

Announcements



Earth Gauge Video: Discuss trends in [heavy rain events](#) in the U.S. Videos may be freely used on-air, online and in community outreach.

Hurricane Katrina: The five-year anniversary of Katrina takes place this weekend. Visit NASA's [Satellite Video Retrospective](#).

Minneapolis-St. Paul, MN

Link: <http://www.earthgauge.net/2010/school-days>

Earth Gauge: School Days

This is the time of year when many students head back to school. Did you know that up to 20 percent of weekday morning traffic is school-related? Living in areas with lots of traffic can prompt even more parents to drive children to school to ensure safety. Increased traffic and idling vehicles create air pollutants that can aggravate asthma and other respiratory conditions. Kids are more susceptible to health effects from poor air quality because their systems are not fully developed and because they spend more time engaged in high activity levels, which causes them to breathe more deeply.

Viewer Tip: The U.S. Environmental Protection Agency is already monitoring outdoor air quality at schools around the country to look for air pollutants of concern and devise ways to improve air quality near schools. If you drive your kids to school, you can help reduce traffic and improve air quality with these tips:

- **Avoid idling.** If you spend time waiting during drop-off and pick-up times, kill the engine. An idling car creates air pollutants...and gets zero miles per gallon.
- **Carpool.** Team up with other parents in the neighborhood and take turns driving kids to school to cut down on morning traffic.
- **Walk or bike.** If the weather is nice and school is nearby, encourage your kids to walk or bike to school. If you are concerned about safety, help kids map out a safe route to school and make the trip with them.

(Sources: US EPA. Children's Health Protection. "Designing Healthier Communities for Healthier Children." <http://yosemite.epa.gov/ochp/ochpweb.nsf/content/nphw2006.htm>; International Walk to School, "Air Quality and the Environment," <http://www.walktoschool.org/why/environment.cfm>)

Climate Fact: Wheat, Nitrogen and CO2

Link: <http://www.earthgauge.net/2010/climate-fact-wheat-nitrogen-and-carbon-dioxide>

In Brief: Wheat grown under elevated ambient carbon dioxide levels is less nutritious than wheat grown under current levels.

Atmospheric carbon dioxide (CO₂) is a key plant nutrient, as carbon is the primary building block of all life on Earth. Other building blocks, however, are just as essential. Nitrogen, for example, is the mineral that plants require in the largest quantity. As atmospheric CO₂ concentrations have risen from 280 parts per million to 390 over the last few centuries, scientists have started to ask questions about what this change will do to plant growth. More CO₂ appears to stimulate growth in some plants, notably parasitic climbing vines, poison ivy and weeds like Canadian Thistle. In other plants, which use different methods to convert carbon into plant matter, more CO₂ can also affect a plant's ability to absorb nitrate, the most common nitrogen compound found in agricultural soils. Experiments done on wheat show that when this crop is grown under CO₂ concentrations of twice today's levels, there is a 7.4 to 11 percent decline in the protein content of the wheat grains, making the grain less nutritious.

(Sources: Bloom, AJ et al. "Carbon Dioxide Enrichment Inhibits Nitrate Assimilation in Wheat and Arabidopsis." *Science* 328 (2010): 899-903 and Phillips, OL et al. "Increasing dominance of large lianas in Amazonian forests." *Nature* 418 (2002): 770-774 and "As CO₂ Levels Rise, Plants—and Humans—Respond." *Agricultural Research Magazine*. USDA Agricultural Research Service, Nov. & Dec. 2009. Web. Nov. 2009: Vol. 57, No. 10.)

Climate in the News: Staats, Eric. "Collier getting wetter and Lee warmer, UCF climate study shows." – Naples Daily News, August 22, 2010 –

<http://www.naplesnews.com/news/2010/aug/22/collier-getting-wetter-and-lee-warmer-ucf-climate/>

The historic relationship between temperature, rainfall and plants in Florida is discussed in a recent University of Central Florida study.

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Knowledge to live by

Earth Gauge® Statement on Climate Change Science: <http://www.earthgauge.net/climate>

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