



Curriculum Units by Fellows of the National Initiative
2021 Volume IV: The Sun and Us

Using Case Studies to Understand the Sun's Influence on Earth's Climate System in 3rd Grade

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This unit is written for teachers of 3rd grade students and is aligned with the latest Next Generation Science Standards for 3rd grade Earth Science topics about weather and climate. These include obtaining and combining data to describe climates in different world regions, representing weather data using charts and graphs, and making a claim about the merit of a design to reduce the impact of a weather-related hazard.

Students will begin this unit by viewing a news report about an interesting, real-life phenomenon that occurred in Guadalajara, Mexico in June of 2019. Residents were shocked to wake up to the aftermath of a massive nighttime hailstorm unlike anything they had ever seen. Engaging phenomena gives what they are learning a sense of purpose as they develop questions and acquire information to help them make reasonable conclusions. This hailstorm is one of several interesting events that will help students learn about the Earth's Climate system. This, in turn, leads to an examination of our Sun and how the Earth's atmosphere and magnetic fields interact with the Sun's energy and radiation.

The unit culminates with students designing a solution to a weather-related problem.

(Developed for Elementary Science/STEM, grade 3; recommended for Elementary Science, grades 2-4)

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