

Lab Options: From off the shelf to do it yourself

Before we get started



Open **Collaborate Panel** to view session options (bottom right of screen)



Click **Settings** to edit options (e.g., disable pop-up notifications)

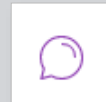


Let us know if you can hear us when we do **Audio checks**

During the webinar



Your **microphone** will be muted until Q&A at end of session



Type questions and comments into the **Chat**



Close **Collaborate Panel** to stop viewing incoming chat posts

GOALS

- Build community awareness of virtual labs and lab alternatives;
- Explore activity options for engaging students in online lab scenarios;
- Demonstrate solutions, applied tips and strategies do it yourself adaptation and module building; and
- Navigate and utilize support resources.

AGENDA

1. Introductions
2. Setting the stage
3. Panelists
4. Q&A and Barrier Busting
5. Navigating Support Resources

Introduction

Setting the stage through the design process:

1. Focus on the most important learning outcomes for your students.
2. Align learning outcomes with assessments.
3. Identify activity steps in each week/module to build student skills and support success in assessments.

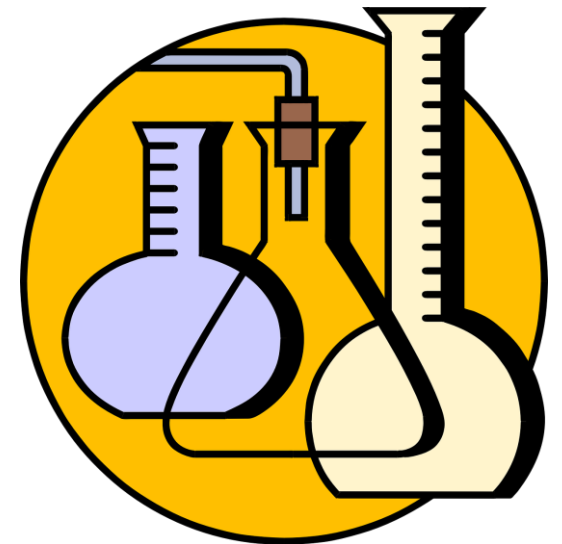




Setting the Stage

As we move to fully online/distance teaching some questions instructors are asking about **lab options** include:

- What is available at low or no cost to students?
- How do I build this into Quercus or other platforms?
- What types of interactivity are available?



Lab Alternatives

Adapt

Use open source materials available at no cost.

Many high-quality lab simulations and online interactive learning objects are available to be embedded or linked through Quercus course shells.

License

License rich content that includes online labs and formative assessment

Available from publishers and other discipline-specific providers.

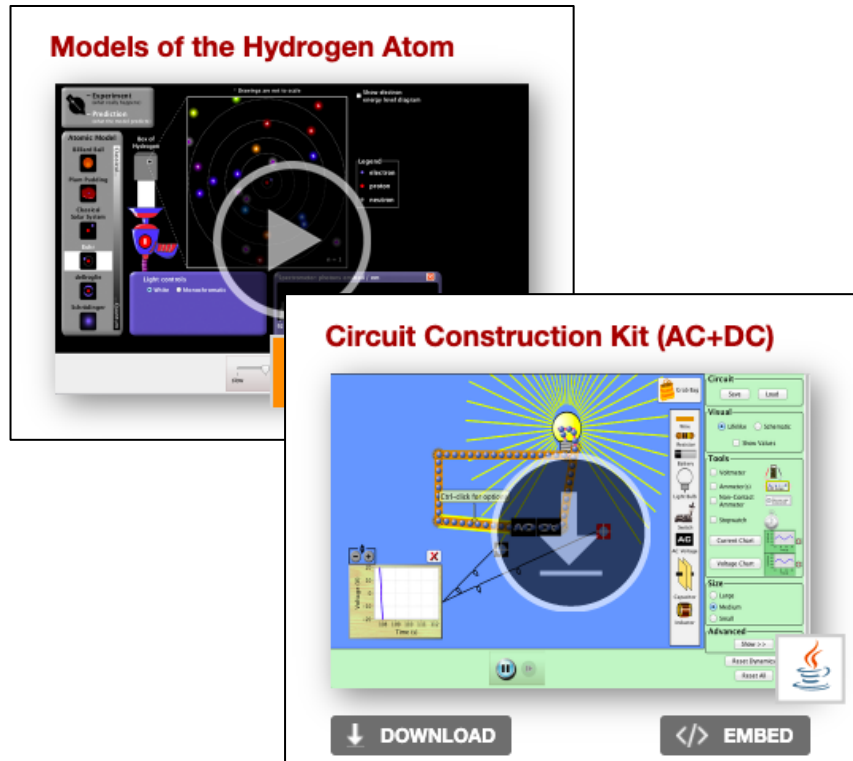
Create

Create your own labs or activity guides using simple video clips of lab protocols and accompanying data sets for analysis.

