Honors Benchmark Mastery Study Guide

SC.912.L.16.3 Describe the basic process of DNA replication & how it relates to the transmission & conservation of the genetic information

SC.912.L.16.5 Explain the basic processes of transcription & translation, & how they result in the expression of genes

SC.912.L.16.4 Assessed as SC.912.L.16.3

Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring

Learning Goal

Level 1	Level 2	Level 3	Level 4	
With help, partial	I can	I can	l can	
success at score 2.0 content & score 3.0 content	*Define each vocabulary word in this unit	Explain the steps for DNA replication	*Design a model of DNA	
	* Identify a structure of DNA	Explain the steps related to transcription	*Analyze how transcription effects gene expression	
	and RNA *Identify the	Explain the steps related to translation	* Analyze how translation effects	
	steps for DNA replication	Explain the how mutations in the DNA sequence result in phenotypic changes	gene expression	
	* Compare and contrast transcription and translation			

Summative Assessment will be administered: Date: Thursday, Nov. 18th

HOMEWORK

Mark the text, including the figures, read, and create two column notes. We will use the following pages below from your Science textbook to learn the benchmarks.

(These Dates Do Not Change)

Place completed homework in your binder

Record your quiz score for each lesson.

 8.2 Structure of DNA p. 220-223 Due: Fri. Oct. 29th
 8.3 DNA Replication p. 225-228 Due: Tue. Nov. 2 nd
 8.4 Transcription p. 229-232 Due: Fri. Nov. 5th
 8.5 Translation p. 233-237 Due: Tue. Nov. 9th
8.7 Mutations p. 244-247 Due: Fri. Nov. 12th

You will have a quiz after reading each lesson above. You will be permitted to use your two column notes. (There are no quiz corrections)
See SCHOOLOGY for resources.

Access Schoology:

http://stjohnsschools.schoology.com/

Username: The letter s with student number followed by @stjohns.k12.fl.us Password:

Elements	0 = F	1 = D	2 = C	3 = B	4 = A	Target Area 🜟
1. I can Define: replication, helicase, primase, DNA polymerase, ligase, messenger RNA, ribosomal RNA, transfer RNA, transcription, RNA polymerase, promoter, intron, exon, polypeptide, genetic code, codon, anticodon, translation, anticodon, gene						IF YOU HAVE INCOMPLETE HOMEWORK YOU DO NOT QUALIFY FOR GRADE RECOVERY.
expression, mutation, point mutation, frameshift mutation, mutagen						What did I do to prepare: Circle all that apply: Tracked learning, Two Column Notes, Viewed Power Point in Schoology, Quizlet, Other:
2. I can Describe: the structure and function of deoxyribose nucleic acid (DNA)						Predict your percentage for the summative exam:
3. I can Explain: the steps for DNA replication						Record your actual grade: Reflection: (I need to)
 I can Describe the structure and function of ribose nucleic acid (RNA) 						
5. I can Describe each step of transcription						
6. I can Describe each step of translation						
7. I can Compare and Contrast transcription and translation						
8. I can Explain how mutations affect genes What is your current understanding? Record a data under						

What is your current understanding? Record a date under the grade the correlates with your current knowledge. You must have a minimum of three dates for each element