What's left for Chem 104Q2?

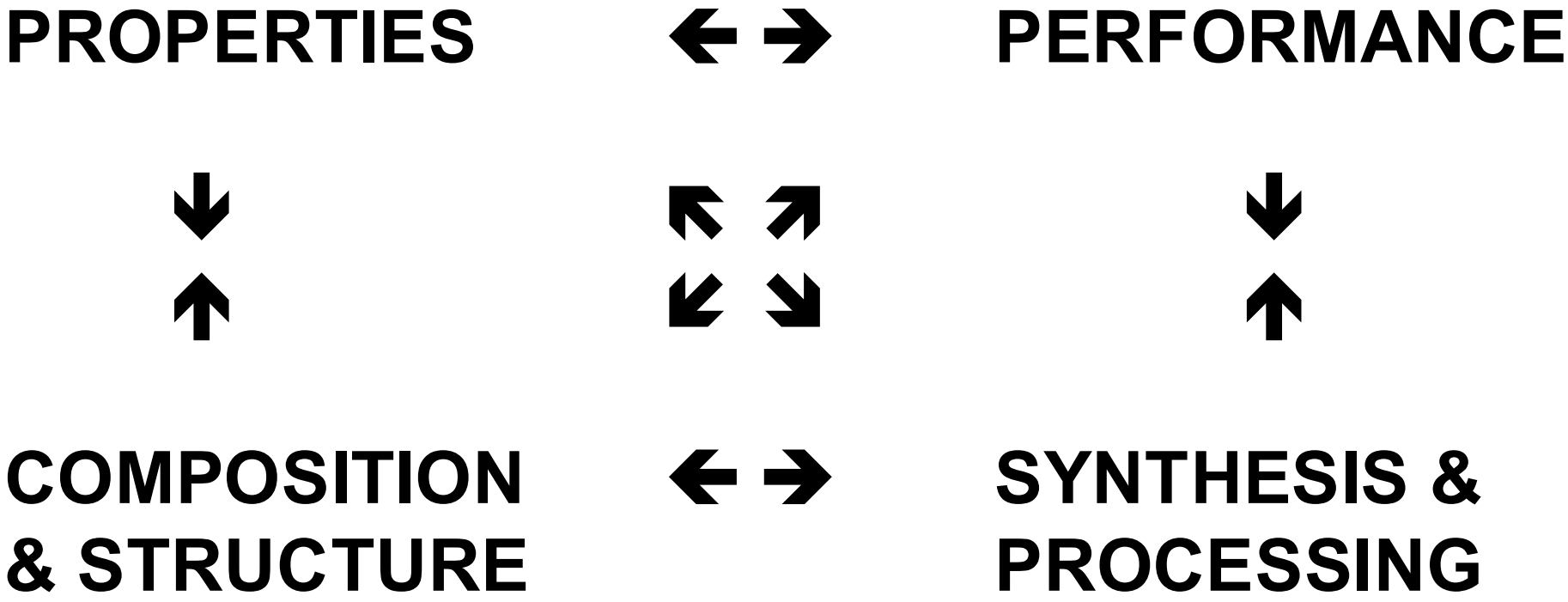
4/13	**Exam 2**	Preparation of Pigment and Paint	9. Pottery	9. Pottery
4/20	9. Pottery	Preparation and Modification of Glass	10. Glass	10. Glass **Q7**
4/27	11. Construction Materials	Preparation of Concrete	11. Construction Materials	12. Semiconductors **Q8**
5/4	12. Semiconductors	Concrete, check out	12. Semiconductors **Paper 3 due**	13. Advanced Materials **Q9**
5/11	13. Advanced Materials	**presentations** on advanced materials	exam review	**Exam 3**

