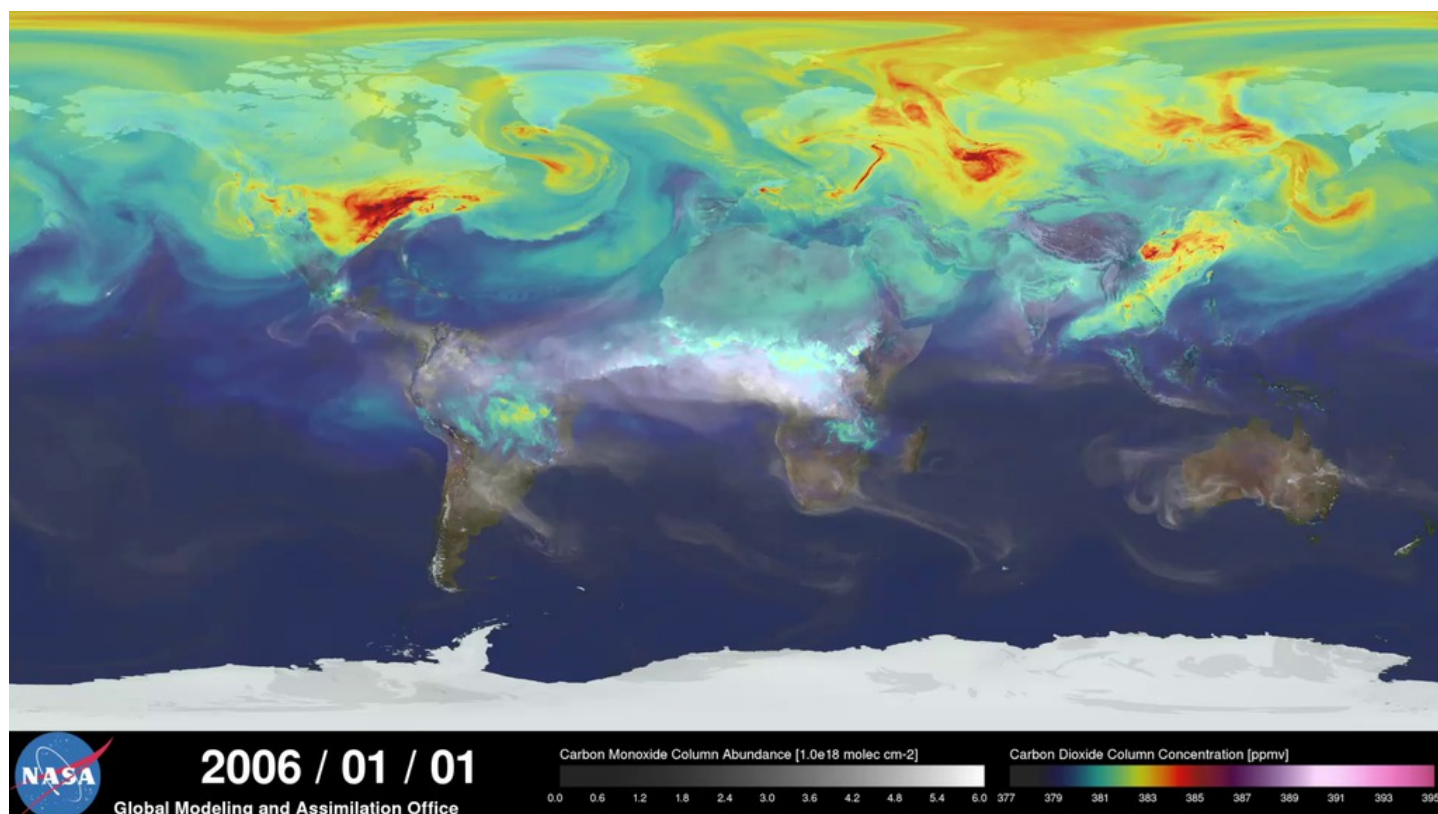


My NASA Data - Mini Lesson/Activity

Systems and System Models: Observing Carbon Dioxide in the Atmosphere



Student Directions

The video [A Year in the Life of CO₂](#) displays a high-resolution NASA computer model called GOES 5. This model has given scientists a new look at how carbon dioxide travels in the atmosphere. Plumes of carbon dioxide swirl and shift as winds disperse the greenhouse gas away from its sources. This video also illustrates the different levels of carbon dioxide in the northern and southern hemispheres of Earth. This includes distinct swings in global carbon dioxide concentrations as the growth cycle of plants and trees changes with the seasons.

Review the video and answer the questions that follow.

[Video: NASA | A Year in the Life of Earth's CO₂](#)

A Year in the Life of Earth's CO2 | <https://www.youtube.com/watch?v=x1SgmFa0r04> | Source: NASA Goddard

Steps:

1. Check with your instructor on how to submit your answers.
2. Describe the phenomenon you observe in the video.
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](#)