



OER in STEM: A flexible model to update resources

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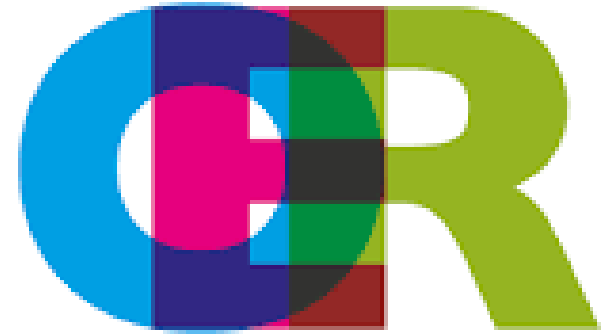


OPEN EDUCATIONAL
RESOURCES

What words come to mind when you think OER?

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What resources do you use in your class?

Do you use a formal textbook?

Do you create your own assignments?

Do you use an online platform?

What are OERs?



Open Educational Resources (OER):

- Teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others

Alternative Education Resources (AER):

- Share library licensed content with your students via Blackboard, library reserves, LibGuides, ePortfolio, etc.
- This is not open, but is zero cost to students
- Always link to the library resource, using a Permalink. Do not upload copyrightable material!

OER open content material engages in the 5R activities

Users can:



Retain – the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)

Reuse – the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)

Revise – the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)

Remix – the right to combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup)

Redistribute – the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

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New works based on the original need to be created under the same license

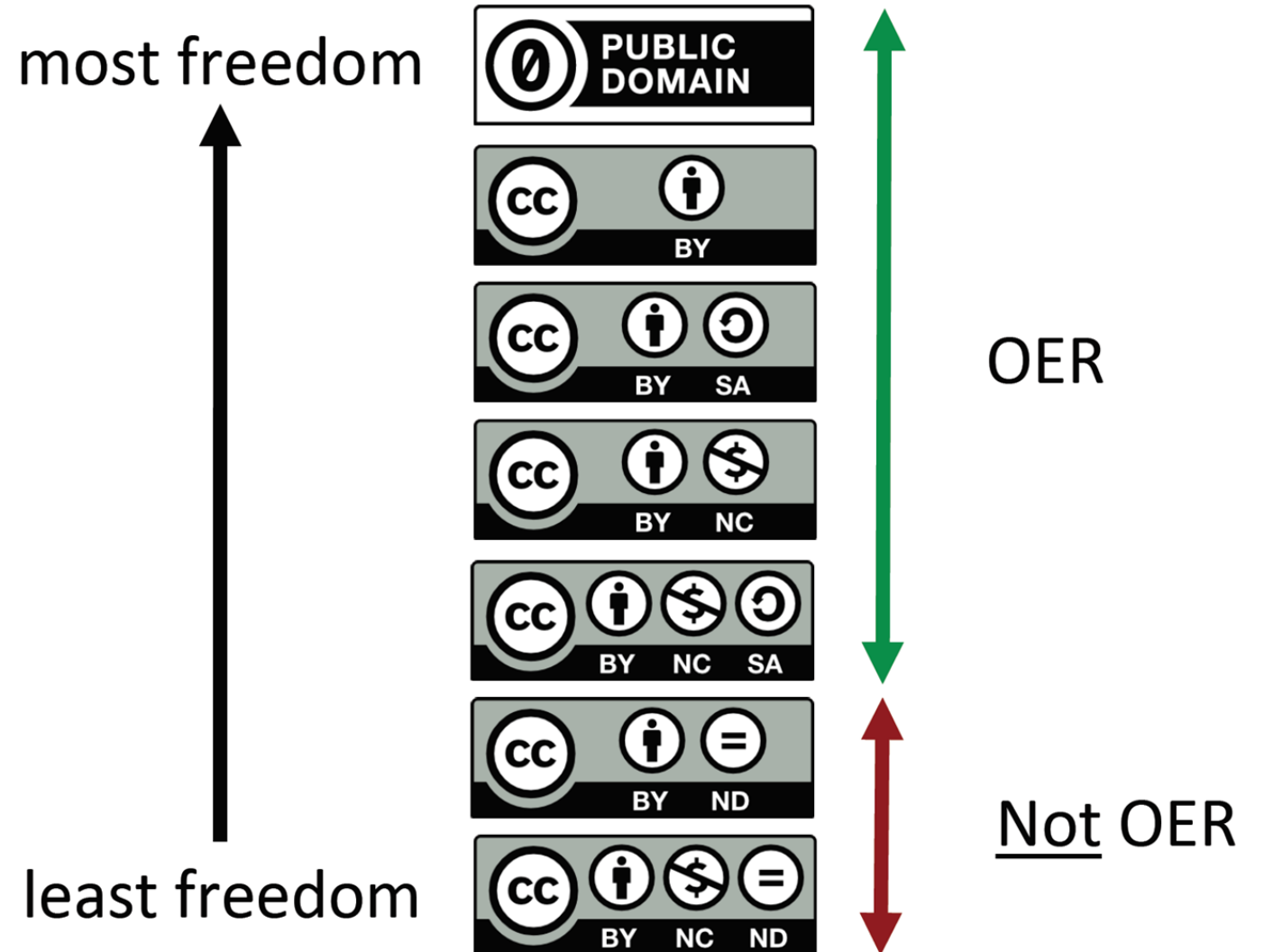


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OER as a Model for Change!



- I. OER is low cost or no cost to students, and affordability increases student engagement and success
 1. An free textbook and/or class materials: journal articles, readings from open sources, interactive online assignments
 2. Assignments created by the instructor
 3. Class exercises that are student-generated

OER as a Model for Change!



- II. OER is a way of rethinking pedagogy and can transform learning
 - 1. Materials can be created and/or modified to create relevant questions to a specific group of students
 - 2. We can revise content and approaches that are not working
 - 3. Available OER allow freedom to adopt part of the material and substitute the components that do not fit our needs
 - 4. Opportunity to gain recognition for assignment development

OER as a Model for Change!



- OER is a way of rethinking pedagogy and can transform learning
- Don't use the commercial textbook to drive the curriculum
- Link the curriculum to the class learning outcomes

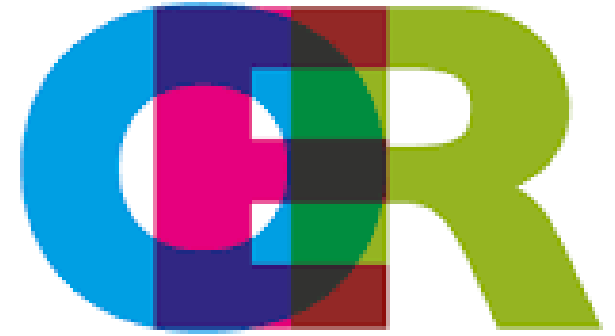
OER Repositories:

- OpenStax (Rice University) <https://openstax.org/>
- Open Textbook Library <https://open.umn.edu/opentextbooks/>
- Merlot Repository (Cal State) <https://www.merlot.org>
- Open Textbooks (Community College Consortium for OER)
<https://www.oerconsortium.org/discipline-specific/>
- OER Commons <https://www.oercommons.org/>
- SUNY Open Textbooks <https://textbooks.opensuny.org>



HANDS-ON ACTIVITY

Modifying an an introductory biology assignment:



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Modifying an assignment from the Pearson MasteringBiology online platform currently used in the Modern Biology introductory courses. These exercises come with the Campbell's Biology textbook and can be used as a guide to create an OER assignment

The task is to propose modifications that will convert this assignment to an OER



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Ording Back...

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