

## Puzzle 10: Chemically Altered Word Square (5:30 PM deadline)

A word square is a grid of letters that spells valid words in each of its rows and columns. For example, here is a  $4 \times 4$  word square:

L	A	C	K
I	R	O	N
M	E	R	E
B	A	K	E

A more generalized form is when the "square" is actually a rectangle (the number of columns is different than the number of rows). For example, here is a  $4 \times 3$  word square:

T	O	M	E
A	N	E	W
G	E	N	E

Your task is to create a word rectangle as above except that, instead of placing letters in the grid cells, you must place the symbols/abbreviations for chemical elements (e.g. Ar, O, He, F, Ca, etc). You may not use a chemical symbol more than once in your grid. A Periodic Table of the elements is provided for you. Every row and column in your word rectangle must be a valid, single-word entry from the *Merriam-Webster's Unabridged Dictionary, 3rd Edition*. Eric has a copy of this to check your answer, but you are not allowed to consult it during the creation of your solution.

When you have completed a word rectangle of size  $M \times N$ , you may have it scored. The score will be a number of Points equal to the sum of all of the Atomic Numbers associated with the chemical elements represented in your diagram multiplied by  $M$  or  $N$ , whichever is the lesser value. You may submit more than one answer if you later improve upon a valid solution that you have already had graded or if your original submission turns out to use words that are deemed invalid.

Word squares must be submitting for grading by 5:30 PM.