

Periodic Table Code Activity

Glue the periodic table on the LAST (or BACK) page of your notebook (4C). You will need a black marker and colored pencils.

1											18						
1 H 1.008											2 He 4.0026						
3 Li 6.94	4 Be 9.0122											5 B 10.81	6 C 12.011	7 N 14.007	8 O 15.999	9 F 18.998	10 Ne 20.180
11 Na 22.990	12 Mg 24.305	3	4	5	6	7	8	9	10	11	12	13 Al 26.982	14 Si 28.085	15 P 30.974	16 S 32.06	17 Cl 35.45	18 Ar 39.948
19 K 39.098	20 Ca 40.078	21 Sc 44.956	22 Ti 47.867	23 V 50.942	24 Cr 51.996	25 Mn 54.938	26 Fe 55.845	27 Co 58.933	28 Ni 58.693	29 Cu 63.546	30 Zn 65.38	31 Ga 69.723	32 Ge 72.630	33 As 74.922	34 Se 78.97	35 Br 79.904	36 Kr 83.798
37 Rb 85.468	38 Sr 87.62	39 Y 88.906	40 Zr 91.224	41 Nb 92.906	42 Mo 95.95	43 Tc (98)	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90	54 Xe 131.29
55 Cs 132.91	56 Ba 137.33	57-71 *	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra (226)	89-103 #	104 Rf (265)	105 Db (268)	106 Sg (271)	107 Bh (270)	108 Hs (277)	109 Mt (276)	110 Ds (281)	111 Rg (280)	112 Cn (285)	113 Nh (286)	114 Fl (289)	115 Mc (289)	116 Lv (293)	117 Ts (294)	118 Og (294)
* Lanthanide series		57 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.05	71 Lu 174.97	
# Actinide series		89 Ac (227)	90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np (237)	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (262)	

Follow each step to create your own coded table.

Part A: Let's classify the elements as METALS, NONMETALS, or METALLOIDS.

Metals



Metals are elements that are shiny and are good conductors of heat and electric current. They are *malleable*. (They can be hammered into thin sheets.) They are also *ductile*. (They can be drawn into thin wires.)

Nonmetals



Nonmetals are elements that are dull (not shiny) and that are poor conductors of heat and electric current. Solids tend to be brittle and unmeltable. Few familiar objects are made of only nonmetals.

Metalloids



Metalloids are also called semi-conductors. They have properties of both metals and nonmetals. Some metalloids are shiny. Some are dull. Metalloids are somewhat malleable and ductile. Some metalloids conduct heat and electric current as well.

Shade the boxes BLUE for those with METALLOIDS.

1 H HYDROGEN 1																	2 He HELIUM 4						
3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
METALS																		NON-METALS					
19 K POTASSIUM 39	20 Ca CALCIUM 40	21 Sc SCANDIUM 45	22 Ti TITANIUM 48	23 V VANADIUM 51	24 Cr CHROMIUM 52	25 Mn MANGANESE 55	26 Fe IRON 56	27 Co COBALT 59	28 Ni NICKEL 59	29 Cu COPPER 64	30 Zn ZINC 65	31 Ga GALLIUM 70	32 Ge GERMANIUM 72	33 As ARSENIC 75	34 Se SELENIUM 79	35 Br BROMINE 80	36 Kr KRYPTON 84						
37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIObIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 121	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131						
55 Cs CESIUM 133	56 Ba BARIUM 137		72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222						
87 Fr FRANCIUM 223	88 Ra RADIUM 226		104 Rf RUTHERFORDIUM 263	105 Db DUBNIUM 268	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 270	108 Hs HASSIUM 270	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGENIUM 281	112 Cn COPERNICIUM 285	113 Nh NIHONIUM 286	114 Fl FLEROVIUM 289	115 Mc MOSCOVIUM 289	116 Lv LIVERMORIUM 293	117 Ts TENNESSINE 294	118 Og OGANESSON 294						

