DNA Replication

Name _____
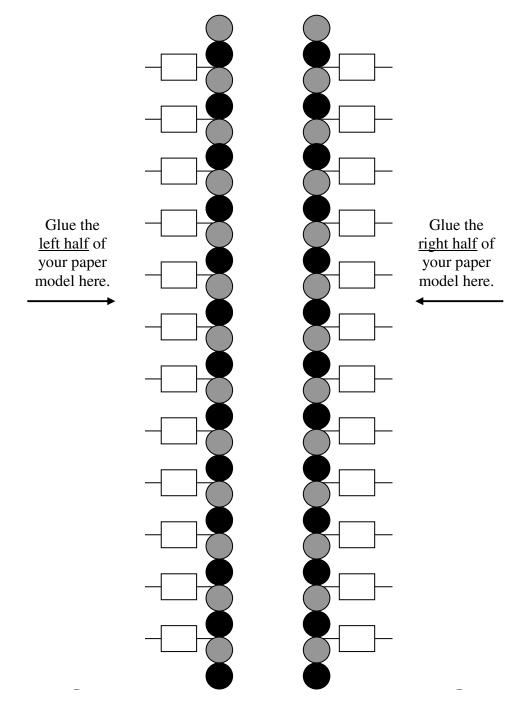
Step 1: After you have completed your DNA keychain, label the bases on the paper model with A, T, G, or C and color the squares to match the bases <u>exactly</u> as they are on your keychain from the bottom to the top.

Step 2: "Unzip" the paper model by cutting it in half longwise and glue the pieces in the spaces below so they match up correctly.

Step 3: Label the empty boxes using A, T, G, or C and then color them using the colors on your DNA Guide. Remember to match the bases correctly!

Step 4: Answer the questions on the back of your worksheet.

Glue the <u>left half</u> of your paper model here.

Glue the <u>right half</u> of your paper model here.

Questions

1. How do the bases in DNA pair up?   A - _____   G - _____   T - _____   C - _____

2.   Compare your two "new" DNA molecules (the ones you did on the front) to your actual keychain. How does the order of the bases they compare?

3. What do we call a change in a gene or chromosome? _____

4. What two cell division processes use DNA replication? _____ & _____

5. What is created by each of the processes in #4?

Going Further ...

As we discussed in class, the DNA molecules consists of <u>nitrogen base pairs</u>. The order of the pairs determines the <u>genetic code</u>, which controls <u>protein synthesis</u> or the <u>production of proteins</u>.

6. What do we call a set of three nitrogen bases? _____ or _____
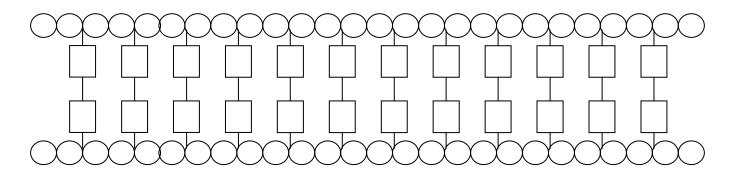
7. What organelle in a cell contains the DNA? _____

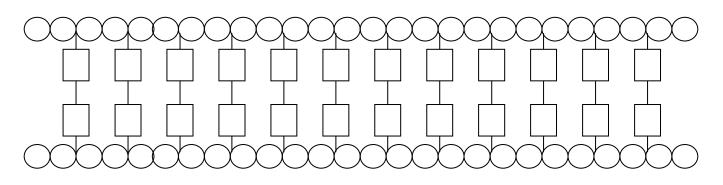8. What organelle is the protein factory in a cell? _____

9. How does the genetic code get to a ribosome? _____
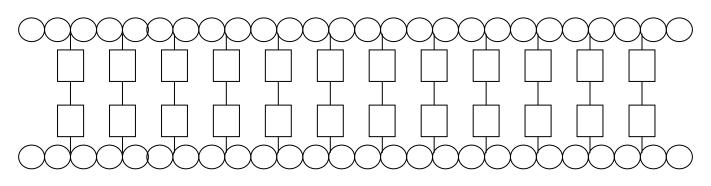
10. What type of RNA assembles the proteins? _____
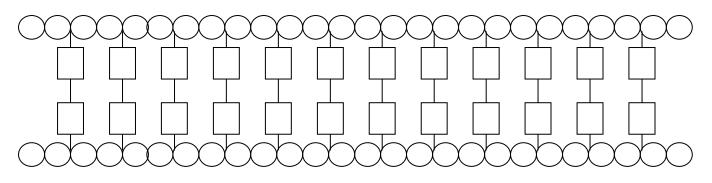
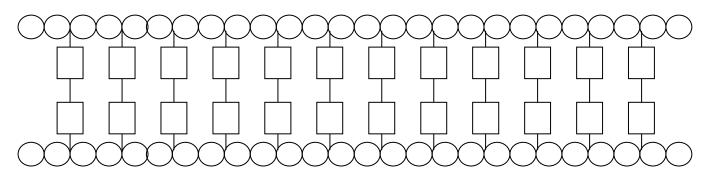11. What are the building blocks of proteins? _____ _____

12. What is another term for a protein? _____ chain (a natural polymer)