



EARTH DAY NETWORK

Earth Day Network provides a Green Schools Leadership Center where they share ideas for how to create a green school, a network for educators and how to engage your community. Visit their website at <http://edu.earthday.org/> for ideas how to celebrate Earth Day, everyday.



The idea of Earth Day was founded by Senator Gaylord Nelson in 1970. It was inspired by student anti-war movement of the sixties and a massive oil spill in Santa Barbara, 1969. Millions of Americans demonstrated for a healthy, sustainable environment. The first Earth Day led to the creation of the U.S. EPA and the clean Air, Clean Water and Endangered Species Acts. In 1990, Earth Day went global.

Source: www.earthday.org

You can join your schools in a variety of activities around the district including community trash pick ups. Ask your students what they are planning for Earth Day 2012!

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ENERGY STAR® is celebrating 20 years of partnership, promise and progress. Since the EPA launched the ENERGY STAR program in 1992, nearly 20,000 organizations have joined and more than 80 percent of Americans recognize the ENERGY STAR label.

Learn more at www.energystar.gov



DMPS Recycling Update

DMPS has increased its recycling efforts, increasing the materials recycled by 48 percent from 2010 to 2011. The benefits to a district recycling program include:

- Educating and helping others to preserve the environment for future generations.
- Valuable resources are not disposed of at the landfill.
- By increasing our recycling, we reduce the number of waste pick-ups scheduled.
- Rebates for recyclable materials will be reinvested on the recycling program for supplies.

DMPS Recycling Tonnage Statistics



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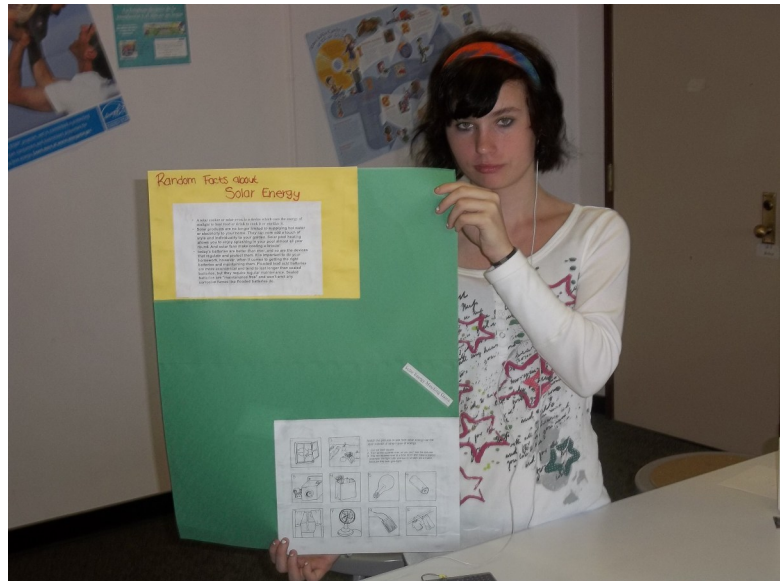
Earth Day 2012

Solar Energy

By Riley Moore and Kim Boner, IESA Students

The project that Kim and I will be doing for earth day is basically about solar energy. What we did was looked up a couple of sheets for the kids to do and printed off a bunch of copies. Then we plan to have a copy of the answers on the back. Here is a sample of some of the things that will be on our very informative poster: 15 easy ways to stay green, random facts about solar energy, and various fun sheets about solar energy so that people won't get bored while they learn. There will also be a computer up running Energyville, a game where you build a city then you try to make it efficient energy wise.

Would your Energyville
be energy wise?



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Earth Day 2012

Alternative Fuels

By Jackson Meister and John Ring, IESA Students

For Our Earth Day Project we are demonstrating the future of Energy, Hydrogen Fuel Cell Technology, Wind Energy, and Photovoltaic Cells (Solar). Regarding the Hydrogen Fuel Cells, we are powering a zero emissions car, which also has the possibility of being powered by solar energy. Society is in need of a new and renewable fuel source. Hydrogen is an excellent solution for the long term. Hydrogen is the most abundant element in our universe and carries the most energy per unit of weight. We are powering a string of LED bulbs with the solar cells. This exercise shows how photovoltaic cells convert the sun's light into electric current.

We are also demonstrating how the pitch of the turbine blades effects the energy output. With our petroleum addicted lifestyle it is important to find more sustainable forms of energy.



