



Creating Online Aquaculture Curriculum

EXPANDING ACCESS TO EDUCATIONAL RESOURCES
THROUGH A VIRTUAL PLATFORM

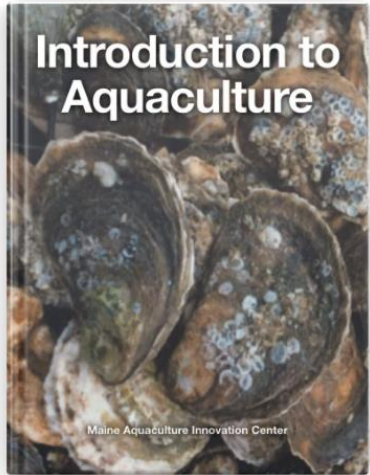
Project Overview

GOAL:

Create up-to-date, engaging, informative, inclusive, and accessible aquaculture curriculum to use in workforce development trainings.

STRATEGY:

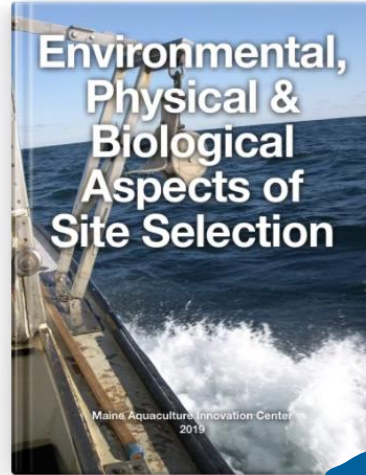
- Identify online learning platform
- Review & revise existing educational resources:
 - Update with current statistics/information
 - Revise to fit new online platform
 - Adapt to include more diverse and inclusive examples, language, and themes
 - Design content to be flexible with a variety of learning styles
- Add content to learning platform
- Receive student feedback on content and course design
- Finalize curriculum content while incorporating student feedback



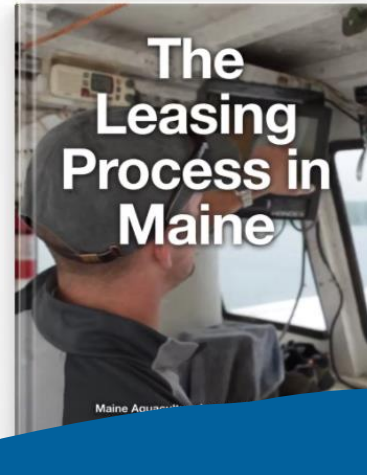
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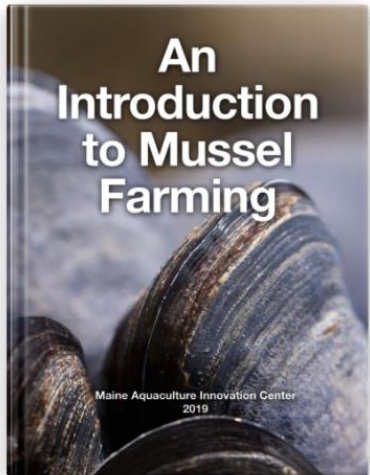
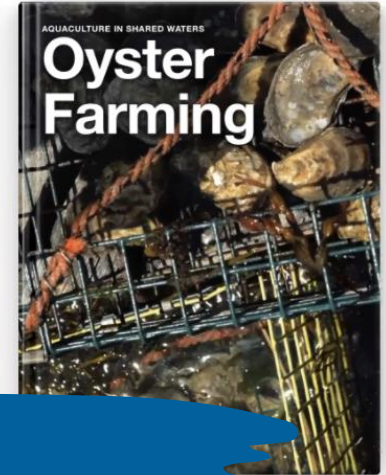
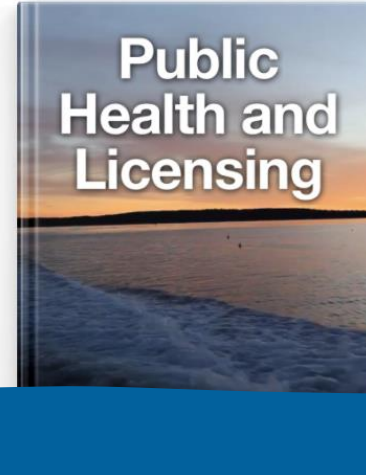
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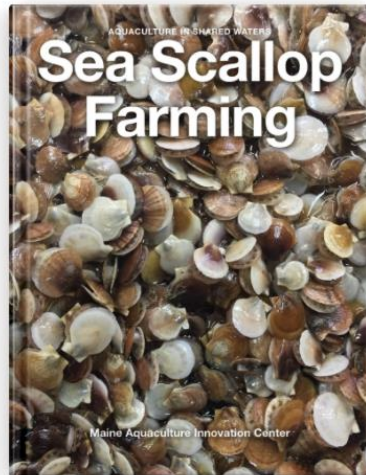
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NEW



NEW



NEW

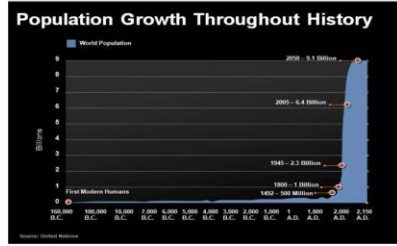
The Existing Course Content

- 12 sections divided by theme
- Housed in iBooks (discontinued platform)
- Utilize text, video, and photo media
- Created as a farmer training resource

Section 1
Feeding A Growing Global Population

Currently aquaculture supplies over 50% of fish that is consumed globally. It is projected to be the prime source of seafood by 2030, due to increasing demand from the growing global middle class, and the depletion of wild capture fisheries.

