**February Notes: Day 2 DNA Replication**

Name: Period: Date:

**AIM: How do DNA molecules make copies of themselves?**

**Do now: What are the complement base pairs?**

**DNA Replication**

* Replication = DNA itself . Occurs in the
* Any in copying =
* DNA mutation = mutation

**Basic facts of DNA Replication**

1. base makes possible.
2. One side of DNA is a for making the other side (Strand)

**Process of DNA Replication**

1. (Helicase) (-ase) weak hydrogen bond between
2.  (DNA Polymerase) brings in bases
3. bases

**Semiconservatitive replication**

* Each DNA molecule contains one strand & one strand
* Each strand remains
* Every molecule is half “old” and “New”

## ****Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****

## ****DNA Replication Coloring****

Each time a new cell is made, the cell must receive an exact copy of the parent cell DNA. The new cells then receive the instructions and information needed to function. The process of copying DNA is called replication. Replication occurs in a unique way – instead of copying a complete new strand of DNA, the process “saves” or conserves one of the original strands. For this reason, replication is called semi-conservative. When the DNA is ready to copy, the molecule “unzips” itself and new nucleotides are added to each side.

The image showing replication is on the attached page. Note the nucleotides are shown as their 3 parts – sugar (to be colored pink), phosphate (to be colored black) and one of the four bases (color codes are below). Color the replication model on the attached page. Notice that several **nucleotides** are floating around. They are waiting to pair up with their match.

The boxed section shows two new strands of DNA. Color the old strand (including its base) brown and the new strand (including its base) light blue.

Color the thymines orange. TColor the adenines green. A  
Color the guanines blue. GColor the cytosines yellow. C

Note that that the bases attach to the sides of the ladder at the sugars and not the phosphate.

Questions:

1. Describe why it is essential for DNA to replicate prior to cell division. What would happen otherwise?
2. Describe the term semi-conservative in relation to DNA replication?
3. Based on what we have discussed in class what proteins are missing from the DNA replication diagram? Infer what would happen if they were truly absent from this process while it occurred within your body?

# DNA REPLICATION

