

Read vertically, from top to bottom.

You only really have to draw one column and arrow

The figure shows a blank periodic table grid with 18 columns and 7 rows. The columns are color-coded into groups:

- Groups IA, IIA, IIIB, IVB, VB, VIB, VIIIB, IB, and IIB are yellow.
- Groups IIIB, IVB, VB, VIB, VIIIB, IB, and IIB are light blue.
- Groups IIIA, IVA, VA, VIA, and VIIA are pink.
- Groups VIIA, VIIIB, IB, and IIB are green.

Arrows indicate electron flow from the yellow groups (IA and IIA) through the light blue groups (IIIB, IVB, VB, VIB, VIIIB, IB, IIB) into the pink groups (IIIA, IVA, VA, VIA, VIIA), and finally into the green groups (VIIA, VIIIB, IB, IIB).

Card Back

Groups / Families

Columns with the “A” designation tell you the number of valence electrons of atoms in that column.

Group 1A or group 1

Card Back

Alkali Metals

- Have 1 valence electron
 - Form 1+ cations
- they LOSE 1 valence e- to form bonds
 - Are HIGHLY reactive with water

Group IIA (2A) or group 2

Card Back

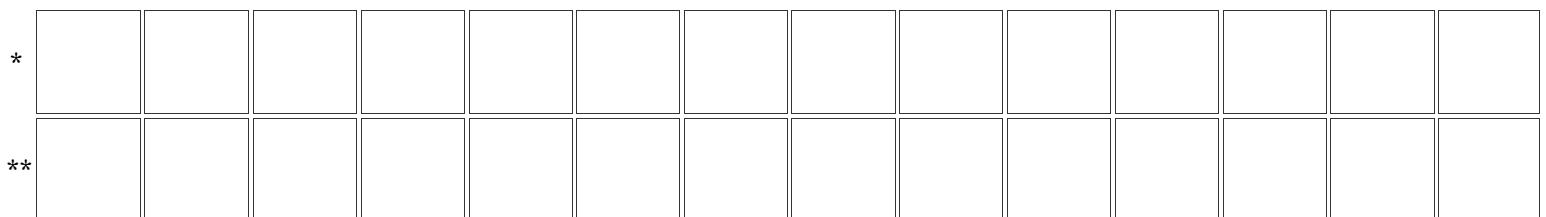
Alkaline Earth Metals

- Have 2 valence electrons
 - Form 2+ cations
- they LOSE 2 valence e- to form bonds
 - Are reactive with water

Read horizontally, from left to right →.

Numbered 1-7

A periodic table diagram where groups 1 through 7 are highlighted with a light blue color. The highlighted area starts at the top left with group IA and continues horizontally through group VIIA. A thick black horizontal line marks the boundary between the highlighted groups and the remaining elements. Below this line, the transition metals (groups IIIIB to IIB) are also shaded blue. The rest of the table, including the lanthanides and actinides, is white.



On back

Periods

Tells you the # of the VALENCE shell for
the elements contained within them.

Group VIIA (7A) or group 17

On Back

Halogens

- Have 7 valence electrons
 - Form 1- anions
- they GAIN 1 valence e- to form bonds
 - highly reactive non-metals

Group VIIIA (8A) or group 18

On Back

Noble Gases

- Have 8 valence electrons except He has 2
- UNREACTIVE / Do NOT generally form ions
 - FULL valence shells

“B” designated elements in groups 3-12

On Back

Transition Metals

- Generically have 2 valence electrons but many will make multiple charges.
 - All but one, Hg-Mercury, are solids
 - Also known as the “d” block

