

Developing Cultural and Environmental Awareness through Active Learning and Collaboration in the Library

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Rising Tides: Marine Biology and Oceanography Placed Based Learning Community

Teaching students about what it means to be a scientist while actively doing science that focuses on Humboldt Bay and Trinidad Bay

Rising Tides offers students:

- “the opportunity to arrive on campus four days early and participate in a Summer immersion field trip to explore marine environments and cultures near Humboldt and Trinidad Bays.”
- “Get to know the faculty, staff, HSU students, and other marine professionals in the community who will help you grow personally and academically.”
- “Learn that solving the biggest social and environmental problems require good science, critical thinking, a commitment to social justice, and effective communication”

(“Rising Tides Program Home”, n.d; “Summer Immersion”, n.d).

Where are Rising Tides students coming from and why does it matter?

33 % are from Los Angeles

18% are local or from other Northern California Areas

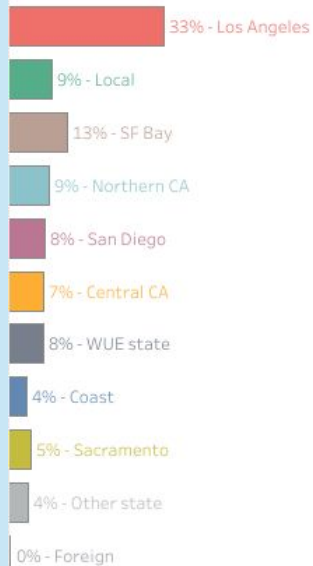
16% from San Diego and Out of State

13% from San Francisco Bay Area

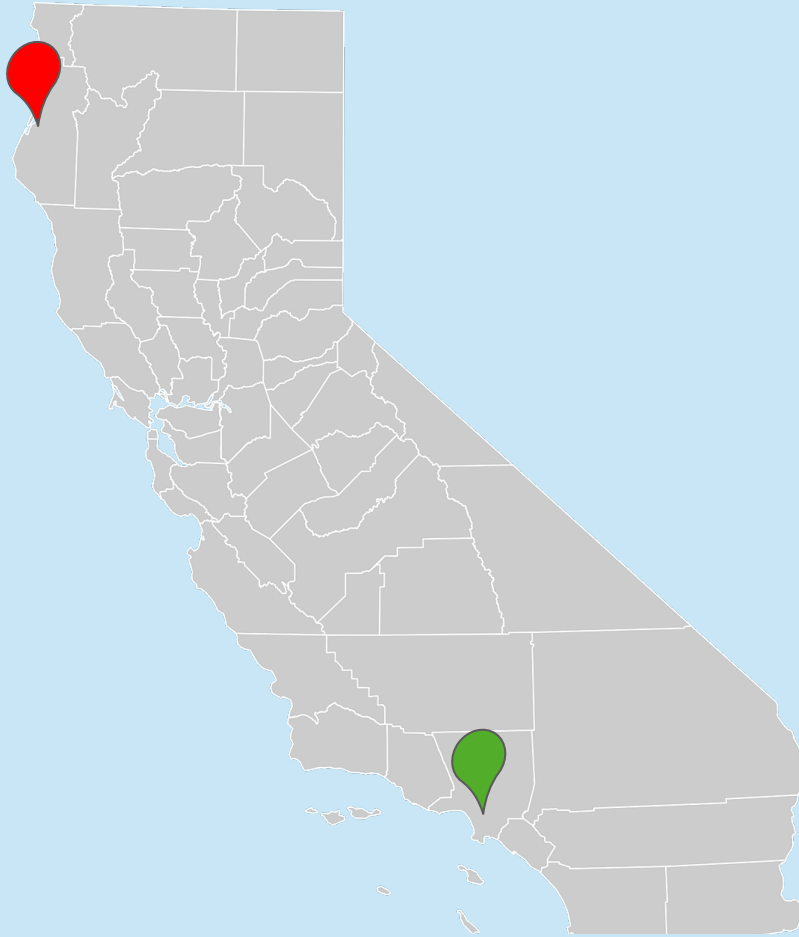
County of Origin (Fall 2018)



Region of Origin (Fall 2018)



