

CONCEPT: PERIODIC TREND: METALLIC CHARACTER

- **Periodic Trends:** Specific patterns in the properties of the elements based on changing atomic numbers.

□ We will examine these patterns while moving to the top right corner of the Periodic Table.

Periodic Trend																	
H																	He
Li	Be																
Na	Mg																
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og

- **Metallic Character:** How easily an element can lose an electron.

□ Metals tend to _____ electrons. □ Non-metals tend to _____ electrons.

□ Recall, the Major Periodic Table Classifications: **metals**, **metalloids** and **non-metals**.

□ **Periodic Trend:** Metallic Character _____ moving from left to right across a period and going up a group.

Metallic Character _____																	
1A (1)	2A (2)																8A (8)
1 H Hydrogen (1)	2 Be Boronium (2)																He Helium (8)
2 Li Lithium (3)	3 Be Beryllium (4)	3B (5)	4B (6)	5B (7)	6B (8)	7B (9)	8B (10)	1B (11)	2B (12)	B Boron (3)	C Carbon (4)	N Nitrogen (5)	O Oxygen (6)	F Fluorine (7)	Ne Neon (8)		
3 Na Sodium (3)	4 Mg Magnesium (4)									Al Aluminum (5)	Si Silicon (6)	P Phosphorus (7)	S Sulfur (8)	Cl Chlorine (9)	Ar Argon (10)		
4 K Potassium (5)	5 Ca Calcium (6)	Sc Scandium (7)	Ti Titanium (8)	V Vanadium (9)	Cr Chromium (10)	Mn Manganese (11)	Fe Iron (12)	Co Cobalt (1)	Ni Nickel (2)	Cu Copper (3)	Zn Zinc (4)	Ga Gallium (5)	Ge Germanium (6)	As Arsenic (7)	Se Selenium (8)	Br Bromine (9)	Kr Krypton (10)
5 Rb Rubidium (5)	6 Sr Strontium (6)	7 Y Yttrium (7)	Zr Zirconium (8)	Nb Niobium (9)	Mo Molybdenum (10)	Tc Technetium (11)	Ru Ruthenium (12)	Rh Rhodium (1)	Pd Palladium (2)	Ag Silver (3)	Cd Cadmium (4)	In Indium (5)	Sn Tin (6)	Sb Antimony (7)	Te Tellurium (8)	I Iodine (9)	Xe Xenon (10)
6 Cs Cesium (5)	7 Ba Barium (6)	La Lanthanum (7)	Hf Hafnium (8)	Ta Tantalum (9)	W Tungsten (10)	Re Rhenium (11)	Os Osmium (12)	Ir Iridium (1)	Pt Platinum (2)	Au Gold (3)	Mercury (4)	Hg Thallium (5)	Tl Lead (6)	Pb Bismuth (7)	Bi Polonium (8)	Po Astatine (9)	Rn Radon (10)
7 Fr Francium (5)	8 Ra Radium (6)	9 Ac Actinium (7)	10 Rf Rutherfordium (8)	11 Db Dubnium (9)	12 Sg Seaborgium (10)	13 Bh Bohrium (11)	14 Hs Hassium (12)	15 Mt Meitnerium (1)	16 Ds Darmstadtium (2)	17 Rg Roentgenium (3)	18 Cn Copernicium (4)	19 Nh Nihonium (5)	20 Fl Flerovium (6)	21 Mc Moscovium (7)	22 Lv Livermorium (8)	23 Ts Tennessine (9)	24 Og Oganesson (10)
Ce Cerium (5)	Pr Praseodymium (6)	Nd Neodymium (7)	Pm Promethium (8)	Sm Samarium (9)	Eu Europium (10)	Gd Gadolinium (11)	Tb Terbium (12)	Dy Dysprosium (1)	Ho Holmium (2)	Er Erbium (3)	Tm Thulium (4)	Yb Ytterbium (5)	Lu Lutetium (6)				
Th Thorium (5)	Pa Protactinium (6)	U Uranium (7)	Np Neptunium (8)	Pu Plutonium (9)	Am Americium (10)	Cm Curium (11)	Bk Berkelium (12)	Cf Californium (1)	Einsteinium (2)	Fermium (3)	Mendelevium (4)	Nobelium (5)	Lawrencium (6)				

EXAMPLE: Based on the periodic trend, which element would have greater metallic character: S vs. Te

PRACTICE: Between which two elements is the difference in metallic character the greatest?

- a) Rb and O b) O and I c) Rb and I d) Li and O e) Li and Rb