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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 |
| **Nitrogenous Bases**    2. Adenine (A) 3. Guanine (G) 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** |