

Research paper –sample 1

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / <input checked="" type="checkbox"/> N/A
Comments/Notes - The project did not require the molecular, species or ecosystem levels. Only the individual level but the cellular level was mentioned briefly.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes Did show the relationship between individual and cellular level but it would have been more detailed.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / __ No / ___ N/A <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes- the student critically analyzed strength training. Yes, it's a contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<input checked="" type="checkbox"/> Yes / __ No / ___ N/A <input checked="" type="checkbox"/> Yes / __ No / ___ N/A <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes –	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – all were included however, there were not paragraphs in the results sections and references could be better.</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p><input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A</p>
<p>Comments/Notes –</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – the paper was overall written well although there was some wording issues.</p>	

Research paper –sample 2 – SAME COMMENTS AS #1

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	<input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A
Comments/Notes - The project did not require the molecular, species or ecosystem levels. Only the individual level but the cellular level was mentioned briefly.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes Did show the relationship between individual and cellular level but it would have been more detailed.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes- the student critically analyzed strength training. Yes, it's a contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes –	

2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.	___ <input checked="" type="checkbox"/> Yes / ___ No / ___ N/A
Comments/Notes – all were included however, there were not paragraphs in the results sections.	
2b. The student demonstrated mastery of techniques specific to the investigation.	___ <input checked="" type="checkbox"/> Yes / ___ No / ___ N/A
Comments/Notes	
2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.	___ Yes / ___ No / ___ <input checked="" type="checkbox"/> N/A ___ Yes / ___ No / ___ <input checked="" type="checkbox"/> N/A
Comments/Notes –	
3. The student effectively communicated in written form about biological matters.	_ <input checked="" type="checkbox"/> Yes / ___ No / ___ N/A
Comments/Notes – the paper was overall written well.	

Research paper –sample 3

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	<input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A
Comments/Notes - The project required the molecular and cellular level but not the larger levels of organization	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes – for the levels that the student studied yes, the student understood the interrelationship among them.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
- clearly articulated elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes- the student studied mutations and that is a contemporary issue that the student critically analyzed.	
2. It is evident that the student has developed the ability to: - study biological problems	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
- analyze experimentally biological problems	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
-interpret biological problems.	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes – The student studied the biological problem of mutations in a model organism, analyzed the problem experimentally and interpreted the biological problem. They could have done a better job interpreting the biological problem by comparing the results to other literature in the field.	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – all were included, discussion section had information that should have been in results.</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes the student learned how to perform a P1 lysate, transduction and plating on XPG.</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p><input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – the student interpreted the research among the levels investigated but not all levels.</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – the paper was overall written well</p>	

Research paper –sample 4

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / <input checked="" type="checkbox"/> N/A
Comments/Notes - The project required the species and ecosystem level but not molecular or cellular level.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> __ Yes / __ No / ___ N/A
Comments/Notes – for the levels that the student studied yes, the student understood the interrelationship among them.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	__ <input checked="" type="checkbox"/> Yes / __ No / ___ N/A __ <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes- the student studied species diversity which is a contemporary issue that the student critically analyzed.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	__ <input checked="" type="checkbox"/> Yes / __ No / ___ N/A __ <input checked="" type="checkbox"/> Yes / __ No / ___ N/A __ <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes – The student studied the biological problem of species diversity, analyzed the problem experimentally and interpreted the biological problem. They could have done a better job of comparing the results to other literature in the field in the discussion section.	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – all were included, results section would have benefited from graphical representation.</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes the student learned how to perform the techniques required.</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p><input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A</p>
<p>Comments/Notes –</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes – the paper was overall written well</p>	

Research paper –sample 5

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / <input checked="" type="checkbox"/> N/A
Comments/Notes - The project required the species and individual level.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	__ Yes / <input checked="" type="checkbox"/> No / ___ N/A
Comments/Notes – it was not clear that the student understood this relationship	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	__ Yes / <input checked="" type="checkbox"/> No / ___ N/A __ Yes / <input checked="" type="checkbox"/> No / ___ N/A
Comments/Notes- the student did not demonstrate these in the paper.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<input checked="" type="checkbox"/> Yes / __ No / ___ N/A __ Yes / <input checked="" type="checkbox"/> No / ___ N/A __ Yes / <input checked="" type="checkbox"/> No / ___ N/A
Comments/Notes –	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p>___ Yes / ___ X No / ___ N/A</p>
<p>Comments/Notes – only abstract was included.</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p>___ X Yes / ___ No / ___ N/A</p>
<p>Comments/Notes the student learned how to perform the techniques required but were elementary.</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p>___ Yes / ___ No / ___ X _ N/A __ Yes / ___ No / ___ X N/A</p>
<p>Comments/Notes – the student did not demonstrate the ability to interpret research.</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p>__ Yes / ___ X No / ___ N/A</p>
<p>Comments/Notes – each sentence of the paper was somewhat worded clearly however the overall paper was very unclear and repeated itself twice.</p>	