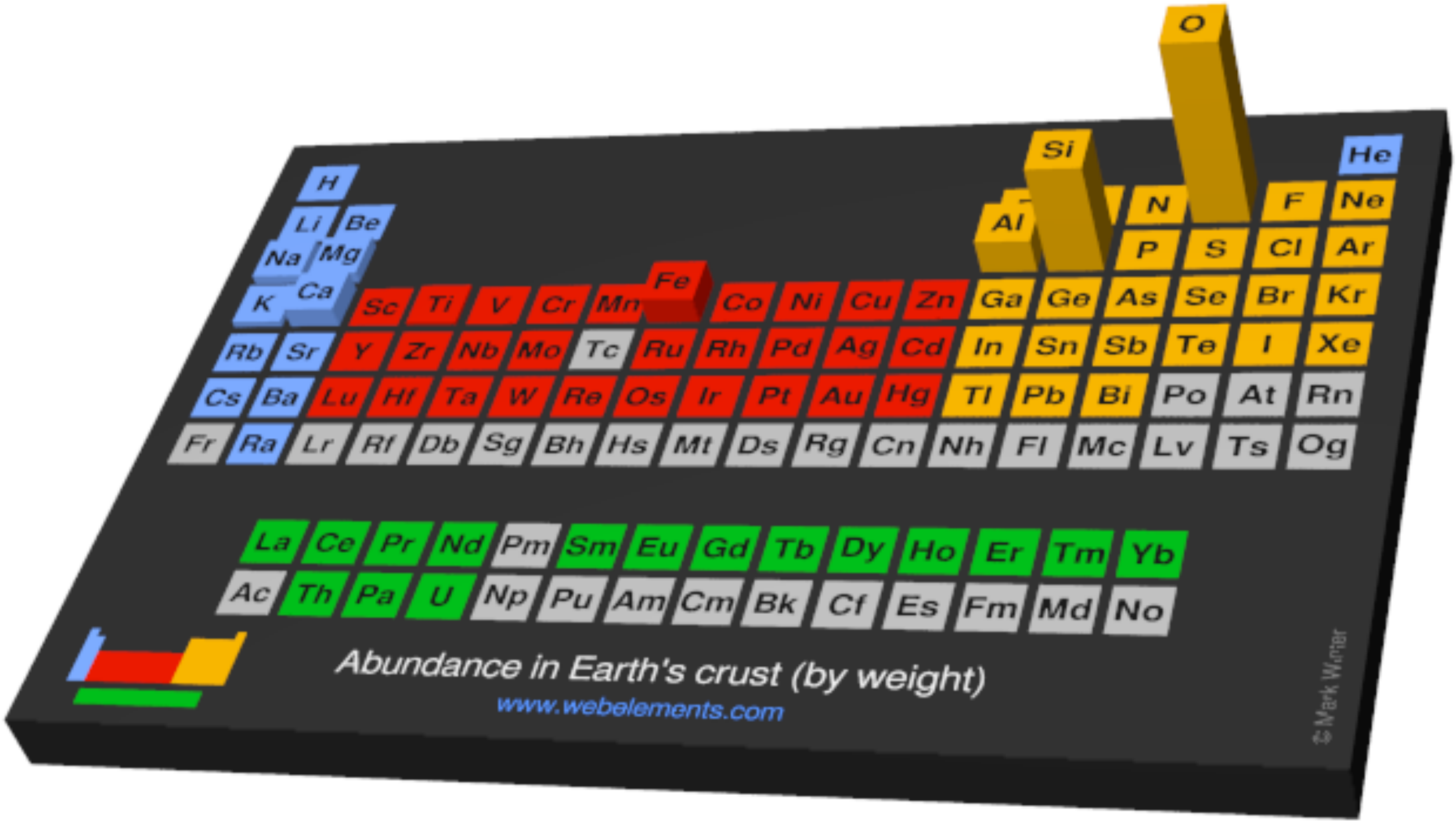
Calendar of Campus Events

O = Opportunities, C = Career, S = Sustainability

day, date, and time	location	event	type
4/15, 11 am - 1 pm	Reeve	Summer Job & Internship Fair	C
4/17, 2-4 pm	Reeve 104	Crafts, coffee, and community	O
4/18, 1-5 pm	3rd floor Sage	UW Oshkosh Free School	S
4/18, 2-5 pm	near Sage	Tree grafting	S
4/22, 10 am - 3 pm	Reeve Concourse	Sustainability Fair	S
4/22, 5:30 - 7:00 pm	Reeve 202	Experimental Archaeology	O
4/23, 9:30 am - 2:30 pm	Reeve	**Celebration of Scholarship & Creative Activity**	
4/24, 11:30 am - 1 pm	Swart	Arbor Day tree planting	S
5/1, 2-4 pm	Reeve 104	Crafts, coffee, and community	O
5/2, 9-11:30 am	Fox River or Lake Winnebago	Fox-Wolf Watershed Alliance cleanup sign-up link	S

