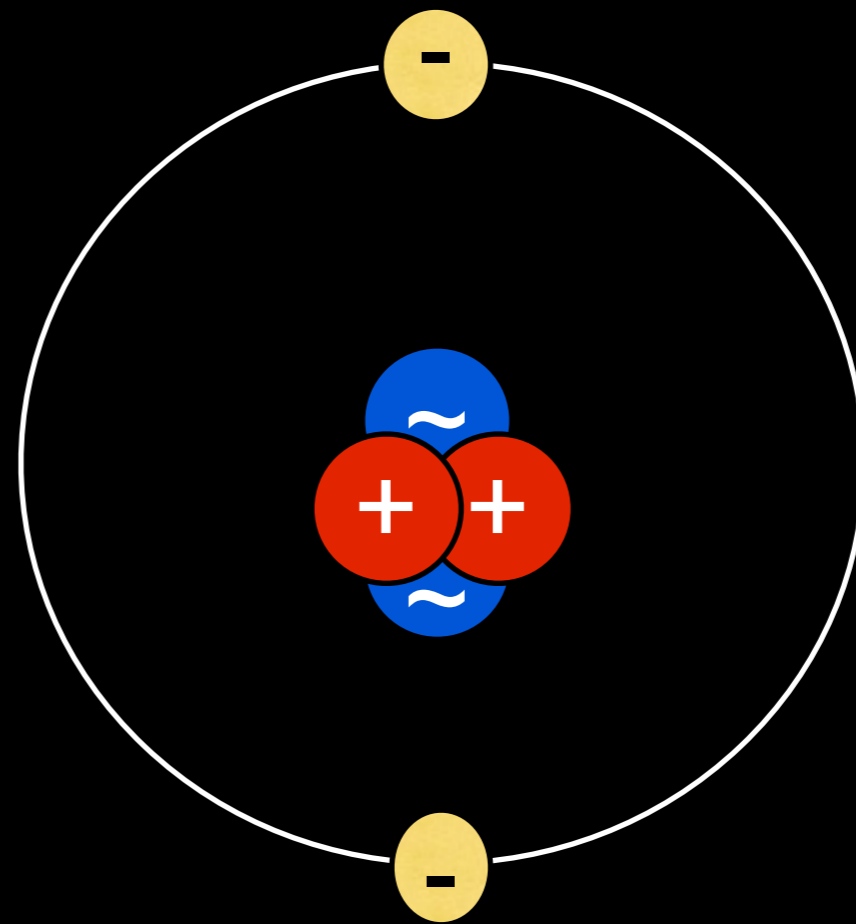
- Today scientists are trying to find out what's inside the atom using quantum mechanics. However this is not important to understand an atom.

Helium (He)

