



THE NAUTILUS

JUNE 2010

A NEWSPAPER WRITTEN AND PUBLISHED
BY THE 5TH & 6TH GRADERS OF NEWARK
CENTER FOR CREATIVE LEARNING



HUMAN RIGHTS GOING APE?

Cole Wood
~ Staff Reporter

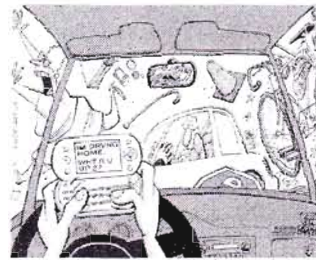
A dolphin learns to choose which treat she wants, a chimp bests the British memory champion, a sea lion gets a higher IQ score than an 11 year-old, a parrot does simple arithmetic, and an orangutan learns to barter.

All of these animals have human-level intelligence. However, none of them have had human-level rights - until now. In 2008, Spain's parliament granted apes the rights of life, liberty, and protection from torture. According to the declaration, apes may only be killed in self-defense, may not be imprisoned without due legal process, and may not be subjected to the "deliberate infliction of severe pain," even if doing so could benefit others, as might be the case with medical testing.

With new research, scientists are finding out information that shows just how intelligent these animals are. So, this provokes the question: if they're smart like us, shouldn't they have the same rights as us?

Science and the study of animal intelligence has come a long way. Since the ancient Egyptians, people have been fascinated with animals. The Egyptians

(continued on page 13 - Society & Law)



TINY SCREEN, HUGE IMPACT

Natalie Orga
~ Staff Reporter

The community watched in helpless horror as two cars collided. The vehicles looked as though wrecking balls had torn through their bumpers. One of the crash victims was a girl named Rachel Marcus, the other a texting teen.

In Utah, two mothers, Jackie Furfaro and Leila O' Dell, mourn their lost husbands while their young children stare naively at them, not knowing that their lives will be stained with grief forever.

A cluster of ragged friends huddle forlornly by three road-side graves, tears streaming down their blotchy faces. One glances uneasily at the one-way road snaking around the bend. The whirl of rush hour traffic sweeps in and out, but the friends remain as the sun sinks lower into the sky.

These three scenes are examples of the pain texting while driving can cause and none of them are imaginary. More and more people across the nation are texting while driving, which proves to be more dangerous than drunk driving, tweeting, e-mailing, and even reading while driving. The consequences are severe, because no text is more important than someone's life.

(continued on page 16 - Society & Law)

LOCAL NEWS



FROM MAKING CARS TO MAKING CAREERS

Nick Viscardo
~Staff Reporter

Tires, golf carts, forklifts, SUV parts, large robots, floor sweepers and clutter, lots and lots of clutter. It's all sitting in a huge building, leaving slowly. "Basically, we're selling everything not bolted down and some stuff that is bolted down," says University of Delaware spokeswoman Andrea Boyle.

The newest property owned by the U of D is what used to be Newark Chrysler. In mid-November 2009, the University bought it for 24.5 million dollars. They now have official ownership of the breathtaking 272-acre lot. "It'll take us two years to demolish the site, which will cost us some money, and it'll take another 5-10 years to have it built and ready," says U of D President, Patrick Harker.

In 1951, Chrysler was built with the successful intention of providing tanks for the U.S. Army in the Korean War. Their first tank was called the Patton 48 or M-48, a medium tank, named after the leader of the U.S. Third Army Division during World War II, George Smith Patton III. Each tank's overall weight was 49.6 tons and used a 90mm gun. The tank was a true success for the plant. Many workers were there building hour after hour. The building was constructed with 40,000 pounds of steel, 106,000 pounds of concrete, and 40,000 panes of glass. It was not easy to make.

In 1957, they stopped producing tanks and switched gears. Chrysler began creating Dodges and Plymouths to fill the roads. In 1950, Newark's population was just 6,700 residents. In 1957, the first car rolled off of the assembly line. The Chrysler Plant helped increase Newark's population to 8,000 residents by hiring new people. Thirteen years later, Newark's population grew to more than 18,000 people. In 1969, Newark Chrysler produced more than 185,000 cars.

