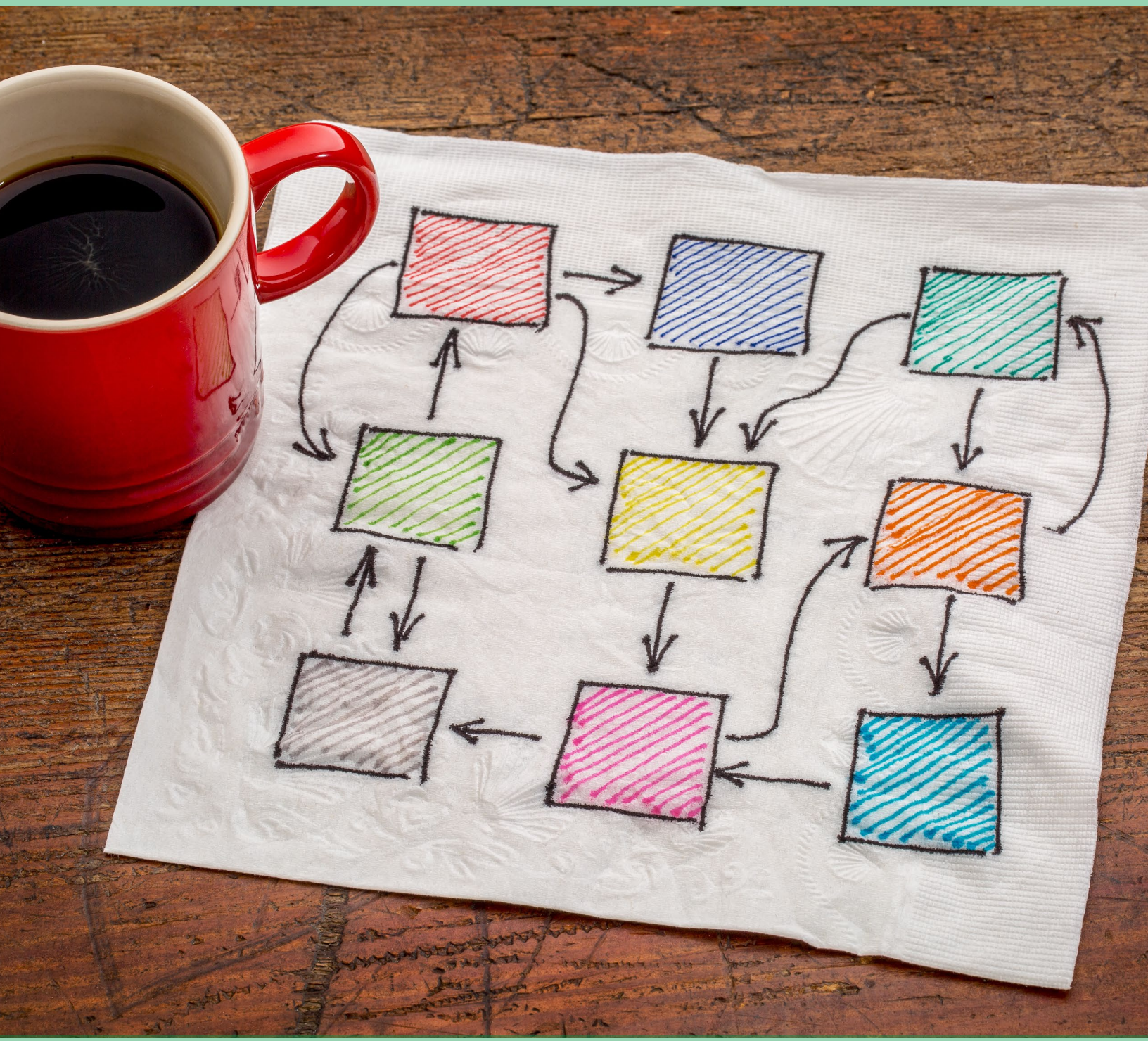
Flowcharts & Storyboards



STEM100: Teaching with Technology in the STEM Disciplines

Prepared for Dr. Wendy Howard

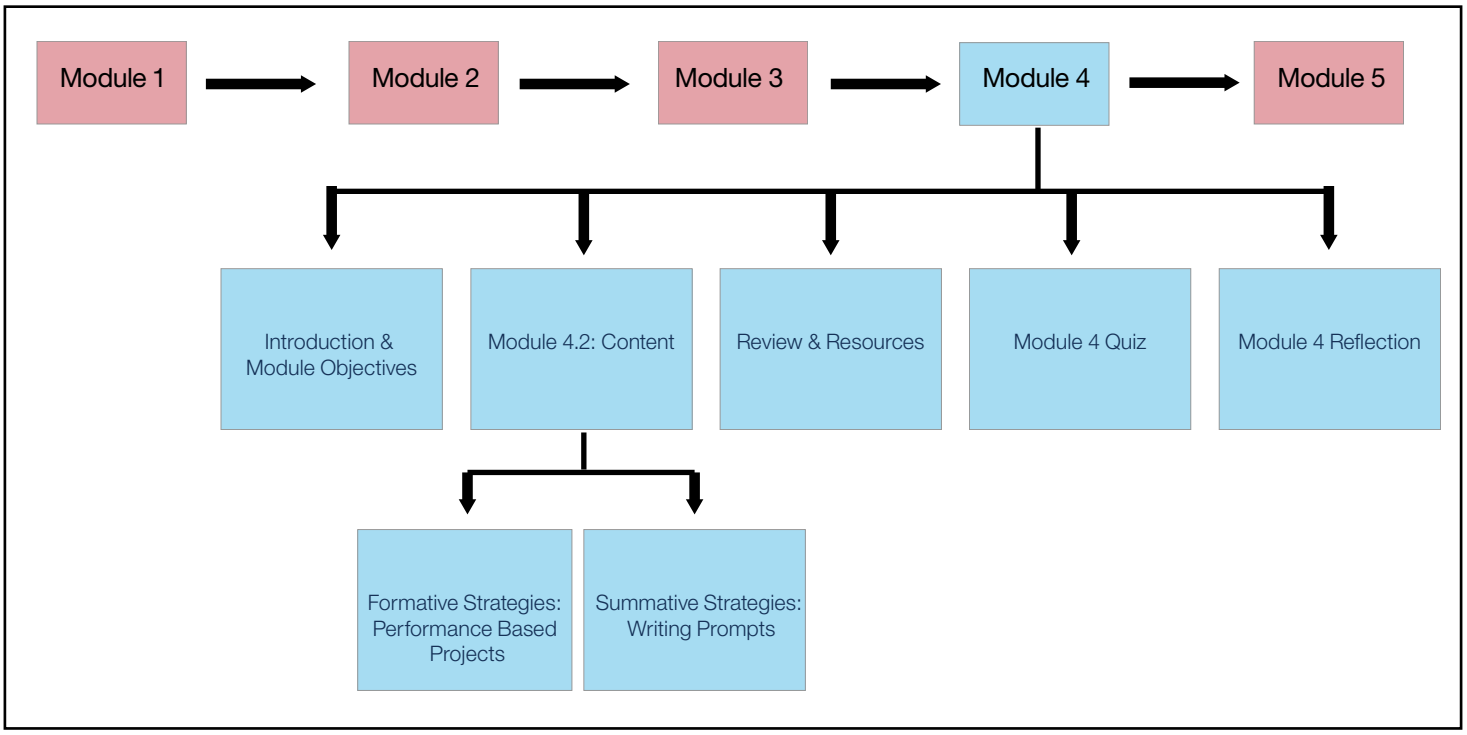
Prepared by group 4.0: Apply Evaluation Strategies

Table of Contents

Flowchart

Provided below is the flowchart for STEM100: Teaching with Technology in the STEM Discipline. Highlighted in this flowchart is Module 4: Apply Evaluation Strategies.

FIGURE 1: Flowchart of Instructional Unit



Storyboard

The following section provides storyboards for each Module 4 page in Webcourses and corresponds directly to the Figure 1 flowchart. The storyboards show how content will be displayed on the following pages: Introduction and Module Objectives, Formative