

Nate Bremer - Science  
Wanda Krueger – Physical Education  
Kate Trnka – Physical Education  
NR 734: School Building Energy Efficiency Education  
Madison Middle School, Appleton, WI  
Grades 7 & 8

## ***It's the Right Thing to Do***

### **1. Action Plan Summary**

Our goal at Madison Middle School is to decrease the percentage (by at least 10%) of energy our school uses in relationship to the East Cluster of the Appleton Area School District. We have formed the E.C.O. (Environmental Conservation Organization) which is our Green & Healthy Schools group. We have and will continue to raise awareness and educate our staff and students about energy usage in our building as well as in our homes. So far, we have surveyed our staff regarding current energy usage habits in their respective classrooms. In addition, we are currently surveying our students with regard to their energy usage at home. We plan to continue this awareness and education via staff meetings, school newsletters, and posters and banners in our hallways.

We will purchase 2 infrared temperature guns (\$20/each) to get the student members excited about doing the energy assessments. In addition, we will purchase t-shirts for our club members so that they stand out while doing these assessments. (\$100)

We will be installing occupancy sensors in our locker rooms and in as many bathrooms as possible with our current budget of \$300. We plan on doing some fundraisers including "Bright Idea Fundraiser" (a CFL purchasing program) and t-shirt sales. Also, one of our club members had the idea of making up construction paper cutouts of leaves and light-bulbs, selling them for \$1 with half of the money going to the E.C.O. and the other half to a state, local or national environmental club/organization of the club's choosing.

### **2. Introduction to the Audience**

Madison Middle School community consists of approximately 700 students and 80 staff members. In addition, we will be working closely with the food and custodial staff with the implementation of this action plan.

The Madison Middle School community as a whole has done a few things that relate to what we are attempting to accomplish in our action plan. Our building engineer sends emails to staff members reminding them to shut down computers and unplug unnecessary appliances, particularly over school breaks.

Our school started to implement the installation of occupancy sensors in the hallways.

Hallway lights are also powered down 5 minutes after the bell rings at the end of the school day.

LED lighting was used in all of our emergency exit signs.

Although a section of our buildings' windows have been replaced, that was done out of necessity rather than energy concerns. Obviously, it did both.

### **3. Statement of Problem or Need**

There was not a building goal or plan for our school before we began this class. Nothing was done to raise the awareness of our energy consumption as a "community" or as individuals. The awareness of how much energy we use is not evident in the habits we exhibit.

Currently lights are left on in classrooms, gyms and offices instead of having them turned off when not occupied. We have some areas of the building that are still using incandescent bulbs rather than CFLs or LED lighting. Space heaters, refrigerators and microwaves abound. Most of the shared refrigerator space is not Energy Star rated.

Becoming a Green & Healthy School will help us to identify our gaps. Through the data that is collected we will be able to make other changes to improve the energy usage in our building.

### **4. Project Goals/Objectives**

- a. Install occupancy sensors in locker rooms and restrooms.
- b. Continue with the Green & Healthy Schools assessments.
- c. Raise awareness within the Madison M.S. "community" regarding energy usage.
- d. Hold fundraisers in an effort to raise awareness as well as allow us to collect more monies for additional ways to reduce our environmental footprint.
- e. Reduce amount of garbage in the cafeteria by using plastic trays instead of Styrofoam trays.
- f. Reduce energy usage by 10% in reference to the East cluster of the AASD.

### **5. Methods and Timeline**

- a. Occupancy Sensors
  - i. Meet with energy director of the school district and express our desire to install occupancy sensors in locker rooms and restrooms with \$300 mini-grant funding. (January, 2009)
  - ii. Installation of Sensors (by February, 2009)
  
- b. Green & Healthy Schools assessments
  - i. Energy Assessments completed by 1/31/09
  - ii. Recycling Assessments completed by 2/28/09
  - iii. Water Assessments completed by 3/30/09
  - iv. Air Quality Assessments completed by 4/30/09
  - v. Transportation Assessment completed by 5/30/09
  
- c. Energy Use Awareness
  - i. Survey staff regarding current energy use practices at school – December staff meeting
  - ii. Survey students regarding current energy use practices at home – completed by January, 2009
  - iii. Give energy tips at monthly staff meetings – Monthly, thru June 2010 (at minimum)
  - iv. “E.C.O. Corner” in monthly school newsletter – Current happenings regarding Green & Healthy Schools as well as energy tip of the month. (Monthly thru 2010, at minimum)
  - v. Classroom Competitions – regarding random energy/recycling audits (ongoing)
  
- d. Fundraisers
  - i. Bright Ideas Fundraiser – Raise awareness of the cost effectiveness of using these bulbs vs. incandescent bulbs and raise money for us to do other fundraising and purchase additional occupancy sensors and/or other environmental needs in our building. Use of the funds will be determined by members of the E.C.O. (Fall, 2009)
  - ii. Leaf & Light Bulb sale – construction paper cutouts of leaves and light bulbs will be sold for \$1 – ½ of the funds collected will benefit the E.C.O.; the other ½ will be donated to a local, state, or national environmental club or organization (March, 2009)
  - iii. T-shirt sales – shirts designed by students will be sold – profits will go toward purchasing necessary supplies for incorporating Green & Healthy Schools goals.
  
- e. Reduce garbage in cafeteria.
  - i. Contact Aramark to determine how to go about getting plastic trays. (October, 2008)
  - ii. Determine costs/who will pay
  - iii. Purchase and begin using plastic (re-usable) trays (Fall, 2009)

#### f. Reduce Energy Usage

By implementing the above steps, it is our hope that our goal will be realized. (February 2010)

### **6. Evaluation Criteria and Process**

The Green & Healthy Schools Assessments will give us a great starting point for where our school is and what we need to do better. The surveys given to the staff and students in the first semester will be compared to surveys that will be given near the end of the school year to determine to what extent behaviors have changed.

Use of plastic trays will also be a great way to raise awareness that Madison is making efforts in several areas to be more environmentally friendly in more areas other than just electricity usage.

The participation of staff/students/families in our fundraisers will be evident at the end of each sale.

The installation of occupancy sensors will also raise awareness of energy conservation measures being employed by the school. In addition, we will be able to determine (via energy bills) what kind of impact both the use of these sensors, along with our improved behaviors, have on our monthly/annual energy bills.

### **7. Budget**

We are beginning with a VERY bare bones budget. \$100 of seed money and \$300 from the mini-grants 3 staff members received via the KEEP course. We will, of course, be holding fundraisers to raise more money to realize our goals.

\$300 – occupancy sensors for locker rooms and as many bathrooms as possible  
\$40 – 2 infrared thermometer guns for doing Green & Healthy Schools energy assessments  
\$60 – t-shirts for 5 founding members