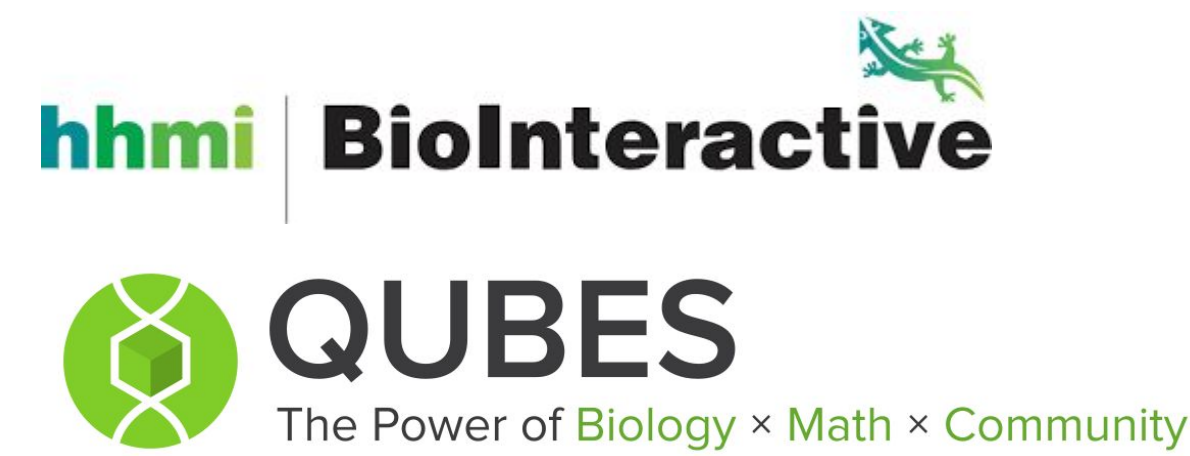


# Closing the Gap in the Open Educational Resources (OER) Life Cycle



## with HHMI BioInteractive Resources

Kristine Grayson, University of Richmond



## Applying the OER Life Cycle for Teaching Materials

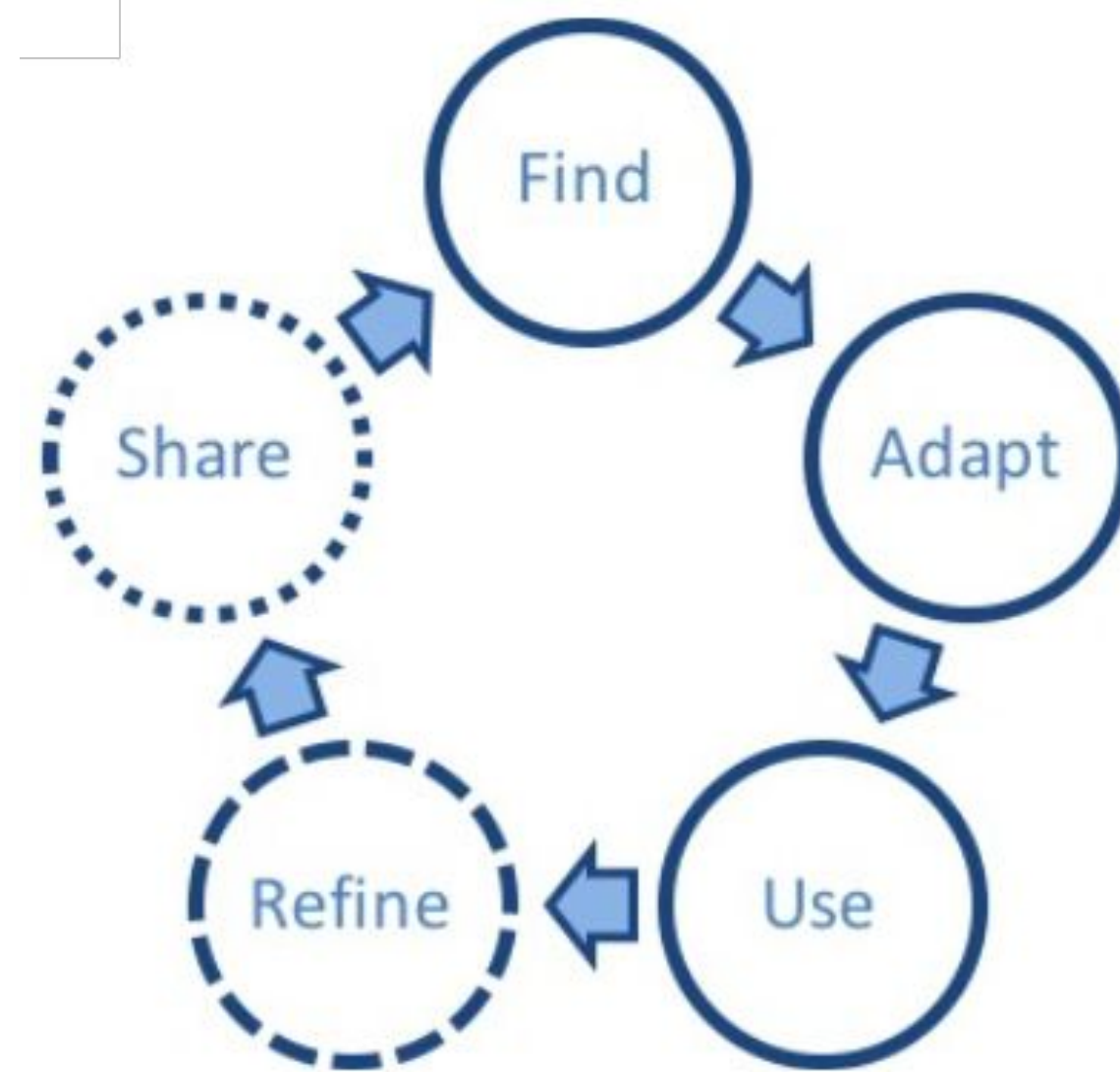
**Step 1:** *Find* teaching materials for the classroom

**Step 2:** *Adapt* the resource so that it is relevant for your class and students

**Step 3:** *Use* your adapted teaching materials and assess student learning

**Step 4:** *Refine* the materials after implementation and assessment

**Step 5:** *Share* your refined product on an OER