Assessment Strategy - Writing Prompts, Summative Assessment Strategy - Performance-based Projects, Review and Resources, Module 4 Quiz, and Module 4 Reflection. Each storyboard includes information necessary to design course pages, including text, screen descriptions, and URLS.

Introduction & Module Objectives

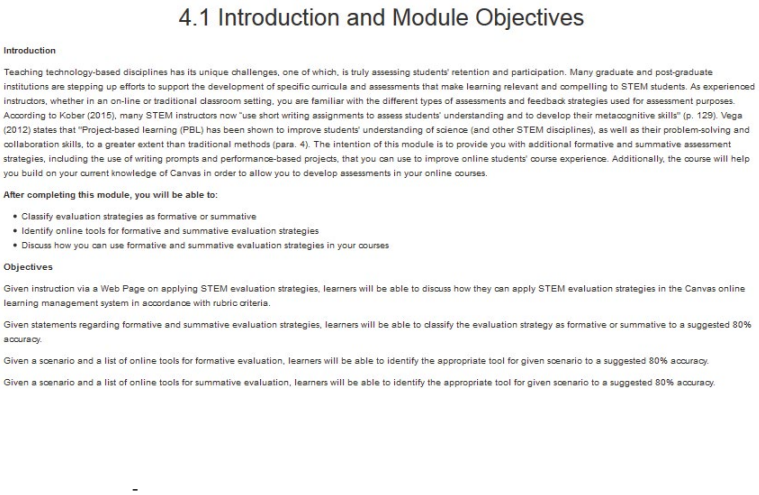
Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Introduction & Module Objectives
Date: 12/03/15
File Name: 4.1 Introduction & Module Objectives
Frame #: 4010

Links
http://www.nap.edu/read/18687/chapter/1

http://www.edutopia.org/pbl-research-learning-outcomes

Screen Description:

Attention grabbing introduction designed to pull readers in and get them interested in the following modules.



