

The Periodic Table (PT)

- father of the PT - Dmitri Mendeleev
 - organized in order of increasing atomic mass
- modern PT - arranged in columns & rows of increasing atomic #
 - elements in a column have similar properties
- groups (families) - vertical columns
 - elements have similar properties
- periods - horizontal rows
- metals - characterized as:
 - lustrous - shiny
 - good conductors of heat & electricity
 - malleable - shapeable
 - ductile - drawn into wire
 - solid @ room temperature (except Hg)
- nonmetals - characterized as:
 - dull solids / most are gases @ room temperature
 - brittle (if solid)
 - insulators (nonconductors) of heat & electricity
- metalloids (semi-metals) -
 - characterized by having properties of both metals & nonmetals
- Alkali Metals - Group 1 (except H)
 - called alkali b/c they form alkaline (basic) solutions in water
 - most reactive metals
 - soft
 - silvery-white

- Alkaline Earth Metals - Group 2
 - called alkaline b/c they form alkaline solutions in water
 - called earth b/c they are found as minerals in the earth
 - reactive metals
 - slightly harder than alkali metals
 - silvery color
- Transition Metals - Groups 3-12
 - called transition b/c their metallic character changes as you move across the period.
- Inner Transition Metals / Rare Earth Metals
 - bottom 2 rows
 - Lanthanides - top
 - Actinides - bottom
- Halogens - Group 17
 - called halogens (means salt-former in Latin) b/c these elements react w/ metals to form salt
 - mix of gases, a liquid, & solids
- Noble Gases - Group 18
 - called noble b/c they are unreactive b/c they are like the nobility, which did not interact w/ commoners

Name:

Periodic Table

Legend

	metals
	nonmetals
	metalloids
	alkali metals
	alkaline earth metals
	transition metals

period: 18 vertical columns

group: 7 horizontal rows

The diagram shows a periodic table where the color of each element cell indicates its category according to the legend. A large arrow points from left to right across the table, labeled "metallic character decreases". The colors transition from yellow (metals) on the far left to red (transition metals) on the far right. The first two columns (alkali and alkaline earth metals) are pink, while the remaining columns are blue. The last six columns (transition metals) are red.