

**COURSE: Biology**

**I. Grade Level/Unit Number: 9 - 12 Unit 3**

**II. Unit Title: Evolutionary Mechanisms**

**III. Unit Length: 2 weeks (on a 90 min per day block schedule)**

**IV. Major Learning Outcomes:**

- The student will gain an understanding of
  - The development of the theory of evolution by natural selection as related to the scientific process
  - The hypotheses about the evolution of the first living things
  - The evidence for the change of organisms over time – both fossil and biochemical evidence
  - The steps in the theory of natural selection
  - The current evidence for evolution seen in antibiotic and pesticide resistance
  - The history of classification systems
  - The changing nature of classification systems related to new understandings about the evolutionary relatedness of organisms
  - The differences and similarities between eukaryotes and prokaryotes
  - The characteristics that are similar and different among the Protists, Fungi, Plants, and Animals
  - The use of dichotomous keys in classifying organisms

**V. Content Objectives Included (with RBT Tags):**

Objective Number	Objective	RBT Tag
3.05	Examine the development of the theory of evolution by natural selection including: <ul style="list-style-type: none"> <li>• Development of the theory.</li> <li>• The origin and history of life.</li> <li>• Fossil and biochemical evidence.</li> <li>• Mechanisms of evolution.</li> <li>• Applications (pesticide &amp; antibiotic resistance).</li> </ul>	B4
4.01	Analyze the classification of organisms according to their evolutionary relationships. <ul style="list-style-type: none"> <li>• The historical development and changing nature of classification systems.</li> <li>• Similarities and differences between eukaryotic and prokaryotic organisms.</li> <li>• Similarities and differences among the eukaryotic kingdoms: Protists, Fungi, Plants, and Animals.</li> <li>• Classify organisms using keys.</li> </ul>	B4
1.00	Learner will develop abilities necessary to do and understand scientific inquiry. Goal 1 addresses scientific investigation. These objectives are an <i>integral</i> part of <i>each of the other goals</i> . Students must be given the opportunity to design and conduct their own investigations in a safe	