**Unit 2.2 Soil Carbon**

Background information for this activity can be found at <http://serc.carleton.edu/eslabs/carbon/5a.html>.

This site provides information on the carbon cycle, what lives in soil, what soil is made of and how soil behaves under different environmental conditions.

In lieu of completing your own soil carbon respiration experiment described on the website, use the data from Bekku et al., 2003:

Bekku, Yukiko Sakata, et al. Effect of warming on the temperature dependence of soil respiration rate in arctic, temperate and tropical soils. *Applied Soil Ecology* 22.3 (2003): 205-210.

1. Use the data tables provided in the paper to plot respiration response as a function of temperature for each site.
2. Summarize the observed effects of temperature on soil respiration.

In your 5 - 10 minute group presentation, include the following elements:

* What is the main idea?
* How does this method work?
* What kind of results were obtained using this method?
* How is the data analyzed? Where should it be used? Over what timescales is it useful?
* What are its advantages and disadvantages?
* What are the limitations to this method of analysis?
* How is this relevant to the Critical Zone?