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Earth Day 2012

Spring Break at Catalina Island, California



By Dakota Lupkes-Heim

Catalina Island in California would be a great experience for anyone who likes wildlife. During spring break students from the IESA program and Animal Science took a trip to an environmental camp on the island. If I could have went on the trip I would have gone. It's not really expensive, this year it was only One thousand dollars to go. They planted different types of plants to cover an area that was dry and no plants were present. They also took out invasive plants that should not be there. They went snorkeling and got to wear wet suits. The cabins were nice and had about six bunk beds in them. In the morning they had fun building a new walking trail going up a hill. All of the kids that went had a great time at Catalina. After Catalina when they went to Disney California Adventure Park. At Disney they got a tour around the park and they took them on rides that related to what the guy talked to them about which was energy.



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Earth Day 2012

Do It Yourself Plant!



By: Alysia Vongsaly, Dilan Mendoza and Riley Alexander

This project and fun experiment is for Earth Day. It represents the easy and fun steps to make plants with objects at home. Kids and adults can do this at home to save money, put used bottles to use and create interesting plants for their own entertainment. Anyone doing this project can take more appreciation in growing plants; they can watch their project grow in a few days. They could also learn how to take care of their plants on a daily basis!

The plastic bottles we're using to hold the soil and plant... bottles are very easy to recycle- although few people do it. All plastic can be recycled but it's not being recycled as much as it should be. Recycling plastic also saves energy. Studies show that the energy saved by recycling a single plastic bottle- as compared to producing a new one from scratch- is enough to power a single 60-watt bulb for six hours.

Growing the plant helps the environment, not only do they play many important roles in the environment they provide us with food and useful products they are also important to the balance of nature. Plants give us oxygen to breathe. Plants not only make the place look alive but they keep us alive also! Without these plants, we wouldn't be here! Green plants combine sunlight and carbon dioxide, through the process of photosynthesis, to fresh air. Plants also are part of the water cycle. 90% or more of the water that is absorbed a plants roots, is eventually released back to the atmosphere.

This do it yourself experiment helps kids and adults learn the process of growing a plant taking care of the plant. Not only does it teach a lesson but it is also fun to do. You can take these mini plants home and share with your family and friends!

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Earth Day 2012

Composting Crossword

By Tyler Chapman and Andy Jones

On Earth Day of 2012 for our class at Central Campus we are doing a project for IESA (Iowa Energy and Sustainability Academy). We are doing our project on compost and what can and can't be composted. We are doing a crossword that has to do with composting and recycling things such as aluminum, glass, plastic, and more sorts of metals. We are also listing what things you compost and things that you cannot compost.

In this class we talk about people and things that has to do with what technology we have today but most of the time we talk about recycling and the different types of plastics and what the different types of plastics are used for.



Wind Energy



By Chris Ellis and Jonathan Reeves

The earth day project, we are going to make a wind turbine and face it towards the fan to capture energy from the fan. We are going to make a poster and on that poster we are going to put pictures of wind turbines and include the parts of the wind turbines and what they do and how they work. We will be showing you how to use and build a wind turbine on earth day. We will show you where they are currently being constructed and what their uses are in daily life. We want you to come on earth day to see our project and see all the cool things about wind turbines and how they work and how they are built from heights of 140ft to a small 10ft turbine or a hand held turbine that would be moved by a fan.

