Ver. 1.0 (May 11, 2017)

About Tools for Creating MOOC Assignments

There are a variety of assignments in online courses. For creating MOOC content, various tools for helping to create assignments are available. Read the following pages (numbers in brackets) to learn specific instances.

Common problem types

- Multiple Choice (p.2)
- Checkboxes (p.3)
- Dropdown
- Numerical Input (p.4)
- Text Input
- Problem with Adaptive Hint

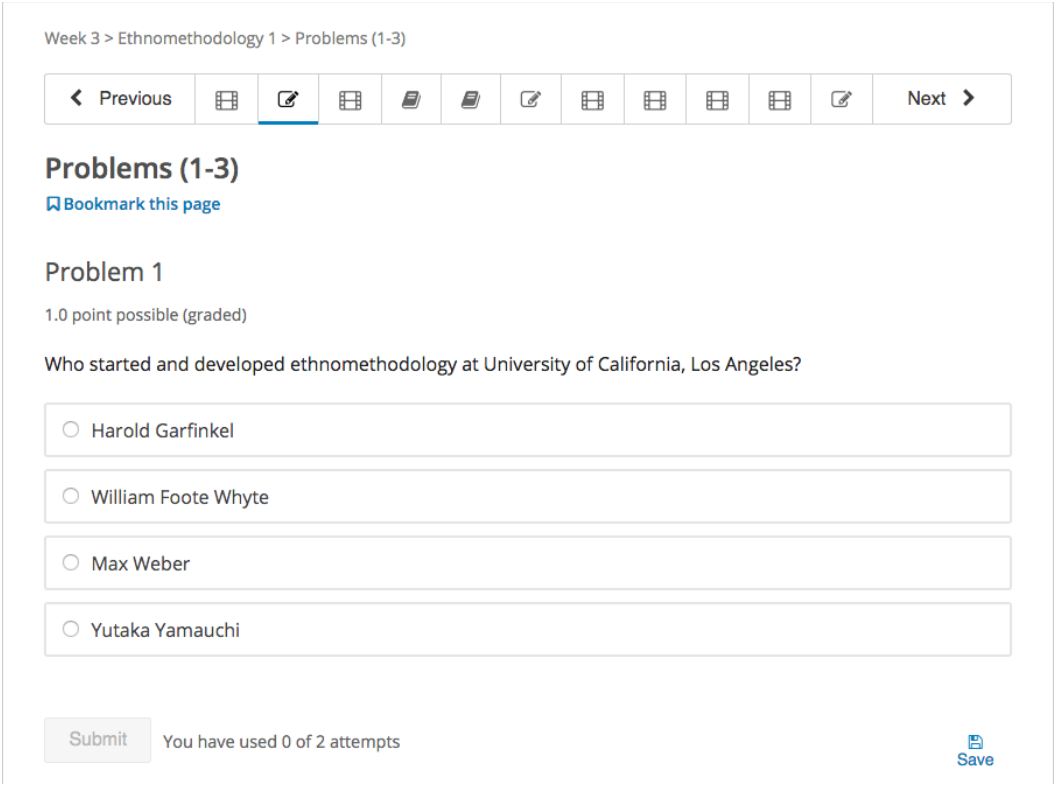
Advanced problem types

- Custom Javascript Display and Grading
- Write-Your-Own-Grader Problem
- Circuit Schematic Builder Problem
- Drag and Drop (p.5)
- Image Mapped Input
- Math Expression Input
- Problem Written in LaTeX
- Molecular Editor (p.6)
- Peer Assessment (p.7)
- Problem with Adaptive Hint

(Based on the following webpage: http://edx.readthedocs.io/projects/edx-partner-course-staff/en/latest/exercises_tools/index.html)