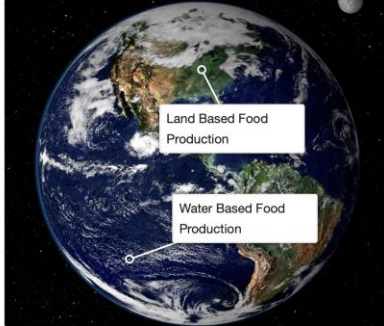
When practiced responsibly, fish farming can help provide livelihoods and feed an increasing global population.



- INCREASING GLOBAL POPULATION**
- A population of 9.1 billion is projected by 2050.
 - This requires at least a doubling of food resources.
 - Since 1950 we have consumed twice the resources of all prior history combined.
 - Cost and availability of food, energy and water will be the social drivers in coming centuries.
 - Globally and nationally terrestrial agriculture is already under pressure.
- GLOBAL PRESSURES ON TERRESTRIAL AGRICULTURE**
- Annually more than 100,000 square kilometers of cropland is removed from cultivation.
 - Known phosphorous reserves are forecast to be depleted in 2050.
 - Groundwater extraction rates exceed recharge rates in 87% of known aquifers.
 - In 2009 maize, rice and wheat yield gains plateaued.
 - Changing weather and precipitation patterns.

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Interactive 1.1 Feeding a Growing Global Population



- NATIONAL PRESSURES ON TERRESTRIAL AGRICULTURE**
- One acre of agricultural land is lost due to urbanization for every person added to the US population.
 - Agricultural productivity gains have plateaued.
 - Biofuels are reducing acreage available for food production.

Sources: FAO 2012, USDA 2011, W WI 2012, Carrying Capacity Network 2010

How can we meet the protein needs for 9 billion people in a way that is healthy, affordable, and environmentally sustainable?

Movie 1.1 Aquaculture as a Source of Sustainable Seafood



A video (5:44 minutes) describing the importance of aquaculture as a source of sustainable seafood for the World. Video Credit: Aquarium of the Pacific and NOAA Fisheries. Available on YouTube: <https://www.youtube.com/watch?v=x4JP49GnR3c&t=1s>

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Current Material Structure



Book pages



Chapters and sections



Bulleted lists



Images with interactive text



Embedded videos



Links to external resources

Reviewing and Revising Process

Read existing content →

Identify key themes and learning objectives →

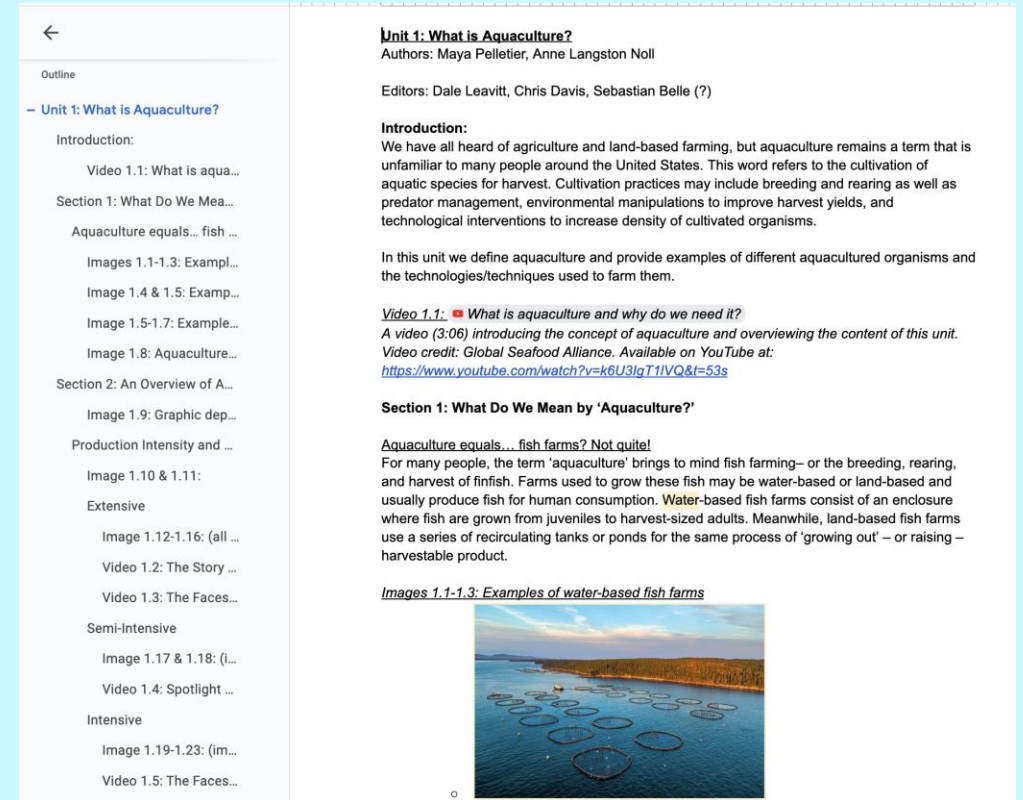
Create outline for revised materials with online platform in mind →