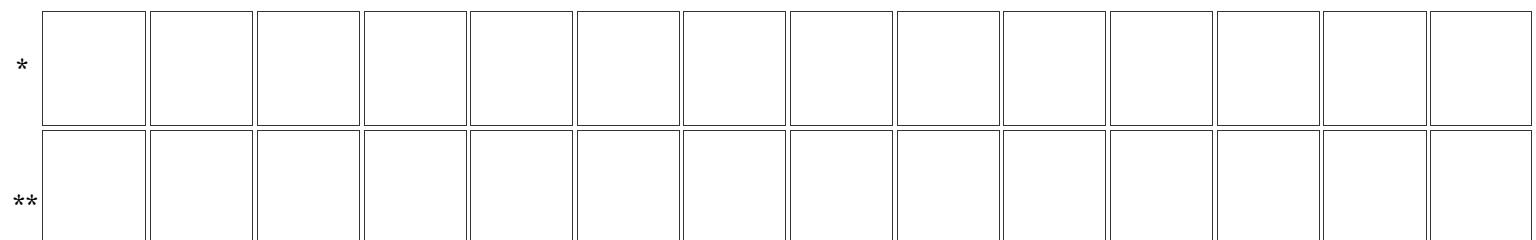
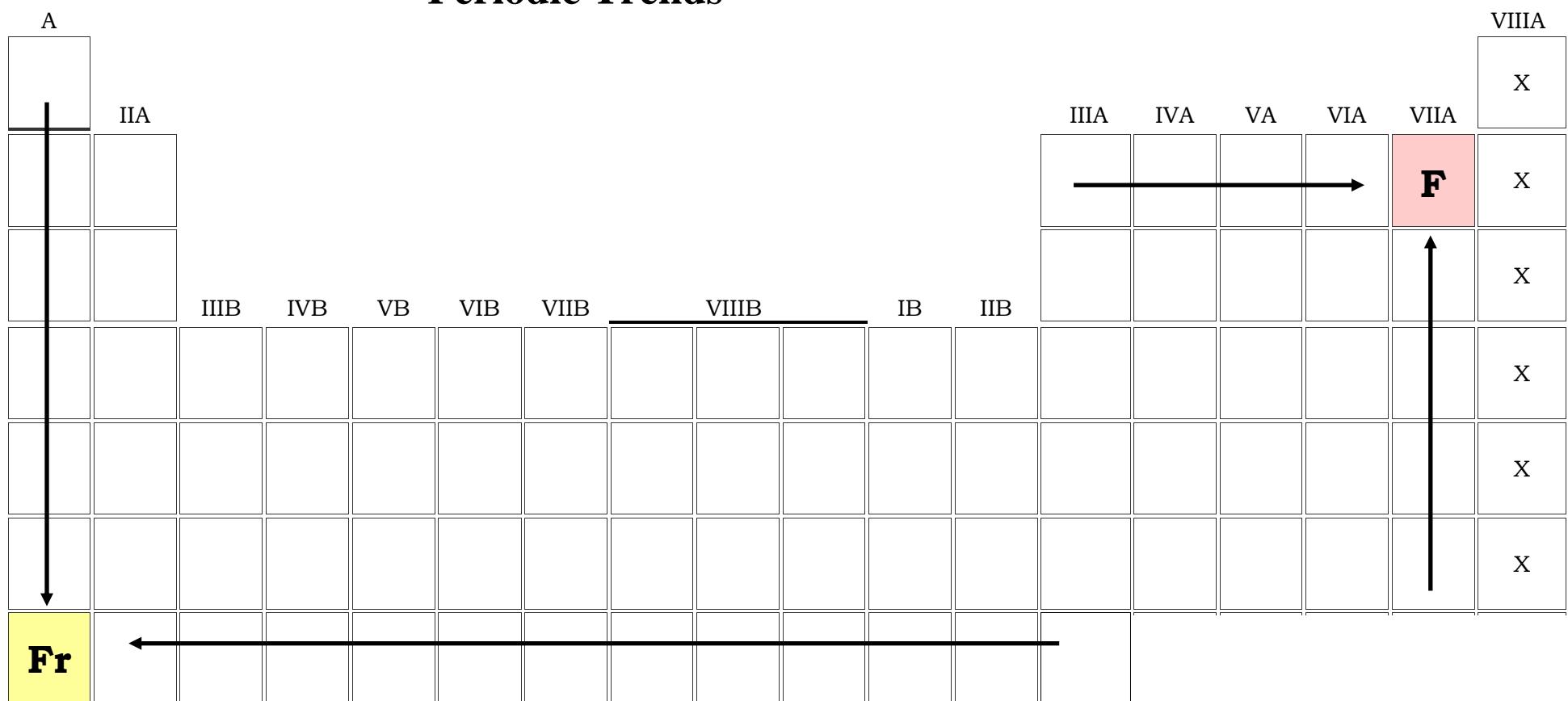
Elements removed and found at the bottom of the periodic table.

On Back

Inner Transition Metals

1. Lanthanides (Rare Earth)-Soft rare metals
2. Actinides-mostly radioactive
 - Also known as the "f" block

Periodic Trends



On Back

Periodic Trends

(Remember one corner and you're good!)

Fr-Francium

- ↑ LARGEST Atomic Radius [AR]
- ↓ LOWEST Ionization Energy [IE]
- ↓ LOWEST Electronegativity [EN]

F-Fluorine

- ↓ LOWEST Atomic Radius [AR]
- ↑ LARGEST Ionization Energy [IE]
- ↑ LARGEST Electronegativity [EN]

*

On Back

Metals

- * left side of pd table
- * ductile & malleable
- * Have luster -shiny (not shinny!!)
- * Good Conductors
- * Mostly solids
- * **LOSE** (not loose!!) electrons to form bonds
(form CATIONS)

On Back

Nonmetals

- * right side of pd. table
- * Brittle
- * Dull
- * Poor Conductors
- * Mostly gases
- * **GAIN** electrons to form bonds
(form ANIONS)

On Back

Semi-Metals/Metalloids

- * Share properties of both metal and non-metals
- * Found on the line b/w metal and non-metals
(except Aluminum, Al!!!)