Use items found at home for simple observations and exploratory activities.

Adapt

- Using OER or open modules available from a range of general and discipline specific sites.



About This Directory

[Using This Directory.](#)

I. Resources

1. Multidisciplinary

2. Biology

3. Chemistry

4. Earth Science

5. Engineering

6. Environmental Science

7. Math

8. Physics and Astronomy



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VIRTUAL LAB AND SCIENCE RESOURCE DIRECTORY

Using This Directory

In This Directory

This directory contains links to free digital science resources. Resources are listed in alphabetical order within their subject area. Each entry in this directory contains a link to a resource, licensing information (if available), the level the resource is appropriate for, and a description of the resource. Some entries have clearly labelled excerpts from external sources. Other

[← Previous: About This Directory](#)

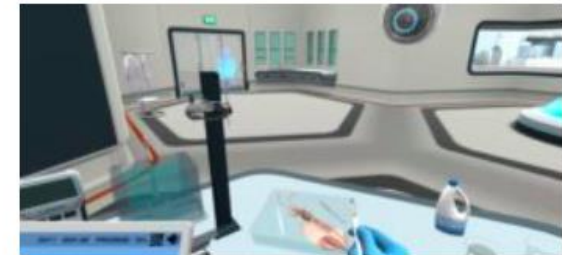
License

[Resources](#)[Pricing](#)[Simulations](#)[Blog](#)[Support](#)

Acids and Bases



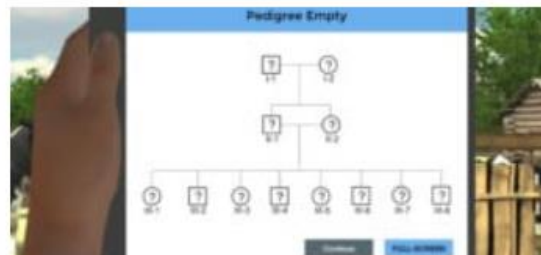
Acids and Bases (Principles): Avoid falling in a lake of acid!



Action Potential Lab: Experiment with a squid neuron



Advanced Acids and Bases



Animal Genetics



Antibodies: Why are some blood types incompatible?

Create

Three options to explore today:

→ Build lab modules in Quercus using standard platform tools

→ Build using H5P* and embed in Quercus

→ Build using H5P and embed on PressBooks open textbook platform

****H5P** is the abbreviation for HTML5 Package which enables educators to create content such as interactive videos, quizzes and presentations.*



OUR PANELISTS

We have 3 panelists to share and demonstrate examples:

- **Will Heikoop (OLS):** Scaffolded activity in Quercus
- **Frank Fan (Pharmacy):** H5P branching scenario in Quercus
- **Andrea Liede-Sevsek (OLS/iSchool):** PressBooks and H5P



Scaffolded Activity in Quercus

<https://q.utoronto.ca/courses/81576>

⋮	▼ Animal Physiology Example II	✓	+	⋮
⋮	📄 Introduction to the Labs	✓		⋮
⋮	📄 Pre Lab 1 Materials	✓		⋮
⋮	📄 Prelab# 1 Assignment - P0101 8 pts	✓		⋮
⋮	📄 Lab 1 Materials	✓		⋮
⋮	📄 Lab#1 Assignment - P0101 9.5 pts	✓		⋮

H5P

H5P (HTML5 Package) is a plugin tool that helps produce and run **interactive content** like videos, quizzes, games, presentations, and more within Quercus, Websites (Wordpress), Pressbooks, and more.

- You can create, share, adapt and edit H5P material to offer more intuitive and interesting content presentation.
- For lab options using microlearning or adaptive/branched learning, interactive content often becomes a foundational aspect—offering learners the chance to personalize their experience.

What is Pressbooks?

pressbooks.com

Pressbooks: The Open Book Creation Platform

Openness. Accessibility. Creation. Control.



Self-Publishers

Easily create a book that you can self-publish as an ebook and in print through services such as Lulu, Kindle Direct Publishing, IngramSpark, Kobo, Nook, and more.

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Faculty Authors

Create textbooks, course materials, and monographs as interactive online books that can also be easily exported and distributed as ebooks, PDF, and print-on-demand formats.

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Educational Institutions

Support open educational resource (OER) initiatives, affordable textbook programs, and library publishing with the most widely adopted open textbook publishing software.