Common Problem Types 1: Multiple Choice

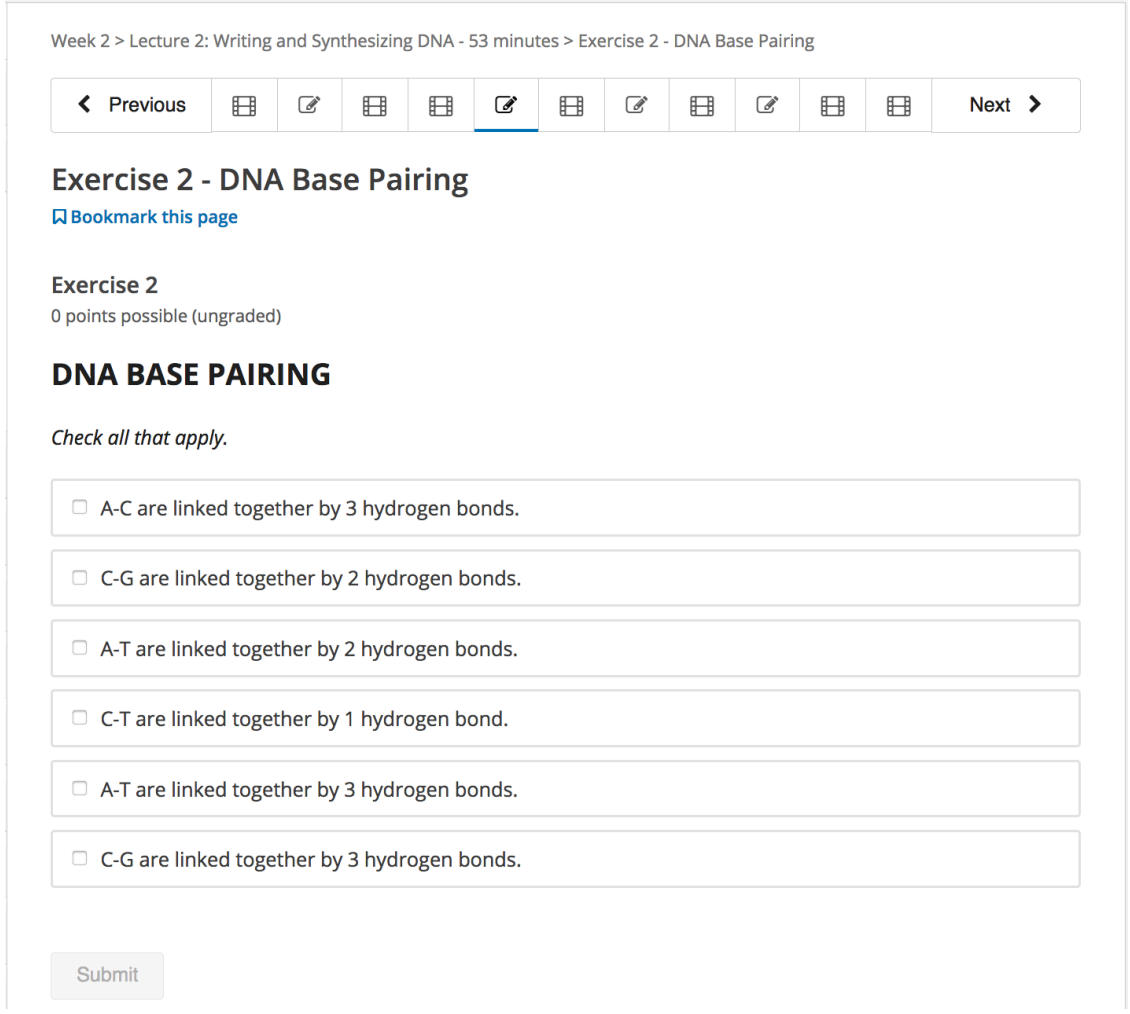
Multiple Choice:
Learners select one answer from a set of possible answers, which are visible directly below the questions. At a minimum, this includes a question or prompt and several answer options. By adding hints, feedback, or both, you can give learners guidance and help when they work on a problem.



