

Name: Kristoffer Van Atten		Grading Quarter: Q1	Week Beginning: 9/4/2023
School Year: 23-24		Subject: AP Biology	
Monday	Notes:	Objective: No School Lesson Overview: Some students may still think there is school and show up. That is a lesson unto itself	Academic Standards:
Tuesday	Notes:	Objective: SWBAT Explain how a change in the subunits of a polymer may lead to changes in structure or function of the macromolecule. ● SYI-1.C.1 Directionality of the subcomponents influences structure and function of the polymer – - a Nucleic acids have a linear sequence of nucleotides that have ends, defined by the 3' hydroxyl and 5' phosphates of the sugar in the nucleotide. During DNA and RNA synthesis, nucleotides are added to the 3' end of the growing strand, resulting in the formation of a covalent bond between the nucleotides. - b DNA is structured as an antiparallel double helix, with each strand running in opposite 5' to 3' orientation. Adenine nucleotides pair with thymine nucleotides via two hydrogen bonds. Cytosine nucleotides pair with guanine nucleotides by three hydrogen bonds. - c Proteins comprise linear chains of amino acids, connecting by the formation of covalent bonds at the carboxyl terminus of the growing peptide chain. - d Proteins have primary structure determined by the sequence order of their constituent amino acids, secondary structure that arises through local folding of the amino acid chain into elements such as alpha-helices and beta-sheets, tertiary structure that is the overall three-dimensional shape of the protein and often minimizes free energy, and quaternary structure that arises from interactions between multiple polypeptide units. The four elements of protein structure determine the function of a protein. Carbohydrates comprise linear chains of sugar monomers connected by covalent bonds. Carbohydrate polymers may be linear or branched. Lesson Overview: Students take notes in their interactive notebooks and do activities based on the content.	Academic Standards: SYI-1.C.1

Wednesday	Notes:	Objective: Explain how a change in the subunits of a polymer may lead to changes in structure or function of the macromolecule. ● SYI-1.C.1 Directionality of the subcomponents influences structure and function of the polymer – - a Nucleic acids have a linear sequence of nucleotides that have ends, defined by the 3' hydroxyl and 5' phosphates of the sugar in the nucleotide. During DNA and RNA synthesis, nucleotides are added to the 3' end of the growing strand, resulting in the formation of a covalent bond between the nucleotides. - b DNA is structured as an antiparallel double helix, with each strand running in opposite 5' to 3' orientation. Adenine nucleotides pair with thymine nucleotides via two hydrogen bonds. Cytosine nucleotides pair with guanine nucleotides by three hydrogen bonds. - c Proteins comprise linear chains of amino acids, connecting by the formation of covalent bonds at the carboxyl terminus of the growing peptide chain. - d Proteins have primary structure determined by the sequence order of their constituent amino acids, secondary structure that arises through local folding of the amino acid chain into elements such as alpha-helices and beta-sheets, tertiary structure that is the overall three-dimensional shape of the protein and often minimizes free energy, and quaternary structure that arises from interactions between multiple polypeptide units. The four elements of protein structure determine the function of a protein. Carbohydrates comprise linear chains of sugar monomers connected by covalent bonds. Carbohydrate polymers may be linear or branched. Lesson Overview: Students take notes in their interactive notebooks and do activities based on the content.	Academic Standards: SYI-1.C.1
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Thursday	Notes:	Objective: SWBAT Describe the structural similarities and differences between DNA and RNA. ● IST-1.A.1 DNA and RNA molecules have structural similarities and differences related to their function – - a Both DNA and RNA have three components – sugar, a phosphate group, and a nitrogenous base – that form nucleotide units that are connected by covalent bonds to form a linear molecule with 5' and 3' ends, with the nitrogenous bases perpendicular to the sugar-phosphate backbone. - b The basic structural differences between DNA and RNA include the following: - i DNA contains deoxyribose and RNA contains ribose. - ii RNA contains uracil and DNA contains thymine. - iii DNA is usually double stranded; RNA is usually single stranded. The two DNA strands in double-stranded DNA are antiparallel in directionality Lesson Overview: Students take notes in their interactive notebooks and do activities based on the content. UNIT 1 REVIEW	Academic Standards: IST-1.A
Friday	Notes:	Objective:. SWBAT complete an assessment on the objectives from unit 1 with 80% accuracy or above Lesson Overview: Students complete a progress check on Unit 1 objectives.	Academic Standards: All Unit 1 Standards