Update and revise existing content to fit new outline →

Add content to highlight diverse perspectives →

Select engaging and pertinent visual and audio media to supplement text →

Work with experts to edit updated modules



The screenshot displays a digital learning platform interface. On the left, a navigation menu shows an 'Outline' for 'Unit 1: What is Aquaculture?' with various sections and media items listed, such as 'Introduction', 'Section 1: What Do We Mean by 'Aquaculture?', and 'Section 2: An Overview of Aquaculture'. The main content area on the right is titled 'Unit 1: What is Aquaculture?' and includes authors (Maya Pelletier, Anne Langston Noll), editors (Dale Leavitt, Chris Davis, Sebastian Belle (?)), and an introduction paragraph. Below the introduction, there is a video link titled 'Video 1.1: What is aquaculture and why do we need it?' and a section titled 'Section 1: What Do We Mean by 'Aquaculture?'' which includes a paragraph and a video link. At the bottom right, there is a video thumbnail titled 'Images 1.1-1.3: Examples of water-based fish farms' showing a large body of water with many circular fish pens.

Learning Resources

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Enroll as an Admin

Working with a New Platform: LearnDash + WordPress

- Creating educational modules, units, and sections
- FREE registration for users
- Instructor features
 - Quizzes
 - Student progress tracking
 - Certificates
 - Managed enrollment

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Introduction to Aquaculture

Community Aspects of Site Selection

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Site Selection: Environmental, Physical, and Biological

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Feeding a Growing Global Population

by MAPSeaweed | Jun 8, 2023

TEST* An Introduction to Aquaculture > Why is Aquaculture Important? > Feeding a Growing Global Population

COMPLETE

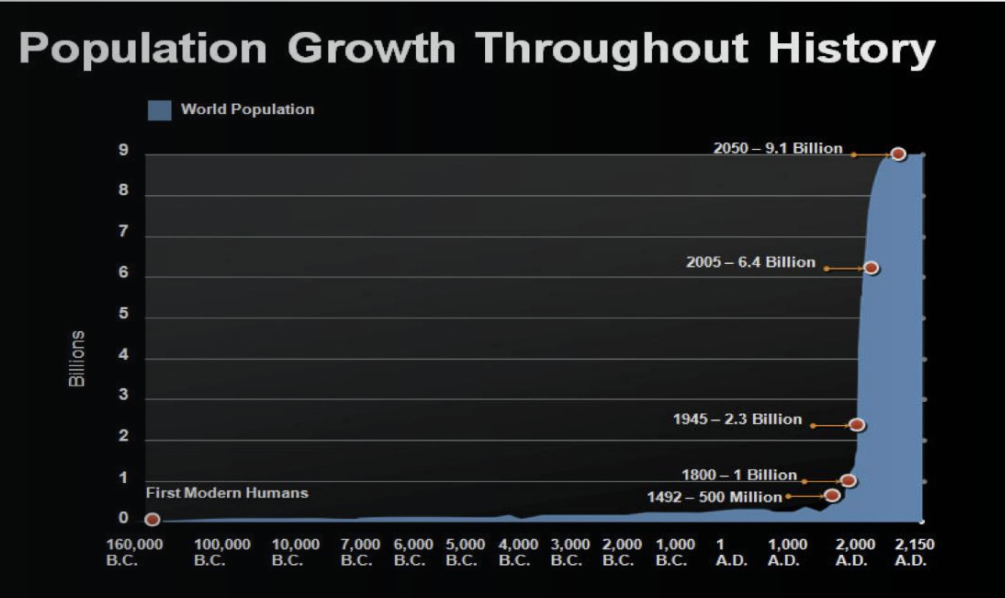
UNIT PROGRESS

100% COMPLETE

*Testing
the New
Platform...*

Currently aquaculture supplies over 50% of fish that is consumed globally. It is projected to be the prime source of seafood by 2030, due to increasing demand from the growing global middle class, and the depletion of wild capture fisheries.

When practiced responsibly, fish farming can help provide livelihoods and feed an increasing global population.



Lessons and Next Steps

Lessons:

Adapting content across platforms requires content revision

Keeping track of citations is key for updating materials

Learning objectives must be considered in tandem with platform design

Don't recreate existing resources

Next Steps:

- Upload finalized module to website
- Ask student users for feedback on formatting
- Complete additional modules
- Provide content access to partner organizations
- Rollout content to student users across Maine