After more than 30 years of operation, Newark Chrysler closed its doors. Their last car, the Chrysler Aspen sealed the deal. The Aspen got roughly 8-10 miles per gallon in the city and 13-15 mpg on the highway. The car's expectation was to save them, but Chrysler only wasted money. In December 2008, they came up short in profits. As well known as the company is, they faced a tragic problem. More than 1,000 employees were laid off and left in the dust, just as the economy took a negative turn.

The plant served no purpose until about a year later. Luckily, the plant was purchased by the University of Delaware in mid-November 2009. This purchase represented the single largest addition to the Newark campus in university history. "We will begin with a better transportation hub for the university and for the city. We're working with the city to make a better place for employees to park. "The size of this parcel of land and its proximity to our main campus makes this truly a once-in-a-lifetime opportunity for University of Delaware," says President Harker.

(continued on page 3 - Local News)

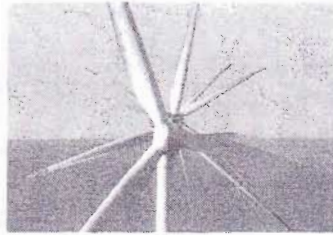
(continued from page 2)

The site will also have a Health and Sciences campus. It'll probably be done between 2017 and 2020. There's no question that this will take a while. But it will all be finished eventually. Preliminary plans show the property being divided into three main areas of use: corporate partnerships for research and development activities, a medical partnership with Thomas Jefferson University, and improved public transportation by expanding on the Amtrak station connected to the property. University officials say the U.S. Army is a likely partner for the site. Because of a base realignment, parts of the Army are most likely to go to the U of D building. Its proximity to Aberdeen and available rail lines make it a great place to house the soldiers from the Maryland base.

When the university bought this property, one of their responsibilities was to clean up any environmental messes. Because of this, they got the property for a bargain - half the estimated lot value. When asked about the environmental problems, President Harker says, "Well there are environmental concerns regarding the plant, but because they were open from the 1950's there is a lot that the old industrial site will have, so one of our obligations was to clean it up. We knew what was there. There are some things but it's not terrible. We weren't surprised. We did a lot of testing before the purchase."

But the University of Delaware isn't all about the money and wealth. They had a better reason to buy this property. President Harker explains: "Our obligation as the state University is to help Delaware with jobs and education. We didn't buy this

for the money, we bought this because we think it's important to the university and the state to get many jobs here. We're willing to take a long time to get our money back."



THE DELAWARE WIND HARVEST BEGINS

Olivia Quinci
~ Staff Reporter

Imagine you wake up one morning in 2012 and decide to drive to Rehobeth Beach. You walk onto the warm sandy surface hearing the ocean roaring, the kids playing, the adults talking, and the babies crying. The sun feels hot on your skin, but you don't sweat. There seems to be something magical about that. You place down your towel and put your food under your umbrella so that the seagulls don't get it. You start to go into the water. Unlike the sand and the sun, the water is cool and soothing. Out in the distance you see these white star-like things, held by thin stalks. You ask your self, what are those things?

In 2012, Bluewater Wind will build an offshore wind farm in the ocean waters off Rehobeth Beach, providing wind energy to 100,000 homes in 2013. Bluewater Wind's farm will be generating 450 megawatts of clean energy in Delaware. Though electric companies will not lose money from the deal, can Bluewater Wind handle the project with all their economic problems?

Bluewater Wind used to belong to Babcock and Brown, an Australian-based energy developer that had financial troubles

(continued on page 4 - Local News)

(continued from page 3)

in 2008 with the economic crisis. Babcockand Brown had to sell Bluewater Wind, which shopped itself to potential buyers around the world for about a year. Eventually, they found a buyer right here in Delaware called NRG Energy, a large company that owns a coal mine.

To build the wind farm, the first step is to get loans from banks because a lot of money is needed up front. Wind farms can cost hundreds of millions or billions of dollars. A wind turbine and construction plan must be chosen. Ships have to be hired and a port selected to operate from. After the windmills are installed, they all take electricity connected by a cable, which is connected to the mainland by one big cable.