platform so that others can find and use



**OER cycle model for education resources**  
Source: Adapted from Atkins et al. 2007

## OER Life Cycle Barriers

While the accessibility of publically available teaching materials has substantially improved, barriers remain for resharing:

- **Awareness**
- **Lack of infrastructure**
- **Academic culture and lack of incentives**

*Find out more about OER and data-based teaching resources from the DIG project!*

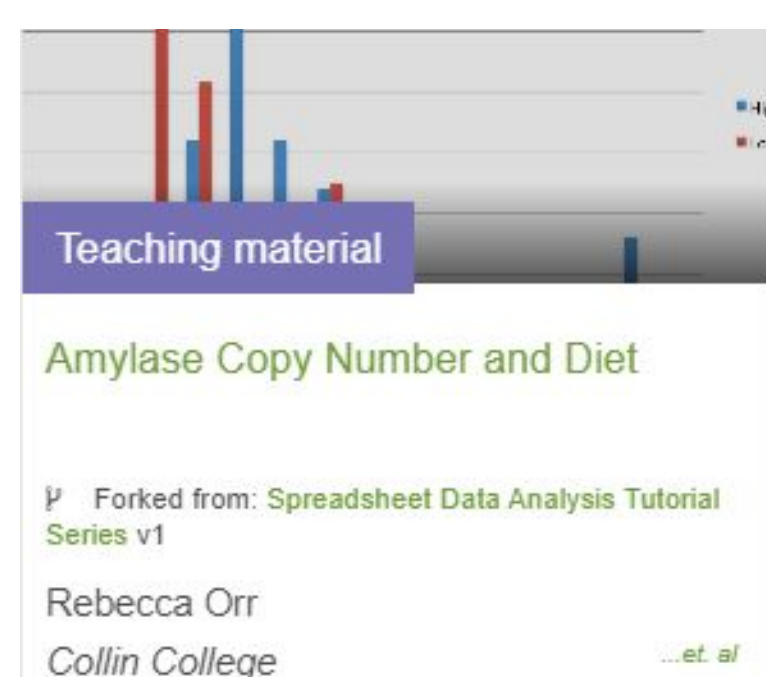
[https://qubeshub.org/groups/data\\_incubator](https://qubeshub.org/groups/data_incubator)  
PIs: Kaitlin Bonner, Arietta Fleming-Davies