6 ← Atomic Number = Number of Protons = Number of Electrons

C ← Chemical Symbol

CARBON ← Chemical Name

12 ← Atomic Weight = Number of Protons + Number of Neutrons*

KEY

- = Solid at room temperature
- = Liquid at room temperature
- = Gas at room temperature
- = Radioactive
- = Artificially Made

57 La LANTHANUM 139	58 Ce CERIUM 140	59 Pr PRASEODYMIUM 141	60 Nd NEODYMIUM 144	61 Pm PROMETHIUM 145	62 Sm SAMARIUM 150	63 Eu EUROPIUM 152	64 Gd GADOLINIUM 157	65 Tb TERBIUM 159	66 Dy DYSPROSIUM 163	67 Ho HOLMIUM 165	68 Er ERBIUM 167	69 Tm THULIUM 169	70 Yb YTTERIUM 173	71 Lu LUTETIUM 175
89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROACTINIUM 231	92 U URANIUM 238	93 Np NEPTUNIUM 237	94 Pu PLUTONIUM 244	95 Am AMERICIUM 243	96 Cm CURIUM 247	97 Bk BERKELIUM 247	98 Cf CALIFORNIUM 251	99 Es EINSTEINIUM 252	100 Fm FERMIUM 257	101 Md MENDELVIUM 258	102 No NOBELIUM 259	103 Lr LAWRENCIUM 262

Shade the boxes for NONMETALS in RED – don't forget hydrogen!

1 H HYDROGEN 1																	2 He HELIUM 2						
3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
METALS																		NON-METALS					
19 K POTASSIUM 39	20 Ca CALCIUM 40	21 Sc SCANDIUM 45	22 Ti TITANIUM 48	23 V VANADIUM 51	24 Cr CHROMIUM 52	25 Mn MANGANESE 55	26 Fe IRON 56	27 Co COBALT 59	28 Ni NICKEL 59	29 Cu COPPER 64	30 Zn ZINC 65	31 Ga GALLIUM 70	32 Ge GERMANIUM 73	33 As ARSENIC 75	34 Se SELENIUM 78	35 Br BROMINE 80	36 Kr KRYPTON 84						
37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIObIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 122	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131						
55 Cs CESIUM 133	56 Ba BARIUM 137		72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222						
87 Fr FRANCIUM 223	88 Ra RADIUM 226		104 Rf RUTHERFORDIUM 263	105 Db DUBNIUM 268	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 270	108 Hs HASSIUM 270	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGENIUM 281	112 Cn COPERNICIUM 285	113 Nh NIHONIUM 286	114 Fl FLEROVIUM 289	115 Mc MOSCOVIUM 289	116 Lv LIVERMORIUM 293	117 Ts TENNESSINE 294	118 Og OGANESSON 294						

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89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROACTINIUM 231	92 U URANIUM 238	93 Np NEPTUNIUM 237	94 Pu PLUTONIUM 244	95 Am AMERICIUM 243	96 Cm CURIUM 247	97 Bk BERKELIUM 247	98 Cf CALIFORNIUM 251	99 Es EINSTEINIUM 252	100 Fm FERMIUM 257	101 Md MENDELVIUM 258	102 No NOBELIUM 259	103 Lr LAWRENCIUM 262

Shade the remaining boxes in GREEN to show the METALS – don't forget the bottom two rows!

1 H HYDROGEN 1																	2 He HELIUM 4						
3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
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37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIOBIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 122	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131						
55 Cs CESIUM 133	56 Ba BARIUM 137		72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222						
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How many of each?

