

Directed Reading A

Section: Organic Compounds

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

THE FOUR BONDS OF A CARBON ATOM

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

HYDROCARBONS AND OTHER ORGANIC COMPOUNDS

- _____ 5. What is an organic compound composed only of carbon and hydrogen called?
- a. molecule
 - b. electron
 - c. hydrocarbon
 - 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
 - b. saturated hydrocarbon
 - c. bonded hydrocarbon
 - d. unbonded hydrocarbon
- _____ 7. What is another name for a saturated hydrocarbon?
- a. carbon atom
 - b. alkane
 - c. triple bond
 - 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
 - b. saturated hydrocarbon
 - c. bonded hydrocarbon
 - d. unbonded hydrocarbon

Directed Reading A *continued*

- _____ 9. What are compounds that contain two carbon atoms connected by a double bond called?
- | | |
|-----------------|------------|
| a. alkanes | c. alkenes |
| b. double-binds | d. alkynes |

- _____ 10. What are compounds that contain two carbon atoms connected by a triple bond called?
- | | |
|-----------------|------------|
| a. alkanes | c. alkenes |
| b. triple-binds | d. alkynes |

11. What are aromatic compounds usually based on?

12. What kind of bonds do the atoms in a ring of benzene have?

13. What do aromatic hydrocarbons often have?

14. List three elements that other organic compounds might have in them.

BIOCHEMICALS: THE COMPOUNDS OF LIFE

- _____ 15. Carbohydrates, lipids, proteins, and nucleic acids are the four categories of
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|------------------------------|-----------------------|
| a. living things. | c. organic compounds. |
| b. unsaturated hydrocarbons. | d. biochemicals. |

- _____ 16. Carbohydrates are biochemicals that are composed of one or more
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|----------------------------|-----------------------|
| a. saturated hydrocarbons. | c. organic compounds. |
| b. sugar molecules. | d. starch molecules. |

- _____ 17. Carbohydrates are used as a source of
- | | |
|----------------------|---------------|
| a. fat. | c. energy. |
| b. genetic material. | d. structure. |

- _____ 18. Simple carbohydrates are made up of
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|-------------------|--------------|
| a. simple sugars. | c. proteins. |
| b. cellulose. | d. lipids. |