Pottery


PROPERTIES
PERFORMANCE
COMPOSITION & STRUCTURE
SYNTHESIS & PROCESSING


H
He
Li
Be
B
C
N
O
F
Ne
Na
Mg
Al
Si
P
S
Cl
Ar
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
Lu
Hf
Ta
W
Re
Os
Ir
Pt
Au
Hg
Tl
Pb
Bi
Po
At
Rn
Fr
Ra
Lr
Rf
Db
Sg
Bh
Hs
Mt
Ds
Rg
Cn
Nh
Fl
Mc
Lv
Ts
Og
La
Ce
Pr
Nd
Pm
Sm
Eu
Gd
Tb
Dy
Ho
Er
Tm
Yb
Ac
Th
Pa
U
Np
Pu
Am
Cm
Bk
Cf
Es
Fm
Md
No
Abundance in Earth's crust (by weight)
www.webelements.com
© Mark Winter

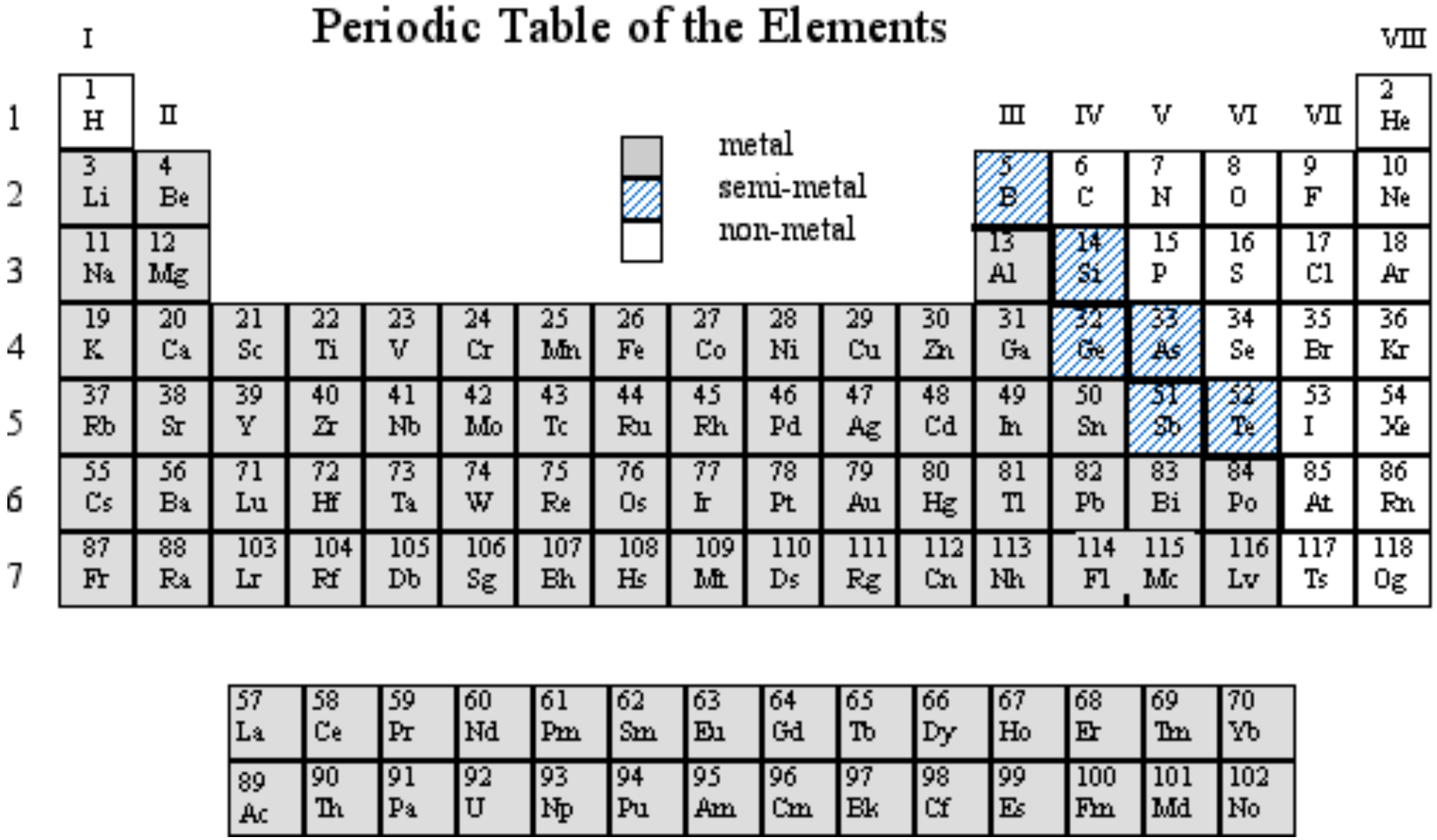

Periodic Table of the Elements
I
II
III
IV
V
VI
VII
VIII
1 H
2 He
3 Li
4 Be
5 B
6 C
7 N
8 O
9 F
10 Ne
11 Na
12 Mg
13 Al
14 Si
15 P
16 S
17 Cl
18 Ar
19 K