For students enrolled Fall 2018
OCN and BIO
(Humboldt State University Office
of Institutional Effectiveness, 2018)

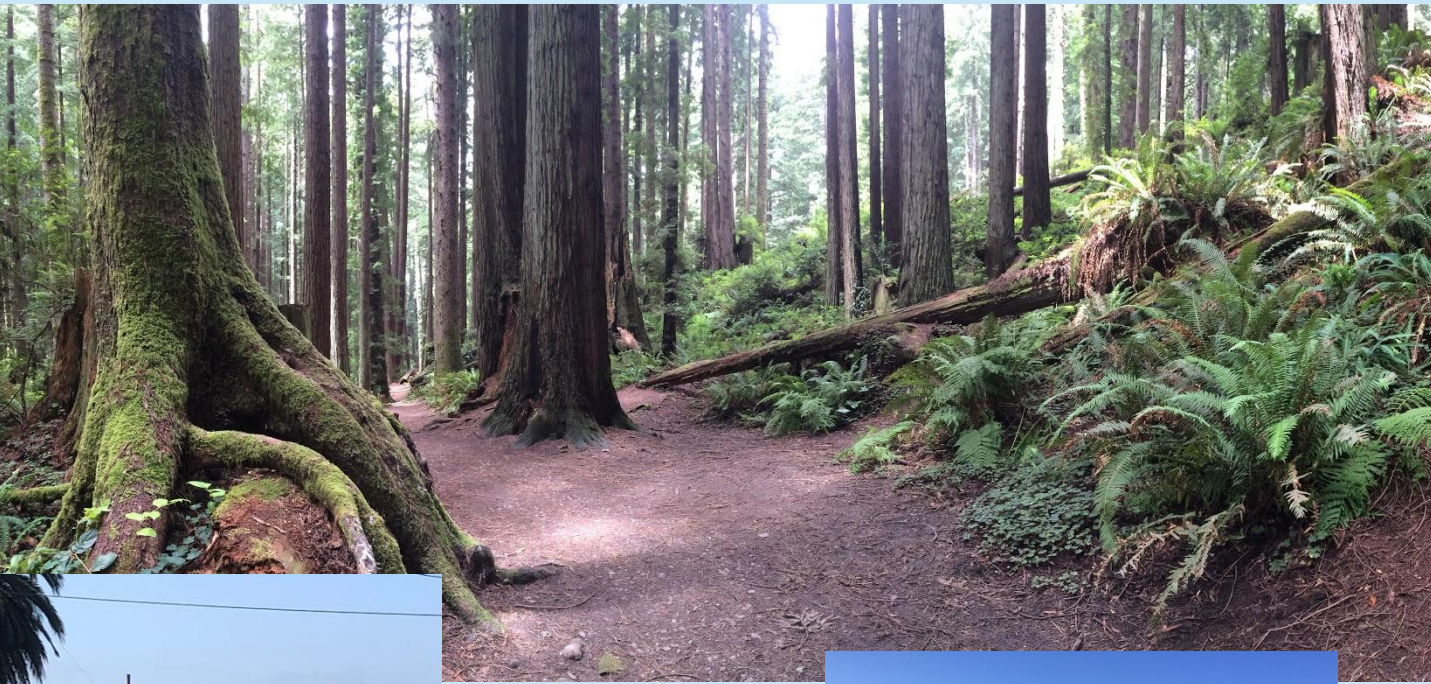


 Humboldt State University (Arcata, CA)

 Los Angeles, CA

Between 10-12 hours drive depending on which route you take and traffic





HSU is on Wiyot Land “Goudi’ni” - Arcata

(Wiyot Tribe, 2011; “Wiyot ancestral territory boundaries [map]”, n.d.).

Students learn about both the Wiyot and Yurok whose ancestral territories cover inland areas and the Humboldt Bay and Trinidad Bay areas, respectively, as part of their summer immersion. They also have field trips during summer immersion to learn from tribal representatives on their field trips.

Check out this video about [Wiyot Place Names](#)

[Wiyot ancestral territory boundaries \[Map\]](#)

Where does the Library fit in?

