



Name

Period

Date

SECTION
8.2

STRUCTURE OF DNA
Study Guide

KEY CONCEPT

DNA structure is the same in all organisms.

VOCABULARY

nucleotide

base pairing rules

double helix

MAIN IDEA: DNA is composed of four types of nucleotides.

In the space below, draw a nucleotide and label its three parts using words and arrows.

1. How many types of nucleotides are present in DNA?

2. Which parts are the same in all nucleotides? Which part is different?

MAIN IDEA: Watson and Crick developed an accurate model of DNA's three-dimensional structure.

3. What did Franklin's data reveal about the structure of DNA?

4. How did Watson and Crick determine the three-dimensional shape of DNA?

Section 8.2 STUDY GUIDE CONTINUED

5. How does DNA base pairing result in a molecule that has a uniform width?

MAIN IDEA: Nucleotides always pair in the same way.

6. What nucleotide pairs with T? with C?

In the space below, draw a DNA double helix. Label the sugar-phosphate backbone, the nitrogen-containing bases, and the hydrogen bonds.

Vocabulary Check

7. Explain how the DNA double helix is similar to a spiral staircase.

8. How do the base pairing rules relate to Chargaff's rules?