## What is QUBES? <https://qubeshub.org/>

- Quantitative Undergraduate Biology Education and Synthesis project
  - Math x Biology x Community
- Community building:
  - Supporting professional development through meetings and workshops
  - Online infrastructure for Faculty Mentoring Networks
  - Integrated computational tools
  - OER publishing platform for original and adapted resources
    - Key features:

Adaptations (“forking”) and versioning



Citations with DOIs

Newtoff, K. N., Squair, C., Homer-Drummond, S. M., Goulet, T. (2018). **Expanded Graphing Tutorial**. HHMI BioInteractive FMN (2017), QUBES. doi:10.25334/Q45M37  
BibTex | EndNote

Access metrics

135 total view(s), 36 download(s)

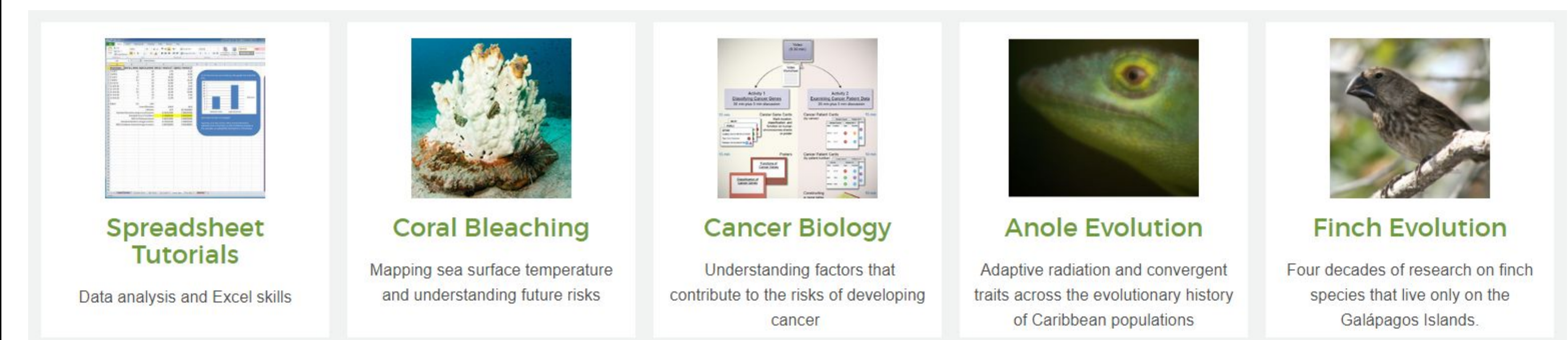


