

## Skills Worksheet

**Directed Reading A****Section: Organic Compounds**

- \_\_\_\_\_ 1. What is a covalent compound composed of carbon-based molecules called?
- |                  |                     |
|------------------|---------------------|
| a. hydrogen atom | c. organic compound |
| b. oxygen atom   | d. valence electron |

**THE FOUR BONDS OF A CARBON ATOM**

- \_\_\_\_\_ 2. How many valence electrons does each carbon atom have?
- |          |         |
|----------|---------|
| a. three | c. six  |
| b. two   | d. four |
- \_\_\_\_\_ 3. What do structural formulas show about the atoms in a molecule?
- what colors the atoms are
  - how the atoms are connected
  - how heavy the atoms are
  - what size the atoms are
- \_\_\_\_\_ 4. What do the backbones of some compounds have hundreds or thousands of?
- |                     |                        |
|---------------------|------------------------|
| a. carbon atoms     | c. structural formulas |
| b. carbon molecules | d. acid ions           |

**HYDROCARBONS AND OTHER ORGANIC COMPOUNDS**

- \_\_\_\_\_ 5. What is an organic compound composed only of carbon and hydrogen called?
- |             |                |
|-------------|----------------|
| a. molecule | c. hydrocarbon |
| b. electron | d. single bond |
- \_\_\_\_\_ 6. What is a hydrocarbon in which each carbon atom in the molecule shares a single bond with each of the four other atoms called?
- |                            |                         |
|----------------------------|-------------------------|
| a. unsaturated hydrocarbon | c. bonded hydrocarbon   |
| b. saturated hydrocarbon   | d. unbonded hydrocarbon |
- \_\_\_\_\_ 7. What is another name for a saturated hydrocarbon?
- |                |                |
|----------------|----------------|
| a. carbon atom | c. triple bond |
| b. alkane      | d. atomic bond |
- \_\_\_\_\_ 8. What is a hydrocarbon in which at least one pair of carbon atoms share a double or triple bond called?
- |                            |                         |
|----------------------------|-------------------------|
| a. unsaturated hydrocarbon | c. bonded hydrocarbon   |
| b. saturated hydrocarbon   | d. unbonded hydrocarbon |



**Directed Reading A *continued***

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\_\_\_\_\_ 19. Complex carbohydrates are made of hundreds or thousands of  
a. lipids. c. proteins.  
b. sugar molecules. d. nucleic acids.

\_\_\_\_\_ 20. Lipids are biochemicals that do not  
a. store excess energy. c. dissolve in water.  
b. make up cell membranes. d. store vitamins.

\_\_\_\_\_ 21. Proteins are biochemicals made up of “building blocks” called  
a. sugars. c. nucleic acids.  
b. amino acids. d. lipids.

\_\_\_\_\_ 22. If a single amino acid is missing or out of place, the protein  
a. may not include sulfur.  
b. may not provide support.  
c. may not transport materials.  
d. may not function correctly.

23. List three roles that proteins have in your body and in other living things.

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24. What are the largest molecules made by living organisms called?

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\_\_\_\_\_

25. What are nucleic acids made up of?

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\_\_\_\_\_

26. What is the only reason living things differ from each other?

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27. Since nucleic acids contain all the information needed for a cell to make its proteins, what are nucleic acids sometimes called?

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28. What are the two kinds of nucleic acids, and what are their functions?

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