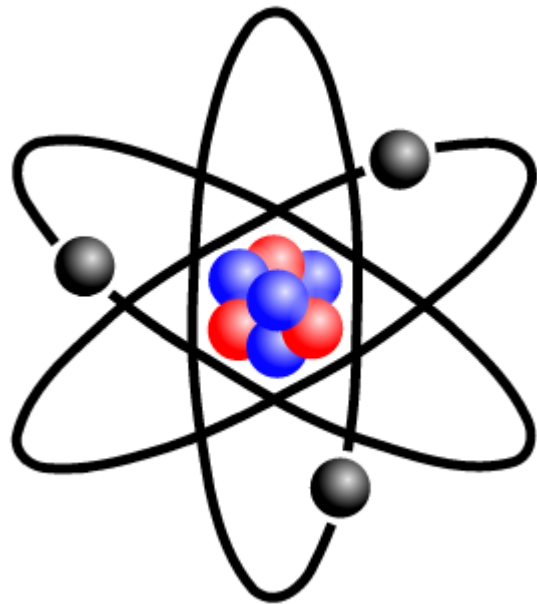


Atoms



Proton



"I'm positive!"

Electron



"I'm negative"

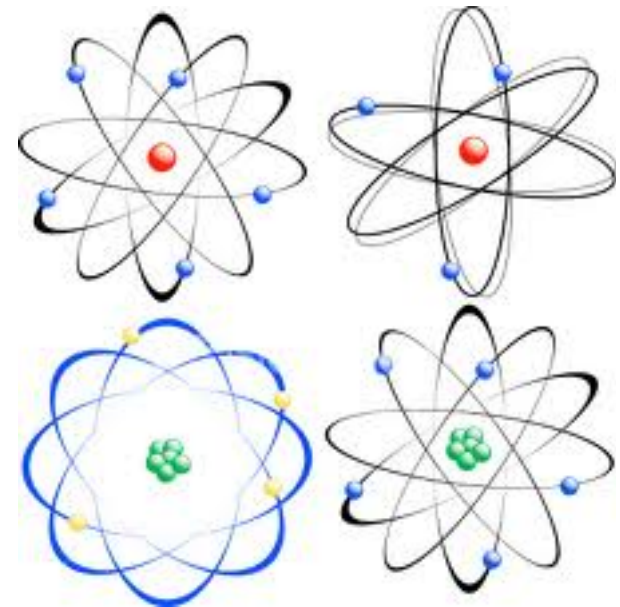
Neutron



"I don't care"

Atoms

- Smallest particles of matter, the building block of everything
- All matter is made of atoms including all states of matter



Size of Atoms

- Atoms are extremely small (10,000,000 atoms would fit inside a period).
- An atom is mostly empty space



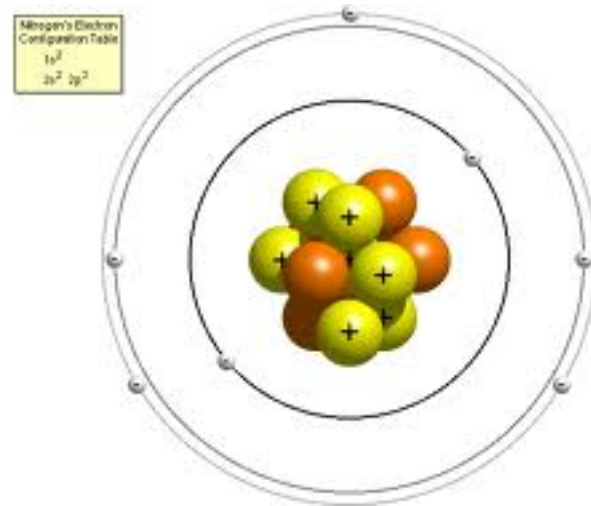
Parts of the Atom

- Atoms are made up of protons, neutrons, and electrons.
- Protons have a positive charge, electrons a negative charge, and neutrons no charge.



