	<u>Unit One</u>	: Matter	and	Change
--	-----------------	----------	-----	--------

Learning Targets:	Textbook Section:					
1.1) Observe proper safety regulations in the laboratory.	Flinn Safety Contract					
1.2) Explain why all samples of a substance have the same intensive properties.	2.1					
1.3) Identify the three states of matter	2.1					
1.4) Classify physical changes.	2.1					
1.5) Explain how mixtures are classified.	2.2					
1.6) Explain how mixtures can be separated.	2.2					
1.7) Explain the difference between an element and a compound.	2.3					
1.8) Distinguish between a substance and a mixture.	2.3					
1.9) Describe what chemists use to represent elements and compounds.	2.3					
1.10) Explain how a periodic table is useful.	2.3					
1.11) Describe what happens during a chemical reaction.	2.4					
1.12) Identify four possible clues that a chemical change has taken place.	2.4					
1.13) Describe how the mass of the reactants and the mass of the products of a chemical reaction are related.	2.4					

Suggested Reading:

Chapter 2: Pages 32-59 (It is suggested that you answer the "Lesson Check" questions at the end of each section)

End of Chapter Questions:

39, 45, 47, 48, 50, 54, 57, 59, 60, 61, 62, 67, 68, 72, 73, 75, 76, 77, 78, 79, 80, 81, 83, 84, 85, 86, 89, 94, 95

		-,																
hydrogen	2 1 5 3		1070			10	100		1070	07372	2.27	1000	10231	1000	1000	0.00	100 X	helium
1																		2
H																		He
1.0079																		4,0026
lithium	beryllium	1											boron	carbon	nitrogen	oxygen	fluorine	neon
3	-4												5	6	.	8	9	10
LI	Be												B	С	Ν	Ο	F	Ne
6.941	9.0122												10.811	12.011	14.007	15.999	18.998	20.180
sodium 11	magnesium 12												aluminium 13	silicon 14	phosphorus 15	sulfur 16	chlorine 17	argon 18
Na													AI	Si	P	S	CI	Ar
	Mg																	
22.990 potassium	24.305 calcium		scandium	titanium	vanadium	chromium	manganese	iron	cobalt	nickel	copper	zinc	26.982 gallium	28.086 germanium	30.974 arsenic	32.065 selenium	35.453 bromine	39.948 krypton
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
39.098	40.078		44.956	47.867	50.942	51.996	54.938	55.845	58.933	58.693	63,546	65.39	69.723	72.61	74.922	78.96	79.904	83.80
rubidium 37	strontium 38		yttrium 39	zirconium 40	niobium 41	molybdenum 42	technetium 43	ruthenium 44	rhodium 45	palladium 46	silver 47	cadmium 48	indium 49	tin 50	antimony 51	tellurium 52	iodine 53	xenon 54
							100 30			1000 CONT (1000)		1000		a secondaria				
Rb	Sr		Y	Zr	Nb	Мо	Тс	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Те		Xe
85.468 caesium	87.62 barium		88.906 lutetium	91.224 hafnium	92.906 tantalum	95.94 tungsten	[98] rhenium	101.07 osmium	102.91 iridium	106.42 platinum	107.87 gold	112.41 mercury	114.82 thallium	118.71 lead	121.76 bismuth	127.60 polonium	126.90 astatine	131.29 radon
55	56	57-70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
Cs	Ba	×	Lu	Hf	Та	W	Re	Os	Ir	Pt	Au	Hg	TI	Pb	Bi	Po	At	Rn
132.91	137.33	0.5%16	174.97	178.49	180.95	183.84	186.21	190.23	192.22	195.08	196.97	200.59	204.38	207.2	208.98	[209]	[210]	[222]
francium	radium	10000000	lawrencium	rutherfordium	dubnium	seaborgium	bohrium	hassium	meitnerium	ununnilium	unununium	ununbium	201.00	ununquadium	200.00	200	[Alo]	222
87	88	89-102	103	104	105	106	107	108	109	110	111	112		114				
Fr	Ra	* *	Lr	Rf	Db	Sg	Bh	Hs	Mt	Uun	Uuu	Uub		Uuq				
[223]	[226]		[262]	[261]	[262]	[266]	[264]	[269]	[268]	[271]	[272]	[277]		[289]				

*Lanthanide series	lanthanum 57	cerium 58	praseodymium 59	neodymium 60	promethium 61	samarium 62	europium 63	gadolinium 64	terbium 65	dysprosium 66	holmium 67	erbium 68	thulium 69	ytterblum 70
	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
	138.91	140.12	140.91	144.24	[145]	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04
	actinium	thorium	protactinium	uranium	neptunium	plutonium	americium	curium	berkelium	californium	einsteinium		mendelevium	nobelium
* * Actinide series	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
	[227]	232.04	231.04	238.03	[237]	[244]	[243]	[247]	[247]	[251]	[252]	[257]	[258]	[259]