

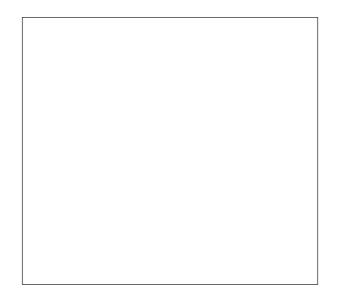
### **KEY CONCEPT**

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?

From DNA to Proteins

**APTER 8** 

Date

#### 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?