

A Periodic Table Puzzle

INSTRUCTIONS: Code letters A to Z have been randomly assigned to the 26 elements in the first four periods of the periodic table (omitting the transition elements from Sc to Zn). The code letters do not represent chemical symbols for the elements. The clues below will help you place the lettered elements in the right place on the table. Study the list of clues to discover the correct location for the elements and place the code letters in the correct position on the table on the other side of this paper.

CLUES:

- 1) The following elements belong together in families: HNU, JXPD, SCY, EZT, RQM, BOI, VWA, LGKF.
- 2) Element A has a total of 2 p sublevel electrons.
- 3) W was undiscovered at the time of Mendeleev, but he predicted a mass of 70.
- 4) X is a noble gas.
- 5) L is an alkali metal.
- 6) O has a total of 3 p sublevel electrons.
- 7) C is an alkaline earth metal.
- 8) U has 3 electrons in the fourth energy level.
- 9) B is a solid at room temperature.
- 10) N has the smallest atomic mass in its family.
- 11) U is more metallic than H.
- 12) S has a larger atomic radius than Y, but a smaller atomic radius than G.
- 13) Element V has a total of 6 s sublevel electrons.
- 14) T has a total of 10 p sublevel electrons.
- 15) M is a liquid, R is a gas at room temperature.
- 16) Most atoms of Q have 10 neutrons.
- 17) K is a gas at room temperature.
- 18) An atom of D has two neutrons.
- 19) J has ten protons.
- 20) X atoms have electrons in three energy levels.
- 21) A is the least metallic in its group.
- 22) I has eight more protons than O.
- 23) R is a halogen.
- 24) The atomic mass of Y is less than that of S, but more than that of C.
- 25) The atomic number of F is one greater than that of D.
- 26) Atoms of G are larger than those of L.
- 27) Atoms of Z have six electrons in the fourth energy level.

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