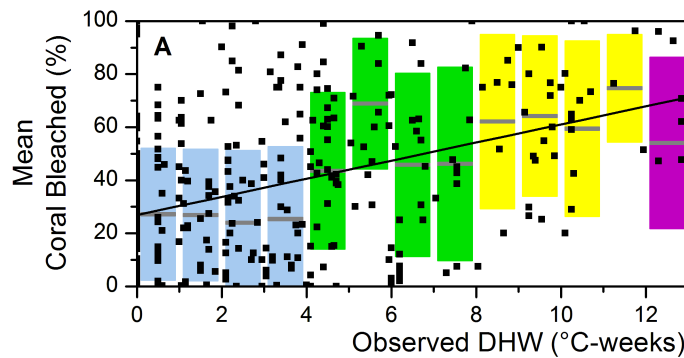


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Coral Reefs in Hot Water (Version 1.0)

By Kaitlin Bonner



Module Description:

In this ~1.5 hour lab activity, students analyze sea surface temperature (SST) data from NOAA to predict coral bleaching at four locations in the Bahamas. They then compare their predictions to authentic research collected about coral mortality and temperature fluctuations. Students use Google Sheets to generate SST graphs, including degree heating weeks (DHW). Using Google Sheets enables students to see each others figures and answer leading questions at the end of the activity. The activity concludes with students making predictions of bleaching given their results for 2005 and comparing their predictions to observed bleaching by interpreting figures from Eakin *et al.* 2010.

Teaching Setting:

This module was designed for upper divisions biology majors in an Ecology course.

QUBES Citation:

Bonner, K. (2018). [Coral Reefs in Hot Water. HHMI BioInteractive FMN \(2017\)](#), QUBES Educational Resources. [doi:10.25334/Q4MM51](https://doi.org/10.25334/Q4MM51)

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Related Materials and Opportunities:

This resource is an adaptation of an adaptation of an original resource! The original resource is an HHMI BioInteractive resource titled, *Coral Bleaching Mapping Activity*, which is available on the [HHMI BioInteractive site](#) and [on QUBES](#). During the [2016 HHMI BioInteractive Faculty Mentoring Network \(FMN\)](#), the original resource was adapted by David Julian (see [Redox Chemistry and Coral Bleaching](#)) and by Kristine Grayson (see [Mapping Coral Bleaching Modified with NOAA and Authentic Bleaching data](#)). Kristine Grayson's resource was further adapted by Kaitlin Bonner during the [2017 HHMI BioInteractive FMN](#) to create the resource featured in this ROW. At the time of this ROW posting, Kaitlin Bonner's resource featured in this ROW had 137 views, 101 downloads and the original resource and the 3 adaptations had a combined 624 views and 326 downloads! [Learn more about HHMI BioInteractive's Coral Bleaching Resources.](#)

QUBES support scholarly approaches to teaching by providing the infrastructure for sharing Open Education Resources (OER). The QUBES Resources System for sharing OER makes it easy for faculty to find quality resources, adapt resources to suit their classroom, and share back their customized version of the resource. The resources described here provide one great example of how the [OER lifecycle](#) results in multiple high-quality, customized teaching resources, making it easier for other faculty to find a version of the material that is best suited for use in their own classroom. [See this past ROW](#) for another example of how the OER lifecycle amplifies the impact of the original resource.

If you adopt and adapt this module, you are highly encouraged to share your adaptation back with the QUBES community using the QUBES Resources System for sharing Open Education Resources.

QUBES on Social Media



QUBES is a community of math and biology educators who share resources and methods for preparing students to use quantitative approaches to tackle real, complex, biological problems.

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QUBES Resource of the Week: Issue 7