[FIND OUT MORE](#)

- Book publishing tool
- Create and format online
- Export (digital and print PDF, MOBI, EPUB)
- Interactive webbook

Using Pressbooks

guide.pressbooks.com

PB PRESSBOOKS

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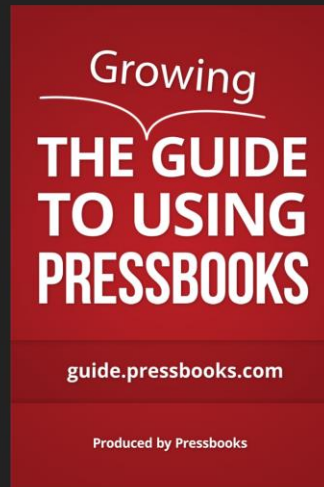
Pressbooks User Guide

Pressbooks

Welcome to the growing guide to Pressbooks! This user guide will walk you through everything you can do with Pressbooks. Find answers for common questions you may have while building your books.

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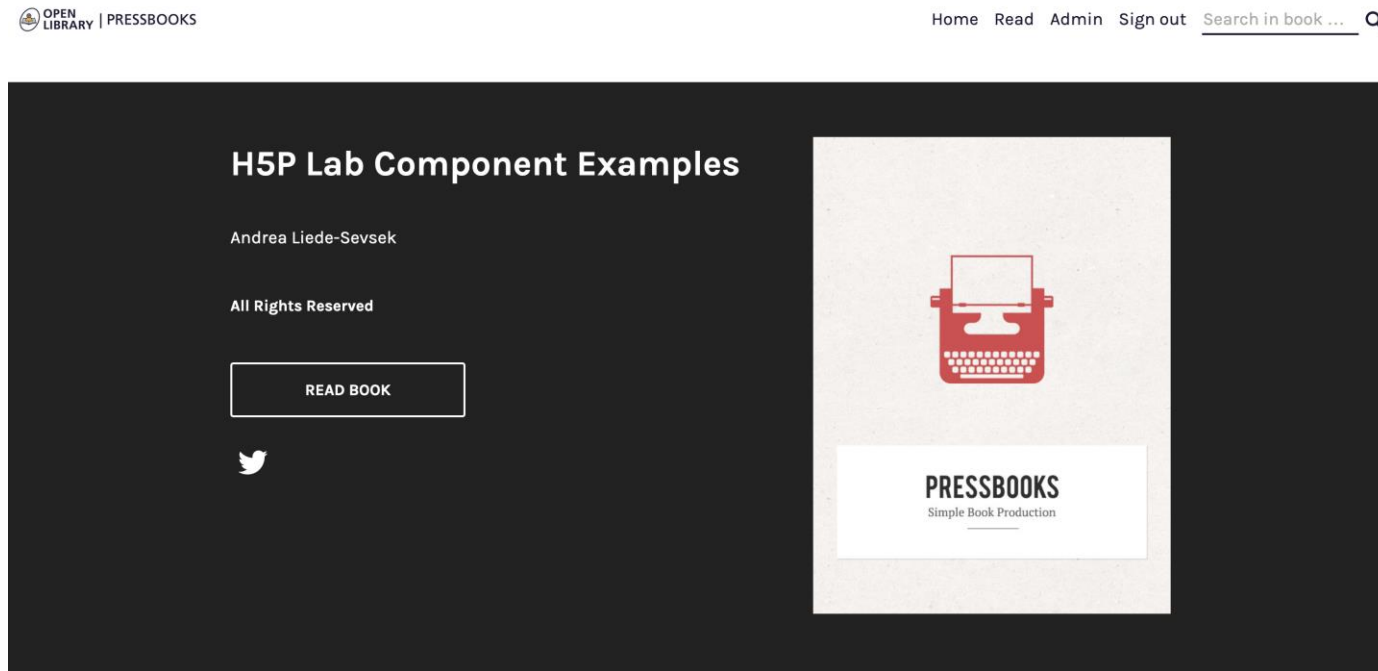
[READ BOOK](#)



- Register for an account at ecampusontario.pressbooks.pub
- Enter book information
- Add and organize text
- Choose book theme
- Export book (or not)

H5P in Pressbooks

<https://ecampusontario.pressbooks.pub/labprototype>



- Examples of several H5P content types
- Demo

Specialized Support Resources

Virtual Labs for Remote/Online Courses:

<https://onlinelearning.utoronto.ca/virtual-labs/>

Virtual Lab and Science Resource Directory:

<https://opentextbc.ca/virtualscienceresources/front-matter/using-this-directory/>

General Support Resources

CTSI website: <https://teaching.utoronto.ca>

Upcoming events: <https://teaching.utoronto.ca/events>

Quercus Support Resources: <https://uoft.me/qresources>

Divisional Support: <https://uoft.me/qsupportcontacts>

Questions: q.help@utoronto.ca

Questions and Comments



Thank You