Right now Bluewater Wind is going to banks for loans, shopping for wind turbines, and lining up subcontractors. "Why would anyone want to go through this hard process?" asks Scott Baker a graduate student at the University of Delaware. Well that's because the CEO of Bluewater Wind believes that energy that doesn't produce CO2 is the future for the world. Hearing that a company wanted to produce wind energy in Delaware made people want to help.

The University of Delaware helped Bluewater Wind by researching the quality of the wind. They searched the best place on the Atlantic coast to build their wind farm and brought conferences and classes so that people can be educated about wind energy. Bluewater Wind can also get information on where they can build their windmills. Out of the project, the university will get pride, an offshore wind farm in their

state, and clean energy for all of Delaware. Bluewater Wind would get a competitive advantage being the first to build an offshore wind farm and of course money.

Some people are worried that there are too many negative environmental impacts about the wind turbines, but there is not much to be worried about. European studies show that this project will lead to no pollution, no greenhouse gases, and nothing toxic. The wind farm is far from flying zones for migrating birds. Even if it were in their path, birds learn to dodge windmills during migrations. Although there have been some deaths of birds in these situations, the number isn't large enough to be much of a concern. The wind farm is also safe for marine life. In fact, the windmills could turn into artificial reefs.

Imagine you're back at Rehobeth Beach again in 2013. You see the windmills and watch the Delaware wind harvest begin.





ANOTHER ONE BITES THE DUST

Clayton Hansen
~ Staff Reporter

A group of teary-eyed people stand about 150 yards away from an oval-shaped building, awaiting its destruction. About 20 feet away, another group of people stand, a group full of people cheering on the wrecking ball as it strikes one of the building's walls.

This will soon be the scene at the Philadelphia Spectrum. In the near future, it will be destroyed to make way for a new state-of-the-art building complex that will include restaurants, shops, and a retail entertainment center.

Ground was broken for the Spectrum on June 1, 1976 on a wet and sticky day. Attending the event was Jerry Wolman, the former owner of the Philadelphia Flyers and Philadelphia 76ers, and then-Philadelphia Mayor James Tate. Construction for the Spectrum finished in 16 months for a cost of seven million dollars. Lou Scheifeld, former president of the Spectrum explains that the name "Spectrum" was for the broad range of events that would be held there. "'SP' for sports and South Philadelphia, 'E' for Entertainment, 'C' for Circuses, 'T' for Theatricals, 'R' for Recreation, and 'UM' as in 'um' what a nice building!" The first event held at the Spectrum was the Quaker City Jazz Festival. On May 1, 1978, a piece of the roof blew off during a performance of the Ice Capades, forcing the Spectrum to close for a month while Mayor James Tate fought with Philadelphia DA Arlen Specter on construction of the roof. But the damage

was repaired and things went on as normal at the Spectrum.

Sports and concerts were about the most popular things than happened at the arena. The Flyers won their first Stanley Cup there defeating the Boston Bruins 1-0 in front of a sell-out crowd of 17,007 people. The winning and only goal was scored by Rick MacLeish with 14:48 remaining in the first period. The Flyers also competed in the Stanley Cup six times between 1974 and 1987, winning it twice. Dr. J led the 76ers to the NBA Finals four times, between 1977 and 1983, with his mind-blowing array of dunks and flowing, black afro. The 1976 and 1992 NHL and 1970 and 1976 NBA All-Star games were held there. The Spectrum is the only arena to hold the NHL and NBA All-Star games in one season, doing so in 1976, when they also hosted the NCAA Final Four. In 1980, all four major Philadelphia sports teams reached the championship in their respective sport. At times, the noise level in the Spectrum got so high that the crowds roar made other teams feel like they were walking into a lion's den.

In addition to sporting events, bands such as Led Zeppelin, Jimi Hendrix, Metallica, The Who, and more than 200 musical groups played at the Spectrum. The most frequent band to play at the Spectrum was the Grateful Dead, who played there 53 times. Aerosmith played at the arena 23 times between 1976 and 1994. During one performance, rowdy fans injured a band member with glass bottles and M-80 firecrackers.

