

# Periodic Table Part 2

## Lewis Notation

- \_\_\_\_\_
- \_\_\_\_\_
- Dots are put in the 4 compass points (N, E, S and W).
- You cannot double up on a compass point until each point has a dot. **No compass points should have more than 2 dots.**

Incorrect

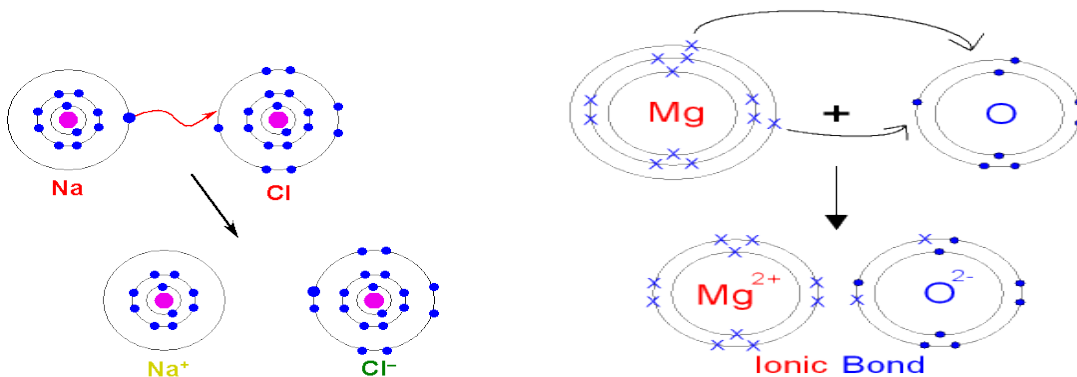
I	II		III	IV	V	VI	VII	0
H •								He ••
Li •	•Be •		•B •	•C •	•N •	•O •	•F •	•Ne ••
Na •	•Mg •		•Al •	•Si •	•P •	•S •	•Cl ••	•Ar ••
K •	•Ca •		•Ga •	•Ge •	•As •	•Se •	•Br ••	•Kr ••
Rb •	•Sr •		•In •	•Sn •	•Sb •	•Te •	•I ••	•Xe ••
Cs •	•Ba •		•Tl •	•Pb •	•Bi •	•Po •	•At ••	•Rn ••

Metal
  Metalloid
  Nonmetal

## Ions

Def: \_\_\_\_\_

- they could be positively or negatively charged.
- they become charged by **gaining or losing electrons.**
- all elements in the same family have the same ion charge.
- metalloids will follow the family rule.



## Metals

- Groups 1, 2 and 3.
- Donate electrons to non-metals and form positive ions.

Group 1	Group 2	Group 3
Charge?		
Why?		

## Non-Metals:

- Groups 4-8
- Accept electrons from metals and form negative ions. \*group 4 exception

Group 4	Group 5	Group 6	Group 7
Charge?			
Why?			

**Group 8:** Does not form ions. Why?

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<b>+1</b>												<b>-1</b>		<b>0</b>					
IA												VIIA		VIII A					
1	<b>+2</b>											1	2						
H	IIA											H	He						
3	4											5	6	7	8	9	10		
Li	Be											B	C	N	O	F	Ne		
11	12											13	14	15	16	17	18		
Na	Mg											Al	Si	P	S	Cl	Ar		
19	20	21	22							29	30	31	32	33	34	35	36		
K	Ca	Sc	Ti							Cu	Zn	Ga	Ge	As	Se	Br	Kr		
37	38	39	40							47	48	49	50	51	52	53	54		
Rb	Sr	Y	Zr							Ag	Cd	In	Sn	Sb	Te	I	Xe		
55	56	57	72							79	80	81	82	83	84	85	86		
Cs	Ba	La	Hf							Au	Hg	Tl	Pb	Bi	Po	At	Rn		
87	88	89	104							111	112			114			116		
Fr	Ra	Ac	Rf																

### Past exam questions

1. Which atom is correctly represented with the Lewis notation?



2. During ionization, an atom can become a positive ion. How does an atom become a positive ion?

- A) It gains one or more electrons
- B) It loses one or more electrons
- C) It gains one or more protons
- D) It loses one or more protons