

**Content Practice A****LESSON 3****DNA and Genetics**

**Directions:** On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.

<b>amino acids</b>	<b>DNA</b>	<b>double helix</b>	<b>genes</b>
<b>genetic disorder</b>	<b>mutation</b>	<b>nitrogen</b>	<b>nucleotides</b>
<b>phosphate</b>	<b>proteins</b>	<b>replication</b>	<b>RNA</b>
<b>traits</b>	<b>transcription</b>	<b>translation</b>	

- Chromosomes are made of \_\_\_\_\_ and \_\_\_\_\_.
- An organism's \_\_\_\_\_ are encoded in segments of its chromosomes called \_\_\_\_\_.
- A DNA molecule is shaped like a twisted ladder, a shape that is called a(n) \_\_\_\_\_.
- The genetic units called \_\_\_\_\_ are made of a sugar, a(n) \_\_\_\_\_ group, and a(n) \_\_\_\_\_ base.
- The process by which a new copy of a DNA molecule is created is called \_\_\_\_\_.
- Three kinds of \_\_\_\_\_ molecules carry out genetic instructions for the production of proteins.
- This process involves two main steps, called \_\_\_\_\_ and \_\_\_\_\_.
- In the second of those steps, units called \_\_\_\_\_ are linked together.
- A change in a gene's sequence of nucleotides is called a(n) \_\_\_\_\_.
- A change in a gene's sequence of nucleotides can lead to a(n) \_\_\_\_\_, such as cystic fibrosis.

**Content Practice B**

**LESSON 3**

***DNA and Genetics***

**Directions:** Answer each question on the lines provided.

1. Which two substances are chromosomes made of?

\_\_\_\_\_

2. What are the three parts of a nucleotide?

\_\_\_\_\_

3. What is name for the process by which new copies of DNA are made?

\_\_\_\_\_

4. What are the three kinds of RNA?

\_\_\_\_\_

5. What is the process by which the coded DNA information for making a protein is copied into RNA?

\_\_\_\_\_

6. What process is carried out by RNA to produce a protein?

\_\_\_\_\_

7. What is a mutation, and what are the three types of mutations discussed in the lesson?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8. Which three genetic disorders are caused by mutations?

\_\_\_\_\_

9. How can a mutation be beneficial?

\_\_\_\_\_

\_\_\_\_\_

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