(Excerpt from KyotoUx 002x: Culture of Services: New Perspective on Customer Relations)

Common Problem Types 2: Checkboxes

Checkboxes:
Learners select (☑) one or more option(s) from a list of possible answers. To answer the problem correctly, a leaner must select all of the options that are correct answers, and the options that are incorrect.

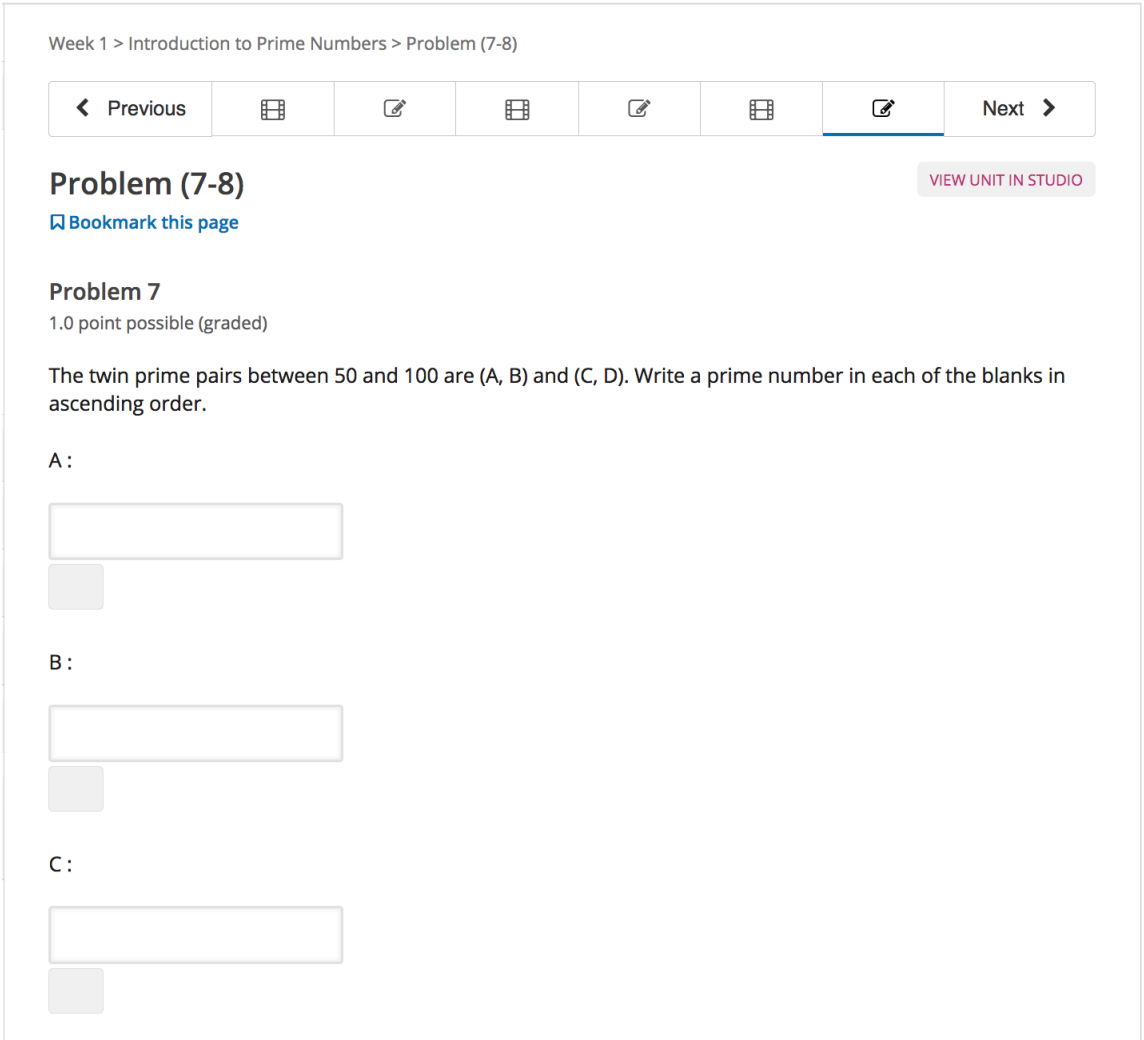


(Excerpt from KyotoUx 001x: Chemistry of Life)