Nonmetals = _____ Metalloids = _____ Metals = _____

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3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
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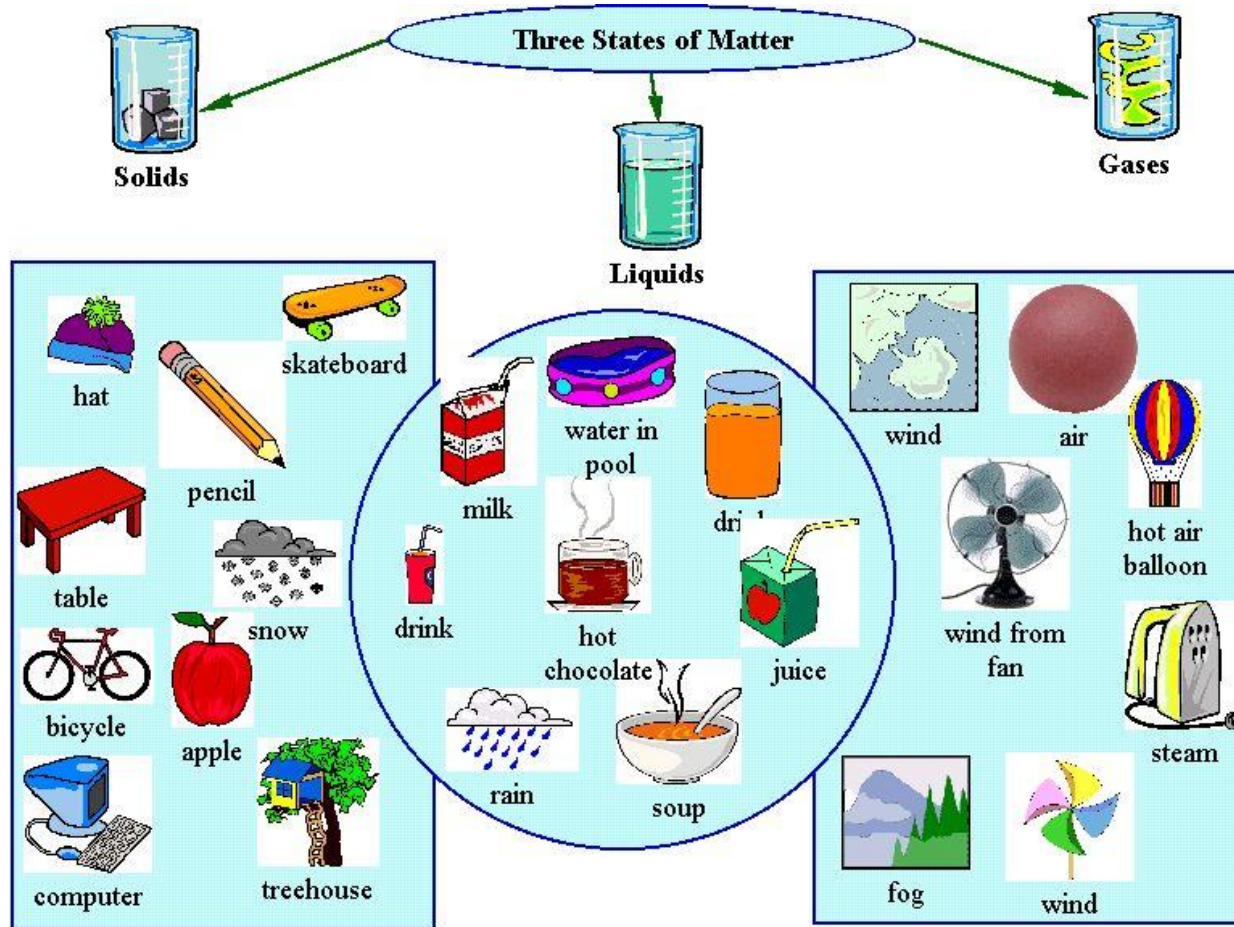
NON-METALS

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Part B: What's the phase?



Source: <http://www.learnnc.org/lp/media/lessons/Indianajennette2112003807/ThreeStatesofMatter.jpg>

Use BLUE to color the WATER DROPLETS to show the elements that are LIQUID at room temperature.

1 H HYDROGEN 1																	2 He HELIUM 4						
3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
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Use BLACK to shade the CLOUDS to show the elements that are GASES at room temperature.

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3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
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What about all the other elements? They are SOLIDS at room temperature and we will not mark those.

