

OFFICIAL COMPETITOR



Happy New Year!

Make the resolution to practice saving energy.

DMPS HEATS UP THE COMPETITION

At the midway point of the competition, McCombs Middle School is in **fourth place** nationally!

DID YOU KNOW?

Turning off the lights in one classroom for one hour keeps over two pounds of pollutants out of the environment.

National Energy Foundation

DMPS Sheds Light on the New Year

The Energy Team's current lighting projects include:

CENTRAL CAMPUS

- Installation of new energy-efficient fluorescent lighting throughout lower level technical education classrooms and shops

Lincoln

- Replacing lights in Library with LED fixtures. Installation of new LED lighting throughout campus exterior. New fixtures to improve site lighting

Capitol View

- Updating of existing fluorescent lighting with more energy-efficient lamps

Hiatt

- Installation of all new LED lighting around the exterior of the building

Hoover

- Installation of new energy-efficient fluorescent and LED lighting in classrooms, building corridors, stairwells and restrooms

East

- Installation of maintenance-free steam system components to reduce required maintenance and improve system efficiency

Harding

- Installation of energy-efficient LED lighting in the school's auditorium





Energy Lessons from IESA Students



Zebra Mussels

By Cha White

Zebra mussels are filter feeding organisms. They are about the size of a human fingernail, which is about 1/4 to 1/2 of an inch. They attach to solid surfaces, and they multiply fast. A female adult mussel can reproduce within six to seven weeks of settling. An average female mussel can produce 1,000 eggs in each reproductive cycle, and about 1 million per year. An average adult mussel can survive up to 10 days out of water.

What is the problem?

Zebra mussels are an invasive species. They were brought over to North America and other countries by accident. Zebra mussels are believed to be the source of deadly avian botulism poisoning that has killed tens of thousands of birds in the Great Lakes. They disrupt ecosystems. They also

damage harbors, waterways, water treatment and power plants.

How did it get started?

They were first found by a German zoologist named Peter Simon Pallas in 1769. They were found in the Ural, Volga and Dnieper rivers. They were detected in Canada in the Great Lakes in 1988.



How can we stop it?

After boating or fishing in infested waters, take these precautions:

1. Inspect and clean your boat.
2. Drain all water from the boat and its components.
3. Dry the boat, trailer and equipment.
4. Leave any live bait behind. If it was used in infested waters, do not transport it to non-infested waters.

Is it serious?

I believe that zebra mussels are a problem. I believe that zebra mussels being in our lakes can mess up our oceans, lakes, power plants and water treatments as well as our ecosystems and our food chains. I believe that having zebra mussels in our waters will leave long-term damages.

Camille Juarez, East High School

Biomes are defined as “the world’s major communities, classified according to the predominant vegetation and characterized by adaptations of organisms to that particular environment.” The five major biomes are deserts, forests, grasslands, tundra and aquatic.

Biomes have changed and moved many times during the history of life on Earth. More recently, human activities have drastically altered these communities. Thus, conservation and preservation of biomes should be a major concern to all.

The Tundra

By Stu Burzette, Lincoln

Tundra biomes, except for Antarctica, are located in the Northern Hemisphere. Permafrost and dryness make the area an almost barren wasteland. With only 1,700 species of plants that are able to grow, there is little vegetation and thrashing winds that can plummet temperatures. The indigenous animals must adapt to the bitter winters to survive.

The tundra can be described as a frozen desert. During the winter, temperatures range from -20 to -30 degrees Fahrenheit. This is caused by the long nights in the winter that can last weeks and the winds that whip snow across the landscape.



During the summer, the

temperature never reaches above 50 degrees Fahrenheit although the sun is visible almost 24 hours a day. The warmer climate partially melts the permafrost located beneath the soil along with the snow. This creates cold swamps and lakes that are unable to drain because of the permafrost’s incapability to do so. The lakes and bogs create breeding ground for various insects that can make the summer miserable for the animal inhabitants. The wind is similar to the winter when it blows small plants across the endless barren.

Only 48 species of land mammals live in the tundra. One type is called the Arctic Fox., which lives in burrows in frostless ground. In order to survive in the frozen wasteland, the fox often will eat

Biodiversity, short for biological diversity, is the term used to describe the variety of life found on Earth and all of the natural processes. It is helpful to think of an ecosystem as a woven carpet; if you pull on a loose thread it might only affect the thread and those closest to it or it might unravel the whole car-

pet. Biodiversity also helps us in our day-to-day lives. Unfortunately, the greenhouse gases produced by human activities are building up in the atmosphere and causing climate change. Climate change is a major threat to biodiversity.

