**Lesson Plan: Lecture 2**

**Green Chemistry: Reimagining Chemistry**

**Description**

In this class students will learn the definition of Green Chemistry and reflect on the last 25 years of Green Chemistry innovation. They will also explore the main drivers to implement Green Chemistry throughout the world and some of the latest Green Chemistry trends.

**Prior to Lecture**

Optional/Supplemental Readings:

* Anastas, Paul T.; “Meeting the Challenges to Sustainability through Green Chemistry”; *Green Chem.* 2003, *5*, G29-G34. <http://pubs.rsc.org/en/content/articlehtml/2003/GC/B211620K>
* Collins, T.; “The Importance of Sustainability Ethics, Toxicity and Ecotoxicity in Chemical Education and Research”; *Green Chem.*; 2003, *5*, G51-G52.

<http://pubs.rsc.org/en/content/articlehtml/2003/gc/b307694f>

* Our Common Journey - Executive Summary. Board on Sustainable Development, National Research Council, 1-14. <http://www.nap.edu/catalog.php?record_id=9690>
* Beach et al; “Green Chemistry: A design framework for sustainability”; *Energy Environ. Sci.*; 2009, *2*, 1038–1049.

http://pubs.rsc.org/en/Content/ArticleLanding/2009/EE/b904997p

**Topics to Cover in Lecture**

* Icebreaker – Definition of Green Chemistry
* What is Green Chemistry? (provides examples)
* What drives Green Chemistry?
  + DDT
  + Climate change
  + Carbon emission reduction
  + Depleting resources
* 25 years of Green Chemistry and innovations
* The future of Green Chemistry

**Class Exercise (Optional)**

The class begins with an Ice Breaker activities (slide #2). Students are asked to do the following:

* Using a piece of paper, draw a picture what you think Green Chemistry means and looks like.
* Or write a couple of sentences about Green Chemistry.
* Can be one drawing or a collage of images.

Provide 5-10 minutes for students to draw, or write. Then, ask students to share with the class. You may opt to perform this exercise again at the *end* of the course, making note of how student perceptions have changed.