

Periodic Table Battleship

Below is your Battleship board. **Number the 7 Periods and the 18 Groups** on your board and your partner's board.

Start by placing your 5 battleships onto your board using the **HIGHLIGHTER** function.

Battleships must be horizontal or vertical - NOT DIAGONAL!!

Battleships:

- 5 spaces (Aircraft carrier)
- 4 spaces (Battleship)
- 3 spaces (Destroyer)
- 3 spaces (Submarine)
- 2 spaces (Patrol boat)

24	25	26	27	28	29
Cr	Mn	Fe	Co	Ni	
CHROMIUM 52	MANGANESE 55	IRON 56	COBALT 59	NICKEL 59	

5	6
B	C
BORON 11	CARBON 12
13	14
Al	Si
ALUMINUM 27	SILICON 28
31	32
Ga	Ge
GALLIUM 70	GERMANIUM 73

YOUR BATTLESHIPS

The Periodic Table of Elements

1 H HYDROGEN 1																	2 He HELIUM 4						
3 Li LITHIUM 7	4 Be BERYLLIUM 9	NON-METALS																					
11 Na SODIUM 23	12 Mg MAGNESIUM 24	5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20	METALS										13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40
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 RUBIDIUM 267	105 Db DUBNIUM 270	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 274	108 Hs HASSIUM 277	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGIUM 281	112 Cn COFHENIUM 285	113 Uut UNUNTRIUM 286	114 Fl FLEROVIUM 289	115 Uup UNUNPENTIUM 289	116 Lv LIVERTSIUM 291	117 Uus UNUNSEPTIUM 294	118 Uuo UNUNOCTIUM 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	
<input type="checkbox"/>	Solid at room temperature
<input checked="" type="checkbox"/>	Liquid at room temperature
<input type="checkbox"/>	Gas at room temperature
<input checked="" type="checkbox"/>	Radioactive
<input checked="" type="checkbox"/>	Artificially Made

57 La LANTHANUM 139	58 Ce CELIUM 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 PROTACTINIUM 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 LAWRENCEIUM 262

* The atomic weights listed on this Table of Elements have been rounded to the nearest whole number. As a result, this chart actually displays the mass number of a specific isotope for each element. An element's complete, unrounded atomic weight can be found on the IUPAC's Elemental web site: <http://education.jlab.org/elemental/index.html>

Periodic Table Battleship

To Play:

- Fill in your own 5 battleships on your board (above), using the directions above.
- Sit facing your opponent, so you cannot see each other's screens.
- Take turns asking if the other has a ship on specific spaces. **You must ask in one of the following ways:**
 - "Do you have a ship in group ____, period ____?"
 - "Do you have a ship on a space with ____ protons (atomic #)?"
- Keep track of yours and your partner's HITS **X** and MISSES **O**. For your partner's guesses, record on your own board. For your guesses, record on your partner's board.
- If your partner HITS all of the squares that make up one of your ships, tell them which ship they sank: ex) "You sank my aircraft carrier!"
- The goal is to sink their entire fleet of 5 ships!

I sank their:

- 5 spaces (Aircraft carrier)
- 4 spaces (Battleship)
- 3 spaces (Destroyer)
- 3 spaces (Submarine)
- 2 spaces (Patrol boat)



The Periodic Table of Elements

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

C ← Chemical Symbol

CARBON ← Chemical Name

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

NON-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
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																	
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 YTIURIUM 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 RUFORGIUM 267	105 Db DUBNIUM 270	106 Sg SEABORGIUM 271	107 Bh BOHRIUM 274	108 Hs HASSIUM 277	109 Mt MEITNERIUM 278	110 Ds DARMSTADTIUM 281	111 Rg ROENTGIUM 281	112 Cn COFHENIUM 285	113 Uut UNUNTRIUM 286	114 Fl FLEROVIUM 289	115 Uup UNUNPENTIUM 289	116 Lv LIVERMORIUM 293	117 Uus UNUNSEPTIUM 294	118 Uuo UNUNOCTIUM 294	
57 La LANTHANUM 139	58 Ce CESIUM 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 HOBIUM 165	68 Er ERBIUM 167	69 Tm THULIUM 169	70 Yb YTTBIUM 173	71 Lu LUTETIUM 175			
89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROTACTINIUM 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 MENDELIUM 258	102 No NOBELIUM 259	103 Lr LAWRENCEIUM 262			

KEY

- = Solid at room temperature
- ⬇ = Liquid at room temperature
- ☁ = Gas at room temperature
- ☼ = Radioactive
- ⚡ = Artificially Made

* The atomic weights listed on this Table of Elements have been rounded to the nearest whole number. As a result, this chart actually displays the mass number of a specific isotope for each element. An element's complete, unrounded atomic weight can be found on the IUPAC Elemental web site: <http://education.jlab.org/elemental/index.html>