4.1 Introduction and Module Objectives

Introduction

Teaching technology-based disciplines has its unique challenges, one of which, is truly assessing students' retention and participation. Many graduate and post-graduate institutions are stepping up efforts to support the development of specific curricula and assessments that make learning relevant and compelling to STEM students. As experienced instructors, whether in an on-line or traditional classroom setting, you are familiar with the different types of assessments and feedback strategies used for assessment purposes. According to Kober (2015), many STEM instructors now "use short writing assignments to assess students' understanding and to develop their metacognitive skills" (p. 129). Vega (2012) states that "Project-based learning (PBL) has been shown to improve students' understanding of science (and other STEM disciplines), as well as their problem-solving and collaboration skills, to a greater extent than traditional methods (para. 4). The intention of this module is to provide you with additional formative and summative assessment strategies, including the use of writing prompts and performance-based projects, that you can use to improve online students' course experience. Additionally, the course will help you build on your current knowledge of Canvas in order to allow you to develop assessments in your online courses.

After completing this module, you will be able to:

- Classify evaluation strategies as formative or summative
- Identify online tools for formative and summative evaluation strategies
- Discuss how you can use formative and summative evaluation strategies in your courses

Objectives

Given instruction via a Web Page on applying STEM evaluation strategies, learners will be able to discuss how they can apply STEM evaluation strategies in the Canvas online learning management system in accordance with rubric criteria.

Given statements regarding formative and summative evaluation strategies, learners will be able to classify the evaluation strategy as formative or summative to a suggested 80% accuracy.

Given a scenario and a list of online tools for formative evaluation, learners will be able to identify the appropriate tool for given scenario to a suggested 80% accuracy.

Given a scenario and a list of online tools for summative evaluation, learners will be able to identify the appropriate tool for given scenario to a suggested 80% accuracy.

-

-

Background: Webcourses default background
Color Schemes: Webcourses default color scheme
Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: n/a

Developer's Notes: n/a

[Unit Title Header]
4.1 Introduction & Module Objectives

[Subheading]
Introduction

[Body]
Teaching technology-based disciplines has its unique challenges, one of which, is truly assessing students' retention and participation. Many graduate and post-graduate institutions are stepping up efforts to support the development of specific curricula and assessments that make learning relevant and compelling to STEM students. As experienced instructors, whether in an on-line or traditional classroom setting, you are familiar with the different types of assessments and feedback strategies used for assessment purposes. According to Kober (2015), many STEM instructors now "use short writing assignments to assess students' understanding and to develop their metacognitive skills" (p. 129). Vega (2012) states that "Project-based learning (PBL) has been shown to improve students' understanding of science (and other STEM disciplines), as well as their problem-solving and collaboration skills, to a greater extent than traditional methods (para. 4). The intention of this module is to provide you with additional formative and summative assessment strategies, including the use of writing prompts and performance-based projects, that you can use to improve online students' course experience. Additionally, the course will help you build on your current knowledge of Canvas in order to allow you to develop assessments in your online courses.

[Subheading]
After completing this module, you will be able to:

[Body]

- Classify evaluation strategies as formative or summative
- Identify online tools for formative and summative evaluation strategies
- Discuss how you can use formative and summative evaluation strategies in your courses

[Subheading]
Objectives

[Body]
Given instruction via a Web Page on applying STEM evaluation strategies, learners will be able to discuss how they can apply STEM evaluation strategies in the Canvas online learning management system in accordance with rubric criteria.

Given statements regarding formative and summative evaluation strategies, learners will be able to classify the evaluation strategy as formative or summative to a suggested 80% accuracy.

Given a scenario and a list of online tools for formative evaluation, learners will be able to identify the appropriate tool for given scenario to a suggested 80% accuracy.

Given a scenario and a list of online tools for summative evaluation, learners will be able to identify the appropriate tool for given scenario to a suggested 80% accuracy.

