Millikin University
Student Learning in Biology

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Department of Biology
Division of Natural Science and Mathematics
July 2009

GOALS

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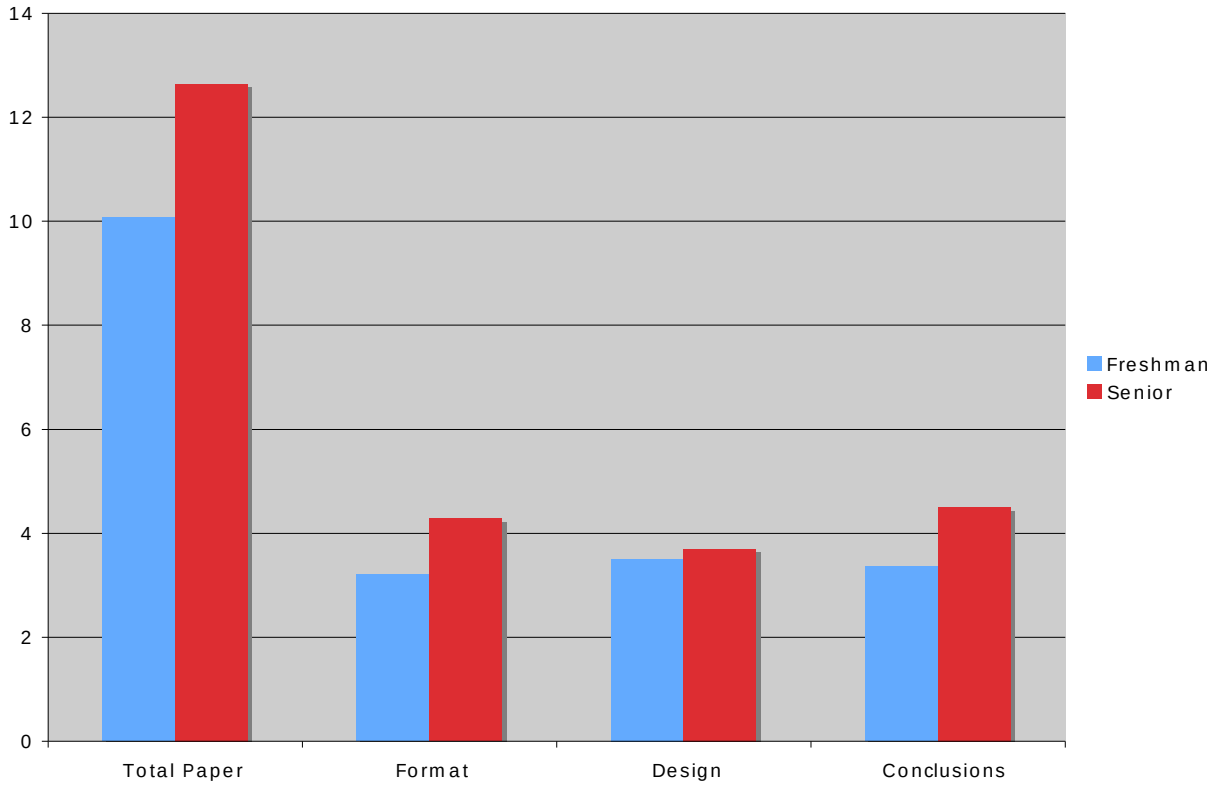
