

GOALS AND STANDARDS

1. Conduct authentic research about local public climate change perceptions.
2. Draw conclusions about local public climate change opinions based on data.
3. Consider sources of experimental error and limitations of data analysis when analyzing and interpreting data.

NGSS Science and Engineering Practices: Planning and carrying out investigations; Analyzing and interpreting data; Obtaining, evaluating, and communicating information

Common Core ELA Standards: RST.6-8.3, RST.9-10.3, RST.11-12.3, RST.9-10.9, WHST.6-8.7, WHST.9-10.7, WHST.11-12.7

Common Core Math Standards: MP.2, MP.4, MP.5, MP.6, 6.RP.A.3

LEVEL

11-12 grade or anyone looking to use data visualization and analysis, surveying, and writing skills in real world applications of climate change communication science.

BACKGROUND



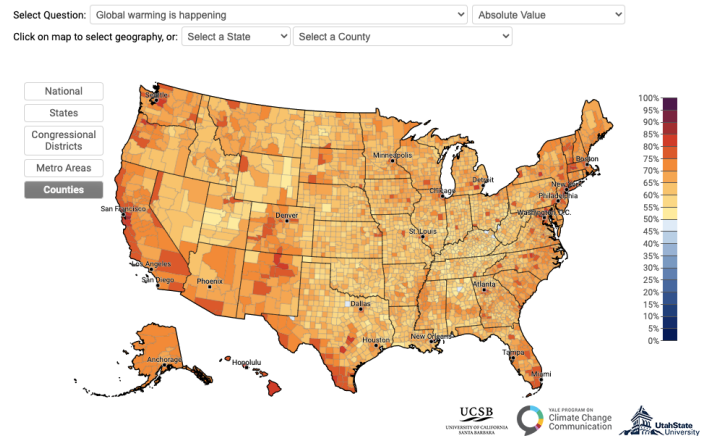
The Yale Climate Opinion Maps (YCOM) allow users to visualize and explore differences in public opinion about global warming in the United States in unprecedented geographic detail. The Yale Program on Climate Change Communication regularly updates YCOM using national survey data in order to accurately reflect current public opinion. The interactive and up-to-date nature of this tool makes it a perfect model for students to manipulate in order to explore beliefs around climate change both locally and nationally.

ACTIVITY DESCRIPTION (120 MINS)

In this activity, students will collect their own data by interviewing people in their communities using YCOM questions.

They will then compare their data to YCOM data and identify changes they could make to their own studies to improve the reliability of their data. The activity guides students through this process in a stepwise fashion. Ultimately, the Climate Change Communication Investigation activity integrates science, math, and civics to help students learn how science works and how their community thinks about climate change.

Estimated % of adults who think global warming is happening (72%), 2020



TIPS FOR SUCCESS

- Don't feel as though students need to do this whole activity in one class period. Students can work through this over the course of a few days.
- Middle schoolers may do better by focusing only on one research question and/or only making comparisons between their data and their county's data.
- Since it will take students different amounts of time to survey ten people, you can make the interview portion of the activity a homework assignment. Or, if you do the surveying during class, you can give students who are done early another one of our activities to complete while others finish. We recommend [Navigating the Yale Climate Opinion Maps](#) or [Connecting Data to Storytelling](#)!
- While it is valuable for students to collect their own data through surveying, we understand that timing and circumstances may not allow for that. If you are unable to have your students conduct a survey, you can have students use the sample data on the following page.

- Since students are asked to survey only ten people, and the ten people can be people that they know, their survey will contain several significant sources of error (small sample size that may not be representative of the community as a whole, bias, only conducted once). Students will be asked to identify those sources of error when comparing their data to YCOM data, so it is important that they have a solid understanding of what sources of error are and how to address them to improve the reliability of experimental results.

SAMPLE DATA

If students are not able to collect their own survey data, they can use the sample data below. Let’s say that this sample data is from Socorro County, New Mexico.

Question	Yes (tally)	No (tally)
Global warming is caused mostly by human activities.	HHH III	II
Global warming will harm me personally.	III	HHH I
Schools should teach about global warming.	HHH III	I