

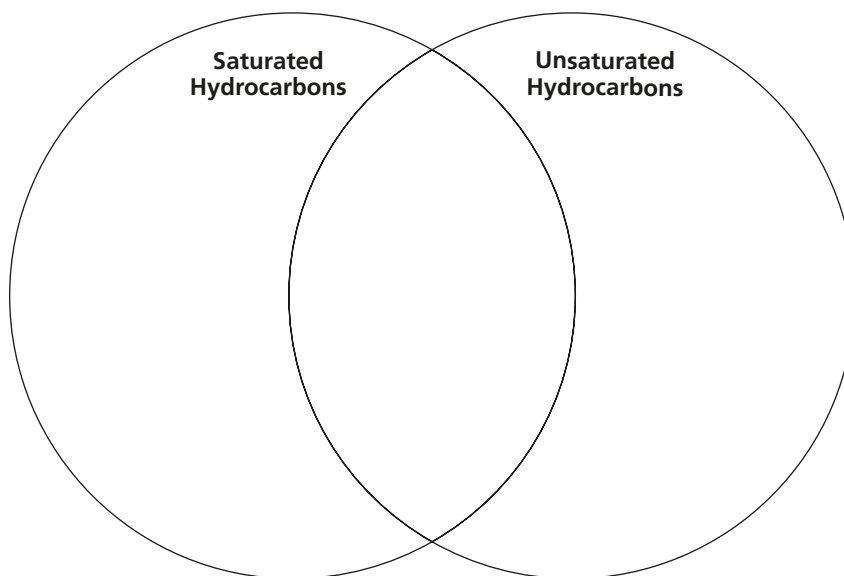
Carbon Chemistry ▪ *Reading/Notetaking Guide***Carbon Compounds** (pp. 296–304)

This section describes the properties that many carbon compounds have in common. It also describes carbon compounds that contain only the elements carbon and hydrogen.

Use Target Reading Skills

Use the Venn diagram to compare and contrast saturated and unsaturated hydrocarbons. Write the phrases listed below in the correct sections of the diagram. Write the similarities in the center, overlapping section. Write the differences in the outside parts of the circles.

- Contain only single bonds
- Contain double or triple bonds
- Names end with the suffix *-ane*
- Names end with the suffix *-ene* or *-yne*
- Contain hydrogen and carbon atoms

**Organic Compounds** (p. 297)

1. Most compounds that contain carbon are called _____.
2. Why are many organic compounds liquid or gas at room temperature?

Carbon Chemistry ▪ *Reading/Notetaking Guide***Carbon Compounds** *(continued)*

3. Circle the letter of each sentence that is true about organic compounds.
- a. They generally have strong odors.
 - b. They have high boiling points.
 - c. Many don't dissolve well in water.
 - d. They are good conductors of electric current.

Hydrocarbons (pp. 298–299)

4. What is a hydrocarbon?

5. Why are hydrocarbons used for fuel in stoves, cars, and airplanes?

6. This is the chemical formula for a hydrocarbon called propane: C_3H_8 .
What does this formula tell you about a molecule of propane?

Structure of Hydrocarbons (pp. 299–301)

7. What are three types of carbon chains that form in hydrocarbons?

- a. _____ b. _____
c. _____

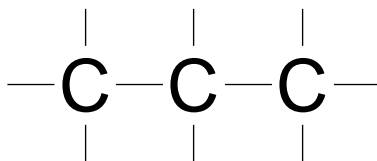
8. What does a structural formula show about a molecule of a compound?

9. Each dash in a structural formula represents a chemical

_____.

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10. The partially complete structural formula below shows the “backbone” for a propane molecule. Complete the structural formula of this hydrocarbon by showing all the hydrogen atoms that are bonded to the carbon chain.

**Propane (C₃H₈)**

11. Compounds that have the same molecular formula but different structures are called _____.
12. Is the following sentence true or false? Carbon atoms can only form a single bond between other carbon atoms. _____
13. Complete the table about saturated and unsaturated hydrocarbons.

Saturated and Unsaturated Hydrocarbons			
Type of Hydrocarbon	Bonds	Ending on Names	Example
a.	Single bonds		Ethane
b.	Double or triple bonds	<i>-ene</i> or <i>-yne</i>	

Substituted Hydrocarbons (pp. 302–303)

14. A hydrocarbon in which one or more hydrogen atoms have been replaced by atoms of other elements is called a(n) _____.

