My NASA Data - Interactive Models

Space Weather StoryMap

Grade Band

- 6-8
- 9-12

Time

- 1 week

Directions

1. Using an internet accessible device, students open the link to the Space Weather StoryMap to begin their exploration of this phenomenon.
2. Distribute the Space Weather StoryMap Student Data Sheet. Have students navigate on their own through the Engage, Explore, Explain, Elaborate, and Evaluate tabs of the StoryMap to answer the questions and complete the activities on their student data sheet.

Teacher Note

Space weather is caused by the solar wind, which is a constant flow of charged particles from the Sun.

To learn more, visit:

- The **Space Weather Phenomena** page for background information.

While this StoryMap is intended to be used with students who have access to the internet in a 1:1 or 1:2 setting, teachers may pull various visualizations to use in singularity or may assign parts of this StoryMap without assigning the full resource. Please see our Google Forms and Sheet for tools that can be modified to fit your instructional needs.

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.

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NGSS Three Dimensional Learning

NGSS Disciplinary Core Ideas

- PS1A: Structure and Properties of Matter
- PS2A: Forces and Motion
- PS4A: Wave Properties
- PS4B: Electromagnetic Radiation
- ESS1A: The Universe and its Stars

Crosscutting Concepts

- Patterns
- Cause and Effect
- Systems and System Models

Science and Engineering Practices

- Developing and Using Models
- Analyzing and Interpreting Data
- Obtaining, Evaluating and Communicating Information

Learning Objectives

- Learners will be able to identify the causes and effects of space weather.
- Learners will be able to describe the relationship between activity on the Sun and space weather in near-Earth space.
- Learners will be able to describe how and why NASA missions study the Sun.
- Learners will be able to analyze space weather data and make predictions.

Essential Questions

1. What is space weather?
2. How does space weather affect Earth?
3. How does NASA study the Sun-Earth system in order to predict space weather?

Google Docs Interactive Files

Student Sheets (All Es)

Google Forms Interactive Files

Engage Student Form