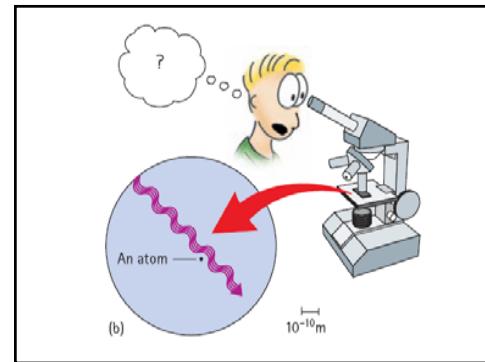
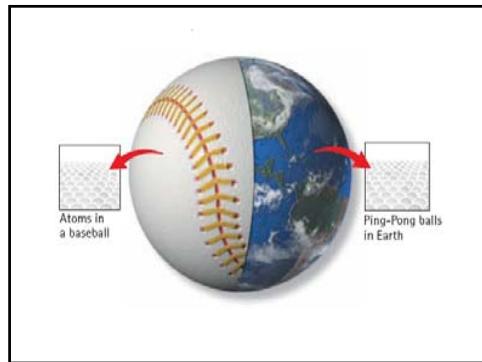
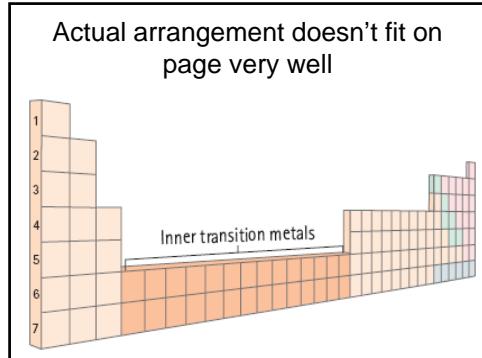


Atoms and the Periodic Table

Chapter 12
Pages 285-305



1	H	2	He
3	Li	4	Be
5	Na	12	Mg
19	K	20	Ca
21	Sc	22	Ti
23	V	24	Cr
25	Mn	26	Fe
27	Co	28	Ni
29	Cu	30	Zn
31	Ga	32	Ge
33	As	34	Se
35	Br	36	Kr
37	Rb	38	Sr
39	Y	40	Zr
41	Nb	42	Mo
43	Tc	44	Ru
45	Rh	46	Pd
47	Ag	48	Cd
49	In	50	Sn
51	Sn	52	Sb
53	Te	54	I
55	Xe	56	La
57	Ba	58	Hf
59	Ta	60	W
61	Re	62	Os
63	Ir	64	Pt
65	Au	66	Hg
67	Hg	68	Tl
69	Pb	70	Bi
71	Po	72	At
73	At	74	Rn
75	Fr	76	Ra
77	Ac	78	Rf
79	Rb	80	Db
81	Pa	82	Sg
83	U	84	Bh
85	Np	86	Hs
87	Pu	88	Mt
89	Am	90	Uuu
91	Cm	92	Uub
93	Bk	94	
95	Cf	96	
97	Es	98	
99	Fm	100	
101	Md	102	
102	No	103	
103	Lr	104	
105	Ce	106	
106	Pr	107	
107	Nd	108	
108	Pm	109	
109	Sm	110	
110	Eu	111	
111	Gd	112	
112	Tb	113	
113	Dy	114	
114	Ho	115	
115	Tm	116	
116	Yb	117	
117	Lu	118	



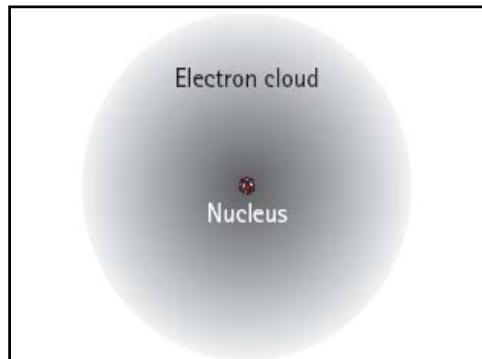
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65	Au	66	Hg
67	Hg	68	Tl
69	Pb	70	Bi
71	Po	72	At
73	At	74	Rn
75	Fr	76	Ra
77	Ac	78	Rf
79	Rb	80	Db
81	Pa	82	Sg
83	U	84	Bh
85	Np	86	Hs
87	Pu	88	Mt
89	Am	90	Uuu
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97	Es	98	
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101	Md	102	
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103	Lr	104	
105	Ce	106	
106	Pr	107	
107	Nd	108	
108	Pm	109	
109	Sm	110	
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111	Gd	112	
112	Tb	113	
113	Dy	114	
114	Ho	115	
115	Tm	116	
116	Yb	117	
117	Lu	118	

Na

Atomic symbol

Only first letter is capital

CO is not cobalt (Co)



- Atomic Structure
- Protons
 - Neutrons
 - Electrons

Atomic Structure--Protons

- Electrical charge +1
 - Equal number of negative electrons
 - Balance to zero charge
- Atomic number is # of protons
- Mass = 1 atomic mass unit (amu)

Atomic Structure--Neutrons

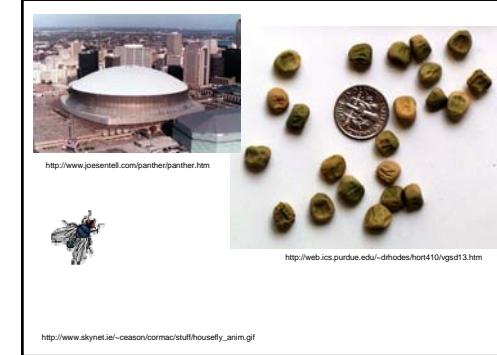
- Electrical charge = 0
- Mass = 1 atomic mass unit (amu)
- Number of neutrons is not set for an atom of an element

Atomic Structure--Nucleus

- Protons--set number, determines the element
- Neutrons—no set number, can be different for same element
Make up the NUCLEUS
NEW KLEE US
Nucleons—have mass
NEW KLEE ONS

Atomic Structure-- Electrons

- Electrical charge -1
- Mass = almost nothing (1/1837 of a proton)



Isotope notation

23
11 Na

Stable Isotope of Sodium

Atomic number is protons 11
Mass number of nucleons is isotope: 23

Periodic Table coding

1 H	2 He
3 Li	4 Be
5 Na	6 Mg
7 K	8 Ca
9 Rb	10 Sr
11 Cs	12 Ba
13 Fr	14 Ra
15 La	16 Ce
17 Th	18 Pa
19 Pr	20 Nd
21 Pm	22 Sm
23 Eu	24 Gd
25 Tb	26 Dy
27 Ho	28 Er
29 Tm	30 Yb
31 Lu	32 Lu
33 Hf	34 Ta
35 W	36 Re
37 Os	38 Os
39 Ir	40 Pt
41 Au	42 Hg
43 Hg	44 Pb
45 Bi	46 Po
47 At	48 At
49 Rn	50 Rn
51 Cf	52 Es
53 Fm	54 Md
55 No	56 Lr

Periods and Groups

