

## **Recycling Practices at Edgewood College**

Jenna Eddington, Katie Hensgen, Gina Pagel, Melissa Zimmer

### **Abstract:**

After noticing that recycling is a problem at Edgewood College, we decided to compare the classroom containers with the more clearly marked containers in the hallways to see which is more effective. We found that the containers in the hallway were more effective than the classroom containers. We believe that this is because of the labeling systems.

### **Introduction:**

What are the effects of the recycling practices at Edgewood College on the Wingra Watershed? What can be done to improve the situation? Throughout the process of this project we hope to determine the current situation, what is being done, what could be done, and what should be done to answer the question above. We think the Edgewood College community should have an interest in promoting a clean and safe environment for generations to come.

Are students choosing not to recycle or is it just the fact that the containers are not clearly marked? Are there enough separate containers in the classrooms for appropriate recycling practices? Would it be helpful to mark the containers more clearly? We hope through our study of recycling, we can answer at least some of the questions above. We feel this is important because according to Paul Ruskin, a spokesman for the Office of Physical Plant, states “without students and faculty putting their items in the right can, we would have nothing—it all depends on participation”(Sitch). This relates to our project because Ruskin was referring to Penn State University’s successful recycling program.

Does the Edgewood College community know enough about the benefits of recycling in order to effectively recycle? According to the Washington State Department of Ecology (Recycling Benefits the Environment), recycling benefits us by conserving natural resources, providing environmentally preferable sources of raw materials, saving energy, reducing greenhouse gas emissions, and reducing emissions of air and water pollutants. Students will probably be less likely to recycle if they do not understand what the benefits are and what they mean in connection to the environment. Ruskin states, “recycling creates a cultural norm” meaning it starts a pattern in their lives. “Students exposed to a recycling ethic may some day be working for a company and work to design more recyclable products because of what they were exposed to here.” Ruskin is again referring to the Penn State recycling program.

The problem that we have come across is that Edgewood College doesn’t have an effective recycling program. We feel that the trash and recycling containers play a part in this problem. We plan to collect waste from the classroom and hallway containers to determine which is most effective. We hope to find a more effective way to improve the recycling habits at Edgewood College. Currently Edgewood College pays Waste Management to take away the recyclable items. It might be possible for Edgewood College to benefit financially if items were separated more efficiently and taken to a recyclable reimbursement company. Until people habitually separate recyclable items, the maintenance staff might be more likely to separate items that are put in the wrong containers if Edgewood College were to receive a monetary compensation.

## **Methods:**

- Purpose:** We set out to find answers to the following questions: Do the markings on the container affect the recycling habits at Edgewood College? Would it be helpful to mark the containers more clearly? Are there enough separate containers in the classrooms for appropriate recycling practices?
- Hypothesis:** Clearly marked containers increase the likelihood that materials will be separated by waste products and recyclables.
- Test:** We contacted custodial services and obtained garbage bags to replace the ones we removed from the containers as well as gloves that we used in order to separate the trash. We removed garbage from the classrooms (Predolin 112, 114, 116, 306, 307, 308) and from hallway containers (Predolin 1<sup>st</sup> and 3<sup>rd</sup> floor) at Edgewood College. We took bags from both the hallway and classroom containers and labeled them as the containers were labeled (waste, paper, plastic, cans, and glass). We compiled the bags that were labeled the same (all of the waste together, all the paper together and all the plastic, cans and glass together) and weighed them. The classroom bags were compiled separate from the hallway bags so that a comparison could be made between the two. We then removed the items that did not match the labels and re-weighed the remaining contents. For example, paper products were removed from trash collected from the waste containers and then we re-weighed the bags. This allowed us to see the percent of items being properly disposed of by simply dividing the weight of items in the correct divided by the initial weight of the bag (see the table below). We repeated the process of weighing and re-weighing for each of the labeled containers.
- Info:** We will refer to the Proposal for New Recycling Program at Edgewood provided to us from Jim Lorman. We will also utilize information from the Wisconsin Waste Reduction and Recycling Program (manual).
- Connection:** Based on the requirements of a recycling program at an institution such as Edgewood College and the current recycling habits, we will be able determine a more efficient means of recycling.

