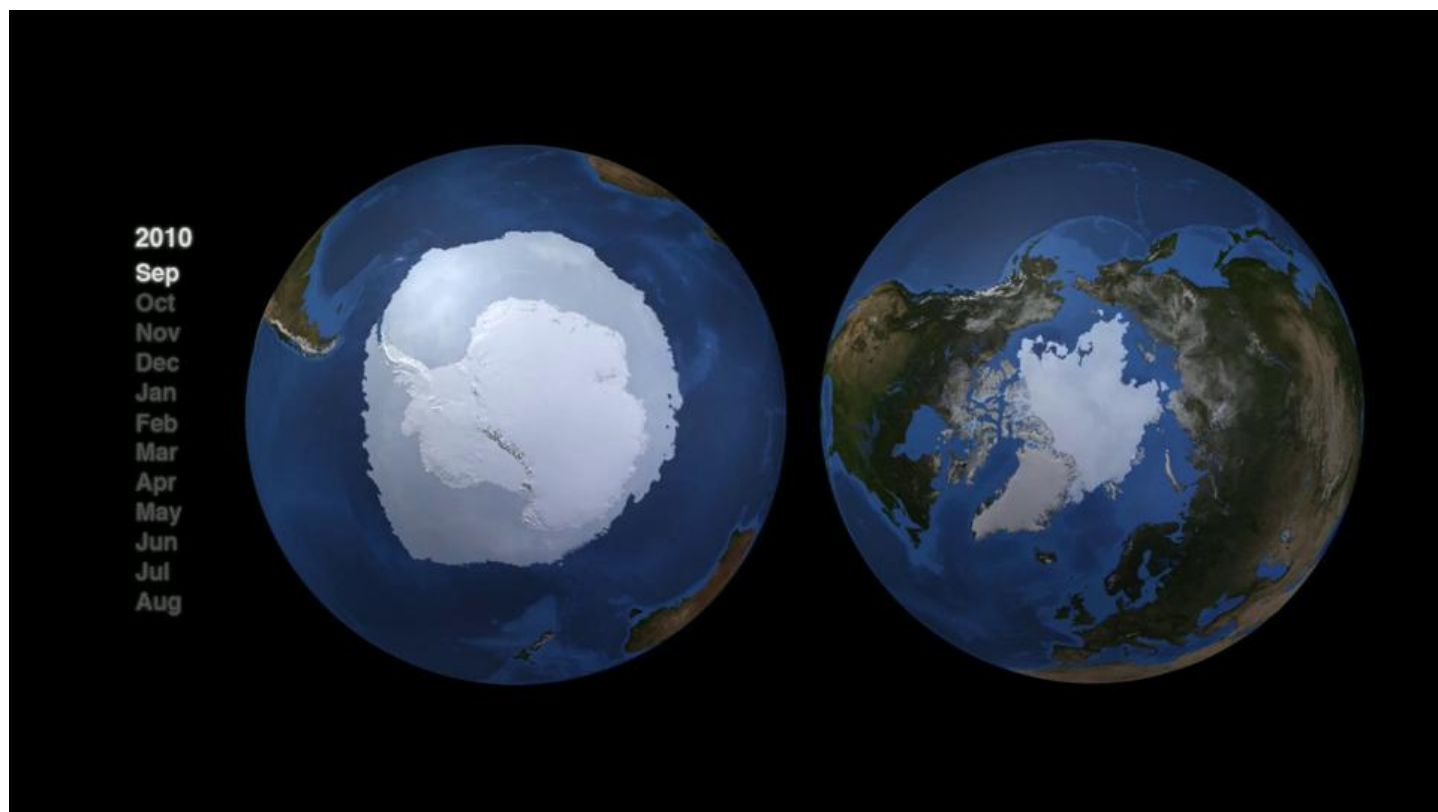

My NASA Data - Mini Lesson/Activity

How does the Cryosphere change over the seasons?



Student Directions

Explore the spatial patterns observed in meteorological data and learn how this information is used to predict weather and understand climate behavior. By observing patterns in data we can classify our observations and investigate underlying cause and effect relationships.

Seen side-by-side, snow and sea ice in the Northern and Southern Hemispheres pulse at exact opposite times of year, constantly out of phase. The extent of yearly change at the extreme poles of our planet is an annual pattern that illustrates that similar forces are at work on distant parts of the Earth. Moderate Resolution Imaging Spectroradiometer (MODIS) data from the near-polar-orbiting Terra and Aqua satellites were used for this visualization.

Watch the video [Seasonal Ice \(2012\)](#) and answer the questions.

[Video: Seasonal Ice \(2012\)](#)

Video

Seasonal Ice (2012) | <https://www.youtube.com/watch?v=DCrpkX88BCw> | Source: NASA Scientific Visualization Studio

Steps:

1. Check with your instructor on how to submit your answers.
2. Describe the phenomenon you observe.
3. Identify the patterns you see in this model.
4. What are the limits of this model?
5. What evidence of Earth System interaction (among Atmosphere, Hydrosphere, Biosphere, Cryosphere, Geosphere) do you see?

Teachers, these mini lessons/student activities are perfect "warm up" tasks that can be used as a hook, bell ringer, exit slip, etc. They take less than a class period to complete. Learn more on the "[My NASA Data What are Mini Lessons?](#)" page.

Teachers who are interested in receiving the answer key, please complete the [Teacher Key Request and Verification Form](#). We verify that requestors are teachers prior to sending access to the answer keys as we've had many students try to pass as teachers to gain access.

My NASA Data Visualization Tool

- [Earth System Data Explorer](#)