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| **GUIDED NOTES: The History of DNA** |
| **What is DNA?** * DNA stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_nucleic Acid
* DNA is present in the \_\_\_\_\_\_\_\_\_\_ of all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
* DNA controls all the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes which take place in cells
* The kind of cell which is formed (i.e. muscle, blood, nerve, etc) is controlled by DNA
* The kind of organism which is produced (i.e. buttercup, giraffe, herring, human, etc) is controlled by DNA
 | **DNA Molecule*** DNA is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (i.e. “Giant Molecule”) made up of a long chain of sub-units (monomers) called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Each **NUCLEOTIDE** has 3 main parts…
1. **SUN:**
2. **HOUSE:**
3. **POOL:**

ys_DNA_4and5 |
| **Nucleotide Structure*** In DNA, the phosphate, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sugar, and a nitrogenous base combine to form a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*Draw and label a nucleotide below.  | **DNA Structure***
* 4 Nitrogenous Bases
1.
2.
3.
4.
 |
| **Nitrogenous Bases**1.
2. Adenine (A)
3. Guanine (G)
4.
5. Thymine (T)
6. Cytosine (C)
 | **More DNA Structure*** **Sides of the Ladder=**
* **image?id=6520&rendTypeId=4Rungs of**  **the Ladder=**
 |
| **Discovering DNA: A Team Effort** |
| **Frederick Griffith (1928)****QUESTION:** **ANSWER:** Transformation… | 450px-Griffith_experiment |
| **Oswald Avery (1944)****QUESTION:** **ANSWER:**  | avery1 |
| **Hershey and Chase (1952)****QUESTION:****EXPERIMENT:** **structure%20of%20bacteriophage****ANSWER:**  | HERSHEY |
| **Erwin Chargaff*** DNA base-pairing rules
*
*
* Their amounts in a given DNA molecule will be about the same.
 | **What does base-pairing look like?**  |
| **Chargaff’s Rule****REMEMBER:**  | **Race for the “Double-Helix”****DNA_double_helix_horizontalRosalind Franklin (1952):****Watson & Crick (1953):**  |
| **Draw the Complementary DNA Strands****CAGGCCTAC****CATTGCAAG** | **TAAGCGATA****GCCATGAAT** |