Research paper –sample 6

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes -	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes – discussed the relationship between individual catfish and the species.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes- the student discussed different bait preferences for the mature vs younger fish.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes – The student studied the biological problem of the bait the catfish preferred and analyzed it experimentally. The data could have been interpreted at a deeper level.	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p><input checked="" type="checkbox"/> ___ Yes / ___ No / ___ N/A</p>
<p>Comments/Notes – yes, all we included however there was no clear statement of the hypothesis.</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p>___ <input checked="" type="checkbox"/> Yes / ___ No / ___ N/A</p>
<p>Comments/Notes the student learned how to perform the techniques required.</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p>___ Yes / ___ No / ___ <input checked="" type="checkbox"/> N/A ___ Yes / ___ No / ___ <input checked="" type="checkbox"/> N/A</p>
<p>Comments/Notes –</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><input checked="" type="checkbox"/> ___ Yes / ___ No / ___ N/A</p>
<p>Comments/Notes – the paper was pretty clear but did repeat itself with some of the exact same wording.</p>	

Senior paper –sample 1

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / ___ X N/A
<p>Comments/Notes</p> <p>-the molecular level of organization was not needed for this paper but it did explain very well the species and ecosystem levels. –The department would have liked to see more about how to implement each of these biofuel generations and possibly if they added in the exact biochemical pathways of converting the corn, grasses and algae into a biofuel that would have incorporated the molecular level.</p>	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	__ Yes / __ No / ___ X N/A
<p>Comments/Notes</p> <p>Of those needed for this paper- yes the interrelationships were well explained by discussing, 3 generations of biofuels, how land and water usage will impact it and the necessity of car engines to develop to use these biofuels.</p>	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<p>__ X Yes / __ No / ___ N/A</p> <p>__ X Yes / __ No / ___ N/A</p>
<p>Comments/Notes- Biofuels is a very current issue and the paper discussed advantages and disadvantages which shows critical analysis of the issue.</p>	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<p>__ X Yes / __ No / ___ N/A</p> <p>___ Yes / __ No / ___ X N/A</p> <p>__ X Yes / __ No / ___ N/A</p>
<p>Comments/Notes – studied the biological problem on biofuels. It was not necessary to analyze experimentally this problem in this paper. The student did interpret the biological problem.</p>	

2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2b. The student demonstrated mastery of techniques specific to the investigation.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.	___ Yes / ___ No / <u>X</u> N/A <u>X</u> Yes / ___ No / ___ N/A
Comments/Notes – the paper required the student to interpret research across the species level and ecosystem level but not the molecular level.	
3. The student effectively communicated in written form about biological matters.	<u>X</u> Yes / ___ No / ___ N/A
Comments/Notes – yes, although there was some wording issues, overall the paper was clear and seemed to be well researched.	

Senior paper –sample 2

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / ___ X N/A
Comments/Notes -the molecular level of organization was not needed for this paper but it did explain the species and ecosystem levels. –to incorporate the molecular level the student could have discussed how the environmental change leads to changes in metabolism or biochemical pathways or growth patterns.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	__ Yes / __ X No / ___ N/A
Comments/Notes The student could have more clearly explained exactly what was happening in each habitat due to the global warming.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	__ Yes / __ X No / ___ N/A __ Yes / __ X No / ___ N/A
Comments/Notes- Extinction is a very contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	__ X Yes / __ No / ___ N/A ___ Yes / __ No / __ X N/A __ Yes / __ X No / ___ N/A
Comments/Notes –. The student did interpret the biological problem.	

