**6th Grade**

**Literacy Fusion Article: “More lightning strikes predicted for the years ahead”**

Almost everyone is aware of the potential power and intensity of a developing storm, especially if caught outdoors when serious cells of conflicted clouds begin to roll violently overhead in a darkening sky.

While most us understand the danger of being caught outdoors by tumultuous weather, most might be surprised to discover new climate models are now predicting an increase in the number of lightning strikes in the years ahead, the result of warming temperatures.

In the Nov. 14 issue of the journal Science, faculty climate scientist David Romps, University of California (UC) Berkeley, warned that after studying data and developing predictions related to precipitation and such factors as cloud buoyancy across multiple climate models, a marked increase in lightning strikes appears certain in the future.

"With warming, thunderstorms become more explosive," said Romps, who also serves as an assistant professor of earth and planetary science and a faculty scientist at Lawrence Berkeley National Laboratory. "This has to do with water vapor, which is the fuel for explosive deep convection in the atmosphere. Warming causes more water vapor in the atmosphere, and if you have more fuel lying around, when you get ignition, it can go big time."

Romps' predictions, the result of cooperative research with a number of colleagues, represent a pioneering effort in determining long-range forecasts of weather-related electrical activity. While previous studies have shown changes in lightning associated with seasonal or year-to-year variations in temperature, no reliable analyses have been available for an extended period of warmer weather and its influence on lightning activity.

Researchers plotted lightning strike data across the U.S. for August and September of 2011 and set about animating the data to determine contributing factors to heightened electrical activity. This data led researchers to better base predictions for long-range lightning activity in the future.

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