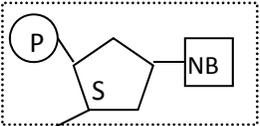
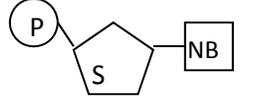


- What is the chemical basis of life?
- The structure of DNA is revealing of function
- Genes are sequences of DNA found on chromosomes

Key Vocabulary	Assignments	Due Date
Adenine (A) Bacterial Transformation Bacteriophage Base Pairing Rule Chromosome Cytosine (C) DNA DNA polymerase Double helix Gene Guanine (G) Helicase Mutation Nitrogen Base Pair Nucleotide Purine Pyrimidine Replication Semi-conservative Thymine (T) Trait Variation	<p>#1 - Read pages 193 to 195</p> <ol style="list-style-type: none"> 1. How did the Hershey and Chase experiment produce evidence that DNA, and not protein, is the hereditary material in viruses? 2. What were the essential differences between the methods and results of Griffith and Avery's experiments? 3. What might Hershey and Chase have concluded if they had found both 32P and 35S in the bacterial cells? <p>#2 – Read pages 196 to 199</p> <ol style="list-style-type: none"> 1. What are the base pairing rules for nucleotides in DNA? 2. Where are the phosphates and Deoxyribose sugars found in the DNA molecule? 3. What piece of information did Franklin and Wilkins have that helped Watson and Crick determine the double helix structure of DNA?? <p>#3 – Read pages 200 to 202</p> <ol style="list-style-type: none"> 1. Describe the role of helicases and DNA polymerases during DNA replication. 2. State why DNA replication is a semiconservative process. 3. Is a mutation that occurs during the formation of an egg cell or sperm cell more significant than a mutation that occurs in a body cell? Explain. 	

DNA, RNA & Protein Synthesis

<p style="text-align: center;">DNA</p> <p>Deoxyribonucleic Acid</p> <p>Is a polymer constructed from four nucleotides containing:</p> <ol style="list-style-type: none"> 1. (A) 2. (T) 3. (C) 4. (G) <p>The molecule takes on a ladder like shape called the _____ with the nitrogenous bases to the inside and the sugar phosphate backbone to the outside. DNA is found in the _____ of Eukaryotic cells. It is responsible for storing the genetic information of every organism.</p>	<p style="text-align: center;">Nucleotide</p> <p>Building block of DNA and RNA</p> <div style="display: flex; align-items: center;"> <div style="border: 1px dashed black; padding: 5px; margin-right: 10px;">  </div> <div style="margin-right: 10px;">Constructed from Ribose sugar and a phosphate group bonded to a nitrogenous base.</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  </div>	<p style="text-align: center;">Translation</p> <p>The process that uses RNA and the ribosomes to synthesize polypeptides (proteins).</p> <p>mRNA travels to the ribosome where its bases are read in groups of three called codons or triplets.</p> <p>tRNA arrives at the ribosome with matching anticodons to bring amino acids to the ribosome where they are bonded to the next amino acid.</p>
<p style="text-align: center;">Chromosome</p> <p>When DNA is condensed around proteins called histones it forms an easy to move structure called a chromosome.</p> <p>A human has 23 pairs of chromosomes (46 total)</p>	<p style="text-align: center;">Gene</p>	<p>The chain of amino acids will continue to grow until the stop codon is reached. Then the chain is released and finished in the ER.</p>
<p>Polymers are molecules made up of repeating subunits. The order of the subunits determines the meaning of the polymer.</p> <p>DNA/RNA are polymers made up of Nucleic acids</p> <p>Proteins are polymers made up of amino acids</p>	<p style="text-align: center;">RNA</p> <p>Ribonucleic Acid is a single stranded polymer used to transmit the information from the DNA in the nucleus to the ribosomes in the cytoplasm. It exits the nucleus by way of the nuclear pores.</p> <p>There are three kinds of RNA</p> <p>mRNA-</p> <p>tRNA-</p> <p>rRNA-</p>	<p>Each tRNA has one of 64 possible anticodons however because there are only 20 amino acids some codons code for the same amino acids.</p>
<p style="text-align: center;">DNA Base Pairing Rule</p> <p style="text-align: center;">A-T C-G</p>		<p style="text-align: center;">Transcription</p> <p>The process that creates RNA using the coding strand of DNA as a template. RNA Polymerase assembles the RNA using the following substitution rules:</p> <p style="text-align: center;">A→Uracil, T→ , C→ , G→</p>