Formative Assessment Strategy - Writing Prompts

Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Formative Assessment Strategy - Writing Prompts
Date: 12/03/15
File Name: 4.2 Formative Assessment Strategy - Writing Prompts
Frame #: 4020

Links to External Sites

-UCF Writing Across the Curriculum

-http://www.bcps.org/offices/lis/writing/secondary/wac_science.html#prompts

-http://sunyjcc.libguides.com/content.php?pid=295922&sid=2481436 (Links to an external site.)

-http://online-journals.org/index.php/i-jep/article/view/4587

-http://visualprompts.weebly.com/stem.html

-http://www.nap.edu/read/18687/chapter/1

Screen Description:

A visual diagram depicts the cycle of formative assessment, followed by text that introduces the concept of formative assessment, discusses writing prompts as a formative assessment tool, and recommends online tools that can be used to deploy formative assessments. Examples of STEM writing prompts are provided as URLS.

Background: Webcourses default background
Color Schemes: Webcourses default color scheme
Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: n/a

Developer's Notes: n/a

[Unit Title Header]
Formative Assessment Strategy - Writing Prompts

[Image]
Formative Assessment Cycle

[Body]
Formative assessments are diagnostic tools instructors use to gauge student comprehension of course material during instruction rather than at the end of instruction. Ongoing formative assessments should happen multiple times throughout the duration of a course. They should address lower levels of Bloom's Taxonomy, such as knowledge recall and procedures, though they can also encourage students to apply knowledge and think critically. The goal of formative assessment is to determine which concepts students understand, and which concepts they are struggling to understand, so that the instructor can adjust instruction to meet student needs. According to Kober (2015), formative assessment allows students to "use what they already know as a framework for building a more complete and accurate understanding (p.66)." In this way, formative assessment allows students to reflect upon their understanding of STEM concepts and empowers them to take an active role in the learning process.

Types of formative assessment include content quizzes, class discussions, group activities, and writing prompts (Kober, 2015). Haudek et. al (2011), explain that formative assessments encourage students to move beyond memorization of facts to promote critical thinking skills and application of big picture ideas. Kober (2015) states that "traditional tests—whether end-of-chapter textbook quizzes or the questions typically found on midterms or finals—do not adequately measure the kinds of conceptual understanding you (instructors) want your students to develop (p. 122). In contrast to traditional testing, formative assessment provides a more student-centered approach.

[Subheading]
The Writing Prompt as a Formative Assessment Tool

[Body]

Guided writing prompts allow students to reflect on learning objectives and course material. According to Kober (2015), "Students must develop skills in solving problems and working with the tools of science (and other disciplines in STEM) and be able to apply these skills to new and somewhat different tasks (p. xii). Writing prompts are effective as formative assessment tools because they allow students to think critically about course concepts and to apply them in creative ways. For example, a writing prompt could ask students to draw on their knowledge of course concepts to devise solutions to a real-world STEM problem, thereby taking their basic understanding of those concepts to a new level. Discipline-specific genres of writing (lab reports, historiography essays, case studies, etc.) need to be taught by disciplinary faculty alongside less-formal writing assignments designed to foster critical thinking and active learning.

[Subheading]
Online Tools for Writing Prompts as Formative Assessment

[Body]

Both the Canvas Discussions tool and the Canvas Assignments tool can be used for STEM writing prompt assignments. If class discussion is desired, the Canvas Discussions tool may be the preferred tool for STEM writing prompt assignments. This tool is particularly useful if instructors plan to use a peer review approach, which can lighten the grading load that often accompanies writing assignments. However, the Canvas Assignments tool may allow the instructor to provide more in-depth feedback on individual student submissions. Instructors should consider the objectives of the instruction when determining which tool to use, keeping in mind the idea that feedback, either provided by peers or the instructor, is the guiding force in formative assessment.

[Subheading]
Examples of STEM Writing Prompts

[Body]

Take some time to explore UCF Writing Across the Curriculum. This site is the best resource for finding information about how to implement and evaluate writing prompts in a STEM course.
For more examples of STEM writing prompts, explore the links listed below.
http://www.bcps.org/offices/lis/writing/secondary/wac_science.html#prompts (Links to an external site.)
http://sunyjcc.libguides.com/content.php?pid=295922&sid=2481436 (Links to an external site.)
http://online-journals.org/index.php/i-jep/article/view/4587 (Links to an external site.)
http://visualprompts.weebly.com/stem.html (Links to an external site.)