The Spectrum was alive and kicking for almost 43 years, but soon nothing will be left. "The Spectrum is my baby," says Ed Snider, Owner of Comcast Spectacor. "But

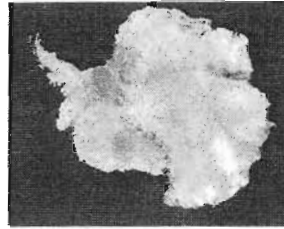
(continued on page 6)

(continued from page 5)

after a lot of thinking and discussions, we all feel that it is in our best interest to close the Spectrum.” Though public opinion might be mixed, management disagrees. “All fans agree that it is time,” says Ike Richman, Vice President of Public Relations for Comcast Spectacor. “After 43 years the Spectrum has reached the point where significant repairs were needed to keep it going,” says Richman.

The Spectrum shall soon be gone and Philly Live will take its place. Philly Live will be a two-block long diagonal street that will connect Lincoln Financial Field and the Wachovia Center. Richman calls the retail and entertainment complex “Spectacular.” Unfortunately, Philly Live won’t be ready until 2011. “We here in Philadelphia are extremely proud of our past championships and successes, but we do not want to continue to live in the past. We need to live in the present,” says Snider. Thus it was announced by Comcast Spectacor that whenever a Philadelphia sports team wins a championship in the future, the stadium would be knocked down and rebuilt to make sure that each building has its own unique history. When asked why Comcast Spectacor would waste so much money destroying and rebuilding structures that are not needed, Snider responded by saying, “Hey the government is spending money they don’t have, why can’t we?”

The Spectrum is still here, but it’s on “death row” just like Veterans stadium was before it. The memories, sounds, and emotions from all of the concerts, circuses, and sporting events will be left with only the people who have been there for themselves.



COLD, HARD FACTS

Maude Ceruso
~ Staff Reporter

The wind is blowing 31 miles per hour. Snowflakes fly up against the scientists’ cabin windows. Their dome building looks like an eye staring up at the clouds. In that same day, the eye falls asleep. The scientists are in their cabins, most likely sleeping just like the eye. The next day, everyone wakes and tries to brush the snow off the top. The eye is awake and the researchers are doing work again. Two days later, the dome decides to doze.

Scientists from the University of Delaware and the University of Wisconsin are in the South Pole. They are in the process of making a neutrino telescope that captures an image of a neutrino at their Ice Cube Neutrino Observatory. A neutrino is a subatomic particle that can pass through ordinary matter. Finding these neutrinos could help scientists understand our galaxy. It can also spot microscopic black holes and many different things that will help the scientists. Mostly, scientists are trying to spy on the neutrinos when they hit the ice.

Life in the South Pole isn’t all that hard, except for the very cold weather. In the summer (which is our winter) the temperature ranges from -5 degrees F to -31 degrees F. Over time, the scientists started to make clubs and classes. One club is called the 300 club. Once it gets very cold, they go into the sauna for a little bit then run outside with or without clothes and

(continued on page 7)

(continued from page 6)

experience a 300 degree difference between inside the sauna and the outside temperature. One class is learning about how to do Scottish dance. So life isn't too hard if you subtract the work and the cold.

The South Pole is the only place where the scientists can do research. They need to be able to accurately take a photograph of the neutrinos in the ice using the Ice Cube telescope that has a small camera in it. Most ice has air bubbles, ruin the process of capturing a photo of a neutrino. South Pole ice doesn't have as many. It's expected to be done by 2011. There are over 400 people at the site, mostly construction workers and scientists. Overall, the whole research and construction is estimated to cost 272 million dollars. The National Science Foundation provides money for most of the construction, which adds up to 242 million dollars and 30 million dollars comes from Ice Cube's contributors in Germany and Sweden.