Common Problem Types 3: Numerical Input

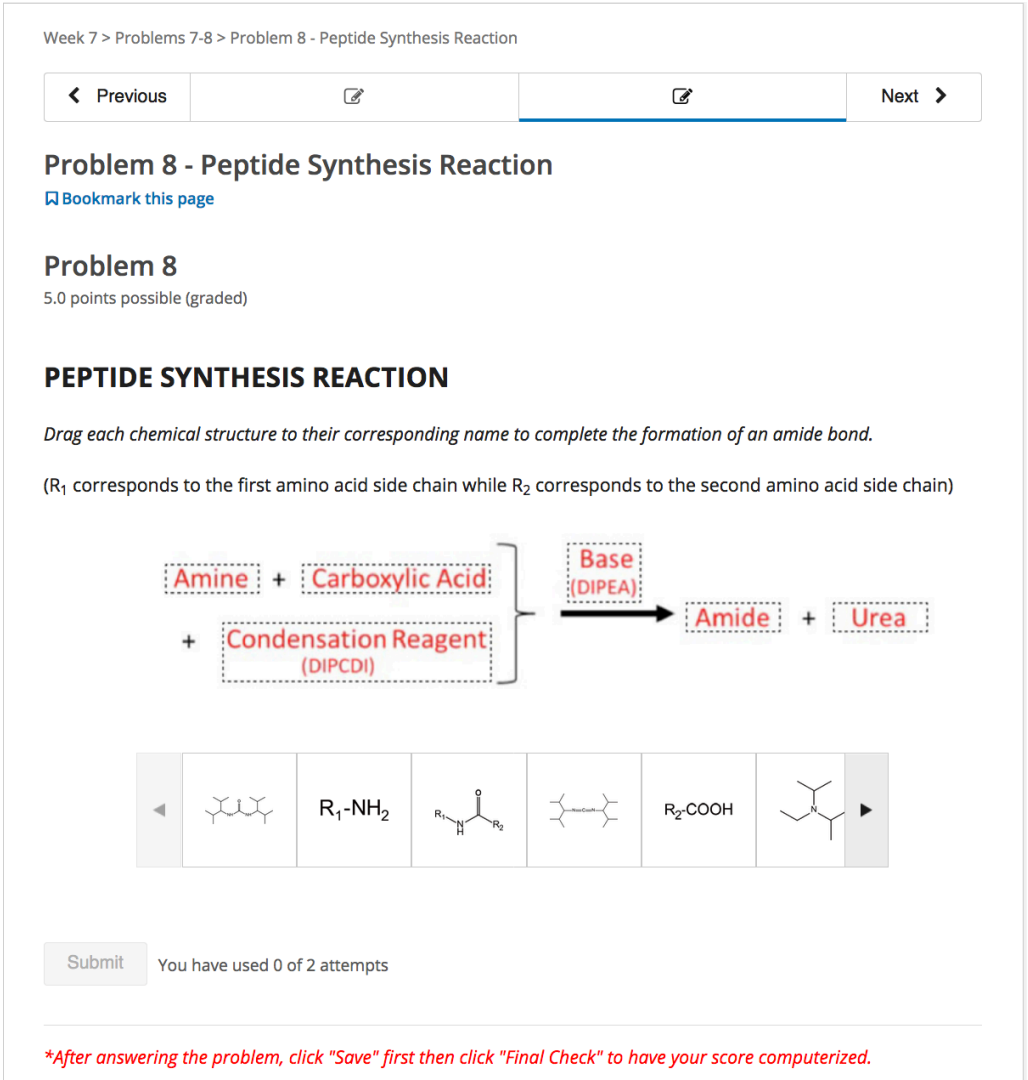
Numerical Input:
In this problem type, learners enter numbers or relatively simple mathematical expressions as answers. In the following case, learners enter a prime number in each box.

