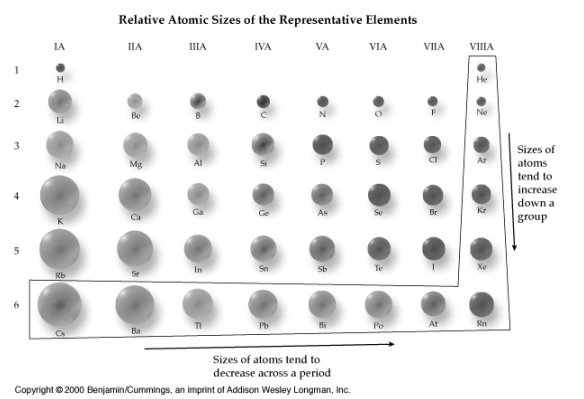


Periodic Trends

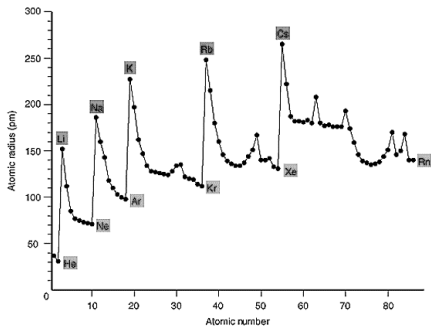
Periodic Trends

- Atomic Size
- Atomic Radius
- Ionization
- Electronegativity

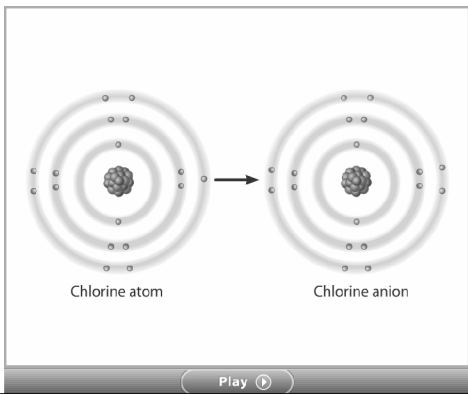
Relative Atomic Size



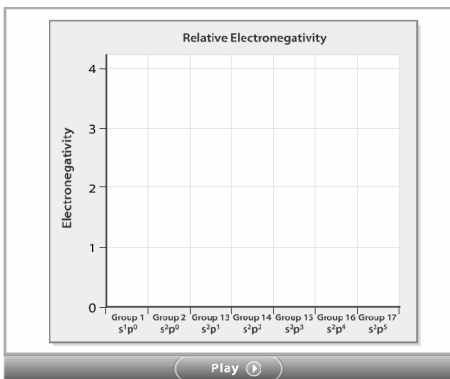
Graph of Atomic # vs Radius



Trends in Electron affinity



Electronegativity



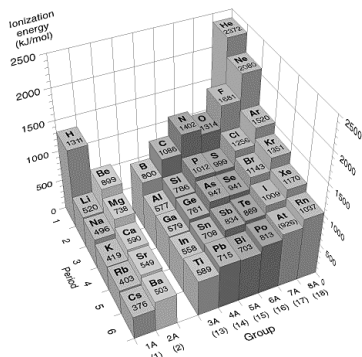
Trends in ionization energies

- **Ionization energies decrease down a group**
 - Outermost electron occupies shell that is farther from the nucleus
 - Less tightly bound by the nucleus
- **Ionization energies increase across a period**
 - Electrons more tightly bound due to increasing effective nuclear charge

More trends

- **Metals found toward the lower left of the periodic table**
 - these elements have low ionization energies and can readily lose their electrons
- **Non-metals found toward the upper right of the periodic table**
 - these elements have high ionization energies and can readily gain electrons

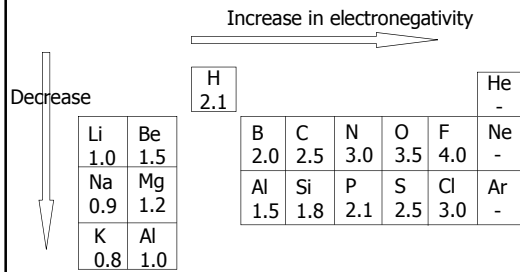
Another perspective



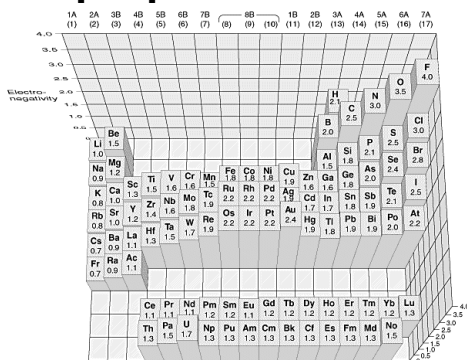
Ionization energy

- Energy required to remove an electron from an atom in the gas phase.

Electronegativity



Another perspective



Perspective with radii

