

DNA Replication 4.3b

Date _____

Last Name _____ First _____ period ____

1. Write a question concerning cell division?

2. What was the important scientific breakthrough concerning the question: How do traits get carried from parent cells to daughter cells?

_____ carry traits from parent cells to daughter cells.

3. The discovery that chromosomes were the carrier of traits lead to more questions. Write one those questions below.

4. What were chromosomes discovered to be made of? _____

5. Study the cell diagram.

a. What is this diagram showing?

The diagram is showing that _____ are made of _____

6. Who discovered the structure of DNA?

a. _____

b. _____

c. _____

7. Describe the shape of DNA? _____

8. What are the sides of the DNA molecule made of? _____ and _____.

9. What are the rungs of the DNA ladder made of? _____.

a. What are the 4 types of Nitrogen bases?

1. _____ ()

2. _____ ()

3. _____ ()

4. _____ ()

10. What provides the blueprint for a cell's growth, structure, and function?

The _____ and _____ of the _____ provide the blue print for the cells growth, structure and function.

11. Write a DNA base sequence 12 letters long using the letters A,T,G,and C.

12. Name the 4 nitrogen bases that make up the DNA molecule and Name their partners.

a. _____ \leftrightarrow _____

a. _____ \leftrightarrow _____

a. _____ \leftrightarrow _____

a. _____ \leftrightarrow _____

13. IF one side of the DNA ladder sequence looks like this: A_G_T_T_C_C_A What does the other side look like?

14. Why must a cell replicate its DNA?

a. A dividing cell must replicate its DNA so the each daughter cell has a _____ of _____

15. DNA replicates itself in 3 basic steps? Describe the steps.

1. The DNA molecule _____.

2. Base pairs _____ down the middle.

3. Extra nitrogen _____ in the chromatin _____ up with the 2 unzipped sides of DNA making ____ complete copies.