(Excerpt from KyotoUx 004x: Fun with Prime Numbers: Mysterious World of Mathematics)



Advanced Problem Types 1: Drag and Drop problem

Drag and Drop problem:
In this problem type, learners respond to a question by dragging text or images to a specific location on a background image.

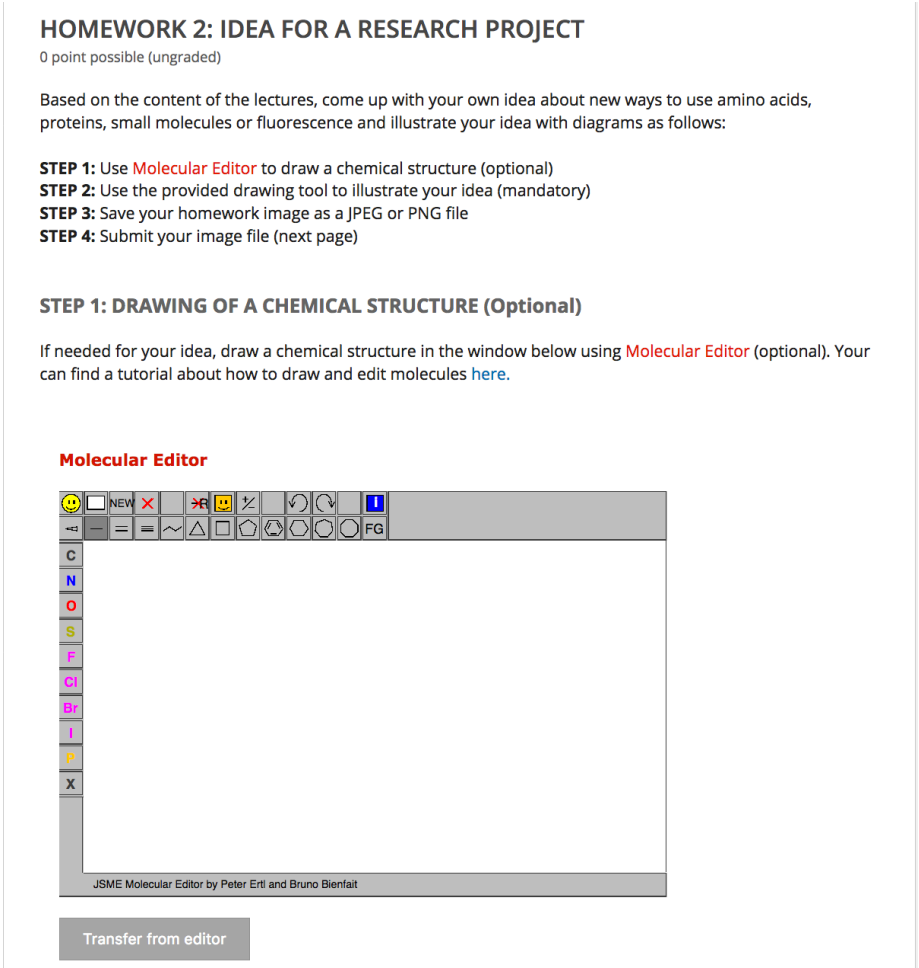


(Excerpt from KyotoUx 001x: Chemistry of Life)

Advanced Problem Types 2: Molecular Editor (Tool for drawing chemical structures)

Molecular Editor:
This tool allows learners to draw molecules that follow the rules for covalent bond formation and formal charge, even if the molecules are chemically impossible, are unstable, or do not exist in living systems. It warns learners if they try to submit a structure that is chemically impossible.

