

Biology Course 4: Theory of Evolution 17% of Milestones Assessment Classification and Phylogeny 22% of Milestones Assessment			
Assessment	www.fsicourses.net	Score	Date Passed
4.1 Earth's Biological History			
a. New Understandings of Earth's History 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. Emergence of New Species from Preexisting Species 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.			
c. Genetics 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.			
4.2 Biodiversity through Speciation			
a. Biodiversity LT 4: I can construct an explanation that explains the importance of biodiversity for the survival of species of organisms.			
b. Isolating Mechanisms LT 5: I can analyze and interpret data to explain patterns in biodiversity that result from speciation via reproductive isolation.			
4.3 Evidence of Evolution			
a. Darwin's Voyage of Discovery LT 6: I can analyze and interpret data to explain patterns in biodiversity that result from speciation via reproductive isolation.			
b. Ideas that Shaped Darwin's Theory of Evolution 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.			
c. Darwin's Theory of Evolution LT 8: I can construct an explanation that explains how natural selection has led to evolution and continued survival of populations of species.			
d. Evidence of Evolution 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.			
4.4 Undirected Genetic Changes Effect on Populations			
a. Mechanisms of Evolution 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.			

<p>b. Biological Resistance LT 11: I can develop and analyze models to explain the role of natural selection in causing biological resistance.</p>		
<p>4.5 Classification & Phylogeny</p>		
<p>a. Viruses vs. Organisms LT 12: I can construct an argument using evidence to compare and contrast the characteristics of viruses and organisms.</p>		
<p>b. Taxonomy – Finding Order in Diversity 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.</p>		
<p>c. Endosymbiosis 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.</p>		
<p>d. Cladograms and Phylogenetic Trees 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.</p>		