

ELEMENTS

Name: _____

- * An element is a substance that cannot be broken down further.
- * _____ has unique chemical and physical properties.
- * Scientists categorize elements according to their chemical and physical properties.
- * Elements have a _____ (ex: sodium) and a _____ (ex: Na).

METALS

- * Metals are normally _____. Only mercury exists at room temperature as a _____.
- * Samples of metals are often shiny (have luster)
- * Metals are _____. They can be hammered into foils or thin sheets.
- * Metals are _____. They can be drawn into wires.
- * Often metals conduct _____ and _____.
- * Most metals have _____ melting points and boiling points.
- * Metal atoms often form _____ charged particles when they dissolve.

Examples:

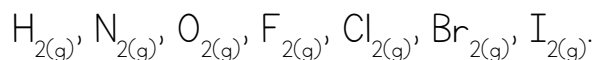
Iron _____
Lithium _____
Potassium _____
Sodium _____
Calcium _____
Uranium _____
Nickel _____
Copper _____
Cobalt _____
Silver _____
Gold _____
Platinum _____

NONMETALS

Examples:

Sulfur _____
Carbon _____
Phosphorus _____
Bromine _____
Iodine _____
Nitrogen _____
Oxygen _____
Fluorine _____
Chlorine _____

- * Nonmetals can exist as _____ and _____. Only bromine is a _____ at room temperature.
- * Nonmetals are _____ and cannot be rolled into _____ or hammered into _____.
- * They are poor conductors of _____ and _____.
- * They do not have metallic luster and do not reflect light.
- * Some nonmetals exist in nature as molecules of the same type of atom. These are called _____.



METALLOIDS

Name: _____

- * Metalloids are _____ at room temperature.
- * Some metalloids have metallic characteristics and some have nonmetal characteristics.

Examples:
 Arsenic _____
 Silicon _____ Antimony _____
 Boron _____ Germanium _____

NOBLE GASES

- * Noble gases are called _____ because they rarely react to form compounds with other elements.
- * All are _____ at room temperature.

Examples:
 Helium _____
 Neon _____
 Argon _____
 Xenon _____
 Krypton _____

THE PERIODIC TABLE

- * Scientists use the periodic table to organize information about the elements.
- * Elements in the same _____ tend to have similar chemical properties.
- * Group 1 elements are called _____ metals. Li, Na, K, Rb, and Cs are all very reactive.
- * Group 2 elements are called _____ earth metals. They are soft metals that also quite reactive.

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

- * Elements 95-118 have not been observed in _____. Scientists have artificially created them in the laboratory. Because they do not normally exist in nature, they are called _____ elements.