The Periodic Table

Part II

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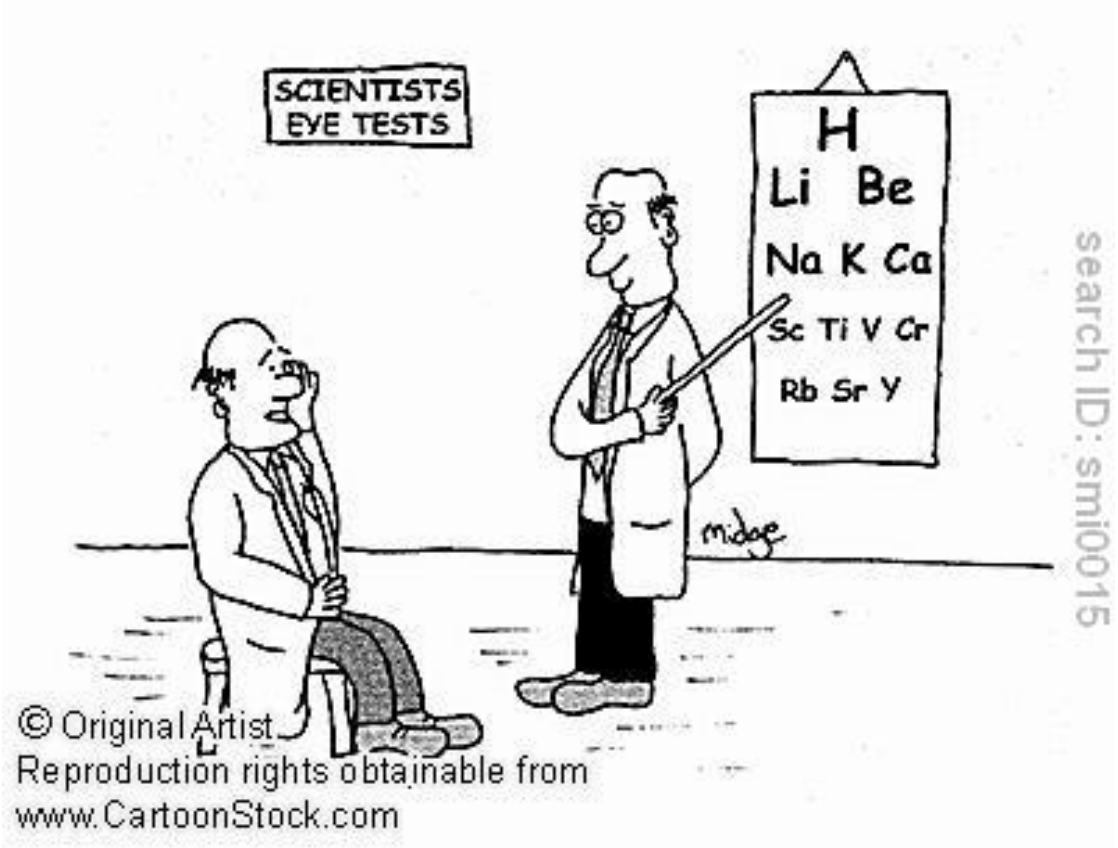
- Atoms will gain or lose electrons to achieve a noble gas-like electron configuration

Eight is Enough



What are the typical ions of

- K
- Xe
- P
- Ca
- Se
- Br

The "Special 7"

- Elements that exist as diatomic molecules
  - H_2
  - O_2
  - N_2
  - F_2
  - Cl_2
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Other elemental molecules:

P_4
S_8

Exceptional Electron Configurations

- Some elements have electron configurations that don't follow the arrow-filling diagram
  - Ex. Cu
    - Expected:
    - Actual:

Exceptional Electron Configurations

- Some elements have electron configurations that don't follow the arrow-filling diagram
  - Why?
    - Special stability associated with half-filled or fully filled sublevels

Periodic Law

- When the elements are arranged in order of increasing atomic number, there is a regular and repeating pattern in their physical and chemical properties