Science literacy enlightens and enables people to make informed choices, to be skeptical, and to reject shams, quackery, unproven conjecture, and to avoid being bamboozled into making foolish decisions where matters of science and technology are concerned. Science literacy is for everyone—scientists, artists, humanists, all professionals, the general public, youth and adults alike.

>> Bassam Z. Shakhashiri
GLOBAL WARMING IS UNEQUIVOCAL

The zone color key shows the lowest observed winter temperatures in that area.

Ice-and ice-off dates for Lake Mendota from the winter of 1852-3 to 2011-2.

ice off is 2 weeks earlier since 1852

ice on is about 2 weeks later since 1853
Science and society have a social contract that enables great intellectual achievements but comes with mutual expectations of benefiting the human condition and protecting our planet.

In a free and civil society, people must be virtuous as well as skilled. Scientific knowledge, proficiency, and technical skills must be harnessed to ensure responsibility and stewardship.

>> Bassam Z. Shakhashiri
**What can you do?**

- Increase your scientific knowledge of climate change.
- Commit to taking responsible action to help mitigate global warming.
- Initiate and sustain conversations in your research group about global warming.
- Engage your family, friends, and others in conversations about global warming.
- Be respectful, trustworthy, and confident in what you say about global warming.
- Keep in touch with us, in person, and electronically at scifun@chem.wisc.edu

- Buy less stuff. (Reduce/Reuse/Recycle)
- Change those light bulbs. (And turn them off.)
- Use a programmed thermostat.
- Eat less meat. (Especially beef)
- Walk, bike, use more public transportation. Fly less.
- Switch to a car with better fuel economy or an electric vehicle.

**IN EVERY ELECTION**

**Raise your voice...**

- Union of Concerned Scientists: ucsusa.org
- Citizens’ Climate Lobby: citizensclimatelobby.org
- Skeptical Science: skepticalscience.com
- Project Drawdown: drawdown.org
- ACS Climate Science Toolkit: acs.org/content/acs/en/climatescience.html

---

**THE KEELING CURVE**

Latest CO$_2$ reading: 410.28 ppm

November 12, 2019

Carbon dioxide concentration at Mauna Loa Observatory

1 ppm CO$_2 = 8,000,000,000,000$ kg

= 8 Gt (gigaton)

= 1 ton/person

---

*Science is Fun*

*In the Lab of Shakhshirni*

*www.scifun.org*