

Student Name: \_\_\_\_\_ Pd. \_\_\_\_\_ Date: \_\_\_\_\_

## Periodic Table Puzzle


Using the following list of clues, place each element in its proper position on the periodic table. The letters bear no similarity to the actual symbols for the elements. The truncated periodic table above shows only the first four periods of the representative elements and the noble gases. **Hint** – place each group in its proper position first, and then arrange the elements in each group.

### CLUES

1. The following elements are grouped together into families: ERH, GSI, NLW, FQK, CDAB, UPZ, YXJ, and MVOT.
2. C is a more reactive metal than A and B.
3. Q forms an oxide with oxygen in the following manner:  $Q_2O_3$
4. B is used as a medication for manic depression (bipolar disorder).
5. T has the highest mass on the periodic table.
6. Z is a liquid.
7. J is a non-metal that was originally extracted from urine.
8. F has three valence electrons on the third energy level and can be found in the kitchen.
9. G has a higher electron affinity than both Y and K.
10. S is a semi-metal that is used in the manufacturing of computer chips.
11. D is the largest atom of the periodic table.
12. N has a smaller 1<sup>st</sup> ionization energy than P or X.
13. V does not have an electronegativity value.
14. Y is more dense than J and X
15. Q has a smaller ionization energy than E.
16. W has a greater effective nuclear charge than L but less than N.
17. H reacts with water to form a white, milky base solution and hydrogen gas.
18. A is an element which can form both an anion and cation.
19. S loses all of its 3<sup>rd</sup> shell electrons to form a +4 charge.
20. P is the most electronegative element on the periodic table.
21. O is lighter than air and has the lowest melting point of all the elements.
22. U has a more negative electron affinity than both M and W.
23. R is larger than E but smaller than H.
24. G is named after a country in Europe.
25. N is the only member of its group that is a gas.