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Earth Day 2012

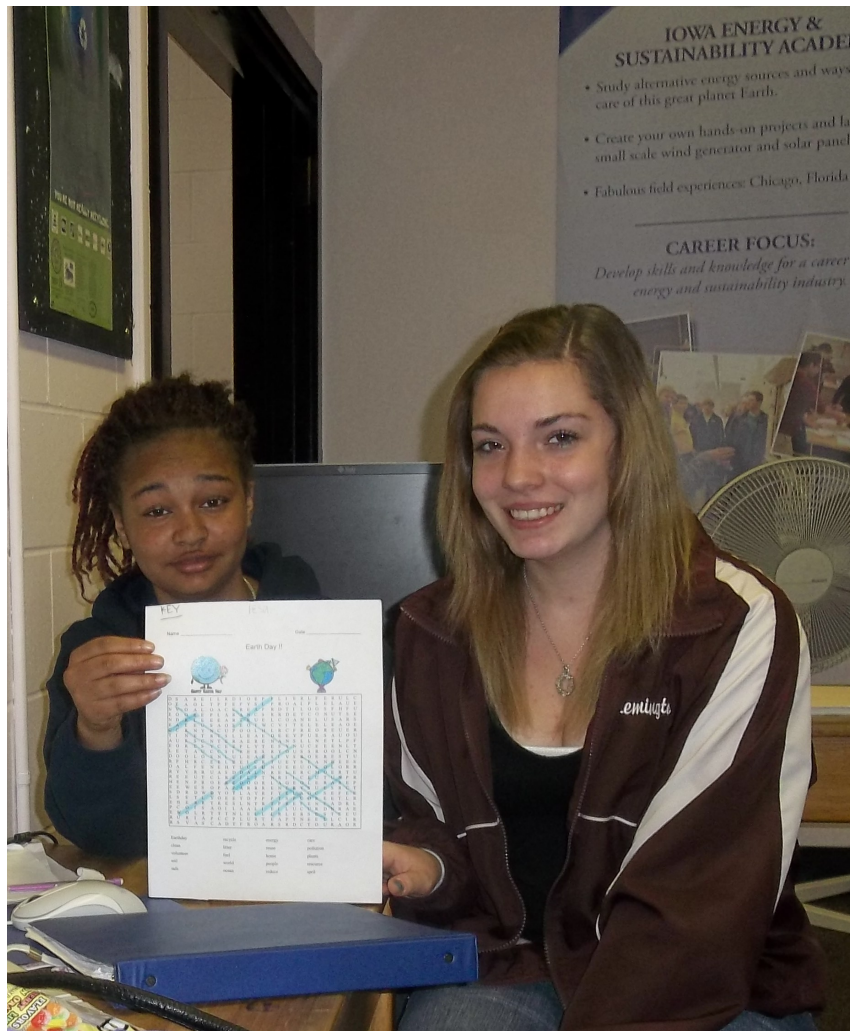
Recycling and Saving Energy

By Ariana Ferguson And Haley Remington

On Earth day we have decided to put a poster together that talks about how to recycle and save energy. We have also put together a word search as an activity for the kids. Our poster will have ideas and ways to recycle and save energy to help the earth. We can save energy in many ways like: turning off water when we aren't using it, shorten showers, turn lights off when we aren't in the room, and car pool.

Our crossword will help kids understand all the key concepts of saving the earth, energy, and recycling. This should help kids want to recycle more and save energy. This is important because it keeps the earth clean. It helps keep the world a positive place.

We need to help keep the earth clean so it won't be polluted and so there won't be trash everywhere. We also need to keep the water clean so we have clean drinking water and so the fish and sea creatures will be safe and not die of nasty water. We need to keep the ground clean so the animals, creatures, and humans have safe grounds to live on, and we need to keep the sky clean so we have safe breathing air.



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Earth Day 2012

“Litter Bugs”



By Allison Lumadue, Riley Dunlap, Dante Amodeo

The activity that we are going to do is making “litter bugs”. These litter bugs are made out of all recyclable items. The way you make them is you crumple up a piece of newspaper and wrap another piece around it. Then wrap it with string and tie off to hold the newspaper in a ball. To make it look more like a bug you can add bottle tops, caps, and string. This is a good activity to use for recyclable items. There is also information about litter and it's impact on the environment.

This project can be focused more with little kids or an older audience as well. This topic interested us because not many people realize that litter is so harmful. It can destroy many things like wildlife. This project also shows that there is many things to do with “trash”.

Alternative Transportation

By Elijah Young and Spencer Tow

Everyday outside of Central Academy there is always a roaring buzz. Whooshes and wurs of all kinds. Horns and sirens and the screeching of tires, all of these sounds you are hearing are the very familiar sounds of ways to get to school. Instead of letting of millions of tons of exhaust a year and hurting our planet why don't you find a different way to school? Instead of driving your car or having your parents drop you off and pick you up from school, why don't you do something else? You could ride a bike or even pogo-stick to school. There are so many ways to get to school other than the way you're getting there now. You should come be apart of the Central Academy IESA class and join the movement for saving the planet.



This is what we are doing for Earth Day. We are trying to make evident all the possible ways to get to school that are Eco-friendly. There are a lot of people on this planet and there will only be more in the future so we should take care of our Earth the best we can.

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Earth Day 2012

Natural Resources

By Nathan Elings

I will be giving a short fun quiz on the D.N.R. The D.N.R. Stands for Department of Natural Resources. In my quiz you will learn all about Iowa, the wildlife, the plants, the environments. The D.N.R. CD rom I have has everything about the state of Iowa. A couple examples of the questions I have are:

What two rivers border Iowa?

