

## Genetics

Name:

### Changes in Genes

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.

copied environment letter mutation random

#### Changes in Genes (p.216)

1. Changing just one \_\_\_\_\_ in a sentence can change the meaning of the sentence.
2. A \_\_\_\_\_ is a change in how the bases in a DNA sequence are arranged.

#### How Do Mutations Happen? (p.216)

3. Mutations can happen when DNA is \_\_\_\_\_ before the cell divides.
4. Lots of mutations are the result of \_\_\_\_\_ errors that happen during DNA copying.
5. DNA can also be damaged by things in the \_\_\_\_\_ around the organism.
- \_\_\_\_\_ 6. What are things in the environment that can cause mutations called?  
a. DNA    b. proteins    c. nucleotides    d. mutagens
- \_\_\_\_\_ 7. Which of the following is NOT a mutagen?  
a. asbestos    b. cigarette smoke    c. protein    d. sunlight

#### Do Mutations Matter? (p.217)

Match the correct description with the correct term. Write the letter in the space provided.

- \_\_\_\_\_ 8. kind of mutation that makes it easier to survive a drought                      a. harmful trait
- \_\_\_\_\_ 9. kind of mutation that does not change the protein a gene codes for                      b. improved trait
- \_\_\_\_\_ 10. kind of mutation that makes it easier to be found by a predator                      c. no change

base sequence in original cell with original DNA	base sequence in cell with mutated DNA
C G	C G
T A	T A
A T	A T
C G	A T
G C	G C
A T	T A
T A	T A

Look at the table to the left. Circle the two mutations that happened when the original cell duplicated its DNA to prepare for mitosis.



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