TWO TRUTHS AND A LIE

NAME:



1. For the Molecule on the far right:
2. I am capable for forming H-bonds
3. I contain very stable covalent bonds with equal clouds of electron density.
4. I am able to dissociate into ions from a covalent bond.
5. For the Molecule from question #1:
6. At pH 7, the pOH molarity is 10-7M
7. I change my temperature faster when I absorb Heat, and slower when I lose Heat, thus I am able to cool off land masses by oceans.
8. 1g of H atoms contains 6.02 x 1023 molecules
9. For the Molecule on the far right:
10. I am made up of only C and H atoms
11. I am able to cross a cell membrane because I am very water loving.
12. I am very stable because my C and H atoms all share electron clouds evenly.



1. For the Molecule on the far right:
2. We are very similar in physical characteristics.
3. We make great pharmaceuticals because of our similar chemistry.
4. The center C is also called the *asymmetric Carbon*.
5. Consider the reaction below: Assume reactions are at equilibrium.
6. Increasing CO2 concentration will decrease the pH of resulting solution.
7. Increasing the pOH will increase the amount of CO2 being discharged.
8. This is called a Buffer solution reaction.
9. Consider the following: **Al3+**
10. I am also known as an anion.
11. I have lost 3 electrons and I am very electropositive.
12. I currently have 8 electrons in my outermost shell.
13. Consider the following: **O2-**
14. I have 6 valence electrons in my outer most shell.
15. I have a valence number of 2
16. I am highly electronegative
17. Consider the Molecules on the far right:
18. We are also known as structural isomers.
19. The first one is called a *cis* and the second *trans*.
20. We carry different chemical reactions.
21. Consider a basic solution of pH 9:
22. The same volume of an acid solution with pH 4 has 100,000 as many H ions.
23. The pOH of the above solution is 5.
24. With a high pH of 9, this solution easily donates H ions upon dilution.
25. Consider the functional group: **COOH – carboxyl group**
26. Is a source of H ions, forms covalent or H bonds, and is very polar.
27. It is an important component of all amino acids.
28. Can act as a base in some living organisms, by picking up H ions from solution.