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11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
METALS																		NON-METALS					
19 K POTASSIUM 39	20 Ca CALCIUM 40	21 Sc SCANDIUM 45	22 Ti TITANIUM 48	23 V VANADIUM 51	24 Cr CHROMIUM 52	25 Mn MANGANESE 55	26 Fe IRON 56	27 Co COBALT 59	28 Ni NICKEL 59	29 Cu COPPER 64	30 Zn ZINC 65	31 Ga GALLIUM 70	32 Ge GERMANIUM 73	33 As ARSENIC 75	34 Se SELENIUM 79	35 Br BROMINE 80	36 Kr KRYPTON 84						
37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIObIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 122	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131						
55 Cs CESIUM 133	56 Ba BARIUM 137		72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222						
87 Fr FRANCIUM 223	88 Ra RADIUM 226		104 Rf RUTHERFORDIUM 263	105 Db DUBNIUM 268	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 270	108 Hs HASSIUM 270	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGIUM 281	112 Cn COPERNICIUM 285	113 Nh NIHOIUM 286	114 Fl FLEROVIUM 289	115 Mc MOSCOVIUM 289	116 Lv LIVERMORIUM 293	117 Ts TENNESSINE 294	118 Og OGANESSON 294						

6 ← Atomic Number = Number of Protons = Number of Electrons

C ← Chemical Symbol

CARBON ← Chemical Name

12 ← Atomic Weight = Number of Protons + Number of Neutrons*

KEY	
	= Solid at room temperature
	= Liquid at room temperature
	= Gas at room temperature
	= Radioactive
	= Artificially Made

57 La LANTHANUM 139	58 Ce CERIUM 140	59 Pr PRASEODYMIUM 141	60 Nd NEODYMIUM 144	61 Pm PROMETHIUM 145	62 Sm SAMARIUM 150	63 Eu EUROPIUM 152	64 Gd GADOLINIUM 157	65 Tb TERBIUM 159	66 Dy DYSPROSIUM 163	67 Ho HOLMIUM 165	68 Er ERBIUM 167	69 Tm THULIUM 169	70 Yb YTTERIUM 173	71 Lu LUTETIUM 175
89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROACTINIUM 231	92 U URANIUM 238	93 Np NEPTUNIUM 237	94 Pu PLUTONIUM 244	95 Am AMERICIUM 243	96 Cm CURIUM 247	97 Bk BERKELIUM 247	98 Cf CALIFORNIUM 251	99 Es EINSTEINIUM 252	100 Fm FERMIUM 257	101 Md MENDELVIUM 258	102 No NOBELIUM 259	103 Lr LAWRENCIUM 262

How many of each?

Liquids = _____ Gases = _____ Solids = _____

1 H HYDROGEN 1																	2 He HELIUM 4						
3 Li LITHIUM 7	4 Be BERYLLIUM 9																	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20
11 Na SODIUM 23	12 Mg MAGNESIUM 24																	13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
METALS																		NON-METALS					
19 K POTASSIUM 39	20 Ca CALCIUM 40	21 Sc SCANDIUM 45	22 Ti TITANIUM 48	23 V VANADIUM 51	24 Cr CHROMIUM 52	25 Mn MANGANESE 55	26 Fe IRON 56	27 Co COBALT 59	28 Ni NICKEL 59	29 Cu COPPER 64	30 Zn ZINC 65	31 Ga GALLIUM 70	32 Ge GERMANIUM 73	33 As ARSENIC 75	34 Se SELENIUM 79	35 Br BROMINE 80	36 Kr KRYPTON 84						
37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIObIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 122	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131						
55 Cs CESIUM 133	56 Ba BARIUM 137		72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222						
87 Fr FRANCIUM 223	88 Ra RADIUM 226		104 Rf RUTHERFORDIUM 263	105 Db DUBNIUM 268	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 270	108 Hs HASSIUM 270	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGIUM 281	112 Cn COPIERNICIUM 285	113 Nh NIHONIUM 286	114 Fl FLEROVIUM 289	115 Mc MOSCOVIUM 289	116 Lv LIVERIUM 293	117 Ts TENNESSINE 294	118 Og OGANESSON 294						

