FINDING RESOURCES FOR THE MITCET CHEMISTRY BRIDGE PROJECT

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Outline

- Process
  - Evaluating Resources
- Describing Resources
  - Licenses
- Resource Sites
Process for finding resources

1. Think up keywords/keyphrases for search
2. Search Google or selected collections
3. Evaluate the resource
4. Check the license
5. Might it work?
6. Catalog the resource
Evaluating Resources

What’s important?
What might make a good resource?

- Reputable
  - Source

- Accurate
  - If cross-check out
  - What's said in textbooks as generally accurate?? (maybe not true)

- Presentation
  - Clear?
  - Quality of video/audio
  - Coherent

- Simplicity
  - Not overly complicated

- Multiple formats

- Alternate sources and cross-check, to help build understanding

- Clear explanation, in common terms for fundamental understanding

- Models, 3D representation

- Interactive and manipulate

- Accessibility
  - Captions, Colors, etc.

- If printed, maintains the clarity of the printed version
  - Also output in multiple forms
Describing Resources

Shhh... we’re going to talk about “metadata”... some consider it a four letter word.
Metadata: A brief history

- U.S. MARC: Standard for metadata used by library catalogers
- 1990s digital resources start to push boundaries of MARC
Enter Dublin Core and Learning Object Metadata

- Dublin Core
  - Library Community
  - Started with 15 fields (simpler to get started)

- Learning Object Metadata
  - Educators and Developers
  - A *lot* more fields
  - Richer potential
What do you think we need to describe resources?

- **Title**
- **Creator**
  - Organization
- **URL**
- **Short description** *(written by cataloger)*
- **Purpose** *(written by cataloger)*
  - To understand this content, what assumptions are you making in to what the student knows?
  - “What do you get out of it?”
- **Type of Media** *(video, document)*
- When it was created
- **Audience** *(type of Chemistry, background of user)*
- **Rating**

Key:
- Definitely catalog
- Later
Brandon’s metadata list for the Chemistry Bridge Project

- Title
- Description (of the resource)
- URL
- Context (how it relates to the module)
- Learning Objectives (topic and sub-topic)
- Type of resource (Website, Video, Document, Simulation)
- Time Point (if a video)
- License (Creative Commons, other)
What can you do with the resource?
THE POWER OF OPEN
Stories of creators sharing knowledge, art, & data.
The stories in The Power of Open demonstrate the breadth and creativity of the individuals and organizations using CC.
Learn more by reading the book!

Mission
WHAT IS CREATIVE COMMONS?
Creative Commons helps you share your knowledge and creativity with the world.
Creative Commons develops, supports, and stewards legal and technical infrastructure that maximizes digital creativity, sharing, and innovation.

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There is no registration to use the Creative Commons licenses. Licensing a work is as simple as selecting which of the six licenses best meets your goals, and then marking your work in some way so that others know that you have chosen to release the work under the terms of that license.
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When you choose a license, we provide you with HTML you can use to add the license information to your site and information on how to select a license on one of several free hosting services that have incorporated Creative Commons. This is not a registration and we do not retain a record of your selection.

Allow commercial uses of your work?
- Yes
- No

Allow modifications of your work?
- Yes
- Yes, as long as others share alike
- No

Jurisdiction of your license
- International

Additional Information
The additional fields are optional, but will be embedded in the HTML generated for your license. This allows users of your work to determine how to attribute it or where to go for more information about the work.

Tell us the format of your work: Other

Title of work

Attribute work to name

Attribute work to URL
Choose which style of button you'd like on your webpage:

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Here's a preview of how your license will appear on your site:

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**Have your own website?**

Copy the text below to your Web site to let your visitors know what license applies to your works.

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<a rel="license" href="http://creativecommons.org/licenses/by/3.0/"><img alt='Creative Commons License' src="http://i.creativecommons.org/i/by/3.0/31.png"/></a>
This work is licensed under a <a rel="license" href="http://creativecommons.org/licenses/by/3.0/">Creative Commons Attribution 3.0 Unported License</a>.
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Advanced license topics

- Using resources with different licenses
An OER walks into a bar...

Finding and Recognizing OERs

Demonstration
Recognizing OERs: Examples

- Focusing on Creative Commons Resources
  - Flickr (www.flickr.com)
  - Google (www.google.com/advanced_search)
- MIT OpenCourseWare (ocw.mit.edu)
- MERLOT (www.merlot.org)
- OER Commons (www.oercommons.org)
- Wikipedia (www.wikipedia.org)
Pattern for Evaluating OERs

1. Check out the Site for license
2. Search for Resources
3. Look at detailed results
4. Review the resource itself for license
5. Is it an OER?

Unless otherwise specified, this work is licensed under a Creative Commons Attribution 3.0 United States License.
Have you used Flickr?

Did you know that Flickr allows photo sharers to indicate a license?

And that you can search for Creative Commons licensed photos?
Searching for Openly Licensed Photos

Advanced Search

Search for

Tip: Use these options to look for an exact phrase or to exclude words or tags from your search. For example, search for photos tagged with "apple" but not "pie".

None of these words:

Only search within Creative Commons-licensed content

Find content to use commercially

Find content to modify, adapt, or build upon

SEARCH

Or, return to the basic search without all the knobs and twiddly bits.
This photo was taken on January 30, 2005 in Delta, British Columbia, CA, using a Nikon D70.

