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	Date	Skill	Plan
M	11/10/14	Unit 3:DNA, Protein Synthesis, Genetics and Biotechnology ALL Obj. # = 3.2.2 Essential? = # 1 Unit ? = # 1,3, 'I will' = # 6,7 Obj = Individual Focus	Opening: Discuss <i>Ghost in your Genes</i> Review: <i>Genetics</i> unit with <i>Study Guide</i> . Work quietly in pairs. Check each section as you go. This will help you focus on what you need to study tomorrow. Discuss: Review for <i>Genetics Unit Test</i> CIWk to Hmwk: <i>Study Guide</i> - MAKE SURE understand how to recognizing and complete punnett squares for <i>Mendelian Genetics</i> , <i>Non-Mendelian Genetics: Incomplete and Co-dominance</i> , <i>Multiple Alleles</i> situations as well as pedigrees. Those that did not take <i>Double Helix Quiz</i> should plan to make that up.

T	11/11/2014 Holiday	Obj. # = 3.2.2 Essential? = # 1 Unit ? = # 1,3, 'I will' = # 1,2,3,4	Opening: Review: Quiz/Test:	Discuss: Practice: CIWk to Hmwk:
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W 11/12/2014	<p>Unit 3:DNA, Protein Synthesis, Genetics and Biotechnology ALL</p> <p>Evolution & Classification Unit</p> <p>Obj. # = 3.4.1-3 Essential? = # 1 'I will' = # 1,2,3</p>	<p><i>Opening: Silent study.</i></p> <p><i>Review: Answer any questions before the test.</i></p> <p><i>Quiz/Test: Genetics Unit Test - Following the test you may read Double Helix</i></p> <p><i>Discuss:</i></p> <p><i>Practice:</i></p> <p><i>CIWk to Hmwk:</i></p>
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H 11/13/14	<p>Evolution & Classification Unit</p> <p>Obj. # = 3.4.1-3 Essential? = # 1 'I will' = # 1,2,3</p>	<p>Opening: KWL chart= what do you know, what you would like to know, leave column for what learned</p> <p>REVIEW: Test</p> <p>Quiz:</p> <p>Discuss: History of Life w/guided notes</p> <p>Classwork/Homework: Flow map "How life began on Earth" formative assessment Evolution & Taxonomy Activity Begin-Evolution portion</p>
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F 11/14/01	Evolution & Classification Unit Obj. # = 3.4.1-3 Essential? = # 1 'I will' = # 1,2,3	Opening: Silent study for Unit test Review: Quiz/Test: Discuss: Begin- Introduction to the Theory of Evolution by means of Natural Selection a- Charles Darwin b- Darwin's trip on the Beagle c- Finches and the Galapagos Islands Classwork/Homework: Evolution Concept Map
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EXTRA

Peppered Moth Simulation Activity

Objectives

Bio.1.2.2 Analyze how cells grow and reproduce in terms of interphase, mitosis and cytokinesis.

Bio.3.1.1 Explain the double-stranded, complementary nature of DNA as related to its function in the cell.

Bio.3.1.2 Explain how DNA and RNA code for proteins and determine traits.

Bio.3.1.3 Explain how mutations in DNA that result from interactions with the environment (i.e. radiation and chemicals) or new combinations in existing genes lead to changes in function and phenotype.

Bio.3.2.1 Explain the role of meiosis in sexual reproduction and genetic variation.

Bio.3.2 Understand how the environment, and/or the interaction of alleles, influences the expression of genetic traits.

Bio.3.2.2 Predict offspring ratios based on a variety of inheritance patterns (including: dominance, co-dominance, incomplete dominance, multiple alleles, and sex-linked traits).

Bio.3.3 Understand the application of DNA technology.

Bio.3.3.1 Interpret how DNA is used for comparison and identification of organisms.

Bio.3.3.2 Summarize how transgenic organisms are engineered to benefit society.

Bio.3.3.3 Evaluate some of the ethical issues surrounding the use of DNA technology (including: cloning, genetically modified organisms, stem cell research, and Human Genome Project).

Bio.4.1.2 Summarize the relationship among DNA, proteins and amino acids in carrying out the work of cells and how this is similar in all organisms.

Bio.3.2.3 Explain how the environment can influence the expression of genetic traits.

Bio 1.1.3 Explain how instructions in DNA lead to cell differentiation and result in cells specialized to perform different functions in multicellular organisms

Curricular Framing ?s

1- Why is it important for cells to replicate?

2- Defend the statement "Government backed stem cell research should be continued."

I will . . .

- 1 -understand the structure of DNA and RNA and the purposes of each
- 2 -understand the process of replication and protein synthesis
- 3 -discuss how cells that contain the exact same DNA carry out a variety of functions
- 4 -learn how the knowledge gained from the Human Genome Project has benefitted mankind
- 5 -understand the stages in the cell cycle and how the processes of mitosis and meiosis are alike and different.
- 6 -know the definitions of terms associated with Mendelian and Non-mendelian genetics
- 7 -be able to complete monohybrid and dihybrid crosses as well as sex linked, incomplete and co-dominance crosses
- 8 -have an understanding of the genetic causes and impact on animals of albinism, sickle cell anemia, cystic fibrosis, and Huntington's disease
- 9 -understand and conduct labs using restriction enzymes and produce DNA fingerprints
- 10 -understand how the environment effects the expression of genes in humans

Unit ?'s

- 1- What patterns do various gene combinations produce in the next generation?
- 2- Evolutionarily speaking, why are pluripotent stem cells important.
- 3- How is genetic information passed on through generations?
- 4- On a molecular basis why is DNA the key to life?
- 5- What makes us different from each other while retaining all traits that make us human?

Content Q's

- 1- How do the four bases on DNA code for the multiple amino acids?
- 2- How does DNA replicate?
- 3- How do the processes of transcription and translation occur?
- 4- What are the three types of RNA? What are their roles?

Unit:

Evolutionary Mechanisms

- Bio.3.4.1 Explain how fossil, biochemical, and anatomical evidence support the theory of evolution.
- Bio.3.4.2 Explain how natural selection influences the changes in species over time.
- Bio.3.4.3 Explain how various disease agents (bacteria, viruses, chemicals) can influence natural selection.
- Bio 3.5 Analyze how classification systems are developed based upon speciation.
- Bio.3.5.1 Explain the historical development and changing nature of classification systems.
- Bio.3.5.2 Analyze the classification of organisms according to their evolutionary relationships (including: dichotomous keys and phylogenetic trees).

I will . . .

- 1 I will be able to explain how the different scientific hypothesis of evolution .

- 2 I will be able to describe Darwin's theory of evolution by natural selection.
- 3 I will be able to explain scientific theories on the origin and evolution of life.
- 4 I will be able to explain the diversity of life on Earth.

Essential ?s

- 1 How do the different scientific theories of evolution explain the diversity of life on Earth?
- 2 How do populations change over time?
- 3 How do new species evolve?
- 4 What makes allele frequency an important concept in biological evolution?
- 5 How do Biologists organize and classify life?