[Subheading]
Additional Resources and Videos

Summative Strategy - Performance Based Projects

Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Summative Strategy - Performance-based Projects
Date: 12/03/15
File Name: 4.2 Summative Strategy - Performance-based Projects
Frame #: 4030

Links to External Sites

-The Buck Institute for Education's (BIE) Project Based Learning

-http://www.nasa.gov/audience/foreducators/topnav/materials/

-https://www.techrocket.com/game-design/minecraft-courses

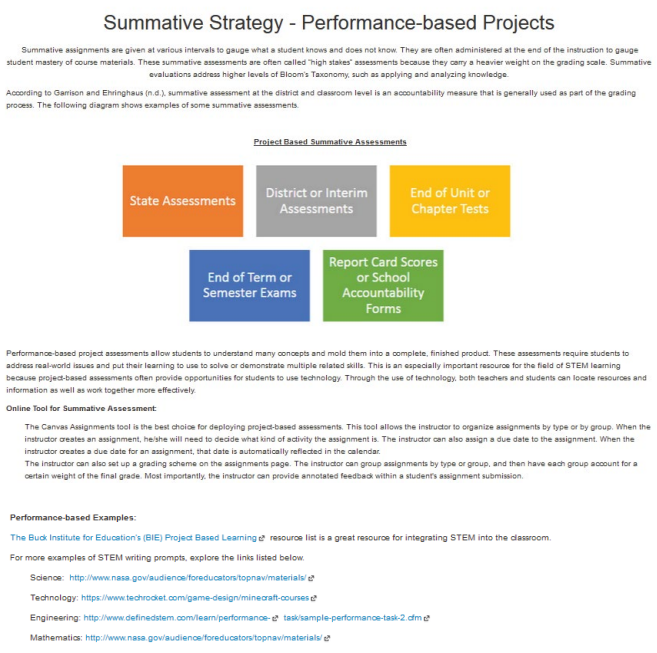
-http://www.definedstem.com/learn/performance-task/sample-performance-task-2.cfm

-http://bie.org/about/why_pbl

-http://www.definedstem.com/learn/performance-task/sample-performance-task-2.cfm

Screen Description:

A visual diagram depits examples of project-based summative assessments followed by text introducing the concept of summative assessment. Then, a paragraph explaining why Canvas is the preferred tool for online assessments is presented. Finally, a list of external URLs is provided to showlearners examples of project-based summative assessments.



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Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: Project-based Summative Assessments

Developer's Notes: n/a

[Unit Title Header]
Summative Strategy - Performance-based Projects

[Image]
Needs Source or title

[Body]
Summative assignments are given at various intervals to gauge what a student knows and does not know. They are often administered at the end of the instruction to gauge student mastery of course materials. These summative assessments are often called "high stakes" assessments because they carry a heavier weight on the grading scale. Summative evaluations address higher levels of Bloom's Taxonomy, such as applying and analyzing knowledge.

According to Garrison and Ehringhaus (n.d.), summative assessment at the district and classroom level is an accountability measure that is generally used as part of the grading process. The following diagram shows examples of some summative assessments.

[Image]
Need Image Title

[Body]
Performance-based project assessments allow students to understand many concepts and mold them into a complete, finished product. These assessments require students to address real-world issues and put their learning to use to solve or demonstrate multiple related skills. This is an especially important resource for the field of STEM learning because project-based assessments often provide opportunities for students to use technology. Through the use of technology, both teachers and students can locate resources and information as well as work together more effectively.

[Subheading]
Online Tool for Summative Assessment:

[Body]
The Canvas Assignments tool is the best choice for deploying project-based assessments. This tool allows the instructor to organize assignments by type or by group. When the instructor creates an assignment, he/she will need to decide what kind of activity the assignment is. The instructor can also assign a due date to the assignment. When the instructor creates a due date for an assignment, that date is automatically reflected in the calendar.

The instructor can also set up a grading scheme on the assignments page. The instructor can group assignments by type or group, and then have each group account for a certain weight of the final grade. Most importantly, the instructor can provide annotated feedback within a student's assignment submission.

[Subheading]
Performance-based Examples:

[Body]
The Buck Institute for Education's (BIE) Project Based Learning (Links to an external site.) resource list is a great resource for integrating STEM into the classroom.

For more examples of STEM writing prompts, explore the links listed below.

Science: http://www.nasa.gov/audience/foreducators/topnav/materials/ (Links to an external site.)

Technology: https://www.techrocket.com/game-design/minecraft-courses (Links to an external site.)

Engineering: http://www.definedstem.com/learn/performance- (Links to an external site.) task/sample-performance-task-2.cfm (Links to an external site.) (is this a good source? It looks like a paid service)

Mathematics: http://www.nasa.gov/audience/foreducators/topnav/materials/ (Links to an external site.)

