Heredity, DNA, and Adaption Over Time

ESTABLISHED GOALS (CCSS)

7.S 1.1 Understand Systems, order and Organization
7.S.1.2 Understand Concepts and processes of Evidence, Models, and Explanations
7.S.1.8 Understand Technical Communication
7.S.1.3 Understand Constancy, Change, and Measurement
7.S 3.2 Understand the Relationship between Matter and Energy in Living Systems
7.S.3.3 Understand the Cell is the Basis of Form and Function for All Living Things
7.S.5.2 Understand the Relationship between Science and Technology
7.S.1.4 Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of

Transfer

Students will be able to independently use their learning to…

Describe how traits are inherited and why variations in organisms are important.

Meaning

UNDERSTANDINGS

Students will understand that…

DNA has a specific structure and function for inheritance

Traits are inherited

Variations in organisms are important

ESSENTIAL QUESTIONS:

How is an individual's traits linked to DNA and inheritance?

Why is DNA important?

Why is variation and change important for an individual?

Acquisition

Students will know…

Each individual normally receives one allele from each parent.

A dominant gene will be expressed when it is present in the genotype

Recessive genes are expressed when they occur in pairs in the genotype.

DNA is a double stranded helix and carries the genetic code.

Mutations are not all harmful and can actually be beneficial.

Students will be skilled at…

Performing monohybrid Punnett square showing the probability of dominant vs. recessive traits.

Recognizing homozygous and heterozygous combinations, phenotypes and genotypes.

Describing the pros and cons of mutations

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Equilibrium as a Physical State. CCSS Writing Standards 1-10 CCSS Reading Standards 1-10		

Stage 2 - Evidence	
Evaluative Criteria	**Assessment Evidence**
PERFORMANCE TASKS	**CURRICULUM EMBEDED PERFOMANCE ASSESSMENT (PERFORMANCE TASKS):** Students will construct a dog based on DNA and then take one trait and determine the cross that produced that trait. Further the student will explain that trait to the class and explain their reasoning in a presentation.
	OTHER EVIDENCE: **Teacher Made Tests** **Quizzes** **Vocab** **Labs** **Homework** **Discussions** **Computer feed back**
CLAIMS	**CLAIM 1** **CLAIM 2** **CLAIM 3** **CLAIM 4**
DEPTH OF KNOWLEDGE LEVELS	**DOK 1** **DOK2** **DOK 3** **DOK4**
ACHIEVEMENT LEVEL DESCRIPTORS	**ALD 1** **ALD 2** **ALD 3** **ALD 4**
Stage 3 – Learning Plan	
Summary of Key Learning Events and Instruction	Notes From Individual Lesson Plans

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