2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2b. The student demonstrated mastery of techniques specific to the investigation.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.	___ Yes / ___ No / <u>X</u> N/A __ Yes / <u>X</u> ___ No / ___ N/A
Comments/Notes – <u>it was a summary</u>	
3. The student effectively communicated in written form about biological matters.	<u>X</u> Yes / ___ No / ___ N/A
Comments/Notes – <u>yes, although there was some wording issues, overall the paper was clear but it's possible it could have had more details and better researched.</u>	

Senior paper –sample 3

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / <u>X</u> N/A
Comments/Notes -the species and ecosystem levels of organization were not required for this paper.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	__ Yes / __ No / <u>X</u> N/A
Comments/Notes The student could have more clearly stated the effect on the person after an organ transplant and added in details of how organ transplants fail.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<u>X</u> Yes / __ No / ___ N/A <u>X</u> Yes / __ No / ___ N/A
Comments/Notes- the paper showed that the student did look up information regarding organ transplants. Yes it is a contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<u>X</u> Yes / __ No / ___ N/A ___ Yes / __ No / <u>X</u> N/A <u>X</u> Yes / __ No / ___ N/A
Comments/Notes – studied the biological problem of organ transplants. It was not necessary to analyze experimentally this problem in this paper. The student did interpret the biological problem.	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p>___ Yes / ___ No / <u>X</u> N/A</p>
<p>Comments/Notes</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p>___ Yes / ___ No / <u>X</u> N/A</p>
<p>Comments/Notes</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p>___ Yes / ___ No / <u>X</u> N/A __ Yes / <u>X</u> No / ___ N/A</p>
<p>Comments/Notes –</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><u>X</u> Yes / ___ No / ___ N/A</p>
<p>Comments/Notes – there were some wording issues that made it difficult to read some sentences.</p>	

Senior paper –sample 4

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes -does not go into detail on the molecular level but does mention it. In the future the student could pick a specific gene to research for a child. Does mention species and ecosystem level.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes The student understands that all of these are interrelated but does not go into many details.	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes- Yes it is a contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A <input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A
Comments/Notes – studied the biological problem of human reproduction and collapsing of societies but did not find outside sources other than the books reviewed in class. The student could have interpreted the biological problem more deeply but overall yes met the criteria.	

2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2b. The student demonstrated mastery of techniques specific to the investigation.	___ Yes / ___ No / <u>X</u> N/A
Comments/Notes	
2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.	___ Yes / <u>X</u> ___ No / ___ N/A ___ Yes / <u>X</u> ___ No / ___ N/A
Comments/Notes – the student did not do additional research to clearly demonstrate their ability to interpret research across levels of organization.	
3. The student effectively communicated in written form about biological matters.	<u>X</u> Yes / ___ No / ___ N/A
Comments/Notes – the paper was easy to read.	

Senior paper –sample 5

Goal	Assessment
1. It is evident that the student understands biological principles and their implications from the molecular to ecosystem levels of organization	__ Yes / __ No / <input checked="" type="checkbox"/> N/A
Comments/Notes - Does mention species and ecosystem level.	
1a. It is evident that at each level of organization, the student: - demonstrated an understanding of the interrelationships of parts and processes specific to the system under study	__ Yes / <input checked="" type="checkbox"/> No / ___ N/A
Comments/Notes	
1b. It is evident that at each level of organization, the student: - demonstrated an ability to critically analyze elements of contemporary issues related to the system under study - clearly articulated elements of contemporary issues related to the system under study	__ Yes / <input checked="" type="checkbox"/> No / ___ N/A <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes- the student did not include enough examples or specifics to demonstrate that they critically analyzed each of these elements. Yes it is a contemporary issue.	
2. It is evident that the student has developed the ability to: - study biological problems - analyze experimentally biological problems -interpret biological problems.	__ Yes / <input checked="" type="checkbox"/> No / ___ N/A ___ Yes / __ No / <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes / __ No / ___ N/A
Comments/Notes – the student did not state a biological problem that was being studied and did not find outside sources other than the books reviewed in class.	

<p>2a. The student demonstrated an ability to generate all of the elements of a formal research paper abstract, introduction, methods and materials, results, and discussion.</p>	<p><input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A</p>
<p>Comments/Notes</p>	
<p>2b. The student demonstrated mastery of techniques specific to the investigation.</p>	<p><input type="checkbox"/> Yes / <input type="checkbox"/> No / <input checked="" type="checkbox"/> N/A</p>
<p>Comments/Notes</p>	
<p>2c. The student demonstrated an ability to: -analyze data across levels of organization. -interpret research across levels of organization.</p>	<p><input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes –</p>	
<p>3. The student effectively communicated in written form about biological matters.</p>	<p><input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> N/A</p>
<p>Comments/Notes –</p>	