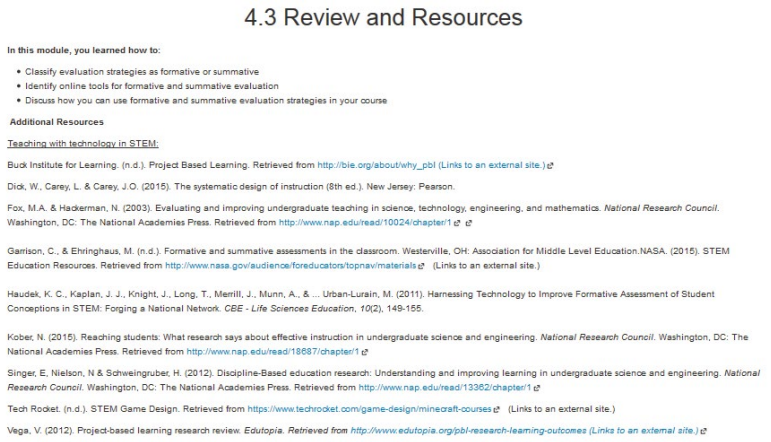
Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Review & Resources
Date: 12/03/15
File Name: 4.3 Review & Resources
Frame #: 4040

Links to External Sites

- http://bie.org/about/why_pbl
- http://www.nap.edu/read/10024/chapter/1
- http://www.nasa.gov/audience/foreducators/topnav/materials
- http://www.nap.edu/read/18687/chapter/1
- http://www.nap.edu/read/13362/chapter/1
-https://www.techrocket.com/game-design/minecraft-courses
-http://www.edutopia.org/pbl-research-learning-outcomes
- http://www.nasa.gov/audience/foreducators/topnav/materials/
- https://www.techrocket.com/game-design/minecraft-courses

Screen Description:

The module learning goals appear at the top of the screen. This is followed by additional resources and links regarding teaching with technology in STEM and resources for Formative and Summative Assessment.



4.3 Review and Resources

In this module, you learned how to:

- Classify evaluation strategies as formative or summative
- Identify online tools for formative and summative evaluation
- Discuss how you can use formative and summative evaluation strategies in your course

Additional Resources

Teaching with technology in STEM:

Buck Institute for Learning. (n.d.). Project Based Learning. Retrieved from http://bie.org/about/why_pbl (Links to an external site.)

Dick, W., Carey, L. & Carey, J.O. (2015). The systematic design of instruction (8th ed.). New Jersey: Pearson.

Fox, M.A. & Hackerman, N. (2003). Evaluating and improving undergraduate teaching in science, technology, engineering, and mathematics. *National Research Council*. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/10024/chapter/1

Garrison, C., & Ehringhaus, M. (n.d.). Formative and summative assessments in the classroom. Westerville, OH: Association for Middle Level Education.NASA. (2015). STEM Education Resources. Retrieved from http://www.nasa.gov/audience/foreducators/topnav/materials (Links to an external site.)

Haudek, K. C., Kaplan, J. J., Knight, J., Long, T., Merrill, J., Munn, A., & ... Urban-Lurain, M. (2011). Harnessing Technology to Improve Formative Assessment of Student Conceptions in STEM: Forging a National Network. *CBE - Life Sciences Education*, *10*(2), 149-155.

Kober, N. (2015). Reaching students: What research says about effective instruction in undergraduate science and engineering. *National Research Council*. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/18687/chapter/1

Singer, E, Nielson, N & Schweingruber, H. (2012). Discipline-Based education research: Understanding and improving learning in undergraduate science and engineering. *National Research Council*. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/13362/chapter/1

Tech Rocket. (n.d.). STEM Game Design. Retrieved from https://www.techrocket.com/game-design/minecraft-courses (Links to an external site.)

Vega, V. (2012). Project-based learning research review. *Edutopia*. *Retrieved from http://www.edutopia.org/pbl-research-learning-outcomes (Links to an external site.)*

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Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: n/a

Developer's Notes: n/a

[Unit Title Header]
4.3 Review and Resources

[Subheading]
In this module, you learned how to:

[Body]

- Classify evaluation strategies as formative or summative
- Identify online tools for formative and summative evaluation
- Discuss how you can use formative and summative evaluation strategies in your course

[Subheading]
Be sure to check out these additional resources and links when strategizing your next assessment approach:

[Body]

Teaching with technology in STEM:

Buck Institute for Learning. (n.d.). Project Based Learning. Retrieved from http://bie.org/about/why_pbl (Links to an external site.) (Links to an external site.)

Dick, W., Carey, L. & Carey, J.O. (2015). The systematic design of instruction (8th ed.). New Jersey: Pearson.

Fox, M.A. & Hackerman, N. (2003). Evaluating and improving undergraduate teaching in science, technology, engineering, and mathematics. National Research Council. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/10024/chapter/1 (Links to an external site.) (Links to an external site.)

Garrison, C., & Ehringhaus, M. (n.d.). Formative and summative assessments in the classroom. Westerville, OH: Association for Middle Level Education.NASA. (2015). STEM Education Resources. Retrieved from http://www.nasa.gov/audience/foreducators/topnav/materials (Links to an external site.) (Links to an external site.)