## **Results**

	HALLWAY			CLASSROOM		
	Waste	Plastic, Cans, Glass	Paper	Waste	Plastic, Glass, Cans	Paper
<b>Initial Weight</b>	20 lbs.	6.62 lbs.	22 lbs.	10 lbs.	8 lbs.	1.79 lbs.
<b>Weight of Items in correct container</b>	18 lbs.	4.25 lbs.	20.4 lbs.	1.72 lbs.	6 lbs.	1.43 lbs.
<b>Percent of correct recycling</b>	90%	64.2%	92.7%	17.2%	75%	79.9%
<b>Number of other items</b>	Paper- 6 Cardboard- 3 Plastic- 2 Aluminum -1 can	Trash- 26 Paper- 4	Card- board- 2	Paper- 7 Aluminum - 2 Plastic- 7	Trash- 8	Plastic -1 Trash- 17

Figure 1

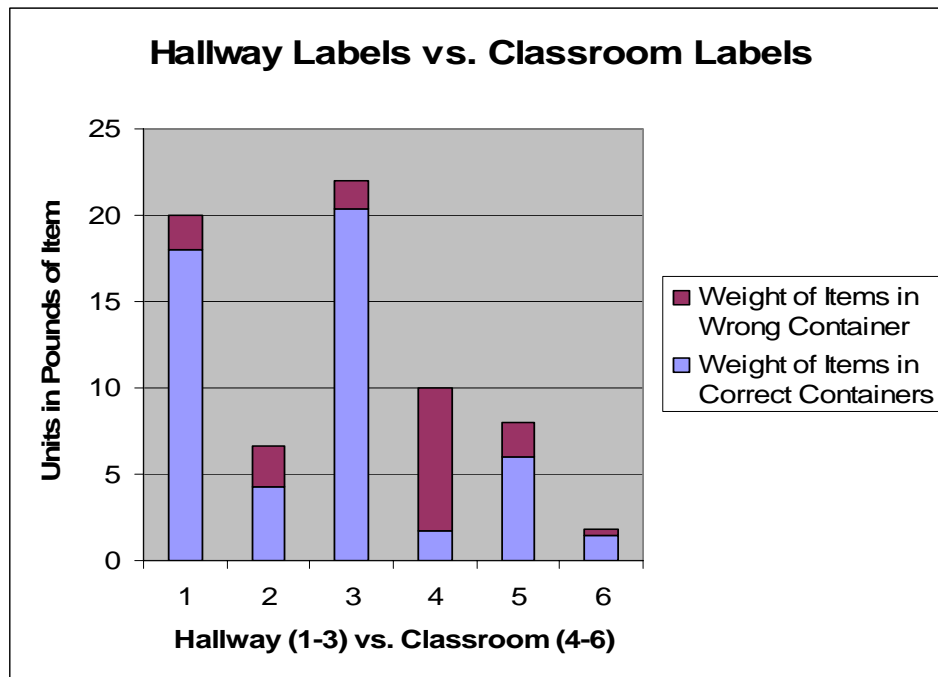


Figure 2

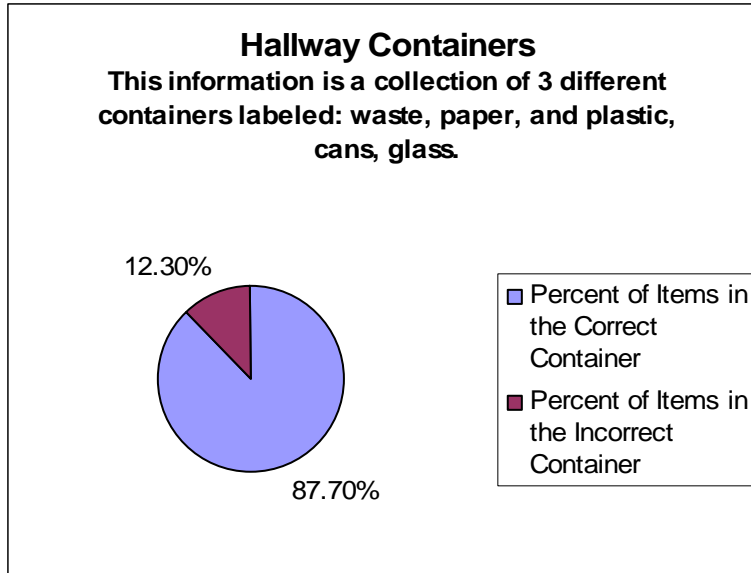
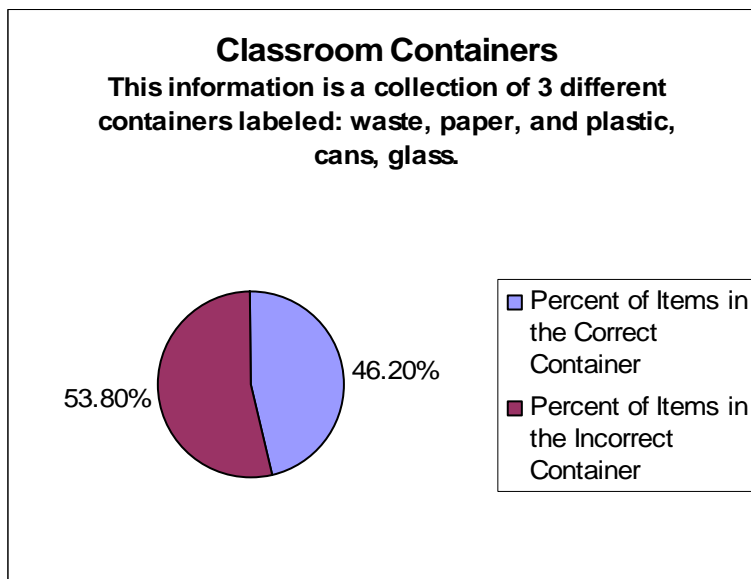


Figure 3



**Results**

The containers labeled in the hallway were more consistent than the classrooms. We feel that this is in part due to clearly labeled containers and the shapes on the top through which the items were dropped. The labels on the containers in the hallway were easy to read and see. These containers are also each a different height therefore making it even easier to distinguish between them. We found that the containers in the classrooms were all the same shape as well as the same height. We also found that the labels on the containers were not facing the same way making it difficult for people to see what goes where.

## **Discussion**

The containers in the hallway were more effective in getting people to sort their trash appropriately. Figure 1 shows that the classroom containers had more recyclables in the trash than the hallway containers. Comparing figure 2 and figure 3 suggests the same thing. Hallway containers received 87.7% of items in the appropriate container while the classroom containers only received 46.2%. We feel this is due to the fact that the hallway containers were labeled more clearly and consistently than those in the classrooms. The shapes on the tops of each hallway container, through which the items are dropped, could also be a factor. These containers are also each a different height therefore making it even easier to distinguish between them. We found that the containers in the classrooms were all the same shape as well as the same height. We also found that the labels on the classroom containers were not facing the same way making it difficult for people to see where trash goes. For a more accurate representation of the recycling practices at Edgewood College, future researcher could collect samples in other areas of the campus as well as on more frequent occasions. The scale we used was rounded to the nearest two pounds so a more precise weighing method is recommended because in some cases not a lot of waste was removed making it a little difficult to differentiate the amounts. This problem could easily be solved by notifying the Watershed Community of this problem. By displaying our findings at the Family Science Night as well as a display outside the Wingra Café, we will make more people aware of the results to show effects of not disposing their waste properly. This is a problem everywhere and we hope to reach people by connecting to their community, specifically the Wingra Watershed Community. We suggest working with custodial staff to implement a trial period in which the containers will have corresponding lids similar to the hallway. We also suggest painting the containers different colors to distinguish which container is which. Our results showed that changes need to be made at Edgewood College and if the suggested measures are taken, the case for change could be strengthened before being brought to the administration. It will be imperative for the effort toward change to have the support of students, faculty, and staff within the Edgewood Community.