Library Day Activity: [Link to Activity Instructions](#)

Goals:

- Get students doing collaborative, active, hands-on inquiry based learning to produce poster presentations
- Introduce them to the value of the library early in their college career
- Continued scaffolding the introduction/contextualizing the place and peoples of in Humboldt County
- Introducing connections between the genocide of local indigenous peoples/cultures (Yurok and Wiyot) and landscape change in Humboldt County (particularly Trinidad Bay and Humboldt Bay)

Objective:

Students will create a poster/presentation that includes at least 10 facts that answer the questions posed to their group

The Activity and Goals

Research on the Indian People, seascapes and landscapes of Trinidad & Humboldt Bay

Click on the group for a link to their questions

	Trinidad Area	Humboldt Bay Area
Native American culture (past, present, future)	<u>Group 1</u>	<u>Group 2</u>
Landscape & Seascape (past, present & future)	<u>Group 3</u>	<u>Group 4</u>

Questions and the activity for the Rising Tides library research session were developed in collaboration with Dr. Cutcha Risling Baldy and Dr. Frank Shaughnessy.

Inquiry-Based Learning and the Model of Inquiry Process

Inquiry based learning lessons are

- Learner centered
- Engaging in learning across the disciplines and with diverse perspectives
- Students learn by actively engaging with questions, doing research, and presenting what they learn-- “learning by doing”
- Collaborating and self-managing, and making decisions with in their group, and taking responsibility for their own learning
- Self-reflection and assessment of their learning

(Center for Teaching, n.d., p. 1).

Model of Inquiry Process

“Engage with a topic and build a knowledge base”



“Develop a question”



“Determine what needs to be known”



“Identify resources and gather data”



“Evaluate data”



“Organize and synthesize data”



“Communicate new understandings”




“Reflect upon the process and success”

(Center for Teaching, n.d., p. 2).

Group 1 Ten Important Facts

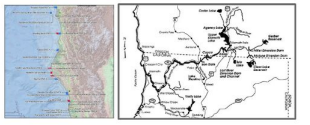
Authors:

Question 1



Checked! And... it's not by looking and asking the boat. Photo by Shutterstock/Chris.

Question 3



Question 5




Group 3 Ten Important Facts

Authors: Ben Zeigler, Emmett Coates, Razi Lederman, Tyler Nagle, Audrey Anderson, Brian Schneider, Abby Styczynski, Cassandra Matchan, Jessica Heidelberg, Maury Juarez, Alexis Hernandez

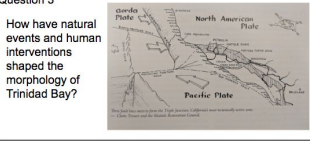
Question 1

What happened to the Yurok People with European contact and trade in Trinidad Bay?



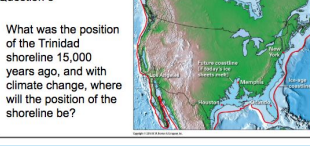
Question 3

How have natural events and human interventions shaped the morphology of Trinidad Bay?



Question 5


What was the position of the Trinidad shoreline 15,000 years ago, and with climate change, where will the position of the shoreline be?



Question 2



Question 4



Sources:

Yurok Tribe. (2020). History Culture. Retrieved July 24, 2018, from <http://www.yuroktribe.org/outreach/culture.htm>

Performing archive. Yurok [website]. (2018). Retrieved July 24, 2018, from <http://performingarchive.org/performingarchive/yurok>

Yurok Male Holding "A'Frame Fish Net"

Raphael, R., & House, F. (2011). Two peoples, one place [Rev. ed., Humboldt history v. 1]. Eureka, CA: Humboldt County Historical Society, Pp.150-33


Boak, M., & Lissel, D. (1992). Yurok tribe (California native American tribes : 26). Vashon, Wash.: Merrimott Pub.

Yurok Dictionary. (n.d.). Retrieved from <http://corpus.linguistics.berkeley.edu/~yurok/lexicon.php?yale=ruany&id=36>

Marine protected areas in California: Regulations (Title 14, Section 632). (2016). Retrieved August 9, 2018, from <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Regulations/Title-14-Section-632>

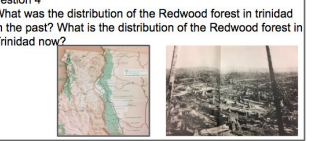
Question 2

What construction and industries have affected the bay?