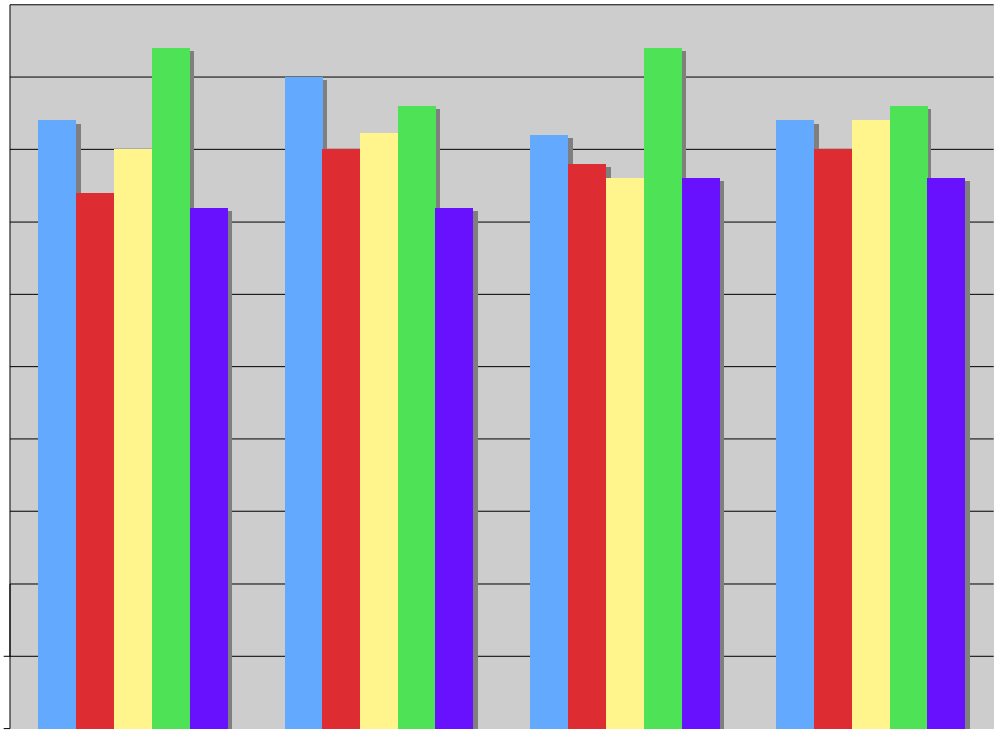
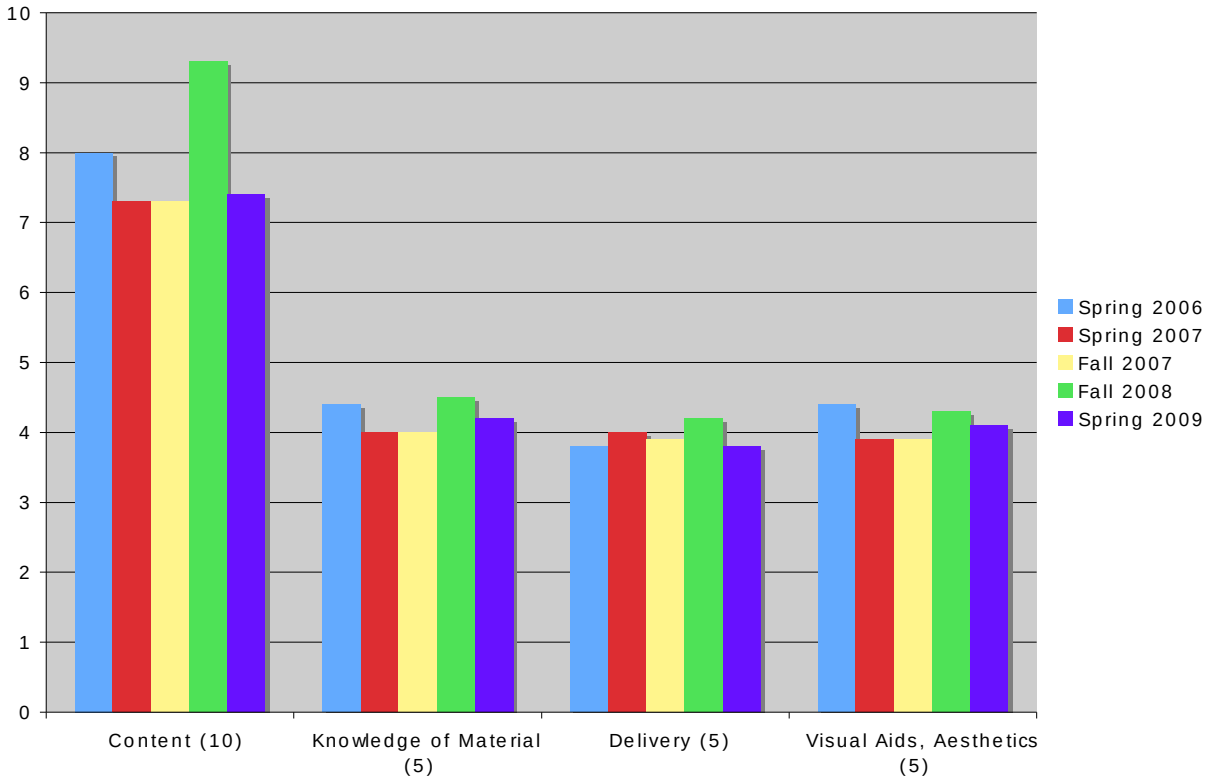
ORAL PRESENTATION	
Content	
7-10	
3-6	
1-2	
Knowledge of Material	
5	
3	
1	
Delivery	
5	
3	
1	
Visual Aids and Aesthetics	
5	
3	
1	