The basic reason scientists are doing this research is to understand the universe better. With this neutrino telescope they can spot many other things than just neutrinos. For example, they can locate dark matter like black holes. All of these scientists are thirsty for knowledge. That's why they are there. They discovered something new and are there to test it out and do research to feed their curiosity. "In the end, our goal is to provide insights into the nature of neutrinos and the universe that might someday be used to make the science fiction of today the reality of tomorrow," says John D. Wiley from the University of Wisconsin.

Antarctica has been a human curiosity for a long time - all the way back to

Captain James Cook. He tried hard to record data about Antarctica, although his real goal was to find the southern continent. Many other sailors like Scott and Shackleton brought scientists with them and focused on recording data like geography, biology, and meteorology. Other sailors took geomagnetic readings to find the South Magnetic Pole. Geographical discovery was the main focus. That was many years ago. Today, a blizzard of new scientists have settled in the South Pole to learn more.



FAST, SEXY, AND FAMILY FRIENDLY

Tyler Yates
~ Staff Reporter

Is it possible to have a car that's environmentally friendly and suits the need for speed? Imagine that car being made in Wilmington, Delaware and supplying as many as 2,000 jobs. Now stop imagining. In late 2012, Fisker Automotive will be opening a plant to make what Henrik Fisker said "Will be the most radical, sexy family car on the planet." This vehicle will be for people who want a fast plug-in hybrid.

Henrik Fisker used to design cars for Aston Martin, Ford, and even James Bond movies, but in 2005, he left a good job and a great salary to make cars under his own name. He said that it wasn't his dream to own his own company, he just always wanted to do something bigger. In June 2012, Fisker Automotive will be opening up in Wilmington, Delaware at the old GM plant that they bought with a 527.8

(continued on page 8)

(continued from page 7)

million dollar loan. They will be making a performance, plug-in hybrid for families. In late 2012, Fisker is going to start making the Nina car in their new plant in Wilmington, Delaware. By 2014, when they reach full capacity, they plan to have 2,000 employees.

In 2010, Fisker is going to start selling the Karma, which will be made in Finland. The Karma is a luxury sports car and also a hybrid. A plug-in hybrid works by plugging it into an outlet where it takes the energy and powers the car. After driving on battery power, the car will automatically turn on the fuel engine. One of the other ways it can collect energy is that it has solar panels on the roof of the car. The car can go up to 125 mph and can go up to 100 miles without ever stopping to refuel. Fisker also wanted a little more style in the car so they put a small box-shaped device in the back of the car, which when turned on makes a jet-like sound. They will be selling this car at Union Park in Wilmington for around \$80,000 after rebate.

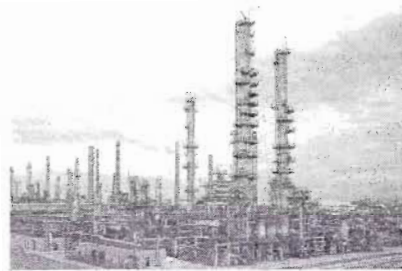
The Nina is a fast, sexy, family plug-in hybrid. The Nina was named after one of Christopher Columbus's ships. The name Nina suggests coming from the old world to the new world. Fisker named the car after coming from old car technology to newer plug-in hybrid sports car technology. The car will be sold at about \$40,000 after rebate.

Something that is good for the environment is that Fisker's cars don't burn gas and create CO2 since they are plug-in hybrids. People aren't necessarily aware that it actually takes burning coal to create electricity so the car would still pollute the environment in that sense.

A benefit of Fisker Automotive coming to Delaware is that a lot more

dealers will be able to employ more employees and have more cars to sell. So far, the Karma will be sold at around 45 different dealerships. Fisker Automotive will also be making around 100,000 Ninas in 2013 and 125,000 in 2014 when they reach full capacity.

The stereotype of a hybrid is that it is box shaped or looks like a computer mouse but Fisker cars are different. The Fisker cars look like crouching tigers. If Fisker Automotive becomes successful then a lot more crouching tigers will be sprinting on the road.