 electron

 proton

 neutron

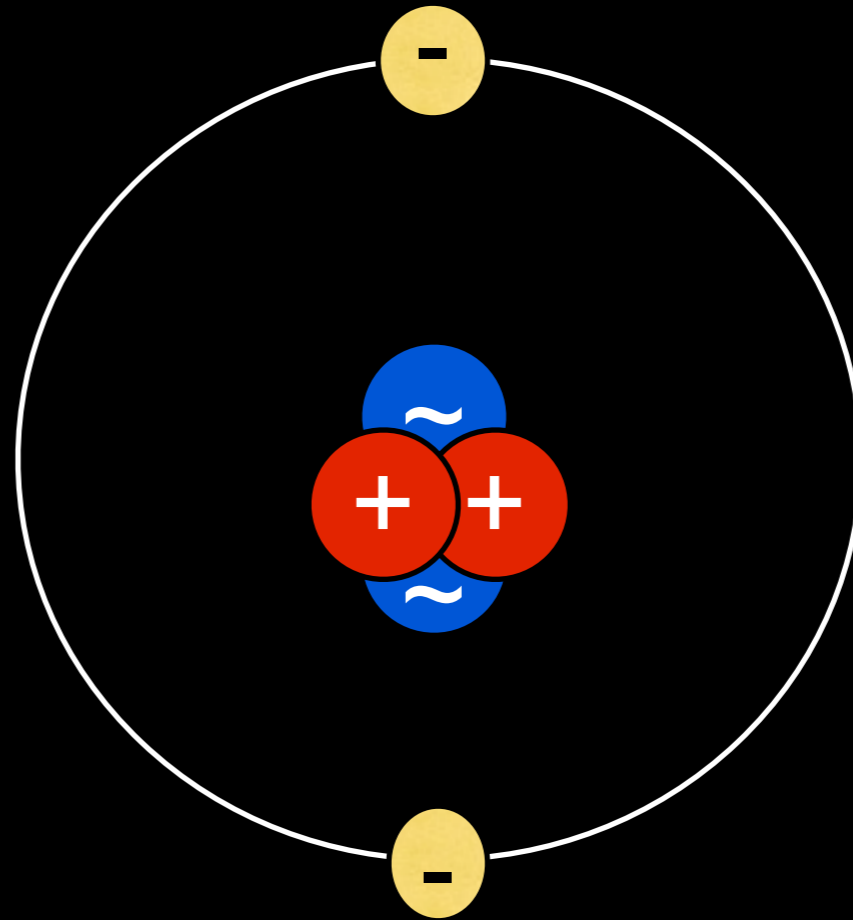


Electric Affinity
(charge) : 0

Charges: ~ neutral + positive - negative

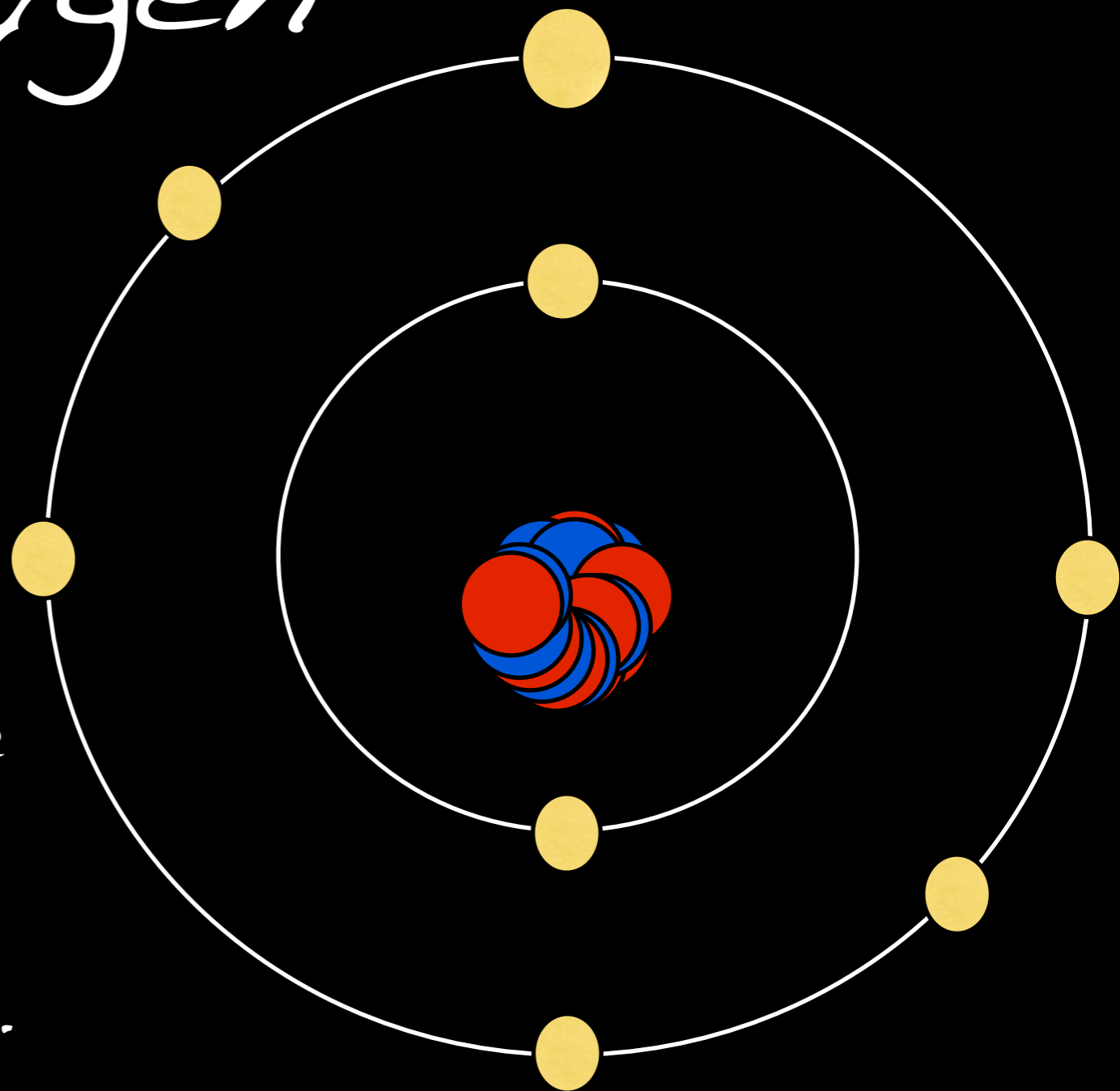
atoms

- In an atom the electrons orbit the nucleus (protons and neutrons), just like the earth orbits around the sun, only much faster.



oxygen

Some atoms have multiple rings called orbitals where the electrons go, in this case there are two. The outside electrons are called valence electrons.



Helium (He)

atomic mass: $n + n + p + p = 4$

atomic number: $p + p = 2$

charge: $p + p - e - e = 0$

Since the electrons have a negative charge they are subtracted from the protons, who have a positive charge, to find the total charge of the atom.

Questions

- The types of questions that will be on the PSSA will mainly focus on the items listed in the previous slide. Finding the atomic mass, number, etc.