

### Organic Compound Worksheet

1. What are the characteristics of life?

\_\_\_\_\_

\_\_\_\_\_

2. What are the four basic compounds of life?

- A. \_\_\_\_\_ C. \_\_\_\_\_
- B. \_\_\_\_\_ D. \_\_\_\_\_

3. What element does all living organisms possess? \_\_\_\_\_

4. What is the difference between saturated and unsaturated fats?

\_\_\_\_\_

\_\_\_\_\_

5. Please fill in the blanks for the following.

- a. Amino Acid + \_\_\_\_\_ + \_\_\_\_\_ → \_\_\_\_\_
- b. \_\_\_\_\_ + Fructose → \_\_\_\_\_
- c. \_\_\_\_\_ + \_\_\_\_\_ → Lactose
- d. \_\_\_\_\_ + \_\_\_\_\_ → Maltose
- e. \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ → Lipid (Fat)
- f. Monomer + \_\_\_\_\_ → \_\_\_\_\_
- g. \_\_\_\_\_ + \_\_\_\_\_ + 2 Fatty Acids → \_\_\_\_\_
- h. \_\_\_\_\_ + Monosaccharide + \_\_\_\_\_ → \_\_\_\_\_
- i. Nucleotide + \_\_\_\_\_ + \_\_\_\_\_ → \_\_\_\_\_
- j. ADP + P → \_\_\_\_\_
- k. \_\_\_\_\_ + \_\_\_\_\_ + Pentose Sugar → Nucleotide

6. What are the four bases of DNA? \_\_\_\_\_

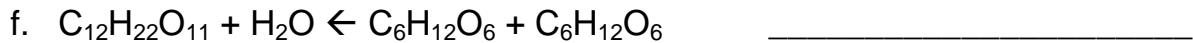
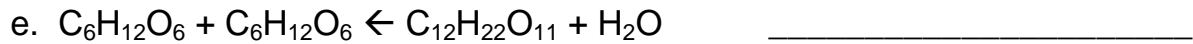
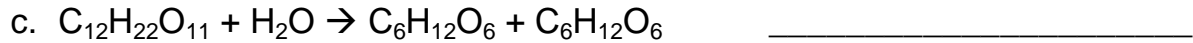
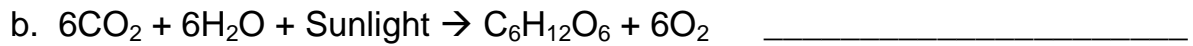
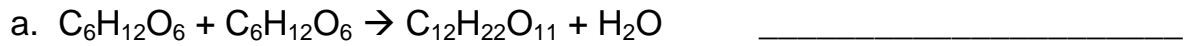
7. What is the name of the energy molecule used in animal cells? \_\_\_\_\_

8. When energy is released during a reaction, it is considered what type of reaction?

\_\_\_\_\_

9. How many different types of bases are there in DNA? \_\_\_\_\_

10. Please indicate if the following reactions are dehydration synthesis or hydrolysis.



11. Please give an example of an isomer. \_\_\_\_\_

12. Name a compound that you would find phosphates in. \_\_\_\_\_

13. Why and what do animals use wax for? \_\_\_\_\_

14. Give an example of a starch. \_\_\_\_\_

15. Give an example of a place where you would find glycogen. \_\_\_\_\_

16. Where do you find phospholipids? \_\_\_\_\_

17. Where is cellulose found? \_\_\_\_\_

18. What is the problem with cellulose for animals? \_\_\_\_\_

19. What biological compound are enzymes considered? \_\_\_\_\_

20. Where is chitin found? \_\_\_\_\_

21. What causes amino acids to be different? \_\_\_\_\_

22. What biological compound are hormones considered? \_\_\_\_\_

23. In what compound would you find peptide bonds? \_\_\_\_\_

24. How many amino acids are there? \_\_\_\_\_

25. Name two things that will destroy a protein. \_\_\_\_\_

26. How can scientists account for the millions of proteins there are? \_\_\_\_\_

27. Many scientists say that DNA is the universal code of life. Explain what this statement means. \_\_\_\_\_