Thursday, January 17th, 2013

Unit: DNA Topic: Transcription/Translation	Date: 1/17/2013 Class: Biology

Illinois Objectives:
12.11.21 Understand that, in all living things, DNA (deoxyribonucleic acid) carries the instructions for specifying the characteristics of each organism. Understand that DNA is a large polymer formed from four subunits: A, G, C, and T (adenine, guanine, cytosine, thymine, a 5-carbon sugar and a phosphate). The chemical and structural properties of DNA explain how the genetic information that underlies heredity is both encoded in genes (as a string of molecular letters) and replicated (by a templating mechanism). Know that each DNA molecule in a cell is a single chromosome.
12.11.23 Understand the general steps by which ribosomes synthesize proteins, using information from mRNA and from amino acids delivered by tRNA.

Michigan Biology Objectives:
B4.2f Demonstrate how the genetic information in DNA molecules provides instructions for assembling protein molecules and that this is virtually the same mechanism for all life forms.
B4.2g Describe the processes of replication, transcription, and translation and how they relate to each other in molecular biology.

My Lesson Objectives:
- Transcribe DNA into a complementary mRNA sequence without the assistance of the teacher or peers.
- Translate a strand of mRNA into a chain of amino acids using the codon chart.

Activities:	Materials/Equipment:
● Transcription & Translation Practice (25 minutes) ● Amino Acid Bingo (25 minutes)	● amino acid bingo cards ● chips ● copies of transcription/translation worksheet

Assessment: (Embedded, Formal)
Embedded:
1 Responses to the Bingo game. I will randomly draw bases from a deck of cards and produce a piece of DNA that is 3 bases long. The students will have to write the complementary mRNA strand on their own and find the corresponding amino acid from the codon chart.

Formal:
Transcription/Translation worksheet (10 questions).