Haudek, K. C., Kaplan, J. J., Knight, J., Long, T., Merrill, J., Munn, A., & ... Urban-Lurain, M. (2011). Harnessing Technology to Improve Formative Assessment of Student Conceptions in STEM: Forging a National Network. CBE - Life Sciences Education, 10(2), 149-155.

Kober, N. (2015). Reaching students: What research says about effective instruction in undergraduate science and engineering. National Research Council. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/18687/chapter/1 (Links to an external site.)

Singer, E, Nielson, N & Schweingruber, H. (2012). Discipline-Based education research: Understanding and improving learning in undergraduate science and engineering. National Research Council. Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/read/13362/chapter/1 (Links to an external site.)

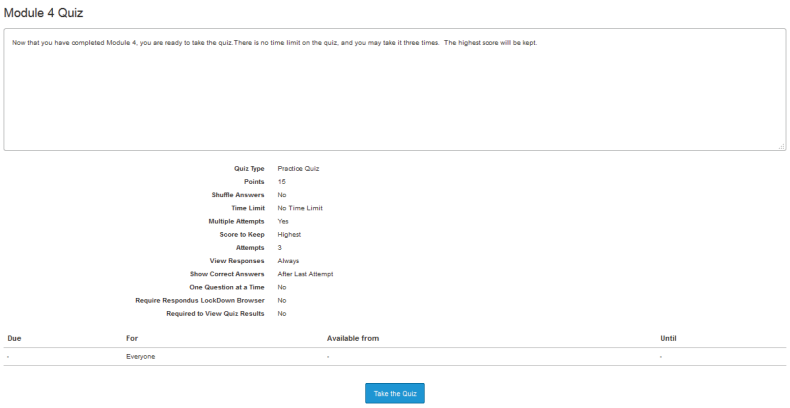
Tech Rocket. (n.d.). STEM Game Design. Retrieved from https://www.techrocket.com/game-design/minecraft-courses (Links to an external site.) (Links to an external site.)

Vega, V. (2012). Project-based learning research review. Edutopia. Retrieved from http://www.edutopia.org/pbl-research-learning-outcomes (Links to an external site.) (Links to an external site.)

Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Module 4 Quiz
Date: 12/03/15
File Name: Module 4 Quiz
Frame #: 4050

Links to External Sites
n/a

Screen Description:
The module 4 Quiz covers the content addressed in module 4.



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Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: n/a

Developer's Notes: n/a

[Unit Title Header]
Module 4 Quiz

[Body]
Now that you have completed Module 4, you are ready to take the quiz.There is no time limit on the quiz, and you may take it three times. The highest score will be kept.

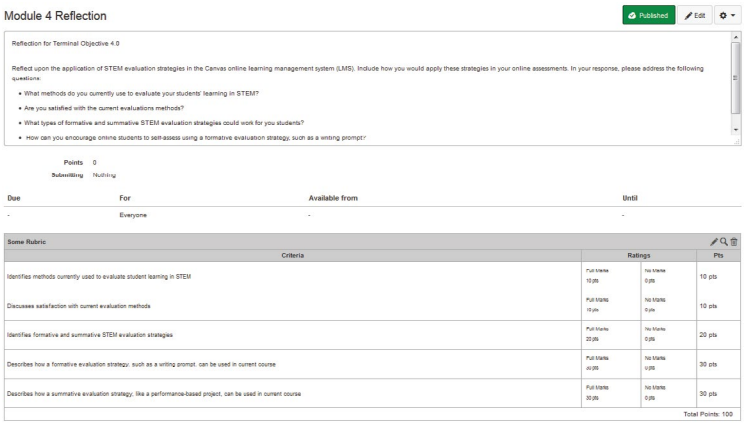
Quiz Type
Practice Quiz
Points
15
Shuffle Answers
No
Time Limit
No Time Limit
Multiple Attempts
Yes
Score to Keep
Highest
Attempts
3
View Responses
Always
Show Correct Answers
After Last Attempt
One Question at a Time
No
Require Respondus LockDown Browser
No
Required to View Quiz Results
No

Module 4 Reflection

Project Title: STEM100 - Teaching with Technology in the STEM Disciplines
Page: 1 of 1
Lesson Title: Module 4 Reflection
Date: 12/03/15
File Name: Module 4 Reflection
Frame #: 4060

Links to External Sites
n/a

Screen Description:
The module 4 Reflection covers...



