**Sci 9 DNA Replication WS** Name:

Block:

1. Why does DNA replicate?

So each new cell will have an exact copy when it divides.

1. Why is DNA replication is considered “semi-conservative”?

Each of the two new copies contains a strand from the original and a new strand.

1. When does DNA replication occur in a cell?

Just before the cell is ready to divide

1. Where does DNA replication occur in a cell?

In the nucleus

True or False. If statement is false, correct the statement

1. \_\_F\_\_\_ Guanine and cytosine are referred to as *nitrogenous bases*
2. \_\_F\_\_\_ DNA is in the shape of a double helix.
3. \_\_F\_\_\_ A nucleotide is made up of a sugar, phosphate and *one* nitrogen bases.
4. \_\_T\_\_\_ Replication is performed prior to cell division.
5. \_\_F\_\_\_ Adenine always pairs with *Thymine.*
6. \_\_F\_\_\_ Complementary base pairing matches up with complementary *bases*.
7. \_\_\_\_\_ The sides of the DNA molecule are made up of repeating *phosphates* and sugars.
8. \_\_\_\_\_ The letters that make up the DNA molecule code for *proteins*.
9. \_\_\_\_\_ Replication results in two strands of DNA, each of which has *one* original strand, one new.
10. \_\_\_\_\_ *Hydrogen* bonds hold nitrogen bases together, forming the rungs of the DNA ladder.

Put the following sentences in correct order:

1. \_\_3\_\_ Two new molecules of DNA are created.
2. \_\_1\_\_ DNA unzips
3. \_\_4\_\_ Cell starts into the mitosis phase of cell cycle
4. \_\_2\_\_ Free-floating nucleotides pair up with exposed nitrogen bases.

**Complete the statement:**

1. \_adenine , guanine, cytosine, and thymine are four nitrogenous bases.
2. In DNA, \_\_\_\_cytosine\_\_\_\_\_\_\_\_\_\_\_ always forms hydrogen bonds with guanine.
3. The sequence of \_\_\_\_nucleotides\_\_\_\_\_\_\_\_\_\_\_\_ carries the genetic information of an organism.
4. The process of \_\_\_\_\_\_DNA replication\_\_\_\_\_produces a new copy of an organism’s genetic information.
5. The double coiled shape of DNA is called a \_\_\_\_\_\_double helix\_\_\_\_\_\_\_\_\_\_\_\_\_.

Show the complementary base pairing that would occur with this original strand of DNA:

C A G T T A C G A T G A

G T C A A T G C T A C T