

DNA structure Powerpoint

Summary

A lesson for secondary students taking biology. The lesson includes a powerpoint for a lecture of DNA structure, transcription of RNA and translation into protein. Links to web sites are used to show animations of some concepts. I thought that by showing images of structures and animations of how things fit together and what processes occurred it would benefit the students and help them to understand DNA structure and function.

Time Frame

3 class periods of 60 minutes each

Group Size

Individual

Life Skills

Thinking & Reasoning

Materials

-computer with internet access and microsoft powerpoint. -LCD projector that can be attached to computer. -paper structures of bases, sugar and phosphate for students to build DNA model

Student Prior Knowledge

Students will have learned concepts of cell energetics, cell structure, chemical structure of some important cell molecules (lipids, carbs, basic amino acid structure), chemical bonding concept and cell cycle.

Intended Learning Outcomes

Students should be able to identify DNA structures such as bases, phosphate, and sugar groups. Students should be able to briefly describe replication, transcription and translation. Students should be able to discuss why sequence is important and why a change in one base may impact a protein structure.

Instructional Procedures

Present power point presentation, and discuss concepts shown to help students to understand concepts. Have students build DNA models out of paper and demonstrate replication, and transcription.

Strategies for Diverse Learners

For students of different learning styles the presentation should be visual, with auditory comments on each slide and structure. The paper DNA structure will be beneficial to kinesthetic learners. For students with language barriers the lecture animations, appearance of a single line of text at a time on the screen and pictures of structures may be helpful so as to not overwhelm students with too much text. For students with visual or hearing impairments the presentation should include enough text for those with hearing impairments, for those with visual impairments the teacher should be able to explain structures and procedures along with the animations so students can mentally put together what is happening.

Assessment Plan

Students will be given a multiple choice, fill in the blank and short essay test after the unit is completed.

Rubrics

[Science Writing Rubric](#)

Bibliography

Campbells Biology Starrs Biology <http://www.ncc.gmu.edu> (animations)
<http://omega.dawsoncollege.qc.ca> (animations) Also a special thanks to Mr. Stuart Francom of Spanish Fork High School for the paper DNA structure exercise.

Authors

[Alisha Hone](#)