**Biology STAAR Review Stations**

**Day 4**

**Category # 2 Mechanisms of Genetics (6.A, 6.B, 6.C, 6.D)**

6.A identify components of DNA, and describe how information for specifying the traits of an organism is carried in the DNA

6.B recognize that components that make up the genetic code are common to all organisms

6.C explain the purpose and process of transcription and translation using models of DNA and RNA

6.D recognize that gene expression is a regulated process

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **6.A** | **6.B** | **6.C** | **6.D** |
| **Interactive Quizzes** | **What is DNA? Tutorial**  <http://learn.genetics.utah.edu/content/molecules/dna/> | **DNA Quiz**  <http://www.softschools.com/quizzes/biology/dna/quiz2295.html> | **Transcription and Translation Quiz**  <http://www.proprofs.com/quiz-school/story.php?title=biologytranscription-translation> | **Gene Expression and Regulation Quiz**  <http://quizlet.com/15282489/test> |
| **Graphic Organizers** | **DNA Graphic Organizer**  <http://mvhs1.mbhs.edu/edgrid/dna/dnamod1eng.pdf> | | **DNA/RNA Graphic Organizer**  See handout | **Gene Expression and Regulation Graphic Organizer**  [**http://tinyurl.com/lghzjs3**](http://tinyurl.com/lghzjs3) |
| **Virtual Labs** | **Build a DNA Molecule**  [**http://learn.genetics.utah.edu/content/molecules/builddna/**](http://learn.genetics.utah.edu/content/molecules/builddna/) | **Transcribe and Translate a Gene**  [**http://learn.genetics.utah.edu/content/molecules/transcribe/**](http://learn.genetics.utah.edu/content/molecules/transcribe/) | **What is the role of DNA and RNA in protein synthesis?**  <http://www.glencoe.com/sites/common_assets/science/virtual_labs/LS04/LS04.html> | |
| **Vocabulary** | **DNA Flashcards**  <http://quizlet.com/3071891/biology-dna-flashcards-flash-cards/> | **Genetic Code Flashcards**  <http://quizlet.com/10872685/biology-dna-as-the-genetic-code-flash-cards/> | **Transcription/Translation Flashcards**  [**http://quizlet.com/750710/transcription-and-translation-flash-cards/**](http://quizlet.com/750710/transcription-and-translation-flash-cards/) | **Gene Expression Flashcards**  [**http://tinyurl.com/lghzjs3**](http://tinyurl.com/lghzjs3) |
| **Video Clips** | **The Structure and Function of DNA**  <http://www.youtube.com/watch?v=_POdWsii7AI> | **One Wrong Letter**  <http://www.pbs.org/wgbh/nova/genome/media/2809_q056_03.html> | **Transcription and Translation**  <http://www.youtube.com/watch?v=41_Ne5mS2ls> | **Gene Expression Video**  <http://www.ck12.org/biology/Gene-Expression/lecture/user:13IntW/Gene-Expression/r1/>  **Control of Gene Expression in Eukaryotes**  <http://highered.mcgraw-hill.com/olc/dl/120080/bio31.swf> |

**Critical Thinking Questions**

**Write answers in your notebook!!!!!!!**

1. Describe the composition of DNA.

2. How is genetic information carried by DNA?

3. Discuss differences between DNA and RNA.

4. Describe nucleotide composition.

5. What is a genome?

6. Why must transcription and translation occur?

7. How does DNA instruct the body to make protein?

**6.C DNA/RNA Graphic Organizer**

|  |  |  |
| --- | --- | --- |
|  | **DNA** | **RNA** |
| **Draw the molecule** |  |  |
| **Double or single stranded?** |  |  |
| **Type of sugar** |  |  |
| **List the nucleotides** |  |  |
| **Where is it found?** |  |  |

**Word bank**

Double

Single

Deoxyribose

Ribose

Adenine

Thymine

Uracil

Guanine

Cytosine

Nucleus

Ribosome

Cytoplasm

**Match the appropriate process with the proper description.**

Replication DNA🡪RNA (in the nucleus)

Transcription RNA🡪amino acid/protein (in the ribosome)

Translation DNA🡪DNA (in the nucleus)