Question 4

What was the distribution of the Redwood forest in trinidad in the past? What is the distribution of the Redwood forest in Trinidad now?



Sources:

U.S. Census Bureau. (2019). The redwood and giant sequoia. Retrieved July 24, 2018, from <https://www.census.gov/library/publications/2019/other/redwood-giant-sequoia.html>

U.S. Census Bureau. (2019). The redwood and giant sequoia. Retrieved July 24, 2018, from <https://www.census.gov/library/publications/2019/other/redwood-giant-sequoia.html>


U.S. Census Bureau. (2019). The redwood and giant sequoia. Retrieved July 24, 2018, from <https://www.census.gov/library/publications/2019/other/redwood-giant-sequoia.html>

U.S. Census Bureau. (2019). The redwood and giant sequoia. Retrieved July 24, 2018, from <https://www.census.gov/library/publications/2019/other/redwood-giant-sequoia.html>

Group 2 Ten Important Facts

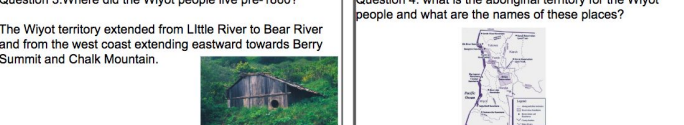
Authors: Rebecca Rabell, Dinora Castaneda, Jesse Ortega, Rose Malville, Sierra Salazar, Isaac Flores, Evan Burnett, Dylan Hoban, Alex Bainslow, Jordan Munoz

Question 1: What marine resources are gathered by the Wiyot people and how is the gathering done?



Question 3: Where did the Wiyot people live pre-1860?

The Wiyot territory extended from Little River to Bear River and from the west coast extending eastward towards Berry Summit and Chalk Mountain.

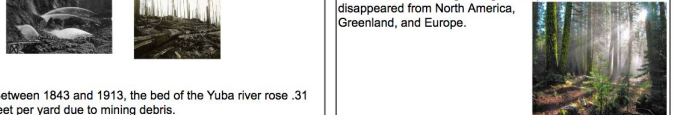


Question 5



What happened to where the Wiyot People live post-1860?

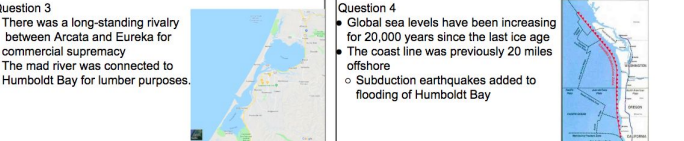
Question 1



Between 1843 and 1913, the bed of the Yuba river rose .31 feet per yard due to mining debris.

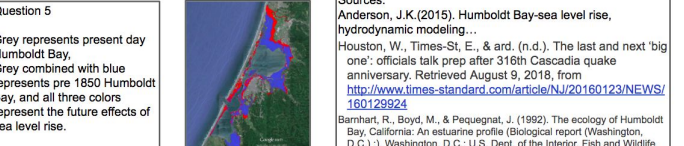
Question 3

- There was a long-standing rivalry between Arcata and Eureka for commercial supremacy
- The mad river was connected to Humboldt Bay for lumber purposes.




Question 5

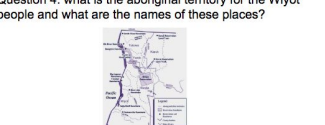
Grey represents present day Humboldt Bay, Grey combined with blue represents pre 1850 Humboldt Bay, and all three colors represent the future effects of sea level rise.



Question 2: What affects Wiyot marine resource management today?



Question 4: what is the aboriginal territory for the Wiyot people and what are the names of these places?



Sources:

National Marine Protected Areas. (2019). Retrieved July 24, 2018, from <https://www.nmpana.gov/Conservation/Conservation/About/About/About/About/About>

Yurok Tribe. (2020). History Culture. Retrieved July 24, 2018, from <http://www.yuroktribe.org/outreach/culture.htm>

Performing archive. Yurok [website]. (2018). Retrieved July 24, 2018, from <http://performingarchive.org/performingarchive/yurok>

Yurok Male Holding "A'Frame Fish Net"

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Boak, M., & Lissel, D. (1992). Yurok tribe (California native American tribes : 26). Vashon, Wash.: Merrimott Pub.

