

Presentation: DNA Replication Model

OBJECTIVE: to visually and orally demonstrate an understanding of the process of DNA Replication (so that you will remember it forever).

MATERIALS:

- 6 different colours of paper
- Scissors
- Tape

INSTRUCTIONS:

1. With a partner, create small squares (2cmx2cm ish...) representing: 40 sugar, 40 phosphate, 10 adenine, 10 thymine, 10 cytosine, 10 guanine (each type a different colour).
2. Assemble 40 nucleotides using the tape as covalent bonds.
3. Assemble 1 DNA molecule (10 nucleotides long) with tape as covalent bonds and imaginary lines (or a prop of your choice!) as hydrogen bonds.
4. Practice showing the process of replicating that DNA molecule (using the other nucleotides).
5. You will present this to peers for evaluation on _____. In your presentation, you must explain all bonds being created/broken, any enzymes involved, the location in the cell, as well as the purpose of DNA replication.

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Assessed By: _____

PERFORMANCE-BASED ASSESSMENT:

	Beginning	Developing	Accomplished	Exemplary
CONTENT (STRUCTURE)	Many of the components are missing or incorrectly used	The majority of structural components are correctly used, while some components are missing or incorrect	Almost all structural components are correctly used, with some minor errors.	All structural components are correctly used
<i>Purpose, location, DNA, nucleotides, base sequence, hydrogen bonds, covalent bonds, semi-conservative, enzymes: helicase, DNA polymerase, daughter strand and parent strand</i>				
CONTENT (PROCESS)	Many processes are incorrect or not included.	The majority of processes are correct and accurate, with some processes missing or incorrect	Almost all processes are correct and accurate, with some minor errors.	Entire process is correct and accurate
<i>"Unzipping," Complimentary Base Pairing, Joining of Adjacent Nucleotides, Breaking/Making Hydrogen Bonds, Making Covalent Bonds</i>				
CLARITY	Although an attempt is made, it is difficult to understand most of the presentation.	Most of the presentation is well organized with clear visual and oral communication, but some is not.	Entire presentation is well organized with clear visual and oral communication.	Entire presentation is effectively organized with an unmistakable visual and clear oral communication. Presentation could be used as a teaching tool for all ages.

Comments:**Presentation: DNA Replication Model**

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