

Cell Processes and Energy ▪ *Guided Reading and Study*

Chemical Compounds in Cells

This section identifies the basic building blocks of cells. It also explains the importance of water to cells.

Use Target Reading Skills

As you read, compare and contrast carbohydrates, proteins, and lipids in the table below.

Type of Compound	Elements	Functions
Carbohydrate	Carbon, hydrogen, oxygen	
Protein		
Lipid		

Elements and Compounds

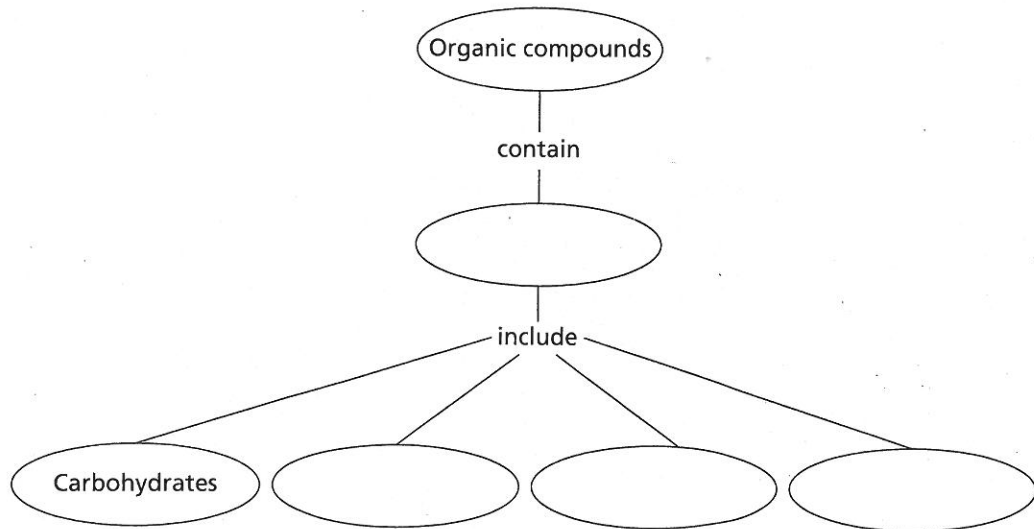
1. A(n) _____ is any substance that cannot be broken down into simpler substances. Its smallest unit is the _____.
2. When two or more elements combine chemically, they form a(n) _____. Its smallest unit is usually called a(n) _____.
3. Most chemical reactions within cells could not take place without _____.

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Chemical Compounds in Cells *(continued)*

4. Complete this concept map on organic compounds.



5. Compounds that do not contain carbon are called _____.

Carbohydrates

6. A carbohydrate is made of carbon, hydrogen, and _____.

7. Starch is a kind of carbohydrate. What foods have starch?

8. How do cells use carbohydrates?

Lipids

9. What are three examples of lipids?

a. _____

b. _____

c. _____

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10. How are lipids like carbohydrates?

11. Cells store _____ in lipids to use later.

Proteins

12. _____ form parts of cell membranes and many of the cell's organelles.

13. What small molecules make up proteins? _____

14. What do enzymes do?

Nucleic Acids

15. Very long organic molecules that contain instructions that cells need to function are called _____.

16. Is the following sentence true or false? Cells use the instructions in nucleic acids to carry out all life functions. _____

17. List the two kinds of nucleic acids.

a. _____ b. _____

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