

Course Student Learning Outcomes Assessment

BIOL 109 Fundamentals of Biology

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General Information (Course Student Learning Outcomes Assessment)

Standing Requirements

📖 Course Description

Principles of biology stressing the relationship of all organisms from anatomical physiological and ecological points of view. Includes cell machinery genetics reproduction embryology animal behavior botany ecology evolution and human physiology. Designed for non-biology majors.

📖 Course Student Learning Outcomes

BIOL 109 Fundamentals of Biology Outcome Set

Outcome	
Outcome	Mapping
Outcome 1 Identify and explain the definitive characteristics of living organisms in a clear and concise manner.	Institutional Student Learning Outcomes: Communicate 1, Learn 1, Think 1
Outcome 2 Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.	Institutional Student Learning Outcomes: Act 3, Communicate 1, Learn 1, Think 1, Think 2, Think 3

2014-2015 Assessment Cycle

Measurements

Outcomes and Measures

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2015

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2016

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings

Finding per Measure

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2015

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings for Means of assessment 109

Summary of Findings: Question #1: When an organism becomes a fossil, its tissues are replaced by minerals. It no longer exhibits most of the properties associated with life. Which property is retained by the fossil?

A) organization. B) homeostasis. C) growth and reproduction. D) response to stimuli. E) metabolism.

Over 4 sections totaling 529 students, 325 answered the question correctly (61.4%)

Question #2: Outside, the non-living world is unorganized and chaotic while inside an organism, there is a relatively constant environment. Maintenance of the constant internal environment exhibits which of the following properties associated with life?

A) behavior. B) metabolism. C) growth and development. D) homeostasis. E) adaptation.

Over 4 sections totaling 529 students, 330 answered the question correctly (62.4%)

Question #3: The smallest unit that has all the characteristics of life is

A) tissue. B) atom. C) molecule. D) organelle. E) cell.

Over 4 sections totaling 529 students, 389 answered the question correctly (73.5%)

Results: Criteria for Success Achievement Status: Not Met

Analysis of Findings: Question #3 had a high percentage of correct answers. Both question #1 and #2 had about the same percentage of correct answers as past semesters, but lower than the expected level of success.

Recommendations: We have continued to use these questions over many semesters as a means of assessment. The number of correct answers really has not varied much over time. The students are achieving slightly lower than expected levels of proficiency for these topics. We also find that students may struggle with application-type questions, which these illustrate. The department will continue to utilize these questions but also explore other avenues of testing learning.

This Findings is associated with the following Actions:

109 Plan of Action for SLO #1

(Plans of Action; 2014-2015 Assessment Cycle)

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2016

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings for Means of assessment 109

No Findings Added

Overall Recommendations

No text specified

 Plans of Action


Actions

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

 Action: 109 Plan of Action for SLO #1
This Action is associated with the following Findings**Findings for Means of assessment 109**

(Measurements and Findings; 2014-2015 Assessment Cycle)

Summary of Findings: Question #1: When an organism becomes a fossil, its tissues are replaced by minerals. It no longer exhibits most of the properties associated with life. Which property is retained by the fossil?

A) organization. B) homeostasis. C) growth and reproduction. D) response to stimuli. E) metabolism.

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Question #2: Outside, the non-living world is unorganized and chaotic while inside an organism, there is a relatively constant environment. Maintenance of the constant internal environment exhibits which of the following properties associated with life?

A) behavior. B) metabolism. C) growth and development. D) homeostasis. E) adaptation.

Over 4 sections totaling 529 students, 330 answered the question correctly (62.4%)

Question #3: The smallest unit that has all the characteristics of life is

A) tissue. B) atom. C) molecule. D) organelle. E) cell.

Over 4 sections totaling 529 students, 389 answered the question correctly (73.5%)

Details of Plan of Action: We will continue to explore new ways of explaining this topic and maybe try to introduce students to application-style questions earlier in the course. Some of the instructors teaching this course explain the topics differently so students may not understand the language. We need to discuss this and alter the questions based on how the instructor explains the topics.

Plan of Action Timeline: Until this SLO is re-assessed (Spring 2017)

Who is responsible for carrying out the Plan of Action?: Department members currently teaching this course.

How will you determine if the Plan of Action has been effective?: Once the actual values of success meet or exceed the expected values of success (70%).

Additional Resources Required (if any):

Budget request amount: \$0.00

Priority: Medium

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Action:** Plan of action as of Fall 2014

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Details of Plan of Action: We have continued to use these questions over many semesters as a means of assessment. The number of correct answers really has not varied much over time. The students are achieving the expected level of proficiency for these topics. The department will continue to utilize these questions but also explore other avenues of testing learning.

