
My NASA Data - Mini Lesson/Activity

Observing Earth's Cryosphere

Grade Band

- 3-5
- 6-8

Time

- 15 minutes

Overview

Students watch the video Frozen Earth and answer the following questions that discuss how ice helps moderate the planet's temperature using NASA satellites.

Student Directions

Ice covers 10 percent of Earth's surface and helps moderate the planet's temperature. Glaciers and ice sheets around the world are melting at an alarming rate. By keeping an eye on Earth's ice from space, NASA satellites help us understand the global effects of climate change.

Complete the questions while watching the video [Frozen Earth](#).

[Video: Frozen Earth](#)

Steps:

1. Check with your instructor on how to submit your answers.
2. Review the various images of the Earth's Cryosphere.
3. Identify at least three different forms of ice that are shown in the video.
4. Describe how ice can moderate temperatures on Earth?
5. What NASA satellite missions are studying ice?
6. Describe what is happening to the annual sea ice minimum?
7. Why does NASA study ice from space?

Teacher Note

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.

NGSS Three Dimensional Learning

NGSS Disciplinary Core Ideas

- ESS2A: Earth Materials and Systems

Crosscutting Concepts

- Cause and Effect

Science and Engineering Practices

- Developing and Using Models
- Constructing Explanations and Designing Solutions
- Obtaining, Evaluating and Communicating Information