## HHMI BioInteractive on QUBES

<https://qubeshub.org/groups/hhmibiointeractive>



## Current Resources:

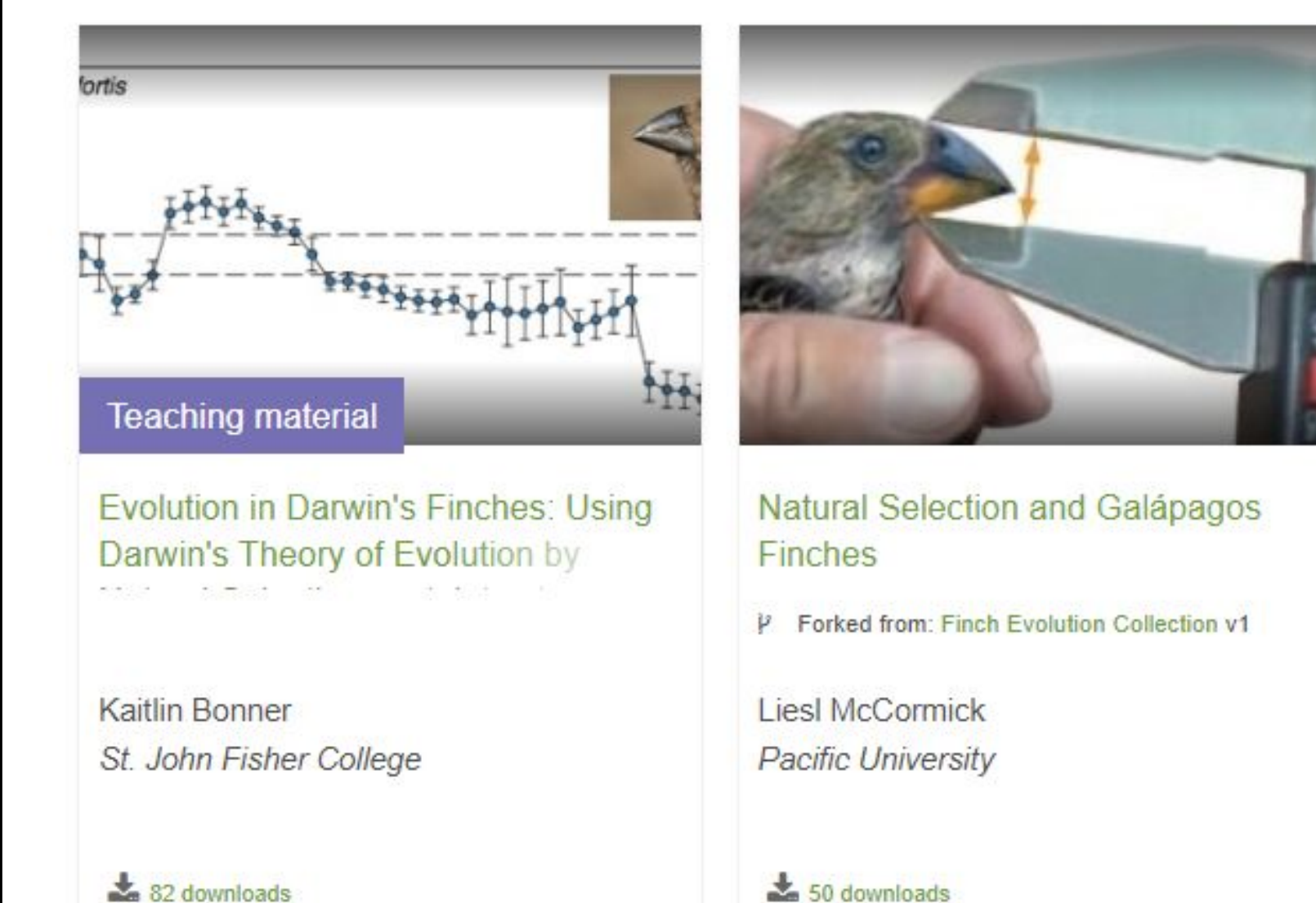


## Example Original BioInteractive Record on QUBES:



## Example Educator Publications:

Some of these modifications were produced by participants in the 2016 HHMI/QUBES Faculty Mentoring Network. Instructors collaborated to use these materials in different course contexts and with different student groups. As they have shared their materials and insights into teaching with these materials, additional educators have also published their materials: (More coming soon!)



## Feedback?

**Interested in OER publishing your teaching materials?**  
[kgrayson@richmond.edu](mailto:kgrayson@richmond.edu)

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