Study Guidelines: **Cell Cycle**

Name: \_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_ Seat: \_\_\_\_

The success of both single celled and multicellular organisms is dependent upon the ability of cells to successfully divide.

1. a. Study your vocabulary words!!! b. Draw a picture of a homologous pair

2. a. Define diploid and haploid.

 b. Draw a diploid cell that has 4 chromosomes in it.

 c. Draw a haploid cell that has 4 chromosomes in it.

3. Draw a diploid cell that has 8 chromosomes in it and then draw what its haploid cell would look like.

4. Identify the reason why cells would need to divide

5. a. Name the 2 main phases of the cell cycle.

 b. Name the 3 phases that are part of interphase and explain what happens during each phase.

6. a. Define checkpoint.

 b. Identify the location of the three major check points

7. a. Draw a picture of a homologous pair and sister chromatids

 b. Define centromere and sister chromatids

 c. Explain the difference between homologous pairs and sister chromatids.

8. a. Describe the purpose of checkpoints in the cell cycle

 b. Name at least one thing that would be checked at each of the major (3) check points

9. a. In your own words, explain what happens during mitosis.

 b. What is the purpose/point of mitosis?

 c. Study what happens during the steps of mitosis.

10. a. When does mitosis occur?

 b. What types of cells does it make?

 c. How many cells are made?

 d. How many steps?

11. a. Explain the purpose of meiosis.

 b. What is the point of meiosis 1?

 c. What is the point of meiosis 2?

12. a. Describe the process of crossing over.

 b. When does it occur?

 c. What is the point of crossing over?

13. 13. Compare and contrast mitosis and meiosis:

 Purpose:

 Cell Type produced (not diploid or haploid):

 Haploid or Diploid:

 # of Steps:

 # of cell divisions:

 # of cells made at the end:

 when does it occur:

 Any other important comparisons?...