# **Instructor Notes: Exploring Health Inequities and Redlining**

This project is composed of a simple worksheet containing an overview and a set of questions that will help introduce students to the concept of redlining and to how historic racism may have impacted modern patterns of health. This activity is very simple, and the only tools used in this activity are several internet sites. Students do not need to be familiar with any specialized computer programs to complete this activity. Although it is a very simple activity, students with extensive data science backgrounds may still find this exploration interesting.

A secondary purpose of this activity is to show students a big picture view of the data science process, especially how data scientists can merge data from multiple sources, how visualizations can be used by data scientists to convey data in a succinct, effective, and informative way, and how much georeferenced data are available to explore.

I used this activity most successfully in a small upper-level biology course (11 students), being taught primarily over Zoom. This activity should be amenable to lower-level classes as well.

This activity can be completed in 90 minutes or a shortened version can be completed in 60 minutes, especially if the instructor has the students watch the redlining video ahead of time.

I followed up this simple activity with more in-depth activities where students filtered and found similar data on the same communities directly from the CDC and Census Bureau websites. I found it beneficial to explain the location ID’s that the Census Bureau uses for Census Tracts. I also followed up with activities that showed students how the data could be explored using ArcGIS online and EJSCREEN. These activities are not included in this project.

## **Suggested Budgeting of Class Time:**

### **Class Prior to the Activity (or Homework):**

* Assign or watch the redlining video prior to the activity: <https://youtu.be/kX_W_XRNHJ4> -
* Answer question #1 as a whole class and/or perhaps assign it as homework to be prepared for the next class time. If assigned to the whole class, pull together key and common components of the different definitions that students find or construct.

### **Class Session Used for Activity (Note these times are a little bit too short- the activity may generate discussion & you may want to spread it out over two class periods):**

* First 10-15 minutes
	+ Introduce the activity; refresh students’ memory as to the definition of redlining covered in the previous class or homework. If spreading this out over two class periods, consider taking more time to compare definitions of redlining and systemic racism. Redlining can defined specifically in reference to the HOLC maps or it can be more broadly defined as any discriminatory practice that prevents access to resources, especially financial, based on location or neighborhood and based solely on racial or ethnic demographics rather than an individual buyer/borrower’s actual financial qualifications. While it usually refers to the refusal to loan to someone living in particular areas, the definition has been expanded to refer to many services and resources that are denied certain neighborhoods (patterns of food deserts, city investment in plant trees, city investment in sidewalk upkeep, city investment in local health care facilities, availability of highway exits, availability of public transport, and others).
		- Narrow definition: The use of HOLC maps specifically to deny people in neighborhoods access to loans, based on the racial and ethic composition of that neighborhood.
		- Broader definition: Discrimination that results in any resource or service being less available for neighborhoods based on the racial or ethic composition of those neighborhoods. Examples of the resources or services could be: lack of food stores, trees, well-maintained sidewalks, health care facilities, highway exits
	+ Show the class how to use the University of Richmond “Not Even Past” site: <https://dsl.richmond.edu/socialvulnerability/> , make sure they understand how to find the information for question 4, and make sure students know what to turn in and when it is due.
	+ I created video to help prepare instructors to explain the website: <https://youtu.be/hOfx98pqRJ4> - and my recommendation is that the instructor, if needed, watch my video ahead of time and then just explain the NCRC website to their class themselves. However, if an instructor can also assign my video to the class.
	+ Try hard to keep the introductory material short – let the students explore the activity in their small groups without a lot of guidance.
	+ Focus the student’s attention on Question #4, 5 & 7 – these are the questions that I had students report on when they returned to the big group.
* Middle 15-20 minutes
	+ Break the class into small groups of 3 to 4 people and let them work through the questions in their small groups.
	+ Before setting the groups free, assign someone to report back on what cities the students chose & what patterns they observed.
	+ Visit the groups to make sure they are working together on the activity.
* Last 15 minutes and/or the next class period
	+ Have each group report on their answers to question #4, 5 and #7.
	+ Thank students for their input and ask them to complete the rest of the worksheet on their own and/or propose to finish the activity in the next class time and to submit the assignment electronically.
	+ You can always summarize or ask students to share their answers to other questions in the next class.
	+ Faculty member can combine the class data for a more quantitative comparison.
	+ Students in my class were surprised by how cancer did not follow the same pattern as some of the other chronic diseases.
	+ Connections can be made to other inequities in services and resources in the US, including the growing difficulties that rural communities face in comparison to urban areas for access to internet access and healthcare

This assignment was scored in an all-or-nothing effort-based grade in my class. Most of the worksheet questions include several sub-questions. I gave credit to students even if they didn’t answer all the sub-questions. There is no key to this activity because most of the questions are open-ended, and in most cases, there is no single right or wrong answer.

I really enjoyed reading the student responses, and it was helpful for me to learn that many students had never done class projects on these topics.

Additional resources that may be of interest:

Domonoske, C. (2016, October 19). Interactive redlining map zooms in on America’s history of discrimination. NPR. <https://www.npr.org/sections/thetwo-way/2016/10/19/498536077/interactive-redlining-map-zooms-in-on-americas-history-of-discrimination>

Hillier, A. E. (2003). Redlining and the Home Owners' Loan Corporation. *Journal of Urban History*, *29*(4), 394-420. <https://journals.sagepub.com/doi/abs/10.1177/0096144203029004002>

Overview of University of Richmond Mapping Inequality Project: <https://youtu.be/zIY2fzqeNcc>

Activist Organization with Policy Recommendations: <https://ncrc.org/holc-health/> (Site pop-up may appear asking for your email address; if you don’t wish to give your email address, click the tiny “No thanks” below the email field.)

University of Richmond Urban Renewal Site that Documents Relocation of Communities: <https://dsl.richmond.edu/panorama/renewal/#view=0/0/1&viz=cartogram>