Be able to use and apply critical thinking to life situations. (This success is inferred by their ability to write critically in biology)







e a “green light”. This goal was only achieved in two of the evaluated semesters (Fig. 3).

Secondary Education Program

Evolution and Natural Selection Survey Biology Department, Spring 2009

Name_____

1. Natural populations of organisms that can interbreed and produce fertile young and are reproductively isolated from other such groups are known as _____.
2. A change in frequency of a particular trait in a population over time is_____.
3. A particular structure, behavior, or physiological function that allows organisms possessing it to survive and reproduce more than individuals in the population that lack it _____.
4. material for evolution_____
5. A structure with similar function but different ancestral origins is a(n)_____
6. A structure that no longer has a function in an organism, that has a function in related organisms, is a(n)_____structure. (Example: pelvic bones in whales)
7. What is **the** mechanism of adaptive evolution?_____
8. The apparent similarity between marsupial mammals in Australia and ecologically equivalent mammals in other parts of the world is an example of _____ evolution.
9. The five major mechanisms of evolution are:

   _____ _____

   _____ _____

   _____
10. What TWO evolutionary mechanisms play a major role in resistance to HIV?_____ and _____.
11. A type of natural selection that acts to eliminate one extreme from an array of phenoptypes is called_____ selection.
12. A type of natural selection that eliminates intermediate phenotypes while favoring both extremes is called _____ selection.
13. The evolutionary history of an organism, represented in the form of an evolutionary tree, is called _____.
14. The genetic contribution of an individual to succeeding generations, a relative term comparing the contribution of one individual to others in a population gene pool _____.
15. The advantage of sexual reproduction over asexual reproduction is that sex generates _____ (which makes evolution by natural selection possible) and asexual does not.
16. The _____ Theory suggests that chloroplasts and mitochondria of eukaryotic cells were derived from bacteria living in other bacteria.
17. Explain the mechanism of natural selection using conditions that lead to adaptation. **(write your essay on back)**

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Word Bank for all but number 17. Some terms may be used more than once, and some may not be used

1. Adaptation
2. Adaptive Radiation
3. Analogous
4. Character displacement
5. Commensalis

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13. Genetic Drift
14. Genetic Variation
15. Homologous
16. Migration, Movement between populations
17. Mutation
18. Mutualism
19. Natural selection
20. Non-random mating
21. Parasitism
22. Phylogeny
23. Species
24. Stabilizing
25. Vestigial

	Ecological Journey	Neurobiology	Immunology	Endocrinology	
	BI 404 Evolution	**BI 326*** Plant Biology	**BI 322** Neurobiology		
			BI 325* Vertebrate Biology		
			BI 328 Ornithology		
			BI 413 Advanced Cell Biology		

***Courses with student/designed research projects students must take at least one of these courses**