

Genetics

Name:

Unraveling DNA

Period:

Use Chapter 7, Section 2 of your textbook to answer the questions below. The word banks can be used to fill out the sentences below them.

bases chromatin chromosome divides gene information proteins

Section 2: How DNA Works (p.212)

- _____ 1. How much DNA does a human cell contain?
a. less than 1 m b. about 2 m c. more than 10 m d. about 30,000 m

Unraveling DNA (p.212)

2. _____ package DNA tightly into cells.
3. A _____ is made from the DNA molecule and the proteins it winds around.
4. In a eukaryotic cell, long strands of DNA and proteins are called _____ .
5. Before a eukaryotic cell _____, chromatin is bundled up into compact chromosomes.
6. The structure of DNA is what allows it to hold _____ .
7. In DNA, it is the order of _____ that make a code to carry information.
8. A string of nucleotides that tell the cell how to make a trait is called a _____ .

chromosome DNA loosely nucleus proteins

9. Look at Figure 1, part a. Where is the DNA found in the cells of the girl? _____
10. Look at Figure 1, part b. How is the chromatin bundled in the nucleus? _____
11. Look at Figure 1, part c. What is the DNA in the chromatin coiled around? _____
12. Look at Figure 1, part d. How many strands of DNA are connected in the middle? _____
13. Look at Figure 1, part e. What must a cell copy before it can divide? _____
14. Look at Figure 1, part e. What is formed by two identical chromatids? _____
15. Look at Figure 1, part f. How many chromosomes does each human cell have? _____