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Background: Webcourses default background
Color Schemes: Webcourses default color scheme
Text Attributes: Webcourses default text
Unit Title Heading Heading 2
Subheading Heading 3

Audio: n/a
Video: n/a
Animated Gifs: n/a
Graphic Stills: n/a

Developer's Notes: n/a

[Unit Title Header]
Module 4 Reflection

[Body]
Reflect upon the application of STEM evaluation strategies in the Canvas online learning management system (LMS). Include how you would apply these strategies in your online assessments. In your response, please address the following questions:

-What methods do you currently use to evaluate your students' learning in STEM?

-Are you satisfied with the current evaluations methods?

-What types of formative and summative STEM evaluation strategies could work for you students?

-How can you encourage online students to self-assess using a formative evaluation strategy, such as a writing prompt?

-How can you encourage online students to apply STEM knowledge using a summative strategy, such as a performance-based project?

Some Rubric
Criteria Ratings Pts
Identifies methods currently used to evaluate student learning in STEM

Full Marks
10 pts

No Marks
0 pts

10 pts
Discusses satisfaction with current evaluation methods

Full Marks
10 pts

No Marks
0 pts

10 pts
Identifies formative and summative STEM evaluation strategies

Full Marks
20 pts

No Marks
0 pts

20 pts
Describes how a formative evaluation strategy, such as a writing prompt, can be used in current course

Full Marks
30 pts

No Marks
0 pts

30 pts
Describes how a summative evaluation strategy, like a performance-based project, can be used in current course

Full Marks
30 pts

No Marks
0 pts

30 pts
Total Points: 100

Appendix A - Quiz

1. Evaluations that are used throughout the course as diagnostic tools to help students improve their learning progress are classified as:

Formative

Summative

2. Evaluations that address lower levels of Bloom's Taxonomy, such as knowledge recall and procedures, are classifi as:

Formative

Summative

3. Evaluations administered at the end of the instruction to gauge student mastery of course materials are:

Formative

Summative

4. Evaluations that address higher levels of Bloom's Taxonomy, such as applying and analyzing knowledge, are classified as:

Formative

Summative

5. Guided writing prompts allow students to reflect on learning objectives and course material.

True

False

6. Discipline-specific genres of writing (lab reports, historiography essays, case studies, etc.) need to be taught by disciplinary faculty alongside less-formal writing assignments designed to foster critical thinking and active learning.

True

False

7. Suppose an instructor is looking for information about how to develop a writing prompt. The best online tool available is:

UCF Writing Across the Curriculum
Online Discussion tool in Canvas
The online library resources

8. Suppose an instructor wants to deploy writing prompts and promote peer evaluation. The best available online tool is:

Online Discussions tool in Canvas
Assignments tool in Canvas
The library resources

9. Suppose an instructor wants to deploy writing prompts and provide feedback. The best available online tool is:

Assignments tool in Canvas
Online Discussions tool in Canvas
The library resources

10. The first step in the Formative Evaluation Cycle is to define learning objectives.

True
False

11. Formative assessment includes all of the following except:

End-of-class assignments
Writing Prompts
Group Work
Content Quizzes

12. Suppose an instructor is looking for information about how to develop a performance-based project. The best online tool available is:

Buck Institute for Education Project-based learning
Library resources
UCF Writing Across the Curriculum
Canvas

13. Suppose an instructor wants to deploy project-based assessments and provide feedback. The best available online tool is:

Assignments tool in Canvas
Online Discussions tool in Canvas
Online Quiz tool in Canvas
Email

14. All of the following are examples of summative evaluations except:

Practice quizzes
End of semester exams
State assessments
End of chapter tests

15. This practice quiz is an example of:

Formative Evaluation
Summative Evaluation

Appendix B - Reflection Rubric

Reflect upon the application of STEM evaluation strategies in the Canvas online learning management system (LMS). Things about how you would apply these strategies in your online assessments. In your discussion post response, address the following questions:

- What methods do you currently use to evaluate your students' learning in STEM?
- Are you satisfied with the current evaluations methods?
- What types of formative and summative STEM evaluation strategies could work for you students?
- How can you encourage online students to self-assess using a formative evaluation strategy, such as a writing prompt?
- How can you encourage online students to apply STEM knowledge using a summative strategy, such a performance-based project?

Criteria	Ratings		Pts
Identifies methods currently used to evaluate student learning in STEM	Full Marks 10 pts	No Marks 0 pts	10 pts
Discusses satisfaction with current evaluation methods	Full Marks 10 pts	No Marks 0 pts	10 pts
Identifies formative and summative STEM evaluation strategies	Full Marks 20 pts	No Marks 0 pts	20 pts
Described how a formative evaluation strategy, such as a writing prompt, can be used in current course	Full Marks 30 pts	No Marks 0 pts	30 pts
Describes how a summative evaluation strategy, like a performance-based project, can be used in current course	Full Marks 30 pts	No Marks 0 pts	30 pts
			Total Points: 100