

What Does DNA Look Like?

Chapter 6, Section 1

Read pages: 144-147 and answer the questions below. Questions 1, 2, 5-7, and 10 should be complete sentences.

1. DNA stands for _____ and what is it?

The Pieces of the Puzzle

2. Scientists knew that genes are inherited traits. They did not know what materials made up genes but they did know TWO things that those materials could do. What were they?
a. _____
b. _____
3. What are the subunits that make up DNA? _____ and what are those subunits made up of? _____, _____, and _____
4. There are four bases. What is the full name of the four bases?
_____, _____, _____, _____
5. In the 1950's what did the biochemist Erwin Chargaff discover?

6. Rosalind Franklin also contributed to the discovery of DNA. What did she discover and how?

7. James Watson and Francis Crick tied both Chargaff and Franklins' discoveries together by doing what?

DNA's Double Structure

8. DNA looks like a _____ which is known as a _____.

Making Copies of DNA

9. Refer to FIGURE 4 on page 146. Each base will bond with only one other base. Based on the figure fill-in the blanks: **A will always pair with _____** and **C will always pair with _____**.

10. DNA will have to make copies of itself. Listed below are the steps of DNA replication. Fill-in the missing steps based on the reading:

- a. _____

- b. Bases on each side of the molecule are used as a pattern for a new strand.
- c. _____

- d. Ta da! Two new DNA molecules are formed. Half of each is old DNA and _____!

Critical Thinking

11. What would the complimentary strand of DNA be for the sequence of bases below? (the first one is done for you.)

A T G C A A T C T C A G
T _____

12. In the box below, draw a picture of the shape of DNA and show the complimentary bases in the ladder. (refer to pictures in the book for help)