Yurok Dictionary. (n.d.). Retrieved from <http://corpus.linguistics.berkeley.edu/~yurok/lexicon.php?yale=ruany&id=36>


Marine protected areas in California: Regulations (Title 14, Section 632). (2016). Retrieved August 9, 2018, from <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Regulations/Title-14-Section-632>

Group 4 Ten Important Facts

Authors: Abby Berkowitz, Ray, Alissa, Julia, Angel, Anna, Zamantha, Steven Amezcua, Timmy

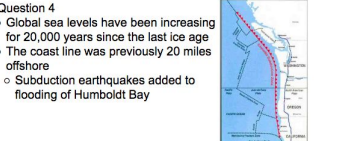
Question 2

- Due to climate change the giant sequoia disappeared from North America, Greenland, and Europe.



Question 4

- Global sea levels have been increasing for 20,000 years since the last ice age
- The coast line was previously 20 miles offshore
 - Subduction earthquakes added to flooding of Humboldt Bay



Sources:

Anderson, J.K. (2015). Humboldt Bay-sea level rise, hydrodynamic modeling...

Houston, W., Times-St, E., & ard. (n.d.). The last and next 'big one': officials talk prep after 316th Cascadia quake anniversary. Retrieved August 9, 2018, from <http://www.times-standard.com/article/NJ/20160123/NEWS/160129924>

Barnhart, R., Boyd, M., & Pequegnat, J. (1992). The ecology of Humboldt Bay, California: An estuarine profile (Biological report (Washington, D.C.)). Washington, D.C.: U.S. Dept. of the Interior, Fish and Wildlife Service.



Takeaways and what it has reinforced for my practices

- Letting go of control (but not structure and planning) as a facilitator instead of lecturing
- Experimenting more with student centered lesson plans
- Allowing students to use their abilities interpret information and find their own answers
- Seeking opportunities for collaboration to have more impact than one-shot instruction session
- Build in time for reflection on learning

Sources

- Center for Teaching and Learning York College of Pennsylvania. (n.d.). Overview of Inquiry-based Learning (IBL). Retrieved from https://my.ycp.edu/c/document_library/get_file?uuid=cb4bf2c2-a387-4f71-b1da-2874bd44c9eb&groupId=672261
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- Rising Tides Program Home. (n.d.). Retrieved May 8, 2019, from <https://risingtides.humboldt.edu>
- Rising Tides Program Summer Immersion. (n.d.). Retrieved May 8, 2019, from <https://risingtides.humboldt.edu/student-support/summer-immersion>
- Wiyot ancestral territory boundaries [map]. (n.d.). Retrieved from <http://www2.humboldt.edu/nasp/map.html> via <http://www2.humboldt.edu/nasp/links.html>
- Wiyot Tribe. (2011). *The Wiyot place name project* [Video file]. Retrieved from <http://www.wiyot.us/162/Wiyot-Placename-Video>

Instructions for Rising Tides Library Activity: Research on the Indian People, seascapes and landscapes of Trinidad & Humboldt Bay

	Trinidad Area	Humboldt Bay Area
Native American culture (past, present, future)	Group 1	Group 2
Landscape & Seascape (past, present & future)	Group 3	Group 4

The Activity

This is a Library active learning exercise designed such that, in one morning, you can learn more about the people and places that are the main focus of Rising Tides. You are doing the research and the presentations, but we are providing help with respect to group formation, providing digital and physical resources, roving assistants, and a Google Slides template. There isn't enough time for 'deep research', but you are expected to understand your group subject well enough that you can *explain* a few main points to the other three groups. For example, if your group works on "Native American culture" in the "Trinidad Area" (Table 1), then you will use your slide presentation to inform groups 2-4 about that topic.