20 Ca
21 Sc
22 Ti
23 V
24 Cr
25 Mn
26 Fe
27 Co
28 Ni
29 Cu
30 Zn
31 Ga
32 Ge
33 As
34 Se
35 Br
36 Kr
37 Rb
38 Sr
39 Y
40 Zr
41 Nb
42 Mo
43 Tc
44 Ru
45 Rh
46 Pd
47 Ag
48 Cd
49 In
50 Sn
51 Sb
52 Te
53 I
54 Xe
55 Cs
56 Ba
71 Lu
72 Hf
73 Ta
74 W
75 Re
76 Os
77 Ir
78 Pt
79 Au
80 Hg
81 Tl
82 Pb
83 Bi
84 Po
85 At
86 Rn
87 Fr
88 Ra
103 Lr
104 Rf
105 Db
106 Sg
107 Bh
108 Hs
109 Mt
110 Ds
111 Rg
112 Cn
113 Nh
114 Fl
115 Mc
116 Lv
117 Ts
118 Og
metal
semi-metal
non-metal
57 La
58 Ce
59 Pr
60 Nd
61 Pm
62 Sm
63 Eu
64 Gd
65 Tb
66 Dy
67 Ho
68 Er
69 Tm
70 Yb
89 Ac
90 Th
91 Pa
92 U
93 Np
94 Pu
95 Am
96 Cm
97 Bk
98 Cf
99 Es
100 Fm
101 Md
102 No