(Excerpt from KyotoUx 001x: Chemistry of Life)



HOMEWORK 2: IDEA FOR A RESEARCH PROJECT

0 point possible (ungraded)

Based on the content of the lectures, come up with your own idea about new ways to use amino acids, proteins, small molecules or fluorescence and illustrate your idea with diagrams as follows:

STEP 1: Use Molecular Editor to draw a chemical structure (optional)
STEP 2: Use the provided drawing tool to illustrate your idea (mandatory)
STEP 3: Save your homework image as a JPEG or PNG file
STEP 4: Submit your image file (next page)

STEP 1: DRAWING OF A CHEMICAL STRUCTURE (Optional)

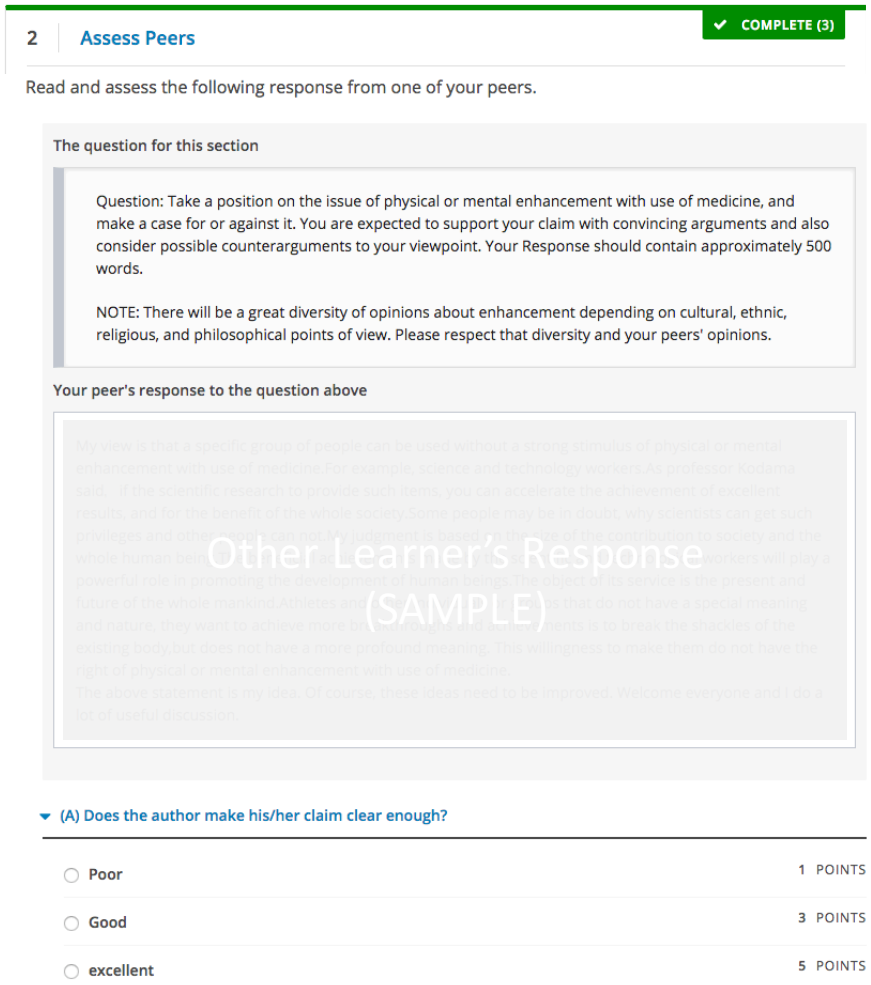
If needed for your idea, draw a chemical structure in the window below using Molecular Editor (optional). Your can find a tutorial about how to draw and edit molecules here.

Molecular Editor

Transfer from editor

Advanced Problem Types 3: Peer Assessment

Peer Assessment:
Learners submit essay responses and then go through a series of assessment steps to complete the assignment. In the peer assessment step (as shown in the figure below), learners review the responses of other learners in the course. Learners can also provide text feedback, or comments, on each response.



(Excerpt from KyotoUx 006x: Ethics in Life Sciences and Healthcare: Exploring Bioethics through Manga (2016, 1st Round))