

Biology Course 4: Theory of Evolution 17% of Milestones Assessment Classification and Phylogeny 22% of Milestones Assessment			
Assessment	<a href="http://www.fsicourses.net">www.fsicourses.net</a>	Score	Date Passed
<b>4.1 Earth's Biological History</b>			
a. New Understandings of Earth's History <b>LT 1: I can construct an explanation of how new understandings of Earth's history, the emergence of new species form pre-existing species, and our understanding of genetics have influenced our understanding of biology.</b>			
b. Emergence of New Species from Preexisting Species <b>LT 2: I can construct an explanation of how new understandings of Earth's history, the emergence of new species form pre-existing species, and our understanding of genetics have influenced our understanding of biology.</b>			
c. Genetics <b>LT 3: I can construct an explanation of how new understandings of Earth's history, the emergence of new species from pre-existing species, and our understanding of genetics have influenced our understanding of biology.</b>			
<b>4.2 Biodiversity through Speciation</b>			
a. Biodiversity <b>LT 4: I can construct an explanation that explains the importance of biodiversity for the survival of species of organisms.</b>			
b. Isolating Mechanisms <b>LT 5: I can analyze and interpret data to explain patterns in biodiversity that result from speciation via reproductive isolation.</b>			
<b>4.3 Evidence of Evolution</b>			
a. Darwin's Voyage of Discovery <b>LT 6: I can analyze and interpret data to explain patterns in biodiversity that result from speciation via reproductive isolation.</b>			
b. Ideas that Shaped Darwin's Theory of Evolution <b>LT 7: I can construct an explanation of how new understandings of Earth's history, the emergence of new species from pre-existing species, and our understanding of genetics have influenced our understanding of biology.</b>			
c. Darwin's Theory of Evolution <b>LT 8: I can construct an explanation that explains how natural selection has led to evolution and continued survival of populations of species.</b>			
d. Evidence of Evolution <b>LT 9: I can construct an argument using evidence from comparative morphology, embryology, biochemistry, and genetics to support the claim that all living organisms are related by way of common descent.</b>			
<b>4.4 Undirected Genetic Changes Effect on Populations</b>			
a. Mechanisms of Evolution <b>LT 10: I can develop and use mathematical models to support explanations of how undirected genetic changes in natural selection and genetic drift have led to changes in populations of organisms.</b>			

<p>b. Biological Resistance  <b>LT 11: I can develop and analyze models to explain the role of natural selection in causing biological resistance.</b></p>		
<p><b>4.5 Classification &amp; Phylogeny</b></p>		
<p>a. Viruses vs. Organisms  <b>LT 12: I can construct an argument using evidence to compare and contrast the characteristics of viruses and organisms.</b></p>		
<p>b. Taxonomy – Finding Order in Diversity  <b>LT 13: I can construct an argument supported by scientific information to explain patterns in structures and function among clades of organisms, including the origin of eukaryotes by endosymbiosis.</b></p>		
<p>c. Endosymbiosis  <b>LT 14: I can construct an argument supported by scientific information to explain patterns in structures and function among clades of organisms, including the origin of eukaryotes by endosymbiosis.</b></p>		
<p>d. Cladograms and Phylogenetic Trees  <b>LT 15: I can analyze and interpret data to develop models (i.e., cladograms, phylogenetic trees) based on patterns of common ancestry and the theory of evolution to determine relationships among major groups of organisms.</b></p>		