

CLASS 5
INTRODUCTION AND LIST OF RESOURCES

I. Introduction

The fifth class focuses on solid waste, composting, ground contamination and the legal system surrounding the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA” or the “Superfund” law). The class also involves an introduction to solid waste, and a demonstration of two methods of composting. The student activity is to role-play different parties at a contaminated superfund site, with students arguing before a judge why they should not be held liable.

The first demonstration involves a worm bin and the second is a homemade “bioreactor” made from soda bottles. A wormbin uses worms to decompose household waste into compost. A bioreactor uses bacteria to do the same. These demonstrations require more preparation ahead of time than some of the other classes. Instructions on how to make a worm bin are available at <http://compost.css.cornell.edu/worms/wormhome.html>, and at other websites listed below in the resources section. Preparations on where and how to obtain the worms should be made at least a month before the class, as ordering worms can take several weeks. Also, the worm bin should be created a week before the class, as it is time consuming and difficult to do last minute.

Composting worms (redworms) can be purchased online at numerous sites. However, redworms also occur in abundance naturally. If you have access to an existing compost pile (essentially, an old leaf pile in the backyard) you can dig up enough worms to have a demonstration. The compost pile can also provide some finished compost for demonstration.

The bottle reactor(s) should also be prepared ahead of time. Instructions for making a bottle reactor are available at <http://compost.css.cornell.edu/soda.html>, and at several other sites listed below in the resources section. Ideally, you should make one bioreactor two weeks ahead of time and then another the day before the class. This way the students can see the amount of decomposition that occurs in two weeks. Getting the materials for these (especially the thermometer) can be difficult, so plan accordingly. The positive part of all the preparations is that the students are very engaged. Despite some initial shrieks, almost every student will touch the worms and the compost. However, this can be a drawback, as bringing the energy level down to discuss CERCLA can be difficult afterwards.

While the CERCLA discussion can be difficult for the students to understand, it is one of the best opportunities to show the students what environmental lawyers do. Keep in mind that the students need to understand the basics of CERCLA so that the activity at the end of the class makes sense. The student activity involves role playing various potentially responsible parties (“PRPs”) at a CERCLA site, with groups of students representing the different PRPs. Each group of students must devise an argument and present it to the judge, explaining why they are not liable and also advocating for a low share of the remediation costs if they are liable. One or two firm individuals can play the judge (or the teacher can be a judge too). Each group of students should determine their strategy regarding the two questions in the problem (liability and share of costs). One of the students from each group then presents their arguments to the judge,

who should ask questions of them to test their arguments (or help them along if they are having difficulty).

The CERCLA activity provides a good opportunity to discuss environmental liability, and the policies behind it. It also is a good chance to show the students the equities in environmental law, and that everyone can be liable, even for decades old conduct.

We suggest having two class leaders to present the concepts. In addition, at least five firm members should attend, so that each group of students has an adult assigned to help the students understand the issues and keep them on task during the activity.

Tips:

- Make sure the class leader is interested in composting, as the composting portion of the class takes more time, and involves getting your hands dirty. Otherwise, it might be best to revise the class to focus on a different aspect of solid waste, such as recycling.
- Bring a pair of plastic gloves and paper towels to hand out worms to the groups (these help some of the more squeamish students touch the worms).
- Supervise the worm handlers carefully to make sure things do not, literally, get out of hand.
- Borrow an old graduation robe for use by the judge during the hearing on CERCLA liability. This adds to the legal atmosphere of the activity.
- Check with the teacher ahead of time whether they are interested in keeping the composting experiments, or whether you should take them back with you.

II. Resources

Many local municipalities have composting programs, whether it is simply Christmas tree pickups or a more rigorous program. These can be valuable sources of information and resources, as well as good examples of composting in action. Additionally, the websites below are a good place to begin for general and specific information.

EPA

Solid Waste - <http://www.epa.gov/swerrims/>

Superfund - <http://www.epa.gov/superfund/>

Kids Page - <http://www.epa.gov/superfund/kids/index.htm>

Cornell Composting Site

General - http://compost.css.cornell.edu/Composting_homepage.html

Soda Bottle Composter - <http://compost.css.cornell.edu/soda.html>

Worm Bins - <http://compost.css.cornell.edu/worms/wormhome.html>

Purchasing Worms

List of Canadian and U.S. worm dealers - <http://www.cityfarmer.org/wormcomp61.html>

Miscellaneous

Deluxe Soda Bottle Composter -
<http://teams.lacoe.edu/documentation/classrooms/gary/plants/activities/articles/composting.html>
and
<http://www.leeric.lsu.edu/le/kids/compost.htm>

Worm Composting - <http://www.cityfarmer.org/wormcomp61.html>
CERCLA Primer - <http://www.law.pitt.edu/fox/COMMON%5CCRCLPRMR.HTM>
Synagro (Biosolids) - <http://www.synagro.com/>
Waste Management Inc. - <http://www.wm.com/>
NRDC - <http://www.nrdc.org/cities/recycling/default.asp>