TEACHER DIRECTIONS:

- 1. Print the Battle Ship rules and the battle ships, one per student.
- 2. Print one periodic tables student.
- 3. On the file folder, open it like the battleship game. Glue the Rules on the top side of the file folder. Glue the periodic table on the bottom side.
- 4. Laminate the file folders.
- 5. Print two battleships per person. Print one "hit/miss" markers per person. Laminate them separately. These are the playing pieces.
- 6. Cut out the markers and the ships.
- 7. Store the playing pieces and the battleships in flat envelopes inside each file folder.

Battleship Rules:

- Place your game board against the back of your opponents game board.
- 2. Place your battleships on the flat Periodic Table of Elements.
- 3. Call out the atomic number, the name, or the group number and period number.
- 4. If your partner calls out the element that your battleship is on, you must say "Hit" and then mark your battleship with a hit marker.
- 5. When you have three hits <u>on the bottom</u> of your battleship, you say "You sunk my battleship!"
- 6. The winner will have sunk two battleships. The loser will have had at least six hit markers.



| HIT! |
|------|------|------|------|------|------|------|
| HIT! |
| miss |
| miss |
| HIT! |
| miss |

| HIT! |
|------|------|------|------|------|------|------|
| HIT! |
| miss |
| miss |
| HIT! | HIT! | HIT! | HIT! | HIT! | HT! | HIT! |
| miss |