Figure 1.14

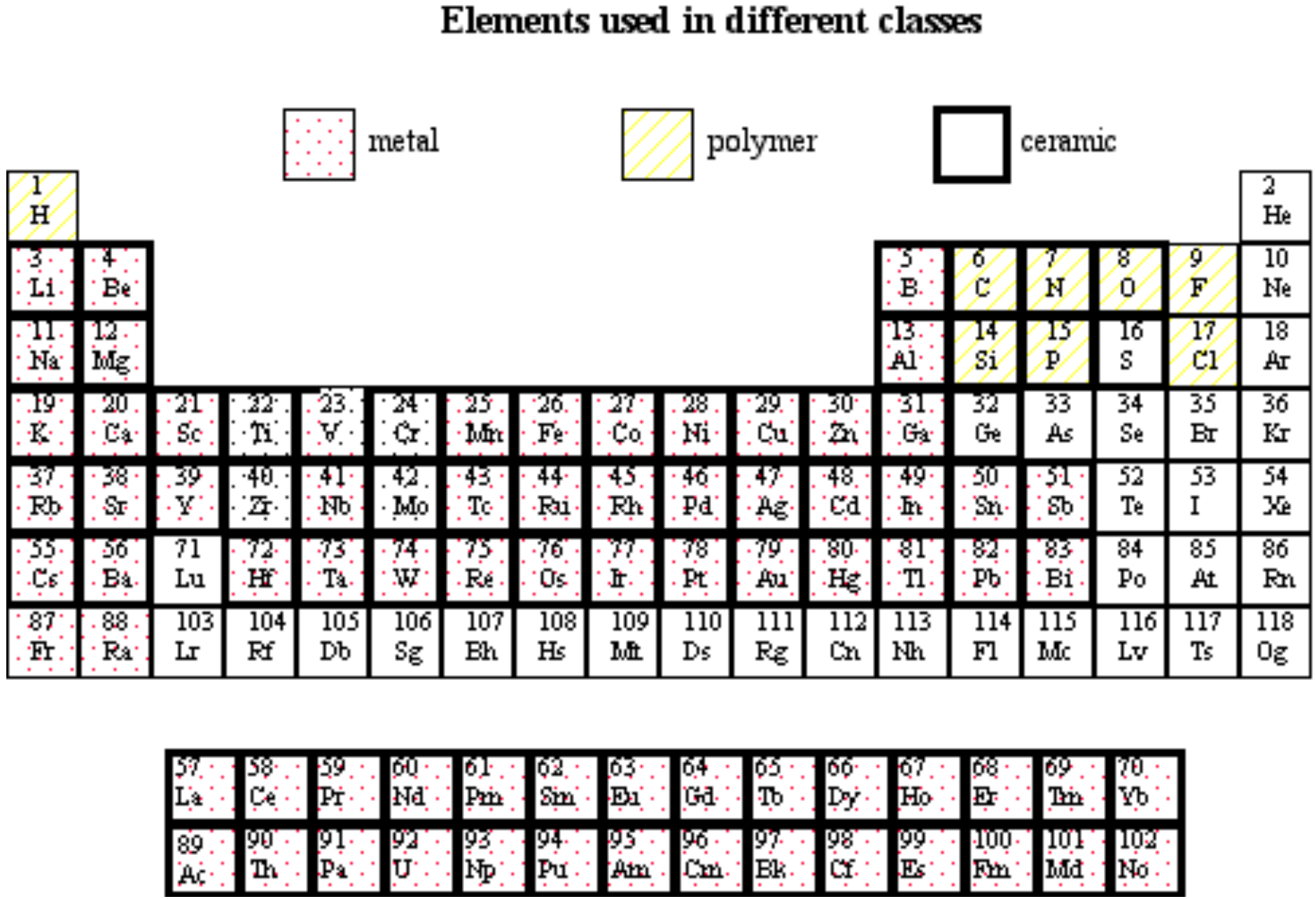

Elements used in different classes
metal
polymer
ceramic
1 H
2 He
3 Li
4 Be
5 B
6 C
7 N
8 O
9 F
10 Ne
11 Na
12 Mg
13 Al
14 Si
15 P
16 S
17 Cl
18 Ar
19 K
20 Ca
21 Sc
22 Ti
23 V
24 Cr
25 Mn
26 Fe
27 Co
28 Ni
29 Cu
30 Zn
31 Ga
32 Ge
33 As
34 Se
35 Br
36 Kr
37 Rb
38 Sr
39 Y
40 Zr
41 Nb
42 Mo
43 Tc
44 Ru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