How many bats Iowa has?

These are just a couple of examples we can learn from this CD ROM . Please come to earth day on April 20th in the morning at central campus in the lobby/cafeteria area.



Come out to Central Campus for Earth Day and see what IESA Students Jamaya Harris and Annie Brown are working on ...

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Earth Day 2012

Recycling: Plastics

By Spencer Tow

Hi my name is Spencer Tow I am a student at Central Campus and enrolled in IESA (Iowa Energy Sustainability Academy) currently we are researching plastics. We brought in one of each of the seven groups of plastic to do tests and identify what type of plastic it's made up of. We had a total of five different tests to try on the samples. A water test which measures density, a copper wire test which measures what color it burns, an acetone test which measures if polymer chains were loosened, a heat test which measures softening points, and a cottonseed oil test which measures density again. After carrying out these tests on our fifteen samples we deduced which group of plastics each sample belongs to and investigated why it is chosen to be used for that type of container. For example plastic type 1 (PET) is used because it is the relatively safest one for humans and also one of the easiest to recycle.



Recycling: Making Paper

By Corry Cunningham and Dakota Lupkes-Heim

We are making paper out of old paper. We will blend it up and then we will pour it onto a screen to filter out all of the water. Then we will put it onto a piece of felt to soak up more water. Then we will wait for it to dry. We decided to pick this because we thought that it would be fun to teach to the little kids how to do this. This would be a good project to do because it shows how to recycle used paper into perfectly good paper for art.

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Earth Day 2012

Healthy Eating

By Megan Dodge

When I say “vegetarian” most of you are probably going to think of animal rights. While a lot of people adopt a meat free lifestyle for animal welfare, there are also other reasons. As farfetched as it may seem, this earth day I'm asking everyone to consider switching your diet to one that is free of animals and their by-products.

Before you freak out and say vegetarian/vegan diets aren't safe, let me assure you that with minimal planning (like any other diet really) you can be a lot healthier than meat eaters. In my presentation, I will briefly cover nutrition and alternative protein sources, so you and/or your children can live a healthy life.

I will also cover the process of raising livestock, highlighting all the situations that create harmful greenhouse gases like feed, transportation and animal bodily functions. Each specific animal will be covered and shown how they contribute to global warming.

Last but not least, each person at my table will have the option to take a “How big is your CO2 paw print?” quiz. Each answer is worth a set number of points and the lower the score, the smaller the paw print.

So this Earth Day, stop by my display on how a meat free lifestyle will benefit the planet. Veggie diets aren't just for tree hugging, liberal hippies! Who knows, this way of life might just become yours.



How big is your carbon paw print?

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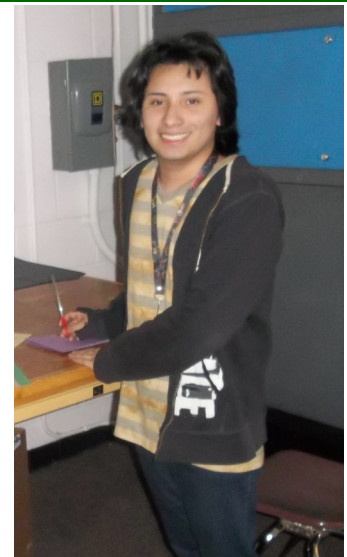
Earth Day 2012

Environmental Jeopardy

By Hector Guerra

On April 20 2012 for Earth Day, me and my friend Amber (10th grader at Lincoln High School), are having kids play an Earth Day game. They will be playing Jeopardy with environmental questions to test there knowledge about the environment. This activity should be useful so that we can educate the young ones on how to well treat our planet. We will also be providing our knowledge of the environment and applying it to there's so that they will know more.

The fun thing about this is that they will be competing against each other over various prizes, some big and some small. Competition makes things more exciting. As they will be competing for the prizes. The prizes will also (no surprise) will do something with the environment, like maybe some plant seeds so they can planet them. Knowledge is the key to helping the environment, the more we know the more we can do to improve it .



Composting



By Kitty Frazier, IESA Student

When we were asked to come up with and Earth Day project for the Downtown School students, I became incredibly inspired with the idea of composting. I knew that I wanted to use my skills of writing and creativity to good use, by making and interactive story book, called the Earth Friendly Adventures of Mr. Worm- Episode One: Composting. It is about a worm named, Mr. Worm who talks to the audience about his knowledge and the benefits of composting. With interactive trivia and new words, entertainment is ensured. My project will also include a short video on how composting really works and how you can do it yourself. I hope my Earth Day project on composting will inspire others as it has inspired me.