hydrogen 4]					5	10,870		100	862		0.00		\$15		4.5		helium 2
Ĥ																		Не
1.0079 lithium 3	beryllium 4											ĺ	boron 5	carbon 6	nitrogen 7	oxygen 8	fluorine 9	4.0026 neon 10
Li	Be												В	C	N	O	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
3,63,600														7220	170000	387		
Na	Mg												ΑI	Si	P	S	CI	Ar
22.990	24.305 calcium		coondium	titanium	wanadium	ahromium	monaonoro	iron	anhalt	niekol	coppor	zino	26.982	28.086	30.974	32.065 selenium	35.453 bromine	39.948
potassium 19	20		scandium 21	22	vanadium 23	chromium 24	manganese 25	26	cobalt 27	nickel 28	copper 29	zinc 30	gallium 31	germanium 32	arsenic 33	34	35	krypton 36
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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
39.098 rubidium	40.078 strontium		44,956 yttrium	47.867 zirconium	50.942 niobium	51.996 molybdenum	54.938 technetium	55.845 ruthenium	58,933 rhodium	58.693 palladium	63.546 silver	65.39 cadmium	69.723 indium	72.61 tin	74.922 antimony	78.96 tellurium	79.904 lodine	83.80 xenon
39.098 rubidium 37	40.078 strontium 38		44,956 yttrium 39	47.867 zirconium 40	50.942 niobium 41	51.996 molybdenum 42	54.938 technetium 43	55.845 ruthenlum 44	58.933 rhodium 45	58.693 palladium 46	63.546 silver 47	65.39 cadmium 48	69.723 indium 49	72.61 tin 50	74.922 antimony 51	78.96 tellurium 52	79.904	83.80 xenon 54
39.098 rubidium 37 Rb	40.078 strontium 38 Sr		44.956 yttrium 39	47.867 zirconium 40 Zr	50.942 niobium 41 Nb	51.996 molybdenum 42 Mo	54.938 technetium 43 TC	55.845 ruthenium 44 Ru	58.933 rhodium 45 Rh	58.693 palladium 46 Pd	63.546 silver 47 Ag	cadmium 48 Cd	69.723 Indium 49	72.61 tin 50 Sn	74.922 antimony 51 Sb	78.96 tellurium 52 Te	79.904 lodine 53	83.80 xenon 54 Xe
39.098 rubidium 37 Rb 85.468 caesium	strontium 38 Sr 87.62 barium		44.956 yttrium 39 Y 88.906 lutetium	47.867 zirconium 40 Zr 91.224 hafnium	50.942 niobium 41 Nb 92.906 tantalum	51.996 molybdenum 42 Mo 95.94 tungsten	54.938 technetium 43 TC [98] rhenium	ruthenium 44 Ru 101.07 osmium	58.933 rhodium 45 Rh 102.91 iridium	palladium 46 Pd 106.42 platinum	63.546 silver 47 Ag 107.87 gold	65.39 cadmium 48 Cd 112.41 mercury	69.723 indium 49 In 114.82 thallium	72.61 tin 50 Sn 118.71 lead	74.922 antimony 51 Sb 121.76 bismuth	78.96 tellurium 52 Te 127.60 polonium	79.904 lodine 53 126.90 astatine	83.80 xenon 54 Xe 131.29 radon
39.098 rubidium 37 Rb 85.468 caesium 55	40.078 strontium 38 Sr 87.62 barium 56	57-70	44.956 yttrium 39 Y 88.906	47.867 zirconium 40 Zr 91.224 hafnium 72	50.942 niobium 41 Nb 92.906 tantalum 73	51.996 molybdenum 42 Mo 95.94 tungsten 74	54.938 technetium 43 TC [98] rhenium 75	55.845 ruthenium 44 Ru 101.07 osmium 76	58.933 rhodium 45 Rh 102.91	58.693 palladium 46 Pd 106.42 platinum 78	63.546 silver 47 Ag 107.87	65.39 cadmium 48 Cd 112.41 mercury 80	69.723 indium 49 In 114.82 thallium 81	72.61 tin 50 Sn 118.71 lead 82	74.922 antimony 51 Sb 121.76 bismuth 83	78.96 tellurium 52 Te 127.60 polonium 84	79.904 lodine 53 126.90 astatine 85	83.80 xenon 54 Xe 131.29 radon 86
39.098 rubidium 37 Rb 85.468 caesium 55 Cs	40.078 strontium 38 Sr 87.62 barium 56 Ba	57-70 X	44.956 yttrium 39 Y 88.906 lutetium 71 Lu	47.867 zirconium 40 Zr 91.224 hafnium 72 Hf	50.942 niobium 41 Nb 92.906 tantalum	51.996 molybdenum 42 Mo 95.94 tungsten	technetium 43 Tc [98] rhenium 75 Re	ruthenium 44 Ru 101.07 osmium 76 Os	58.933 rhodium 45 Rh 102.91 iridium	palladium 46 Pd 106.42 platinum	63.546 silver 47 Ag 107.87 gold	cadmium 48 Cd 112.41 mercury 80 Hg	69.723 indium 49 In 114.82 thallium	72.61 tin 50 Sn 118.71 lead 82 Pb	74.922 antimony 51 Sb 121.76 bismuth 83 Bi	78.96 tellurium 52 Te 127.60 polonium 84 Po	79.904 lodine 53 l 126.90 astatine 85	83.80 xenon 54 Xe 131.29 radon 86 Rn
39.098 rubidium 37 Rb 85.468 caesium 55 Cs 132.91	40.078 strontium 38 Sr 87.62 barium 56 Ba 137.33		44.956 yttrium 39 Y 88.906 lutetium 71 Lu 174.97	47.867 zirconium 40 Zr 91.224 hafinium 72 Hf 178.49	50.942 niobium 41 Nb 92.906 tantalum 73 Ta 180.95	51.996 molybdenum 42 MO 95.94 tungsten 74 W 183.84	54.938 technetium 43 TC [98] rhenium 75 Re 186.21	55.845 ruthenium 44 Ru 101.07 osmium 76 Os 190.23	58.933 rhodium 45 Rh 102.91 iridium 77 Ir 192.22	58.693 palladium 46 Pd 106.42 platinum 78 Pt 195.08	63,546 silver 47 Ag 107,87 gold 79 Au 196,97	65.39 cadmium 48 Cd 112.41 mercury 80 Hg 200.59	69.723 indium 49 In 114.82 thallium 81	72.61 tin 50 Sn 118.71 lead 82 Pb 207.2	74.922 antimony 51 Sb 121.76 bismuth 83	78.96 tellurium 52 Te 127.60 polonium 84	79.904 lodine 53 126.90 astatine 85	83.80 xenon 54 Xe 131.29 radon 86
39.098 rubidium 37 Rb 85.468 caesium 55 Cs	40.078 strontium 38 Sr 87.62 barium 56 Ba		44.956 yttrium 39 Y 88.906 lutetium 71 Lu	47.867 zirconium 40 Zr 91.224 hafnium 72 Hf	50,942 niobium 41 Nb 92,906 tantalum 73 Ta	51.996 molybdenum 42 Mo 95.94 tungsten 74	technetium 43 Tc [98] rhenium 75 Re	ruthenium 44 Ru 101.07 osmium 76 Os	58.933 rhodium 45 Rh 102.91 iridium 77 Ir	palladium 46 Pd 106.42 platinum 78 Pt	63.546 silver 47 Ag 107.87 gold 79 Au	cadmium 48 Cd 112.41 mercury 80 Hg	69,723 indium 49 In 114.82 thallium 81	72.61 tin 50 Sn 118.71 lead 82 Pb	74.922 antimony 51 Sb 121.76 bismuth 83 Bi	78.96 tellurium 52 Te 127.60 polonium 84 Po	79.904 lodine 53 l 126.90 astatine 85	83.80 xenon 54 Xe 131.29 radon 86 Rn
39.098 rubidium 37 Rb 85.468 caesium 55 Cs 132.91 francium	40.078 strontium 38 Sr 87.62 barium 56 Ba 137.33 radium	*	44.956 yttrium 39 Y 88.906 lutetium 71 Lu 174.97 lawrencium	47.867 zirconium 40 Zr 91.224 hafnium 72 Hf 178.49 rutherfordium	50.942 niobium 41 Nb 92.906 tantalum 73 Ta 180.95 dubnium	51.996 molybdenum 42 Mo 95.94 tungsten 74 W 183.84 seaborgium	technetium 43 TC [98] rhenium 75 Re 186.21 bohrium	55.845 ruthenium 44 Ru 101.07 osmium 76 Os 190.23 hassium	58.933 rhodium 45 Rh 102.91 iridium 77 Ir 192.22 meltnerium	58.693 palladium 46 Pd 106.42 platinum 78 Pt 195.08 ununnilium 110	63.546 silver 47 Ag 107.87 gold 79 Au 196.97 unununlum	65.39 cadmium 48 Cd 112.41 mercury 80 Hg 200.59 ununbium 112	69,723 indium 49 In 114.82 thallium 81	72.61 tin 50 Sn 118.71 lead 82 Pb 207.2 ununquadium	74.922 antimony 51 Sb 121.76 bismuth 83 Bi	78.96 tellurium 52 Te 127.60 polonium 84 Po	79.904 lodine 53 l 126.90 astatine 85	83.80 xenon 54 Xe 131.29 radon 86 Rn

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lanthanu		praseodymium	neodymium	promethium	samarium	europium	gadolinium	terbium	dysprosium	holmium	erbium	thulium	ytterbium
57	58	59	60	61	62	63	64	65	66	67	68	69	70
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Но	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
actiniun	thorium	protactinium	uranium	neptunium	plutonium	americium	curium	berkelium	californium	einsteinium	fermium	mendelevium	nobelium
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]