We are all connected.



From the smallest ant to the tallest tree, FROM THE BIRDS ROAMING THE SKIES TO THE FISH SWIMMING IN THE SEA, Each and every creature is part of the biodiversity family. **LET'S PROTECT OUR FAMILY.** Conserve biodiversity now. FOR MORE INFORMATION ON BIODIVERSITY CONSERVATION, LOG ON TO www.aseanbiodiversity.org or chm.aseanbiodiversity.org

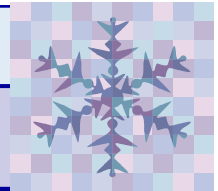


the remains of a larger predator’s meal. Arctic Foxes are forced to be scavengers because of their relatively small size. They are only about the size of a domestic house cat. They have thick fur and bushy tails which keeps them warm during the harsh nights. Their fur color changes by season. During the winters, their fur is white, but during the summer weeks it turns more brown to blend with its environment. The few plants that live in the tundra are not able to grow too deep into the earth. Deep growth is prevented by the layer of permafrost located beneath the thin covering of soil. Arctic Willow, for example, is not able to grow much more than three inches from the ground. The growing season is only 50-60 days because of the short summers.

ENERGY REPORT CARD

YEAR-TO-DATE SITE ENERGY USAGE REPORT , July 1, 2013—December 31, 2013

Percentage change as compared to same period time from last year



Site	Total Energy MBtu	% Chg		Site	Total Energy MBtu	% Chg	
Pleasant Hill	364	-57.50%		Central Campus	11,566	-9.70%	
Findley	612	-55.00%		Central Academy	1,763	-9.40%	
Operations Center	792	-48.70%		Carver	970	-8.60%	
Prospect	1,737	-46.80%		River Woods	1,560	-8.20%	
Moulton	1,966	-43.70%		Walnut Street	3,514	-7.60%	
Kurtz	1,903	-39.30%		Smouse	2,010	-7.50%	
Hoyt	2,122	-36.90%		McCombs Greenhouse	382	-6.60%	
Woodlawn	326	-35.10%		Oak Park	831	-6.30%	
Walker Street	570	-32.70%		Madison	718	-5.60%	
Hiatt	948	-30.50%		Weeks	2,157	-5.10%	
Willard	762	-29.10%		Cowles	674	-4.90%	
Capitol View	924	-28.80%		Stowe	598	-3.70%	
Welcome Center	128	-27.70%		Park Avenue	936	-2.30%	
Samuelson	521	-23.30%		Perkins	732	-2.30%	
Monroe	1,331	-23.20%		Lovejoy	656	-2.20%	
Cattell	669	-23.00%		Brubaker	1,121	-1.40%	
Harding	1,556	-22.90%		Roosevelt	7,199	0.80%	
East	7,258	-22.70%		McKinley	1,148	1.40%	
McKee	247	-22.00%		McCombs	1,968	1.80%	
Garton	828	-21.90%		Lincoln	10,150	2.60%	
Phillips	724	-21.90%		Hubbell	1,078	3.50%	
CNC	4,696	-20.10%		Hoover/Meredith	6,685	4.30%	
Jefferson	678	-17.20%		Windsor	665	4.30%	
Studebaker	410	-16.50%		Jackson	650	4.50%	
Aviation Lab	243	-15.20%		South Union	949	5.30%	
Callanan	1,731	-14.40%		Mitchell	515	5.50%	
Merrill	1,690	-12.50%		Morris	839	6.00%	
King	469	-11.70%		Wright	531	7.50%	
Van Meter	2,183	-11.40%		Hillis	694	9.40%	
Goodrell	1,141	-11.20%		Greenwood	919	12.90%	
Brody	2,112	-11.10%		Howe	571	15.60%	
North	5,112	-10.10%		Moore (Scavo)	1,037	21.30%	
Hanawalt	599	-9.80%		Edmunds Elementary	629	N/A	

Key		Increase in energy use
		Maintaining energy use
		Decrease in energy use

Visit www.dmschools.org for more details of the district's energy mission and building performance. Do you want to share your ideas for saving energy or helping our environment? Or want to let us know about your projects? Tell us about it! E-mail Michelle.Chalkey@dmschools.org