Plan of Action Timeline:

Who is responsible for carrying out the Plan of Action?:

How will you determine if the Plan of Action has been effective?:

Additional Resources Required (if any):

Budget request amount: \$0.00

Priority:

 **Status Reports**

Action Statuses

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

▼ **Action:** 109 Plan of Action for SLO #1

Details of Plan of Action: We will continue to explore new ways of explaining this topic and maybe try to introduce students to application-style questions earlier in the course. Some of the instructors teaching this course explain the topics differently so students may not understand the language. We need to discuss this and alter the questions based on how the instructor explains the topics.

Plan of Action Timeline: Until this SLO is re-assessed (Spring 2017)

Who is responsible for carrying out the Plan of Action?: Department members currently teaching this course.

How will you determine if the Plan of Action has been effective?: Once the actual values of success meet or exceed the expected values of success (70%).

Additional Resources Required (if any):

Budget request amount: \$0.00

Priority: Medium

Status for 109 Plan of Action for SLO #1

No Status Added

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ Action: Plan of action as of Fall 2014

Details of Plan of Action: We have continued to use these questions over many semesters as a means of assessment. The number of correct answers really has not varied much over time. The students are achieving the expected level of proficiency for these topics. The department will continue to utilize these questions but also explore other avenues of testing learning.

Plan of Action Timeline:**Who is responsible for carrying out the Plan of Action?:****How will you determine if the Plan of Action has been effective?:****Additional Resources Required (if any):**

Budget request amount: \$0.00

Priority:**Status** for Plan of action as of Fall 2014

No Status Added

Status Summary

No text specified

Summary of Next Steps

No text specified

2013-2014 Assessment Cycle

Measurements

Outcomes and Measures

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2015

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2016

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings

Finding per Measure

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 1

Identify and explain the definitive characteristics of living organisms in a clear and concise manner.

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Course level; Direct - Exam

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Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2015

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings for Means of assessment 109

No Findings Added

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Measure:** Means of assessment 109
Course level; Direct - Exam

Description of Measurement Tool: Three multiple-choice questions will be inserted into various lecture exams.

Criteria for Success: Individual & Collective Student Criterion: Expected 70% success rate.

Cycle of Assessment: Spring 2016

Who is Responsible for Assessment Activity?: Biology faculty currently teaching the course.

Findings for Means of assessment 109

Summary of Findings: Three multiple-choice questions will be inserted into various lecture exams.

1. When an organism becomes a fossil, its tissues are replaced by minerals. It no longer exhibits most of the properties associated with life. Which property is retained by the fossil?
A) organization. B) homeostasis. C) growth and reproduction. D) response to stimuli. E) metabolism.

Overall department average of 62% correct (n=366)

2. Outside, the non-living world is unorganized and chaotic while inside an organism, there is a relatively constant environment. Maintenance of the constant internal environment exhibits which of the following properties associated with life? A) behavior. B) metabolism. C) growth and development. D) homeostasis. E) adaptation.

Overall department average of 82.5% correct (n=366)

C. 3. The smallest unit that has all the characteristics of life is A) tissue. B) atom. C) molecule. D) organelle. E) cell.

Overall department average of 75.4% correct (n=366)

Results: Criteria for Success Achievement Status: Met

Analysis of Findings: All averages are near or exceed the 70% expected values. Question #1 had a lower actual percentage but we find that application questions tend to score lower.

Recommendations:

Overall Recommendations

No text specified

Plans of Action

Actions

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Action:** Plan of action as of Fall 2014

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Details of Plan of Action: We have continued to use these questions over many semesters as a means of assessment. The number of correct answers really has not varied much over time. The students are achieving the expected level of proficiency for these topics. The department will continue to utilize these questions but also explore other avenues of testing learning.

Plan of Action Timeline:

Who is responsible for carrying out the Plan of Action?:

How will you determine if the Plan of Action has been effective?:

Additional Resources Required (if any):

Budget request amount: \$0.00

Priority:

 **Status Reports**

Action Statuses

BIOL 109 Fundamentals of Biology Outcome Set

Outcome

Outcome 2

Demonstrate a coherent understanding of evolution and its relationship to the unity and diversity of living organisms.

▼ **Action:** Plan of action as of Fall 2014

Details of Plan of Action: We have continued to use these questions over many semesters as a means of assessment. The number of correct answers really has not varied much over time. The students are achieving the expected level of proficiency for these topics. The department will continue to utilize these questions but also explore other avenues of testing learning.

Plan of Action Timeline:

Who is responsible for carrying out the Plan of Action?:

How will you determine if the Plan of Action has been effective?:

Additional Resources Required (if any):

Budget request amount: \$0.00

Priority:

Status for Plan of action as of Fall 2014

No Status Added

Status Summary

No text specified

Summary of Next Steps

No text specified

2012-2013 Assessment Cycle

 **Measurements**

 **Findings**

 **Plans of Action**

 **Status Reports**