6 ← Atomic Number = Number of Protons = Number of Electrons

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12 ← Atomic Weight = Number of Protons + Number of Neutrons*

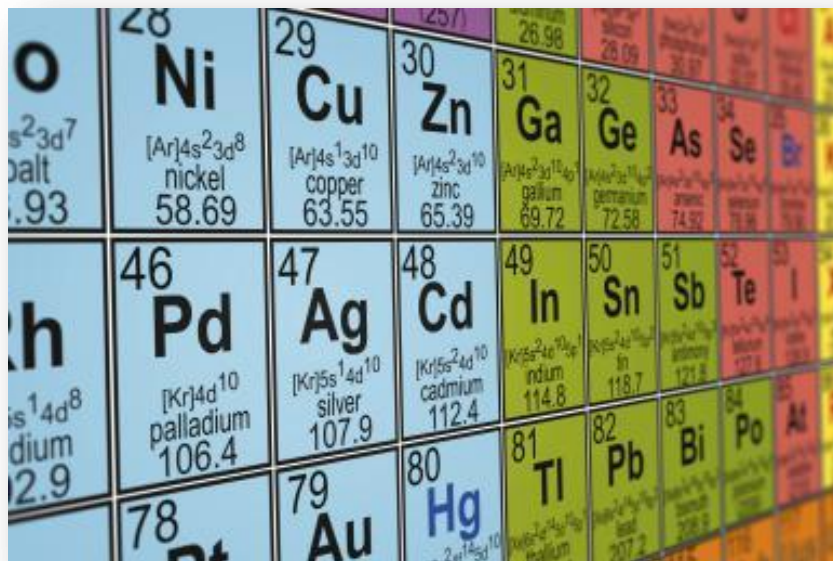
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Part C: Element Families or Groups

Elements are organized into families (also called groups) based on the number of valence electrons they have, which determines their reactivity and other properties.



28 Ni [Ar]4s ² 3d ⁸ nickel 58.69	29 Cu [Ar]4s ¹ 3d ¹⁰ copper 63.55	30 Zn [Ar]4s ² 3d ¹⁰ zinc 65.39	31 Ga [Ar]4s ² 3d ¹⁰ 4p ¹ gallium 69.72	32 Ge [Ar]4s ² 3d ¹⁰ 4p ² germanium 72.58	33 As [Ar]4s ² 3d ¹⁰ 4p ³ arsenic 74.92	34 Se [Ar]4s ² 3d ¹⁰ 4p ⁴ selenium 78.96	35 Br [Ar]4s ² 3d ¹⁰ 4p ⁵ bromine 79.90	36 Kr [Ar]4s ² 3d ¹⁰ 4p ⁶ krypton 83.80
46 Pd [Kr]4d ¹⁰ palladium 106.4	47 Ag [Kr]5s ¹ 4d ¹⁰ silver 107.9	48 Cd [Kr]5s ² 4d ¹⁰ cadmium 112.4	49 In [Kr]5s ² 4d ¹⁰ 5p ¹ indium 114.8	50 Sn [Kr]5s ² 4d ¹⁰ 5p ² tin 118.7	51 Sb [Kr]5s ² 4d ¹⁰ 5p ³ antimony 121.8	52 Te [Kr]5s ² 4d ¹⁰ 5p ⁴ tellurium 127.6	53 I [Kr]5s ² 4d ¹⁰ 5p ⁵ iodine 126.9	54 Xe [Kr]5s ² 4d ¹⁰ 5p ⁶ xenon 131.3
78 Pt [Xe]4f ¹⁴ 5d ⁹ 6s ¹ platinum 200.6	79 Au [Xe]4f ¹⁴ 5d ¹⁰ 6s ¹ gold 197.0	80 Hg [Xe]4f ¹⁴ 5d ¹⁰ 6s ² mercury 200.6	81 Tl [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹ thallium 204.4	82 Pb [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ² lead 207.2	83 Bi [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ³ bismuth 208.98	84 Po [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴ polonium 209	85 At [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ astatine 210	86 Rn [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶ radon 222

Source: <http://f.tqn.com/y/chemistry/1/W/J/V/2/186810031.jpg>

You will to use a PEN to label each column.

