



Atomic Bonding Basics- Lesson 1 Student Note Sheet

Circle the elements found in metallic bonds on the Periodic Table below.

1	2											11	12											17	18
1	H																								He
3	Li	Be											B	C	N	O	F	Ne							
11	Na	Mg											Al	Si	P	S	Cl	Ar							
19	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr							
37	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe							
55	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn							
87	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og							
			58	59	60	61	62	63	64	65	66	67	68	69	70	71									
			8	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu								
			90	91	92	93	94	95	96	97	98	99	100	101	102	103									
			9	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr								

Legend:

- Nonmetals (Red)
- Alkali metals (Yellow)
- Alkaline Earth metals (Orange)
- Transition elements (Purple)
- Other metals (Light Blue)
- Metalloids (Green)
- Halogens (Light Green)
- Noble gases (Cyan)
- Lanthanides (Light Yellow)
- Actinides (Light Blue)

What two forces balance when an atomic bond forms?

Why is it important that our atomic bond exists at an energy minimum?

Sketch out an ionic bond. What are some key characteristics of this bond?



Sketch a covalent bond. What are some key characteristics of this bond?
What materials can it be found in?

Sketch a metallic bond. What makes it different than our covalent or ionic bonds?

Why do we classify Van der Waals bonds as secondary bonds rather than primary bonds?

What is a property that is influenced by atomic bonding? How?