Steps

1. Form groups of 12-13 students.
2. Divide into 5 working pairs/triples within a group.
3. Each pair will research two of the provided questions, each of which is accompanied by some digital and, in some cases physical, research sources. There will be overlap among pairs with respect to the questions being studied. Make sure you are thinking about and keep track of the images and sources that you think the group will decide to use. Remember, you can take photos of images from the physical resources to use in your presentations and use and of the other sources in the Google Drive. There will be roving helpers available to answer your questions. Don't be afraid to ask!
4. Pairs will reconvene with their larger group to decide, as a group, which 10 important facts (with at least 1 from each question) should be *explained* in the group presentation. *You will discover more information than can be presented in*

the short time frame, so choose the points that are most interesting/important to you.

5. There are 15 minutes for each presentation (~ 12 minutes for presentation, 3 minutes for questions). A slides template is provided; the intention is to use images with very little text to *explain* your points. You can have one or multiple presenters.
6. Notes should be taken by the three groups listening to each presentation. Each person should have 10 facts for each group in their notes by the end of the presentations. Check with a neighbor in your group if you are missing facts.

Schedule

8:30-8:45 Introduction to the activity

8:45-10:00 Work in pairs/triples with the library resources.

10-10:20 Work in group to decide which facts or takeaways should be presented in your slides.

10:20-10:50 Students should be working on their presentation at this time

10:50-11:00 Break

11:00-12:00 Slides presentations, questions, note taking

Get Access to the Activity Resources

<http://bit.ly/risingtideslibraryday>

Acknowledgements

Thank you to Christine Kupelian and Treena Neel for their assistance with researching sources for this activity. Thank you to Dr. Cutcha Risling Baldy and Dr. Frank Shaughnessy for lending their expertise in developing this activity and the questions that guide student research.

Group 1 Questions-Trinidad Bay: Yurok Culture

Get access to your resources by going to bit.ly/risingtideslibraryday

1. Which marine resources are gathered by the Yurok People for food and what are the ways they interact with the marine environment?
2. What are the tools and innovations made by the Yurok that interact with this environment?
3. What affects Yurok marine resource management today? (e.g. environmental justice, politics, cultural revitalization, transportation, governance, medicine, inter-tribal relations?)
4. What is the aboriginal territory for the Yurok People and what are examples of coastal Yurok place names?
5. Where do the Yurok People live now?

Group 2 Questions-Humboldt Bay and Wiyot Culture

Get access to your resources by going to bit.ly/risingtideslibraryday

1. Which marine resources are gathered by the Wiyot People and how is the gathering done?
2. What affects Wiyot marine resource management today?
3. Where did the Wiyot People live pre-1860?
4. What is the aboriginal territory for the Wiyot People and what are the names of these places?
5. What has happened to where the Wiyot People live post-1860?

Group 3 Questions-Trinidad: Landscape and Seascape

Get access to your resources by going to bit.ly/risingtideslibraryday

1. What happened to the Yurok People with European contact and trade in Trinidad Bay?
2. What construction and industries have affected the bay?
3. How have natural events (e.g. tsunami, earthquakes) and human interventions shaped the morphology of Trinidad Bay?
4. What was the distribution of the Redwood forest in Trinidad in the past (think Ice Age and 1700s)? What is the distribution of the Redwood forest in Trinidad now?
5. What was the position of the Trinidad shoreline 15,000 years ago, and with climate change, where will the position of the shoreline be?

Group 4 Questions-Humboldt Bay: Landscape and Seascape

Get access to your resources by going to bit.ly/risingtideslibraryday

1. How did European use of the landscape and marine resources displace and lead to the attempted annihilation of the Wiyot People?
2. How was the distribution of Redwood and Sitka Spruce trees around Humboldt Bay changed with the arrival of Europeans to the Bay area in the 1850s?
3. Why was the Mad River connected to Humboldt Bay a couple of times during the late 1800's?
4. What was the location of the shoreline 15,000 to 20,000 years ago at the latitude of Humboldt Bay today? What kind of landscape and habitats would you have seen 15,000 to 20,000 years ago if you were standing in the middle of what is now Humboldt Bay?
5. What is the position of the Humboldt Bay shoreline today? Where will the new shoreline position be if the earthen dikes and rocky riprap shoreline break or if they are overtopped by sea level rise?