Figure 1.9

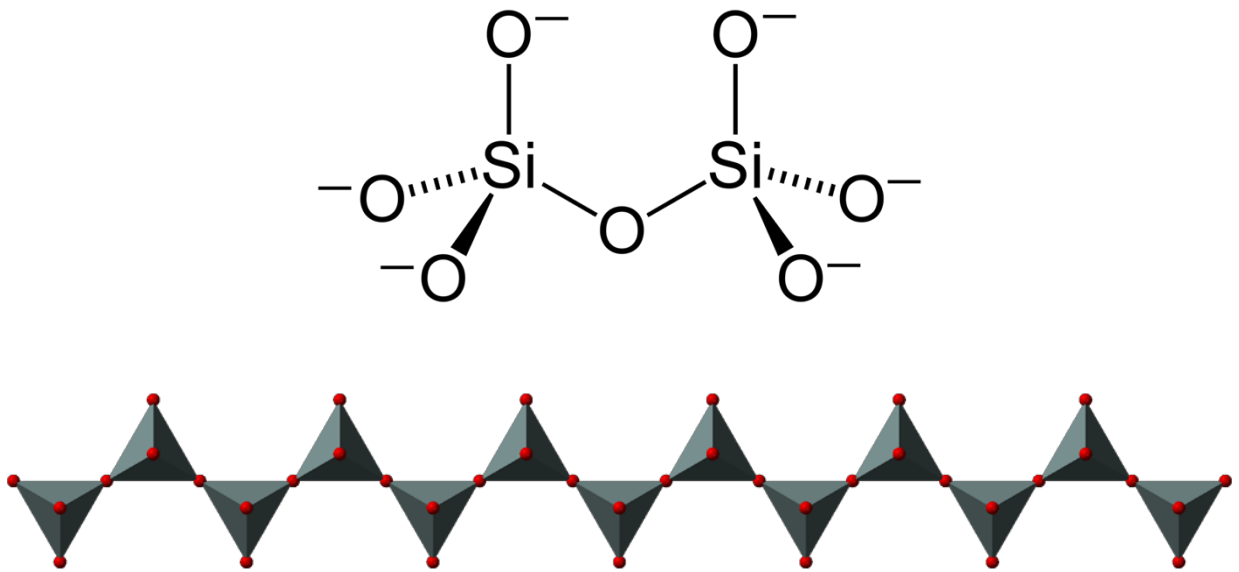
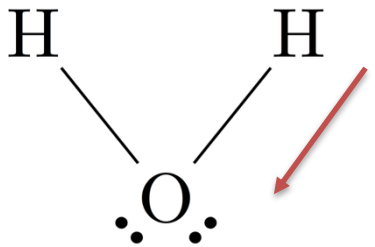
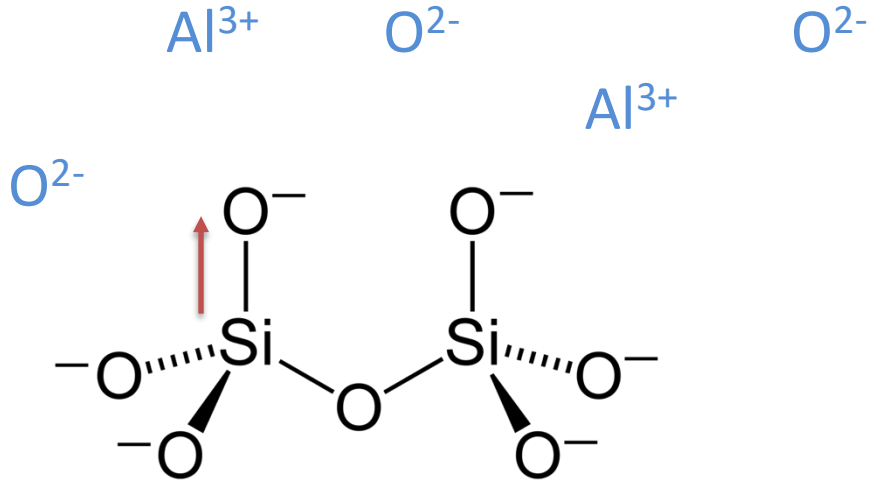
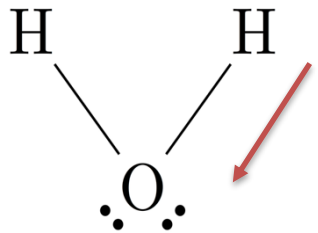
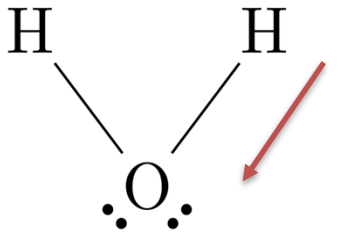