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Tags
- math
- pencil
- eraser
- paper

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<td>Search for terms in the whole page, page title, or web address, or links to the page you're looking for.</td>
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<td>Tell SafeSearch how much explicit sexual content to filter.</td>
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<td>Find pages at one reading level or just view the level info.</td>
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<td>any format</td>
<td>Find pages in the format you prefer.</td>
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Unlocking Knowledge, Empowering Minds.

Free lecture notes, exams, and videos from MIT. No registration required.

Through OCW, I am part of a movement to help make education free and available to the world.

Clinton Blackburn
MIT student
United States

NEWS FEATURE

MITx Enrollment Begins

In December, MIT announced a new online learning initiative called "MITx". Registration is now open for the pilot course, 6.002x Circuits and Electronics.

Enroll now.

View related curriculum on OCW.

A DECADE OF OPEN SHARING

On April 4, 2011, MIT celebrated the 10th anniversary of OCW's announcement. Learn more about our first decade of open sharing.

OCW is grateful for the support of:

MathWorks
LOCKHEED MARTIN
Learning is Sharing

Recommended Resources

**General Ed and Pre-College Courses:** Use these high enrollment, general education and pre-college courses to lower textbook costs for students, to improve college completion rates, and as frameworks on which to build your own online or blended courses

**Common Core Aligned Resources:** K-12 educators, see how individual resources align to the Common Core State Standards and add your resource quality ratings and comments

**Open Textbooks:** Add your review to these free and open textbooks

**Career and Technical Education:** Explore these vocational open educational resources to build general skills with software programs like MS Word and Excel, plan your career, and develop marketable skills

**Classroom Management:** Try this great selection for setting the tone and rules for your classroom and intentionally designing classroom life connected to student learning, social skills and behaviors

**Science as Inquiry:** Teach and learn science by doing active exploration and problem posing

**Art as Inquiry:** Delve into visualization, creative thinking, and more artistic habits of the mind for arts-integrated learning across disciplines

- Free to Use
- Openly Licensed
- 31749 Resources
- From K-12 to College Courses
Welcome!

The Open Course Library is a collection of expertly developed educational materials – including textbooks, syllabi, course activities, readings, and assessments – for 81 high-enrollment college courses. 42 courses have been completed so far, providing faculty with a high-quality, affordable option that will cost students no more than $30 for course materials.

Our goals:

1. Lower textbook costs for students
2. Provide high quality, open resources for faculty
3. Improve course completion rates

Phase 1 Courses

Our 42 phase 1 courses are now available. All course materials are shared under a Creative Commons (CC-BY) license unless otherwise noted. If you have adopted an Open Course Library course please fill out the Adoption Form.

Phase 2 Development

Our phase 2 courses are currently being developed. They will be available Spring 2013.
Open educational resources

From Wikipedia, the free encyclopedia

Open educational resources (OER) are digital materials that can be re-used for teaching, learning, research and more, made available free through open licenses, which allow uses of the materials that would not be easily permitted under copyright alone. As a mode for content creation and sharing, OER alone cannot award degrees nor provide academic or administrative support to students. However, OER materials are beginning to get integrated into open and distance education. Some OER producers have involved themselves in social media to increase their content visibility and reputation.

OER include different kinds of digital assets. Learning content includes courses, course materials, content modules, learning objects, collections, and journals. Tools include software that supports the creation, delivery, use and improvement of open learning content, searching and organization of content, content and learning management systems, content development tools, and on-line learning communities. Implementation resources include intellectual property licenses that govern open publishing of materials, design-principles, and localization of content. They also include materials on best practices such as stories, publication, techniques, methods, processes, incentives, and distribution.

Other Definitions

The following definition of OER has been proposed by the William and Flora Hewlett Foundation:
Examples of OERs

- **Flickr** ([www.flickr.com](http://www.flickr.com))
  - Some CC-licensed, find via Advanced Search

- **MIT Open CourseWare** ([ocw.mit.edu](http://ocw.mit.edu))
  - One of the granddaddy’s of OERs, CC-by-nc-sa

- **MERLOT** ([www.merlot.org](http://www.merlot.org))
  - Wide range of resources, complex licensing

- **OER Commons** ([www.oercommons.org](http://www.oercommons.org))
  - Wide range of resources, nearly all CC-licensed

- **Open Course Library** ([www.opencourselibrary.org](http://www.opencourselibrary.org))
  - Open Textbooks, 42 published, more coming, CC-by

- **Wikipedia** ([www.wikipedia.org](http://www.wikipedia.org))
  - Probably the biggest OER, support for attribution
Selected additional resources

- CK-12, www.ck12.org
- Open University OpenLearn, www.open.edu/openlearn
- Saylor Foundation, www.saylor.org
- WikiEducator, wikieducator.org
- Curriki, www.curriki.org
- YouTube EDU, www.youtube.com/education
- OpenCourseWare Consortium, www.ocwconsortium.org
- Creative Commons, search.creativecommons.org
- iTunesU
Questions?

Brandon Muramatsu

mura@mit.edu

Slides will be posted to: http://slideshare.net/bmuramatsu