You will to use a PEN to label each column(s) with its family name.






Alkali Metals Alkaline Earth Metals Transition Metals (Groups 3-12) Boron Family Carbon Family Nitrogen Family Oxygen Family (Chalcogen) Halogens (Halides) Noble Gases

NON-METALS

METALS

1 H HYDROGEN 1											2 He HELIUM 4															
3 Li LITHIUM 7	4 Be BERYLLIUM 9											5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20									
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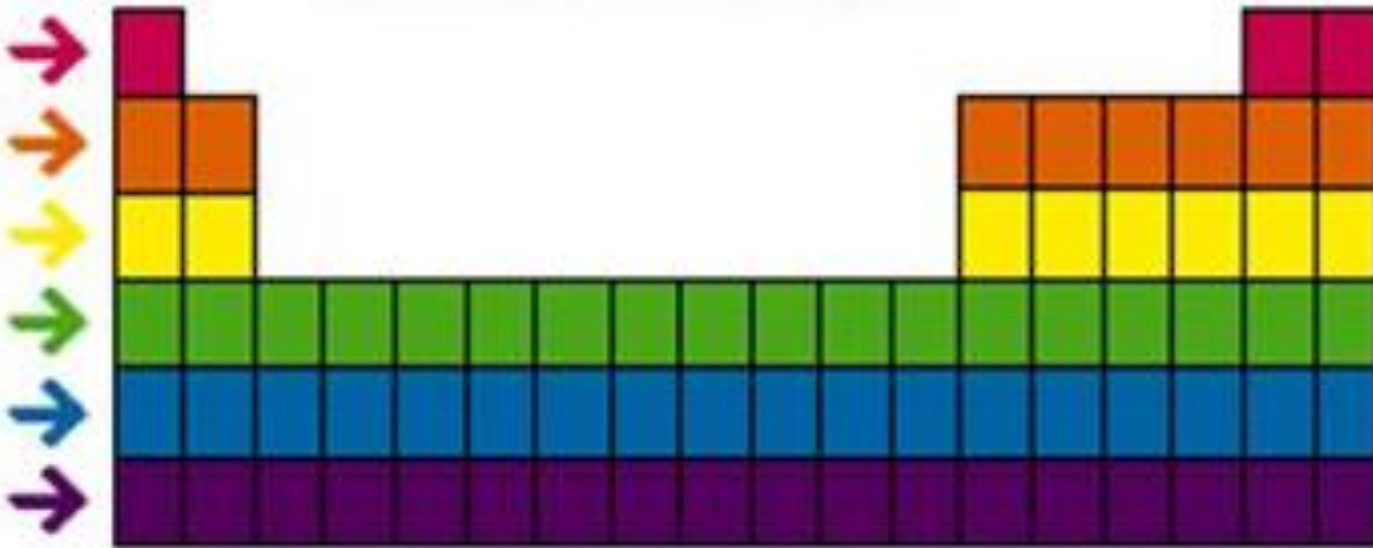
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Part D: Periods (Rows)

