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Antarctic Ice: Past and Present

Post-lecture Discussion Guide

- 1) Where have you traveled that inspired you with awe and wonder? Where have you had experiences at home that filled you with those feelings? How have such experiences changed you or given you new perspectives?
- 2) Most of us see ice every day – ice cubes in our drinks in summer, ice on the sidewalks in winter. However, the scale of ice in Antarctica is much, much larger with icebergs that are larger than entire city blocks being common occurrences. How does size matter in human perception? Why is a large iceberg visually stunning while an icy patch on the ground is often just annoying? What are other examples of things in your daily life that become magnificent when they are observed on much larger scales?
- 3) This talk gave examples of how scientists determine information about past climates using Antarctic ice cores. They can't measure most characteristics of the past directly so they often use proxies – chemicals they can measure today that can be used to give

insight about climate in the past. What are other examples when people can't measure things (scientific or otherwise) directly so need to use proxies to make insights?

- 4) Do you think it is important to learn about past climates in order to understand the current climate crisis? Why or why not?
- 5) What are some current or predicted climate change consequences that matter a lot to you? Why do those effects grip you more than others?
- 6) How is climate change already influencing your local area? What policies might your town/county/state enact to try to slow climate change?

Resources for Further Learning

To Read:

<https://www.nytimes.com/interactive/2021/12/13/climate/antarctic-climate-change.html>:

An interactive newspaper piece describing how the ocean around Antarctica affects the climate of the entire planet, the history of Antarctic ocean waters, and modern oceanographic methods used to study the Southern Ocean.

To Explore:

<https://climate.nasa.gov/> : NASA has an excellent website on climate change with many resources and information on various aspects of climate change. A good starting place is to read the article on why climate change is happening <https://climate.nasa.gov/causes/> and the piece on the effects of climate changes <https://climate.nasa.gov/effects/> .

To Watch:

“Antarctica: A Year on Ice” (film from 2014): This full-length documentary has stunning cinematography from Antarctica. This movie is about the people who live and work in Antarctica, primarily at the US scientific base at McMurdo. It has very interesting personal stories and amazing scenic photos, including a plethora of spectacular time lapse photography. (Available on Amazon, free with prime video:

<https://www.amazon.com/Antarctica-Year-Ice-Anthony-Powell/dp/B083ZHBFFV>)