Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per \_\_\_\_\_\_

**This will be the old topic on the upcoming evolution 2 Test**!

**Biochemistry**

|  |  |
| --- | --- |
| **Carbon Based Molecules (Macromolecules)** |  |
| 1. In order to be considered organic, a molecule must contain this element |  |
| 2. What are the four types of macromolecules?  |  |
| 3. The formation of polymers from monomers occurs as a result of this type of reaction |  |
| 4. The breakdown of polymers into smaller monomers occurs as a result of this type of reaction |  |
| 5. Give examples of carbohydrates |  |
| 6. How do plants use the carbohydrate cellulose? |  |
| 7. How do you store glucose? (a molecule) |  |
| 8. Give examples of lipids |  |
| 9. What important lipid makes up the majority of the cell membrane? |  |
| 10. What is the main function of a lipid? |  |
| 11. What is the monomer for a polypeptide chain? |  |
| 12. Where would you find long chains of amino acids, linked by peptide bonds? |  |
| 13. Give examples of nucleic acids |  |
| 14. What is the function of DNA?  |  |
| **Chemical Reactions** |  |
| 15. In a chemical reaction, these are the substances that get changed (the “ingredients”) |  |
| 16. Another name for a reactant is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |  |
| 17. In a chemical reaction, these are the new substances formed |  |
| 18. Which are the reactants? |  |
| 19. What are the products? |  |
| 20. The amount of energy needed to initiate a chemical reaction |  |
| 21. These reactions absorb energy overall. Draw a picture of the energy of this reaction. |  |
| 22. These reactions release energy overall. Draw a picture of the energy of this reaction. |  |
| **Enzymes** |  |
| 23. Without these, the chemical reactions in your cells would occur too slowly to support life’s processes. |  |
| 24. Reactants in a chemical reaction are also called: |  |
| 25. What is the name of the place on an enzyme where the substrate binds? |  |
| 26. Enzymes are composed of what monomer? |  |
| 27. List two factors that can impact the activity of an enzyme |  |
| 28. Complete the following statement: Enzymes are very specific to the types of reactions that they are involved in, however once the reaction is complete……. |  |
| 29. If any of your answers to # 42 above changes too drastically, what happens to the enzyme? |  |
| 30. Draw a graph comparing the energy pathways of a reaction without an enzyme and one with an enzyme.  |  |