Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I CAN** explain and describe how animal & plant cells produce more cells.

Period \_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If you **do not receive a passing grade**

My child had completed this study guide, studied, and is ready to retake this test.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

parent signature

on this test, in order to retake it you are

required to: **have your parent**

 **sign this study guide.**

**DNA and the Cell Cycle**

Study Guide Cell Cycle Chapter 4 Section 3

1. How many chromosomes in the human body cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. How many homologous chromosomes in the human body? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. The structure (shape) of DNA is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are organized structures of DNA and proteins.

5. DNA stands for the two words: (spell correctly)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. The Base-Pairing Rules in DNA are: \_\_\_\_ to \_\_\_\_\_ and \_\_\_\_ to \_\_\_\_\_

7. You and a banana’s DNA have the same function and structure, so what’s the difference?

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. What is a nucleotide made of? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Circle the error in the nucleotide code below.





T

A

10. When such an error occurs,

 it is known as a \_\_\_\_\_\_\_\_\_\_\_\_.

T

G

g

T

A

11. In the article we read in ScienceWorld called “The Immortal Woman,” explain what HeLa cells are.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. The second, third, fourth, and fifth steps of the cell cycle ALL TOGETHER are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Identify each step of the cell cycle. THESE WILL NOT BE IN ORDER ON THE TEST!***







 13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 14,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cell plate





 16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Mastery—You do not need to answer these questions on the Study Guide.**

**This is just to let you know what you need to study to receive Mastery on the test.**

* Know how to draw a simple DNA model with four nucleotide base pairs AND label each nucleotide.
* Be able to explain, with examples, why cells need to produce more cells.