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Earth Day 2012

Fresh is Best

By Jayshaya Gene, Kasie Cordero, Nemo Rosa

These days almost nobody gardens and plants their own flowers or vegetables. Its simply easier for them to buy them at the store or even just to go to a farmers market, the sad thing about this is that they miss out on the joy of being able to grow a plant and excited when it first turned from a seed into a frail green stalk they had to take much care with. Not to mention that they taste better because you've waited so long to eat them , and after all the work you put in them of course you're really going to enjoy it. For kids gardening is such a beautiful experience, to become one with the land, and this is what our station wants to convey.

Our project will consist of painting a milk carton that has been cut in half. Our visiting students will then be able to take seeds home with them and plant them with their parents in the milk carton. We will also have them write down ways that they can help keep earth healthy and save energy on recycled paper and paper bags. We think they will enjoy doing this with us and we look forward to it very much!



Let's grow together!





**The students of the
Iowa Energy &
Sustainability Academy
at Central Campus have
planned activities and
demonstrations for
Earth Day....**

There will be two sessions:

Morning session

8:00 am-10:30 am

Afternoon session

11:30 am-2:00 pm

Activities and demonstra-
tions will take place in the
Central Campus lobby and
the cafeteria area.

Larry Beall, IESA Instructor
and the IESA students invite
you to learn more and have
fun at their Earth Day event.



Iowa Energy & Sustainability Academy
Des Moines Public Schools

ENERGY REPORT CARD

YEAR-TO-DATE SITE ENERGY USAGE REPORT

July 1, 2011 – February 29, 2012

Percentage change as compared to same time period from previous year.

Site	Total Energy (mBtu)	% Chg	Site	Total Energy (mBtu)	% Chg
Brody	3,268	-51%	Moore (Scavo)	2,052	-10%
Roosevelt●	12,022	-47%	River Woods	2,253	-10%
Cowles	1,143	-44%	Jackson	951	-9%
Merrill	2,825	-43%	Willard	1,873	-9%
Harding	3,332	-42%	Goodrell	2,191	-8%
East Academy	1,533	-35%	Park Avenue	1,381	-8%
North●	10,496	-34%	Capitol View	2,095	-7%
Brubaker	1,127	-33%	Cattell	1,258	-7%
Findley	1,793	-31%	Pleasant Hill	1,120	-7%
Hiatt	4,544	-26%	Studebaker	2,716	-7%
Hanawalt	765	-22%	Perkins	1,049	-7%
McCombs			Jefferson	1,644	-6%
Greenhouse	909	-21%	Edmunds	2,564	-6%
Samuelson	1,027	-21%	Lincoln	15,196	-6%
Operations Center	2,617	-20%	Greenwood	1,189	-6%
Oak Park	1,384	-20%	Moulton	6,904	-5%
Van Meter	3,759	-18%	Weeks	3,128	-5%
Hillis	915	-18%	Hoover/ Meredith	14,591	-5%
King	846	-17%	McKee	526	-5%
Aviation Lab	477	-17%	Carver	1,612	-4%
Smouse	3,753	-17%	Central Campus●	22,052	-4%
Callanan	2,782	-16%	Windsor	1,076	-4%
Walnut Street	4,706	-16%	Stowe	922	-2%
Phillips	1,484	-16%	Monroe	2,957	-2%
Hoyt	4,926	-14%	Garton	1,590	-2%
Welcome Center	276	-14%	CNC	9,175	-1%
Prospect	5,416	-13%	McCombs	6,080	0%
Howe	759	-12%	Madison	1,060	0%
Lincoln South	5,148	-12%	McKinley	1,802	1%
Central Academy	3,267	-12%	South Union	1,351	4%
Lovejoy	1,610	-12%	Wright	688	7%
Hubbell	1,692	-11%	Morris	1,328	15%
Casady	2,191	-10%	Mitchell	802	22%
East	15,193	-10%	Woodlawn	722	54%

● Building occupied during renovations

Green Text: ENERGY STAR labeled building

Visit www.dmschools.org for more details of the district's energy mission and building performance.

Tell us about it! Do you want to share your ideas for saving energy or helping our environment? Or want to let us know about your projects? E-mail lisa.simpson@dmschools.org



Key

Increase in energy use
Maintaining energy use
Decrease in energy use