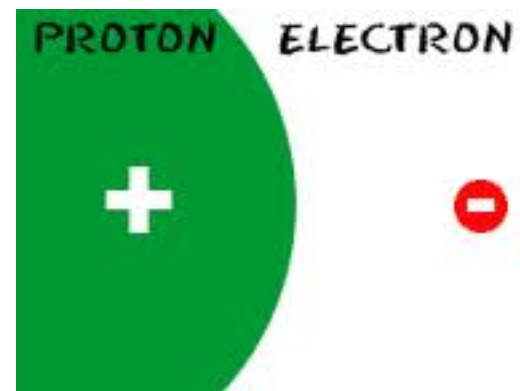
Nucleus

- Protons and neutrons form the nucleus of an atom.
- The nucleus is held together by the strong nuclear force.



Electrons

- Electrons move in a cloud around the nucleus as they are attracted to the protons
- Move at near the speed of light



Protons per Atom

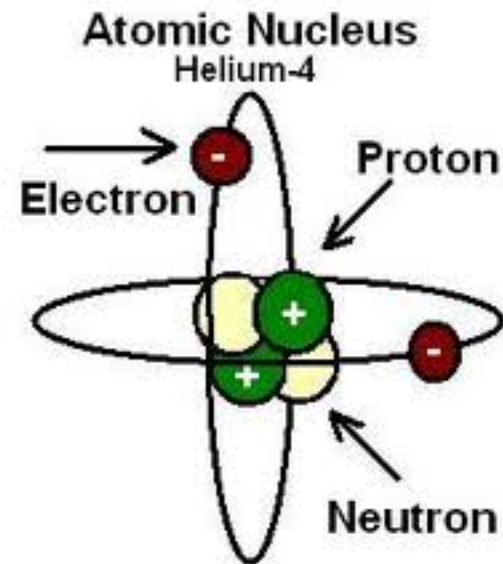
- The number of protons determines the type of element
- For example all iron atoms have 26 protons and all gold atoms have 79 protons



KEY:
● Protons
● Neutrons
● Electrons

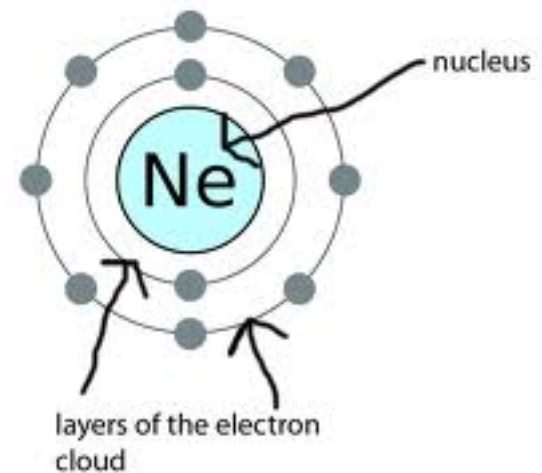
Neutrons per Atom

- The number of neutrons in the nucleus may be different for atoms of the same element.



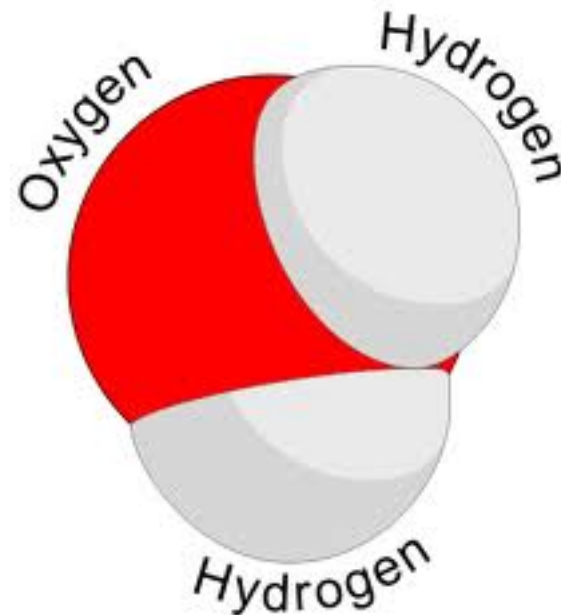
Electrons

- The number of electrons around the nucleus may be different for atoms of the same element.



Molecules

- Two or more atoms joined together
- Examples: NaCl (salt); O₂ (Oxygen); H₂O (water)



Elements

- Substances made up of only one type of atom
- Examples: diamond (carbon), oxygen (O₂), Iron (Fe)

