

Central Dogma Lesson Plan

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The Setting

- Mrs. Nunley's 9th grade general biology class
- A computer lab at Lafayette High School
- SOL review of genetic unit previously taught incorporating visual representation



Objectives

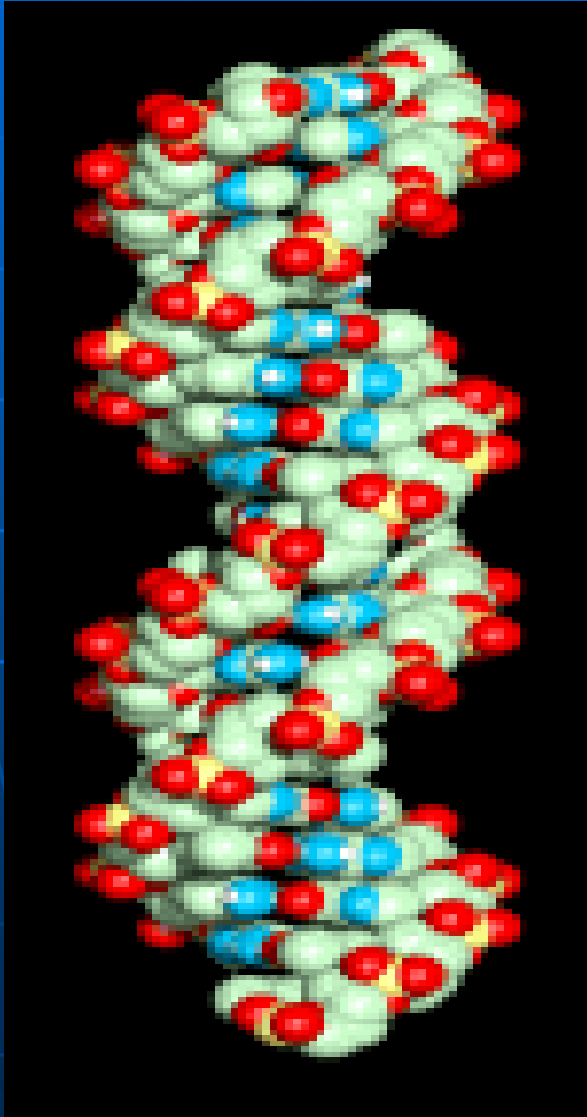
- The student will be able to explain the differences between DNA and RNA
- The student will be able to construct a DNA molecule using nitrogen base pairing rules
- Given a sequence of DNA nucleotides the student will be able to transcribe it into a RNA strand
- Given a RNA sequence the student will be able to translate it into a protein

Materials

- A computer with internet access for each student
- System for projecting internet onto a TV screen
- Worksheet
- <http://gslc.genetics.utah.edu/units/basics>
 - Click on build a DNA molecule. Build a molecule. Go back to previous page and click on "transcribe and translate a gene". Scroll down and click "begin". Go back to the previous page and scroll down to the "And Beyond..." section. Choose either "what makes a firefly glow?" or the "Mystery of the stolen artifacts?".
- <http://www.dnaftb.org/dnaftb>

Molecular Genetics #21

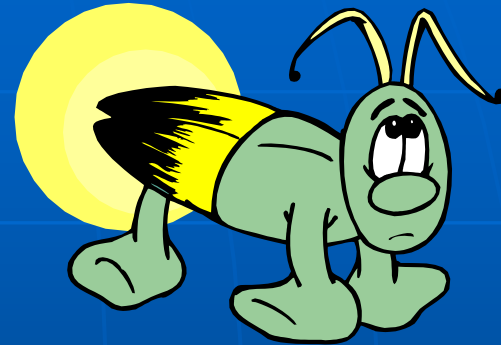
The Activity



- Explain online tutorial about DNA, RNA, and transcription to students as they follow along on the computer
- Review translation using PowerPoint presentation

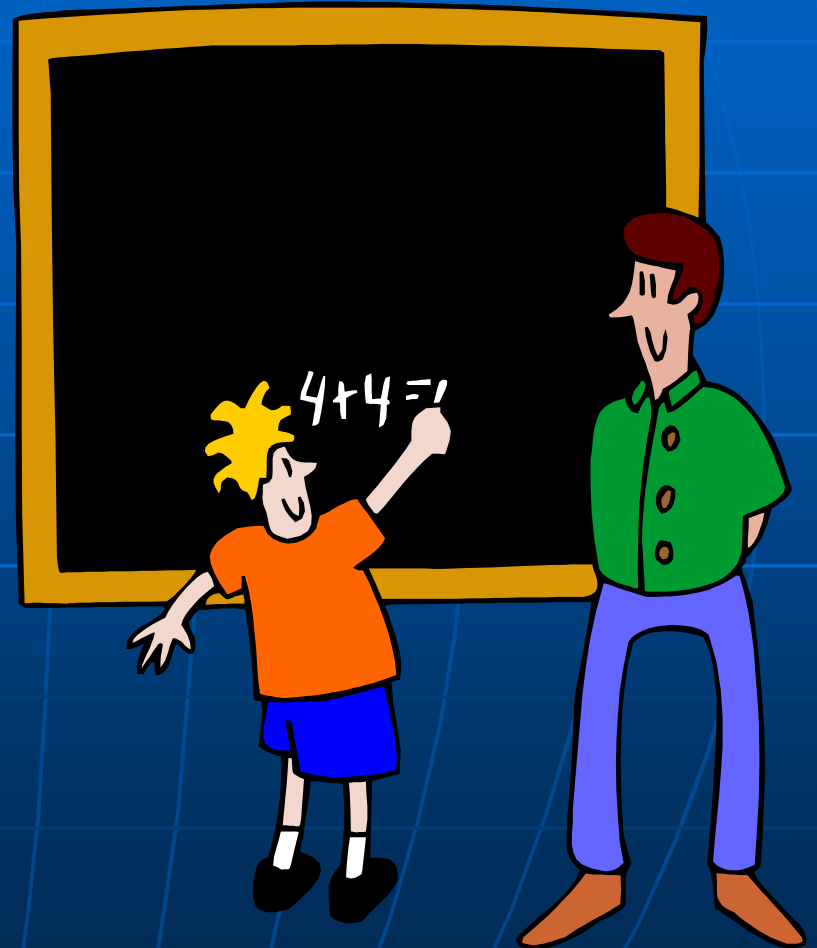
Activity Cont'd

- Guide students through online activities
- When completed activities students further explored topics using real world examples



Assessment

- Questioning during review lecture
- Observed student progress as they were completing the activity
- Worksheet



Reflections



- The use of interactive activities enhanced student involvement in the learning process and therefore it was more enjoyable for them
- Giving adequate assistance to students having difficulties

Reflections Cont'd

- Importance of ensuring that students are on the right track
- Test every aspect of the technology before the lesson
- Always have a back up plan!

