**THE PROBLEM IS TRASH! SSL Lesson for the 6th Grade Residential Program**

**Students will** take a closer look at their school’s garbage and develop strategies for reducing what flows into the waste stream. During the first evening, students will deconstruct the trash and plan follow-up actions in their schools or communities. Students will test strategies by trying to reduce the amount of trash during subsequent outdoor education meals. Trash and recyclables will be weighed and compared to the first lunch.

**Materials**

* Garbage can of trash from one meal
* Recycling bin from one meal (multiple bins if the outdoor education center uses different bins in the cafeteria to sort recyclables).
* sturdy containers or buckets for sorting trash
* Gloves: Heavy-duty rubber kitchen gloves that can be cleaned reused are best. Disposable latex, plastic or rubber gloves can be used.
* Tarps to prevent floor or tables from getting messy
* Chart paper and markers, or flipchart
* Optional: Laminated labels for sorted trash (“food & liquid wastes”, “true trash”, “recyclables”)

**Pre-class Preparation**

* During the first outdoor education lunch ask students to eat their lunch then pack all of their waste back into their lunch sack for the KP to place in the trash can. That way all of the trash stays somewhat together and will be easy to sort later. Recyclables can be emptied of their liquid and placed in the recycling bin. Be sure to keep the bags of trash before building services takes them to the dumpster!
* Create chart paper signs entitled “Strategies to Reduce Trash” or prepare flipchart for introduction, strategies list, and reflection
* Pull several lunch bags out of the trash and place in bins – one bin for each of the groups you will have at the session.

**Evening Session: Deconstruct the Trash**

**Set Up:**

Divide students into groups of 8-12. Place one empty bin in the center of each table or area for each group. Add a few gloves to each bin. Students only need one glove and not every student has to have a glove.

**Introduction:**

**SSL Overview:** Share with students an overview of SSL, the graduation requirement, and the three components of SSL.

**Trash:** Lead a discussion about the current problems associated with trash. Our goal will be to develop some strategies that can reduce trash. In order to develop these strategies, it will be important to actually examine our trash. There will be three stages to our deconstruction. Review the definition of deconstruction and some basic expectations about behavior and cleanliness.

**Deconstruct the Trash:**

**Stage 1: Food and Liquid Wastes**

Give each group a bin of lunch trash and instruct them that the first step is to remove food and liquid wastes. They will move food and liquid waste from the bin of trash into the empty bin. Remove packing when possible (not for liquids). Only students with gloves should touch the trash. The other students can help open bags and decide what is considered food waste and what is not.

Give students 3-5 minutes to deconstruct food and liquid then do a show and tell for each group.

Brainstorm what can be done to reduce food and liquid wastes during subsequent outdoor education meals, at school and at home. Some ideas students may come up with include:

* + Finish your drinks and eat all of your meal.
	+ If possible, don’t take (or bring) items that you aren’t going to eat.
	+ Package food and drinksin containers that can be reused so food and drinks can be saved for later.
	+ Compost food wastes (for example, peels from fruits and vegetables). Some food wastes can be naturally converted to soil by decomposers instead of being added to the solid waste stream. This may not be a feasible strategy for outdoor education centers and schools, but it is a strategy used by many households and businesses.

**Stage 2: Recyclables**

The next stage will be to remove recyclables. Review with students what can be recycled at school and/or at home.

Give them 3 minutes to move recyclables from the trash bin to the empty bin, adding the recyclables to the food and liquid wastes.

Brainstorm how recyclable items may be used in place of non-recyclables at meals.

* + - Does the center need to use better labeling for sorting trash and recyclables?
		- What improvements would students suggest? (Posters, photos, signs, etc.?)
		- If the outdoor education center does not recycle, would it be possible for the school to “pack out” recyclables?

**Stage 3: True Trash**

What is left in the initial trash bin? We call this true trash. Share what kinds of true trash are left.

 Follow the same procedures as those for food wastes with two or three new volunteers. Place the examples in the second bucket or container.

Brainstorm what can be done to reduce true trash. Some “reduce & reuse” ideas students may come up with include:

* Pack food in reusable and recyclable containers.
* Use reusable or recyclable cups, dishes, silverware, etc.
* Purchase items in bulk to reduce the amount of packaging used and store bulk items in reusable containers.
* Try to avoid using paper or plastic bags when shopping. Instead, bring and use reusable shopping bags.
* The key is REDUCE – then reuse, then recycle

**Clean Up:**

Students should take off the gloves and two students from each group can bring both bins to the new trash can and throw away the trash. They should keep recyclables separate if possible. Return the empty bin to their table and the trash bin to the teacher who should refill it for the next group.

**Summarize and Reflect:**

Review the strategies list. Students can reflect in their journals. Summary questions could include:

* What was most surprising to you about this activity?
* There are a lot of things to do on that list – what would be ONE thing you could actually do at home or school to help reduce trash – think of what works for YOU.
* The questions from the SSL form:
	+ What need did your service address?
	+ Who benefited from your service?
	+ What did you learn about yourself?
	+ How was your service-learning connected to something you learned in school?
* What do you know now that you didn’t know before about trash and recycling in your school cafeteria?
* Does anyone know where trash goes when it leaves the cafeteria? (To dumpsters outside the school, to trucks, to the Montgomery County Solid Waste Transfer Station, to the incinerator at the Resource Recovery Facility in Dickerson, to the Brunswick Management Facility landfill in Brunswick, Virginia.)
* Does anyone know where litter goes once it enters a storms drain? (It flows with runoff into local streams.) What path does water take from your streets to the Chesapeake Bay. (For example, for Westland Middle School, water runs through storm drains into Little Falls Branch to the Potomac River to the Chesapeake Bay.)
* Based on what you learned, will you make any changes in your behaviors and actions?
* Do you understand the impact 6th grade students can make when they decide to tackle a problem? Students can and do make HUGE impacts every day!

**Suggested Follow-Up Actions**

Weigh/measure trash at future outdoor ed meals.

Collect and weigh SLOP at future meals (stuff left on plates)

Plan a trash free meal at outdoor ed or back at school

Make posters to promote reducing and reusing at school

Work with the recycling team at school

Submit an entry to MCPS SERT’s recycling poster contest

Organize litter clean ups

**Indicators for Investigations in Science Grade 6**

6.6. B.1. Recognize and explain that human-caused changes have consequences for Maryland’s environment as well as for other places and future times.

1. Identify and describe a range of local issues that have an impact on people in other places.
2. Recognize and describe how environmental change in one part of the world can have consequences for other parts of the world.
3. Identify and describe that ecosystems can be impacted by human activities.
	* Protection of the Chesapeake Bay watershed
	* Resource acquisition and use
	* Land use decisions (agriculture, mining, and development)
	* Recycling
	* Use and disposal of toxic substances

6.8.B.1. Recognize and explain how human activities can accelerate or magnify many naturally occurring changes.

## Recycling Links for Montgomery County

* MCPS SERT – School Energy and Recycling Team

<http://www.montgomeryschoolsmd.org/departments/facilities/greenschoolsfocus/sert.shtm>

* Montgomery County Division of Solid Waste

<http://www.flickr.com/photos/mcrecycles/>

<http://www.montgomerycountymd.gov/swstmpl.asp?url=/content/dep/solidwaste/education/index.asp>