

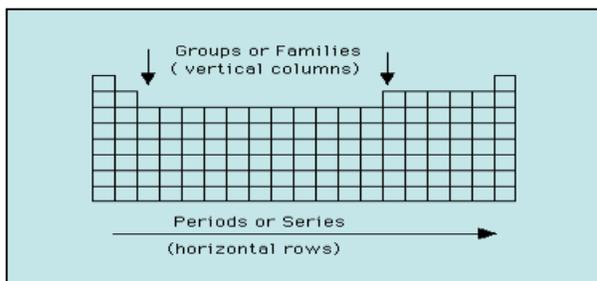
The Periodic Table: Let's Get Organized! - Chapter 6 & 7

I. How are elements organized?

- A. So many elements gives rise to the need to organize.
- B. Certain elements have
- C. Dmitri Mendeleev classified based on what he knew about elements.
 - 1. He put them
 - 2. He
 - 3. His table had gaps but he was
- D. Mendeleev discovered
 - 1. This says:
 - 2. Moseley saw that properties varied more accurately
 - 3. Thus, the periodic table is organized

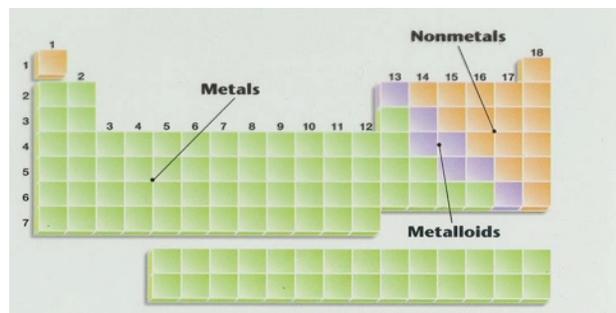
II. Parts of the Periodic Table of the periodic table

- A. These are the
 - 1. Elements in the
 - 2. Ways to label groups:
 - a. with
 - i. are located in the
 - ii. are located in the (more modern)
 - b.
- B. These are the of the periodic table
 - 1. Elements in the
 - 2. Way to label periods:
 - a.



III. Three General Categories of Elements

- A.
 - 1. Have
 - 2.
 - 3. at room temperature (except)
 - 4.
 - 5.
- B.
 - 1.
 - 2.
 - 3. The -
 - 4.
 - 5. Varied physical properties
- C.
 - 1. Also called
 - 2. Have
 - 3. Properties



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IV. The Periodic Groups: More specific categories

A.

B. Why? Because elements in the same group have

1. The _____ an element has is

2. An element can have

C. Group 1 or 1A –

1. _____ and, thus,

2. Become _____ the group

3. They all have

D. Group 2 or 2A –

1. _____ but _____ as Group 1.

2. _____ than alkali metals.

3. They all have

E. _____ (3-12 or 1B-8B)

1. many are _____ (that's why they're used for _____ !)

2. They have

F. Group 17 or 7A –

1.

2.

3. _____ (to form salts).

4. They all have

G. Group 18 or 8A –

1.

2.

3. They all have

H. _____ 57-71 and _____ 89-103

1. Most are

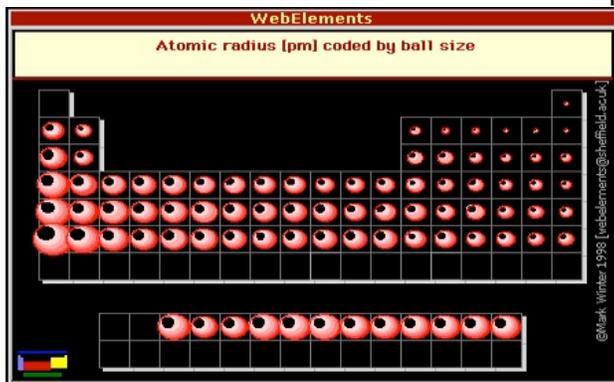
2. Also known as

3. Many of them are

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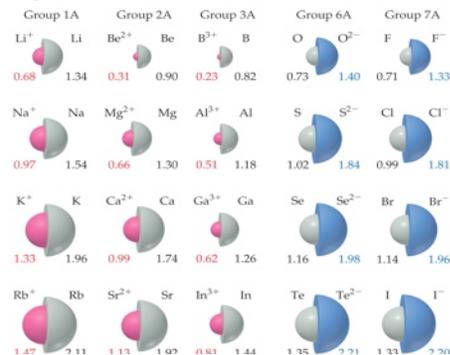
V. Periodic Trends

- A.
- As you _____ because you have _____
 - As you _____ because there are _____
 - _____ of the periodic table.



- B.
- _____ and _____
 - Elements in a _____
 - _____
 - _____
 - _____
 - _____ of the periodic table.
 - BUT,

Ionic Radius Periodic Table



- C.
- High IE means _____
 - Low IE means _____
 - _____ of the periodic table.
 - Electrons that are close to the nucleus causes the outermost electrons to be held less tightly (known as electron shielding).

- D.
- If an element _____ to have eight on the outside,
 - Thus,

3. _____ of the periodic table,

1	2																	10	11		
H	He																	Ne	Rn		
3	4											9	10	11	12	13	14	15	16	17	18
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	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr				
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56		
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe				
55	56	57-70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87		
Cs	Ba	* Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn				
87	88	** Lr	Rf	Db	Sg	Bh	Hs	Mt	Uun	Uuu	Uub	Uuq									
89	90	91-102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119		
Fr	Ra	** Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No						

* Lanthanide series
 ** Actinide series