Welcome to Mrs. Smith’s Biology Diner

The best place in town to get the 5 C’s!

Our Philosophy: The 5 C’s

It is my hope that you enjoy all this diner has to offer through my 5 C philosophy. Students will have choice, be creative, be collaborative, be critical thinkers and demonstrate communication throughout this chapter.

**How it works:**

Each section of the chapter has its own menu. Students must sample each menu item in each section and complete 1 chapter project by the end. Menu items can be completed in any order but it is preferred that you start the day with a lab as they take the longest to complete. You may work together at the stations but you are responsible for your own learning and will take individual exit tickets after day 3 of a section. You get to work at your own pace and chose what assignments fit your learning style. No more than 4 people can be at any given station at one time unless two groups are competing against each other. 1 chapter project showing your creativity from any aspect of the chapter is due at the end.

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| A DNA  Celebration Choose your menu Items from each of the categories below |
| Menu 8.2 |
| Drinks (Vocabulary) -Make Note Cards of each Vocabulary word  -Fill out Key terms sheet  -Do fallen phrases worksheet Appetizers (Videos) Watch on Youtube:  -What is DNA and how does it work? 5:23 min.  -Structure and Function of DNA 8:54 min Meat (Notes) -Read 8.2 in textbook and fill out note sheet  -Listen to taped lecture on One Drive  -Do 8.2 study guide Potato (Lab) -Extract own DNA  -Double Helix Project Sides (Interactve Modules) -Data Analysis-Chargaff’s Rules ([www.classzone.com](http://www.classzone.com))  -Webquest -Transgenic Organisms ([www.classzone.com](http://www.classzone.com)) Desserts (Games) -Puzzle DNA  -Origami DNA Entertainment (Chapter Project) Show creativity by creating a project that explains any aspect of this chapter |

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| A DNA  Celebration Choose your menu Items from each of the categories below |
| Menu 8.3 |
| Drinks (Vocabulary) -Make Note Cards of each Vocabulary word  -Fill out Key terms sheet  -Do fallen phrases worksheet Appetizers (Videos) Watch on Youtube:  -Crash Course #10 DNA Structure and Replication 12:59  -DNA Replication: The cells extreme team sport 7:59 min Meat (Notes) -Read 8.3 in textbook and fill out note sheet  -Listen to taped lecture on One Drive  -Do 8.3 study guide Potato (Lab) -Licorice Lab  -Modeling DNA Replication Lab Sides (Interactve Modules) -DNA Replication Ch. 8 Animation ([www.classzone.com](http://www.classzone.com))  -High School Science Learning Activity: DNA Replication [www.learningliftoff.com/high-school-science-dna-replication/#.WD8tRdIrLIU](http://www.learningliftoff.com/high-school-science-dna-replication/#.WD8tRdIrLIU) Desserts (Games) Vocabulary Matching Game  -Replication rush <http://nanospace.molecularium.com/attractions/replication_rush/>  -DNA and the Double Helix [www.nobelprize.org/educational/medicine/dna\_double\_helix/dnahelix.html](http://www.nobelprize.org/educational/medicine/dna_double_helix/dnahelix.html) Entertainment (Chapter Project) Show creativity by creating a project that explains any aspect of this chapter |

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| A DNA  Celebration Choose your menu Items from each of the categories below |
| Menu 8.4 and 8.5 |
| Drinks (Vocabulary) -Make Note Cards of each Vocabulary word  -Fill out Key terms sheet  -Do crossword worksheet Appetizers (Videos) ***Choose 2*** Watch on Youtube:  -Crash Course #11 DNA, Hotpockets, and the Longest Word Ever 14.08 min.  <https://www.youtube.com/watch?v=itsb2SqR-R0>  -DNA Transcription/Translation 7.18 min  <https://www.youtube.com/watch?v=-K8Y0ATkkAI>  -Protein Synthesis and the Lean Mean Ribosome Machine (Amoeba Sisters) 7.08 min.  <https://www.youtube.com/watch?v=h5mJbP23Buo>  -Replication, Transcription, Translation (KHAN Academy) 15.24 min.  <https://www.khanacademy.org/science/biology/dna-as-the-genetic-material/dna-replication/v/rna-transcription-and-translation>  -Transcription/Translation (Bozeman Science) 11.57  <https://www.youtube.com/watch?v=h3b9ArupXZg> Meat (Notes) -Read 8.4 and 8.5 in textbook and fill out note sheet  -Listen to taped lecture on One Drive  -Do 8.4 and 8.5 study guide Sides (Interactve Modules) **Choose 2** -What is the role of DNA and RNA in Protein Synthesis [www.glencoe.com/sites/common\_assets/science/virtual\_labs/LS04/LS04.html](http://www.glencoe.com/sites/common_assets/science/virtual_labs/LS04/LS04.html)  -Drag and Drop Protein Synthesis [www.zerobio.com/drag\_oa/protein/overview.htm](http://www.zerobio.com/drag_oa/protein/overview.htm)  -Say it with DNA Worksheet  -Protein Synthesis Simulation Lab Worksheet Desserts (Games) -Protein Synthesis Competition (2 teams)  -Protein Synthesis Race <http://www.biomanbio.com/GamesandLabs/LifeChemgames/Protsynth.html> Entertainment (Chapter Project) Show creativity by creating a project that explains any aspect of this chapter |

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| A DNA  Celebration Choose your menu Items from each of the categories below |
| Menu 8.7 |
| Drinks (Vocabulary) -Make Note Cards of each Vocabulary word  -Fill out Key terms sheet  -Do fallen phrases worksheet Appetizers (Videos) Watch on Youtube:  -Mutations: The potential power of a small change (Amoeba Sistera) 7.22 min.  -Mutations (Bozeman Science) 7.03 min.  -The Different Types of Mutations (KHAN Academy) 5.52 Meat (Notes) -Read 8.7 in textbook and fill out note sheet  -Listen to taped lecture on One Drive  -Do 8.7 study guide Potato (Lab) -UV Bead Lab (Only if it’s sunny outside)  -Gene Mutation Document  -DNA Protein Mutation Lab Document Sides (Interactve Modules) -DNA and Genes <http://www.mhhe.com/biosci/genbio/virtual_labs/BL_26/BL_26.html>  -Mutation Activity-What can happen when things go wrong document  -How can a mutation in DNA affect an Organism? Desserts (Games) -Vocabulary Matching Game  -Mutation Man [www.rigb.org/education/games/human-body/mutation-man](http://www.rigb.org/education/games/human-body/mutation-man)  -Genetic Mutation Lab [www.sploder.com/games/members/mrperson3/play/genetic-mutation-lab-2](http://www.sploder.com/games/members/mrperson3/play/genetic-mutation-lab-2) Entertainment (Chapter Project) Show creativity by creating a project that explains any aspect of this chapter |

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**National Science Standard**

HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from 1) new genetic combinations through meiosis, 2) viable errors occurring during replication, and/or 3) mutations caused by environmental factors.

HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

**I CAN STATEMENTS**

**Unit 5: Heredity Chapter 8**

* I can describe the interaction of the four nucleotides that make up DNA.
* I will be able to summarize the process of DNA replication.
* I can explain transcription and translation.
* I will be able to distinguish between different types of mutations and how they affect the phenotype.