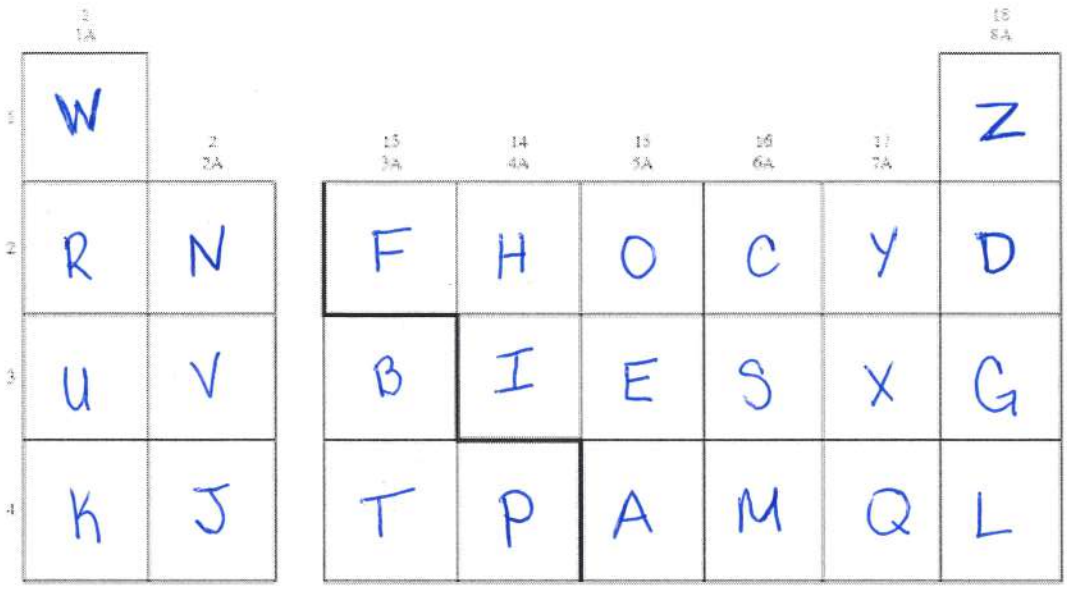
Periodic Trends Logic Puzzles

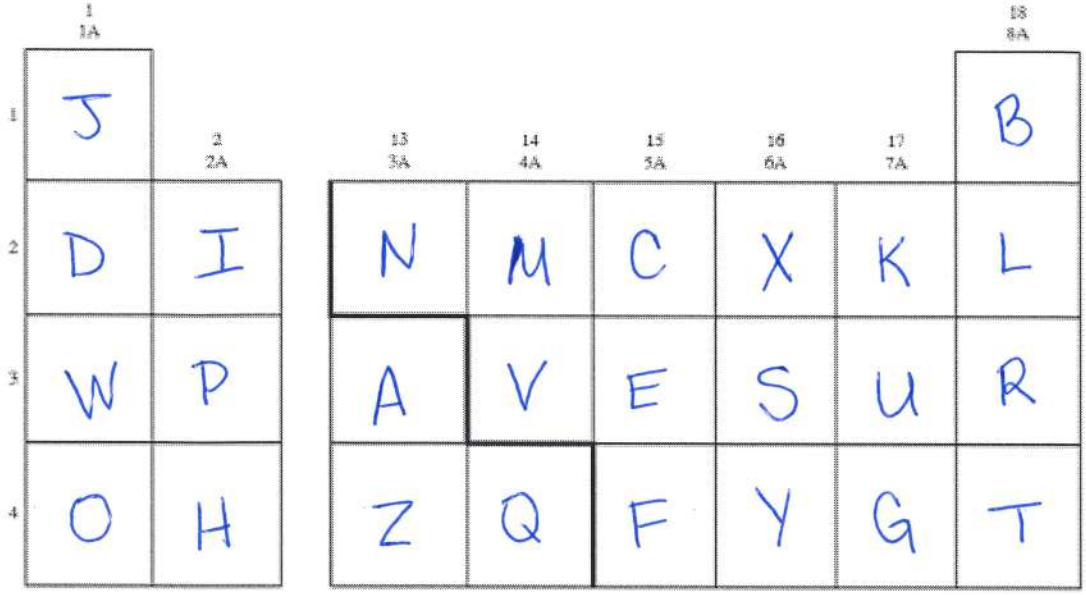
The code letters A to Z have been assigned to 26 elements from the periodic table. The code letters have nothing to do with an element's name or symbol. Use the clues to place the code letters in the correct place on the blank periodic table. ***Hint:*** First, decide which set of elements go in each column



Clues:

1. The following elements belong together in families: BFT, DGLZ, JNV, CMS, QXY, AEO, IPH, UKWR
2. H has four valence electrons
3. You need to breathe C to live
4. G is a noble gas
5. U is an alkali metal
6. E has 5 electrons in its outer shell
7. N is an alkaline earth metal
8. T has 3 electrons in the 4th shell
9. Q is a halogen
10. F has the smallest mass in its family
11. T has a larger atomic radius than B
12. J has more protons than V
13. V has more protons than N
14. P has the lowest ionization energy in its family
15. H is in sugar molecules
16. H has fewer electron shells than any other element in its group
17. S's atomic radius is greater than C's
18. S has a smaller atomic # than M
19. Q is the halogen with the lowest effective nuclear charge
20. Y's ionization energy is higher than X
21. K reacts more violently than U
22. U has a greater atomic mass than R
23. W is not a metal
24. On average, Z has 2 neutrons
25. Atoms of D have 10 protons
26. Atoms of G have electrons in 3 energy levels
27. L has more protons than another element in its family
28. O has electrons in two different shells
29. Atoms of E have a smaller atomic radius than atoms of A

Puzzle #2



Clues:

1. The following elements belong together in groups: ECF, RLBT, YXS, HIP, VMQ, GKU, ZNA, DOWJ
2. A has the valence electron configuration s^2p^1
3. B has only one energy level filled
4. C has the least shielding in its group
5. D has the lowest atomic number of metals in this group
6. E has the valence electron configuration s^2p^3
7. F has the lowest ionization energy in its group
8. G has the highest atomic mass in its group
9. H is an alkaline earth metal
10. I has the smallest atomic radius in its group
11. J is the only element in this group which is not a metal
12. K is a halogen
13. L is a noble gas
14. M has the smallest atomic radius in its group
15. N has the least shielding in its group
16. O has the highest atomic mass in its group
17. P has three energy levels occupied
18. Q has four valence electrons
19. R has three energy levels occupied
20. S has six valence electrons
21. T has the largest atomic radius in its group
22. U is in the same period with W & P
23. V is in the same period with R
24. W is an alkali metal
25. X has the smallest atomic radius in its group
26. Y has a smaller ionization energy than S
27. Z has the highest ~~effective~~ nuclear charge in its group