

4. _____ substances that have _____ bond are not soluble in water.
5. _____ substances that have _____ or _____ bonds are soluble in water
6. Describe and explain these special properties of water
 - a. specific heat
 - b. universal solvent
 - c. adhesion/cohesion
 - d. Heat of vaporization
7. What is the definition of an acid?
8. What is the definition of a base?
9. What is chemical equilibrium?
10. What is the 1st law of thermodynamics?
11. What is the 2nd law of thermodynamics?
12. What is the equation for Gibbs free-energy? Explain all of the terms of this equation.

13. In your own words write one paragraph about the concept of chemical evolution.

14. Why was the experiment that proved formaldehyde and hydrogen cyanide could be formed from inorganic precursors so important

15. The molecules of the early earth are relatively stable when placed in a test tube. What is the chemical reason these molecules began to interact?

16. Why was water so important in chemical evolution model?