THE HOT POTATO REFINERY

Andrew McDermott
~ Staff Reporter

On July 17, 2001 an explosion at the Delaware City refinery killed one worker and injured eight others. Mr. Davis, an employee from Washington Group International (WGI), was repairing a cat walk that was damaged by the acid vapors from the tank. He was cutting bad pieces of grating and putting on new ones. From the welding, a spark either ignited the acid vapors on the outside of the tank or went in the tank through the holes and ignited the vapors inside. The incident caused about 1.1 million gallons of material to spill and it burned for a half hour. Mr. Davis was fatally injured. From 1956 to 2010, the Delaware City refinery has gone through environmental, safety, and financial struggles. It has had about 1,000 environmental and safety violations.

(continued on page 9)

(continued from page 8)

Valero Energy is the U.S.'s largest independent oil refiner. Valero decided to permanently close their Delaware City refinery on November 19, 2009. The Delaware City refinery was one of many refineries to shut down in 2009. Most of the refineries to close in 2009 were because of financial losses. Bill Day, Valero's spokesperson says, "When the refinery closed, Valero was losing one million dollars a day." The closure affected 550 employees. "It struggled most because of imported gasoline."

Over the years, the refinery has had a lot of safety incidents. On July 17, 2001 there was an explosion at the refinery that killed one employee. On November 5, 2005, two workers were asphyxiated in a nitrogen-filled space. It could have been prevented with proper training. The Chemical Safety Board (CSB) also says company training programs and industry good practice guidelines do not adequately warn workers of the dangers of oxygen-deficient atmospheres inside confined spaces.

The plant has also had a lot of environmental issues. Once the plant was ranked the nation's dirtiest for sulfur dioxide emissions. The refinery was able to dump 38,000 pounds of waste into the Delaware River. The fish in the river are now contaminated so you can't eat them. To help tourism and fish, the law states that the coastal zone is not allowed to have any other heavy industry. Alan Muller, Executive Director of Green Delaware says, "A refinery is never a good neighbor. It has done more harm than good." Residents in the area are fed up. Charlotte Powers, who lives in Barbs Farm, south of the refinery,

says, "We hear noises. We see them blowing black junk out of their smokestacks." Wayne Brittnham lives closest to the refinery. He lives near a freshwater marsh that he said often attracts thousands of geese and ducks. He used to hunt on the marsh in the late 1960's and early 1970's. He said emissions from the plant were so bad he had to cover his face with a handkerchief when a northwest wind blew into his duck blind. The Delaware City refinery has struggled for many years to contain soil and ground water pollution.

Valero wishes to complete the deal with PBF Energy by early June. PBF Energy is made up of three companies: Petroplus Holdings A.G., the Blackstone Group, and First Reserve Corp. The deal was 220 million dollars for the 5,000 acre site on the bank of the Delaware River. This is PBF's first transaction of a U.S. refinery. They hope to start a strong independent refining company. A lot of refineries are now closing because the demand for fuel has gone way down since 2005. They are also challenged by imported fuel. The Delaware City refinery sold because Petroplus saw the potential of the refinery.

The refinery has been passed around for a long time. It was built in 1956 by Getty and owned by them until 1984 when Texaco bought it. In 1988, Star Enterprises bought it and sold it ten years later to Motiva Enterprises. Motiva operated it until 2004 when Premcor bought it. A year later, it belonged to Valero Energy. Now Valero is looking to sell it to PBF Energy. PBF Energy hopes to keep the hot-potato refinery for a long time.



DELAWARE'S ALIEN INVASION

Alex Rash
~ Staff Reporter

Imagine your favorite park's trees covered in vines, grass replaced with garlic mustard, bushes entangled with mile-a-minute, flowers with no butterflies, a pathway with nothing to look at on the sides. This is Delaware's future if we don't take full action against invasive species.

Delaware's parks are being taken over by invasive plants and animals that will kill other native species. In Delaware, there are at least 28 invasive plants and over 50 invasive animals. Most of Delaware's invasive species came over on a boat to use as landscaping or pest control. It makes camping, hiking, and other outdoor activities a lot less enjoyable. Right now, the U.S. pays an estimated 137 billion dollars annually in the fight against invasives.