Figure 9.2 Tetrahedral Geometry of Silica









secondary bonds in aluminosilicate mixture:

ion – dipole interactions

add water: polar interactions (dipole – dipole)

Emperor Qin's Terra Cotta Army, Xian, China

Black and Red Figure Vases

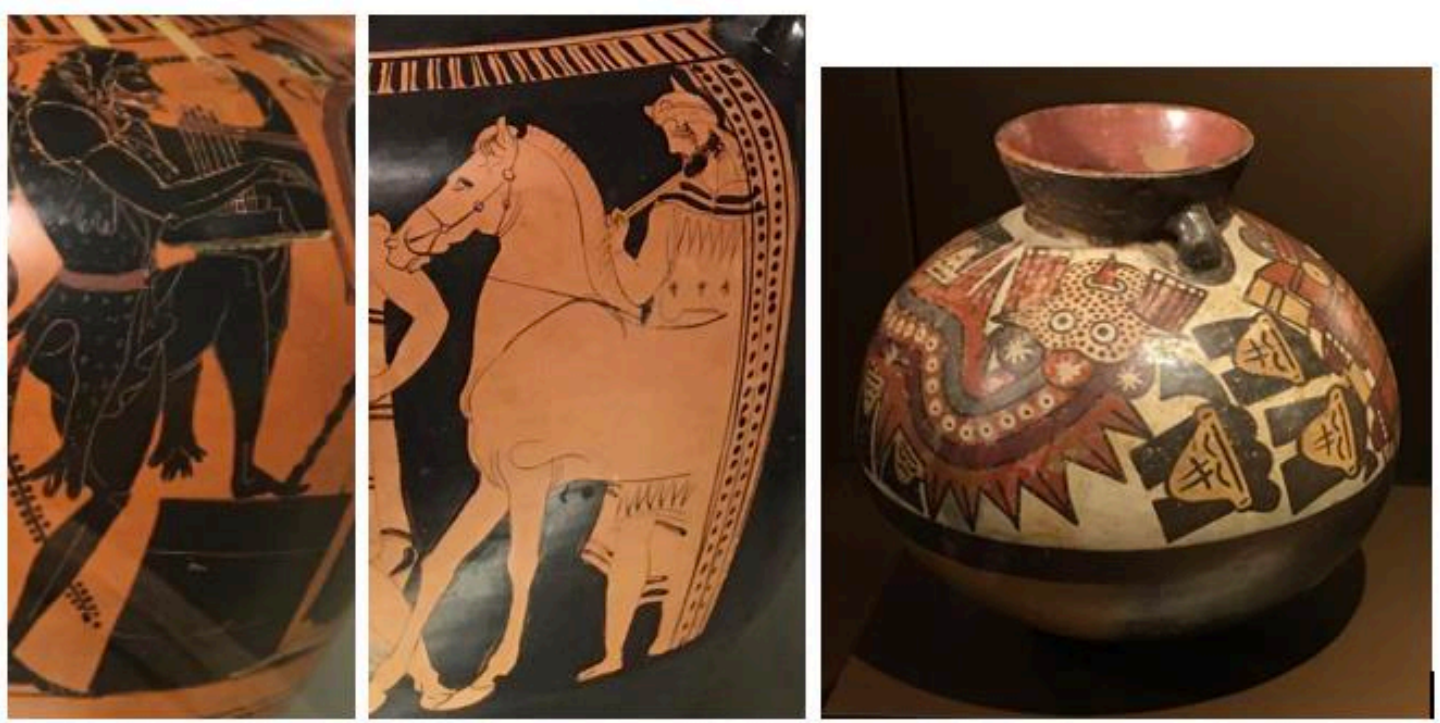


Figure 9.6 Pottery glazed with iron oxides.
left: Athenian black and red figure pottery; right: Nasca bowl