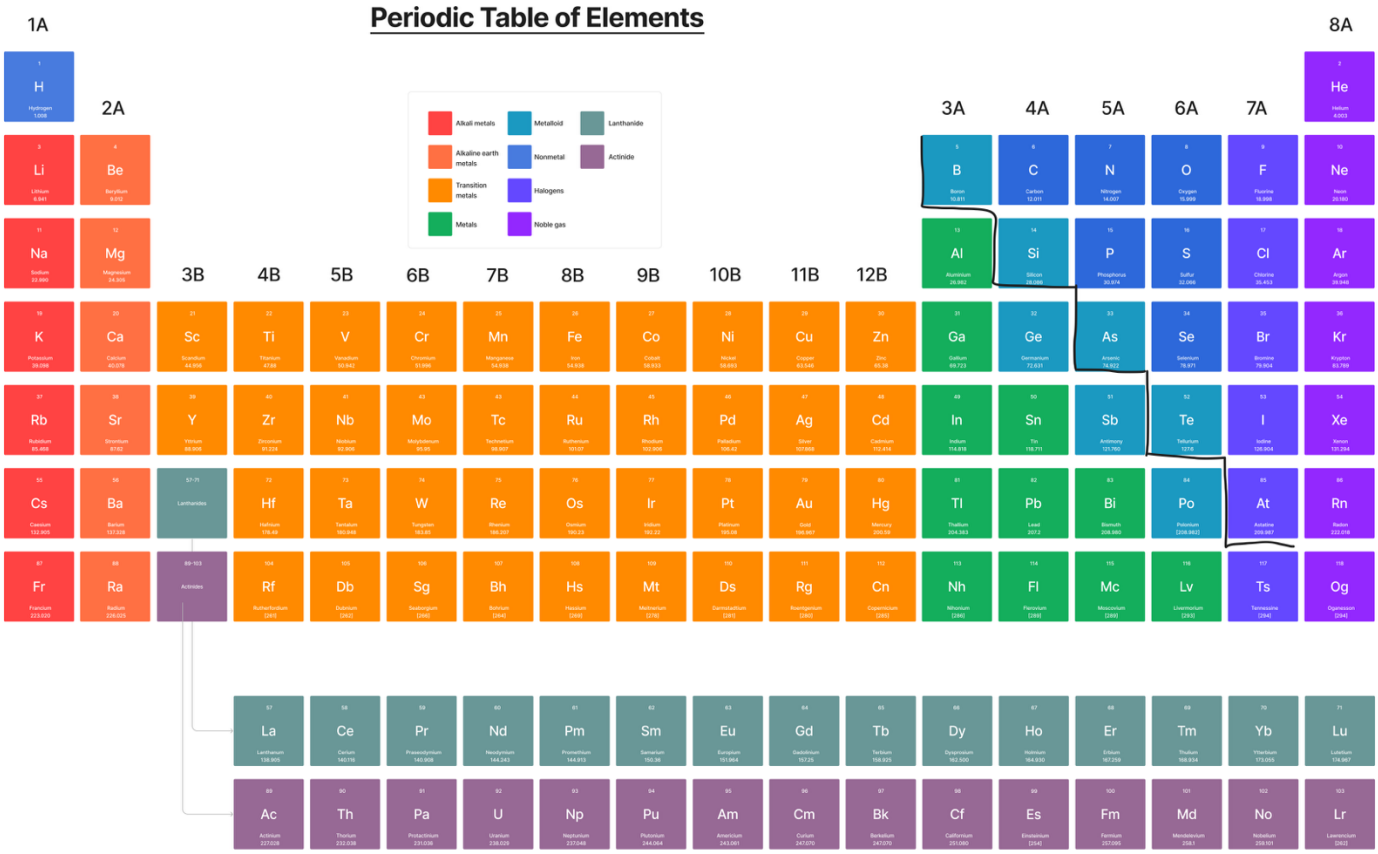


Using the Periodic Table

- Period: the horizontal rows of the periodic table
    - Example: The third horizontal row is period three and includes the following elements: Na, Mg, Al, Si, P, S, Cl, Ar
- Group: the vertical columns of the periodic table and tells you the number of valence electrons of that group
    - Example: The second vertical column of the periodic table is group two and includes the following elements: Be, Mg, Ca, Sr, Ba, Ra
    - Example: Atoms in group four have 4 valence electrons
- Chemical Symbols: abbreviations used to represent chemical symbols
    - Example: H is the chemical symbol for hydrogen
- Atomic Mass: the sum of the number of protons and neutrons in an atom
    - Example: Carbon's atomic mass is 12.011 g/mol
- Atomic Number: the number of protons in an atom and defines the identity of the chemical
    - Example: Oxygen has 8 protons, and its atomic number is 8

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Periodic Table Trends

- Atomic Size:
  - Decreases from left to right and increases from top to bottom
- Electronegativity: describes an atom's ability to attract electrons towards itself
  - Increases from left to right and bottom to top
- Metals vs Non-Metals:
  - Non-Metals: atoms that are to the right of the "staircase" AKA everything to the right of red line drawn in the periodic table
  - Metals: everything else
- Oxidation Number: represents the hypothetical charge of an atom if it was ionic
  - Atoms in group one have an oxidation number of +1
  - Atoms in group two have an oxidation number of +2
  - Atoms in group three have an oxidation number of +3
  - Atoms in group five have an oxidation number of -3
  - Atoms in group six have an oxidation number of -2
  - Atoms in group seven have an oxidation number of -1