**Lesson Plan: Lecture 11**

**Renewable Feedstocks**

**Description**

In this class students will learn about renewable feedstocks. More specifically, the lecture will focus on what a renewable feedstock is and the criteria necessary to identify appropriate materials for future feedstock.

**Prior to Lecture**

Required Readings:

* “Green Chemistry: Theory and Practice”, Anastas and Warner, Oxford University Press, 1998. Ch. 4 Section 7
* “Green Chemistry: Theory and Practice”, Anastas and Warner, Oxford University Press, 1998. Ch. 6

Optional/ Supplemental Readings:

* “Chemistry in Context”, 8th Edition, McGraw Hill Education. Ch. 9.1-9.10, 12.6

Videos

* [Feedstocks](https://youtu.be/088WCtNjYIE)
* [Feedstocks\_Renewable\_Feedstocks](https://youtu.be/5-TtEE5C2_E)
* Feedstocks (in PowerPoint)

**Topics to Cover**

* What is a renewable feedstock
* Renewable feedstock vs. Depleting feedstock
* Criteria for a renewable feedstock
* Why use renewable feedstocks
* Current and future challenges with renewable feedstocks

**Class Exercise**

* No class activity for this lecture.

**Supplemental Material**

* Bakery Waste to Chemical
* Food Waste Biomass
* Bio-based polycarbonate from Limonen Oxide and CO2
* Polymers of Limone Oxide
* Ultrasonic and catalyst free expodiation of Limonene