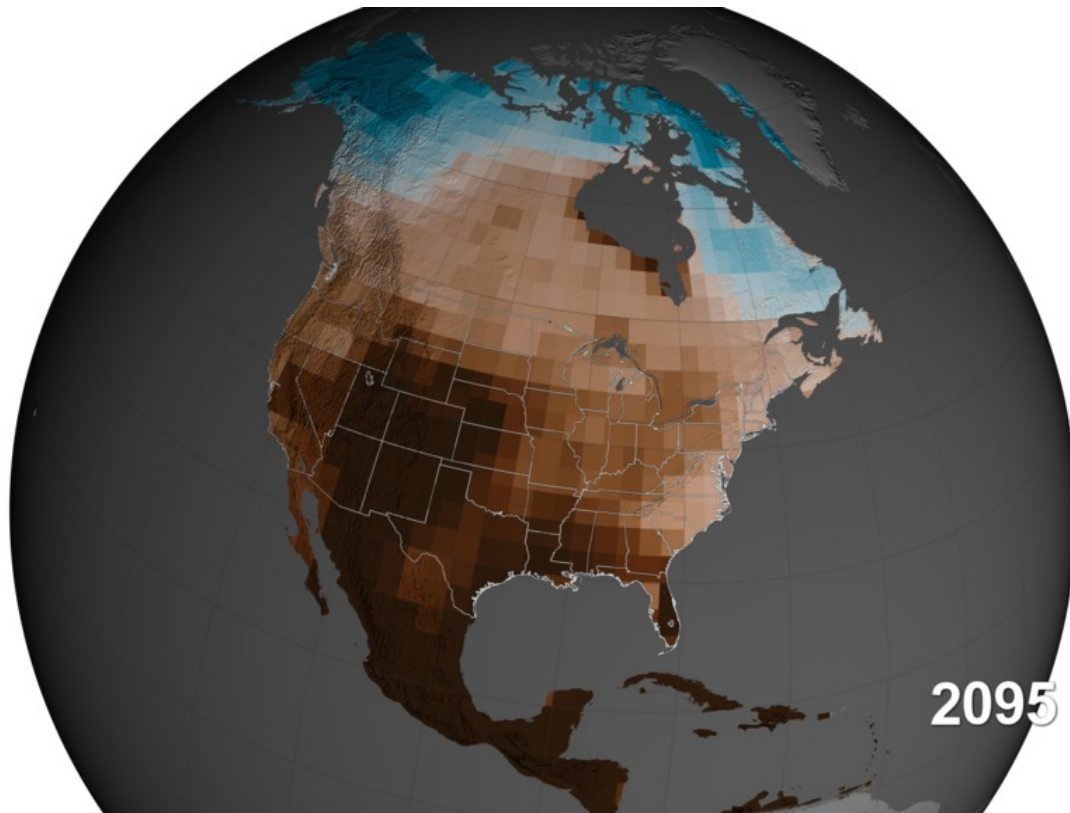

My NASA Data - Mini Lesson/Activity

Systems and System Models: Megadroughts in our future?



Student Directions

Drought conditions have affected much of the United States in recent years. Scientific data helps scientists develop models that describe Earth processes and project future scenarios in climate. Scientists now believe future droughts could increase. Computer models of soil moisture show increasing greenhouse gas emissions. They are driving up the risk of megadroughts which are droughts lasting more than 30 years.

Review the video [System Models: Megadrought](#) below and answer the following questions:

[Video: System Models: Megadrought](#)

Video

System Models: Megadrought | <https://www.youtube.com/watch?v=LhpjBsMveKA> | 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 do 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](#)