

## Evolution - Advanced Biology

### Objectives:

- TSW Understand biological evolution and descent with modification
- TSW Understand that evolution is used to explain the Earth's biodiversity
- TSW Explain the role variation plays in the process of evolution
- TSW Explain the role the environment plays in the process of evolution
- TSW Explain the role of mutations play in the process of evolution
- TSW Outline the process of natural selection

### ALL ORAL ASSESSMENTS COUNT AS 10 POINTS

#### DAY 1

##### **SECTION 1 - Layer 3 (120 Points Maximum)**

##### **1. (20 pts.) REQUIRED - Notes**

- Take notes and answer the questions in the PowerPoint handout

#### DAY 2

##### ***Choose one of the following vocabulary assignments***

##### **1. (20 pts.) REQUIRED - Vocab - Each activity must have:**

##### **Word, Definition, Picture, and Sentence**

- a. Make 1 PowerPoint slide for each word
- b. Make flashcards for each word
- c. Do the 4-Square worksheet for each word

***\*Study the vocab words, there will be an oral assessment tomorrow\****

#### DAY 3

##### ***Two assignments must be done by the end of class.***

##### **1. (20 pts.) REQUIRED - PreTest**

- Find the answers to the 25 questions on the Pre Test

***\*Study the PreTest Questions, there will be an oral assessment\****

##### **2. (10 pts.) REQUIRED - Choose 1 of the following from the book:**

##### **(1 Paragraph = 5 Sentences minimum)**

- a. Write 1 paragraph explaining each of the 2 forms of evidence often cited for evolution (p. 423)
- b. Write 1 paragraph discussing how a species might diverge into 2 new species (p. 438)
- c. Write 1 paragraph explaining why variation is necessary for evolution to occur (p. 420)
- d. Define Natural Selection and its 4 basic principles (p. 420)
- e. Write 2 paragraphs explaining genetic equilibrium and its 5 components (p. 432)

***\*Study your answers to these questions, there will be an oral assessment\****

## DAY 4

**(20 pts) - REQUIRED - Museum Packet** - Today we are going to the Museum

## DAY 5

**SECTION 2 - Layer 2 (60 points maximum)**

**1. (5 Points) - REQUIRED - Butterfly Camouflage Lab**

-Listen and brainstorm 5 possible locations for your butterfly

*One Lab must be done by the end of class. Choose one of the following:*

**2. (20 pts) - Birdland Lab** - Natural Selection and Origami

**3. (20 pts) - Saliva Lab** - Variation in Ptyalin levels in Human Saliva

## DAY 6

*2 Assignments to be completed by the end of class*

**1. (15 pts) - REQUIRED - Butterfly Lab** - Finish decorating and hide

**2. (20 pts) - REQUIRED - Webquest** - With a partner or solo

a. Google Evolution+Webquest+Kansas

b. Click on the 2<sup>nd</sup> one - "Evolution Webquest"

c. Follow the directions on the site and create a WORD document

## DAY 7

**SECTION 3 - Layer 1 (30 points maximum)**

*One Assignment to be completed by the end of class*

**1. (30 pts) - Design an experiment that:**

a. Critical Thinking Question C - Page 419

b. Think Scientifically #5 - Page 441

c. Determines if a new antibiotic will be successful in fighting bacteria

**2. (30 pts) - Create a PowerPoint that:**

a. Discusses the relevance of evolution in the field of medicine

b. Shows a timeline (1 year per slide, 10-15 slides) of the changes and additions to the theory of evolution from 1859 to the present.

**3. (30 pts) - Other project options:**

a. Compose a Song/Rap/Ballad about how Variation, Inheritance, Selection, and Time affect the process of evolution

b. Feel free to bring any additional project ideas to the teacher

A - 188 - 210 Points

B - 167 - 187 Points

C - 146 - 166 Points

D - 125 - 145 Points