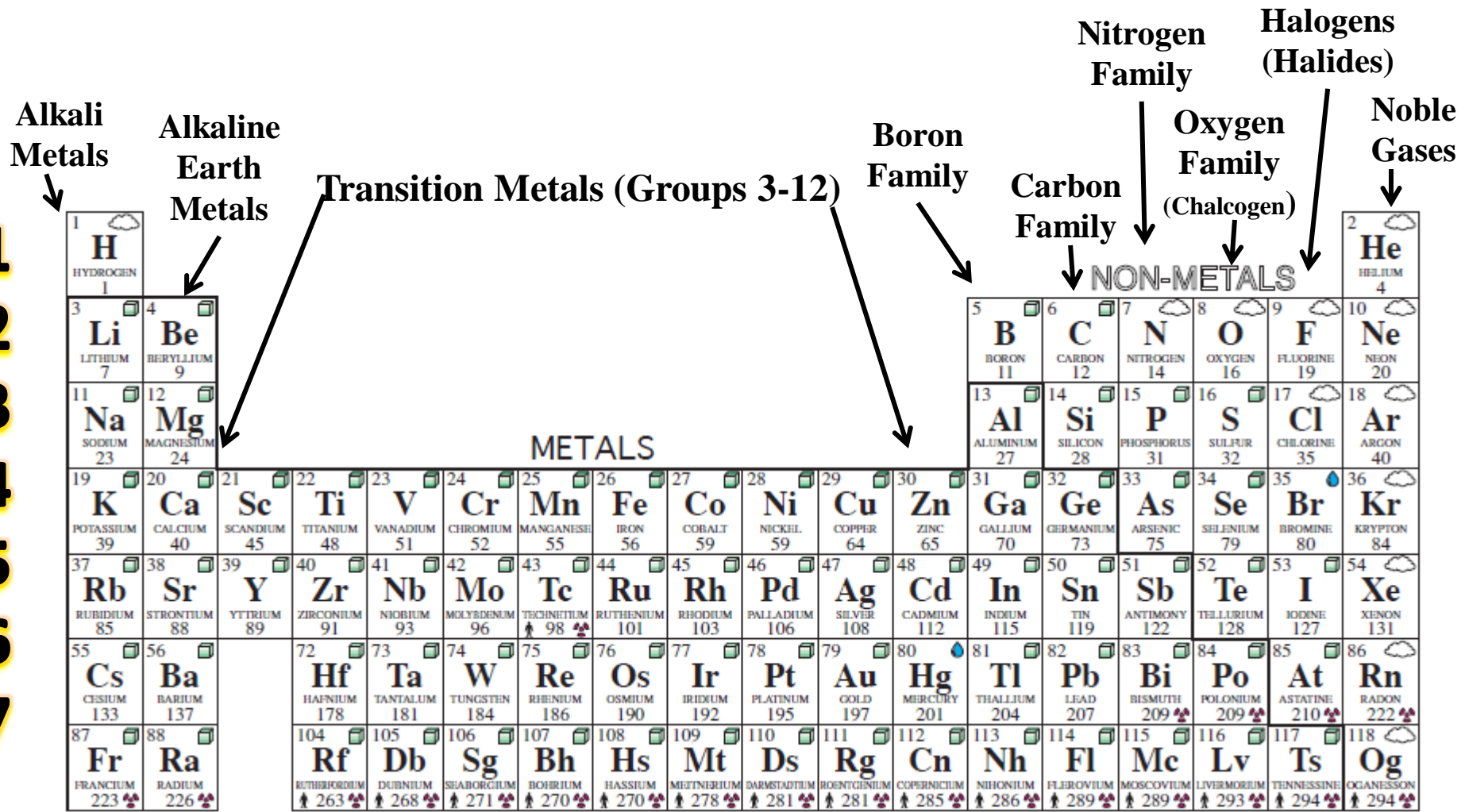
Each row in the table is called a PERIOD. All the elements in a row have the same number of energy levels.



Source: http://images.slideplayer.com/18/5702901/slides/slide_1.jpg

Label each ROW with the NUMBER of ENERGY LEVELS it has.

1
2
3
4
5
6
7



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57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
LANTHANUM	CERIU	PRASEODYMIUM	NEODYMIUM	PROMETHIUM	SAMARIUM	EUROPIUM	GADOLINIUM	TERBIUM	DYSPROSIUM	HOLMIUM	ERBIUM	THULIUM	YTTERIUM	LUTETIUM
139	140	141	144	145	150	152	157	159	163	165	167	169	173	175
89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
ACTINIUM	THORIUM	PROACTINIUM	URANIUM	NEPTUNIUM	PLUTONIUM	AMERICIUM	CURIUM	BERKELIUM	CALIFORNIUM	EINSTEINIUM	FERMIIUM	MENDELEVIUM	NOBELIUM	LAWRENCIUM
227	232	231	238	237	244	243	247	247	251	252	257	258	259	262

6
7