

Biology 11 preAP
DNA Replication Project

Names: _____

Assessed By: _____

Date: _____
 Block: _____

Objective:

To visually demonstrate the process of DNA replication in a creative way (so that you will remember it forever).

Instructions:

Create a model that visually describes the process of DNA replication in detail. Due: _____

Performance-Based Assessment:

	Beginning	Developing	Accomplished	Exemplary
Content – Structure	Missing some major components of DNA structure	Most structural components are labeled in detail, some components are missing	Most structural components are labeled in detail, only a few minor components are not labeled	All structural components are labeled in detail
DNA double helix, nucleotides, deoxyribose, ribose, bases (A, T, U, C, G), phosphate, 5', 3', antiparallel, RNA primer, antiparallel, DNA ligase, primase, DNA polymerase I, DNA polymerase III, helicase, single strand binding proteins, replication fork, origin of replication, parental strands, daughter strands, leading strand, lagging strand, Okazaki fragments, sugar-phosphate backbone, hydrogen bonding, covalent bonding, complimentary base pairing				
Content – Process	Missing some major processes	Missing some minor processes	Some minor errors to accuracy	Entire process is correct and accurate
Unzipping, unwinding, breaking of hydrogen bonds, 5' to 3' synthesis, initiation with the primer, complimentary base pairing, formation of hydrogen bonds, formation of covalent bonds, continuous synthesis, discontinuous synthesis, replacement of primer, joining of Okazaki fragments, placement of enzymes				
Clarity	Although an attempt is made, it is difficult to understand most of the project. - Messy - Disorganized	Most sections are well organized with clear identification, but some sections are not.	Entire project is well organized, but a few of the parts/processes are not easily identifiable.	Clear, concise vocabulary when speaking; all parts/processes are clearly labeled.
Application	Project demonstrates no attempt at making a visual statement.	Project somewhat uses interesting materials for effect.	Project uses interesting materials for effect, but somewhat detracts from overall understanding.	Project aids understanding through visually interesting materials and movement.