The difference between invasive plants and weeds is that a weed takes a lot of nutrition from the ground and an invasive plant crowds out native plants. There are three lists of invasive plants of Delaware: Widespread Invasive Plants, Restricted Invasive Plants, and Restricted and Potentially Invasive Plants. The butterfly bush is the only plant on the Restricted and Potentially Invasive list. The butterfly bush came from Chile and it is found commonly around World War II urban bomb sights in England. It grows somewhat fast and can spread easily.

Delaware is particularly at risk with aquatic invasive species introductions. Phragmites is one of the invasive plants in

Delaware that lives around wetland areas. It came from Europe so people could make thatching. It is found mostly in lower Delaware. Tubulin is a protein that plants need to survive. Phragmites has an acid that disintegrates other plants' tubulin. Zebra mussels are another invasive species that lives on the bottom of ponds and streams. They can clog water intakes and block pipe lines. Zebra mussels came from the freshwater lakes of southeast Russia and accidentally made their way to the U.S. on the bottom of boats then got into Delaware ponds.

There are many invasives in Delaware's woodlands but some are more invasive than others. One of the biggest offenders is garlic mustard. It can take over whole fields in one or two years. It was brought over from Europe and used as food and medicine. A less invasive species is Multiflora Rose. It is a thorn bush that has little roses. It came over from Asia to use as hedges planted around grazing fields. Now you can find it in almost all Delaware parks.

There are many different ways to control invasive species. Here are five you can start with: Always check the bottom of your boat and take off all animals before going to another water source to prevent invasive mussels from spreading. Never release live bait or exotic pets in the wild. Go to a park and pull up all plants you know are invasive or go to a park event where you help pick invasive plants like garlic mustard out of the ground. Whenever you go camping, buy firewood from a local source to prevent ash borers from coming to Delaware and killing all of Delaware's ash trees. Before buying plants or seeds, research and buy native plants or seeds to make sure new invasive plants don't sprout up.

Caffé Gelato

RESTAURANT
+ CATERING

CELEBRATING OUR
10 YEAR
ANNIVERSARY



Have Caffé Gelato Cater your next event, at home, your office or at the restaurant in one of our three private rooms.

(302) 738-5811

90 East Main St. • Newark, DE 19711 • www.caffegelato.net

McDermott Property Management, Inc.

Space Available

Warehouse Space – Kiamensi Rd
(1000 & 2000 sq ft units)

Retail Space – Liberty Plaza
(Kirkwood Highway)

Retail Space– Newport Plaza
(Market Street, Newport)

Call John For More Info:
(302) 545-1337
Serving the Delaware Valley

A Full Service Commercial Management Co.

Fresh | Organic | Local

many
Gluten Free
options!



302-368-5894
280 E. Main St. Newark, DE 19711



www.newarknaturalfoods.coop

Visit the
CO-OP FARMERS MARKET
SUNDAYS 10AM - 2PM
PRODUCE • PLANTS • BAKED GOODS • ART • MUSIC
Sponsored by Newark Natural Foods Co-op



Fire Protection Industries, Inc.
 301 Ruthar Drive, Suite B, Newark, DE 19711
 Telephone: 302-453-9237 • Fax: 302-453-9107
 Fire Sprinkler Systems • Fire Alarms & Security

*
 Contact us for a free home / business security evaluation
 *

Competitive Monitoring Rates
 *

Mention NCCL School for special offers on all services FPI offers



Gourmet Lite Fare
 Catering Available

Joe Marshall
 302-562-7567
 jm4asu@comcast.net

Western Family YMCA Adventure Guides




Are you looking for fun, inexpensive activities for your family?


The Western Family YMCA Adventure Guides Program might be right for you!

Spend quality time with your kids! Take time with your family to build bonds, character, fun and friendships that will last a lifetime. Activities of all kinds from campouts to sleepovers, skating, bowling, rock climbing and much more!

For more information contact:
 Pam Kennedy, Associate Executive Director
 (302)709-9622 x 1155

OUR MEDIUM PIZZA IS 14", OUR LARGE PIZZA IS 16". SOME OF OUR COMPETITOR'S MEDIUM PIZZAS ARE 12" & THEIR LARGE ARE 14"

Serving The Community Since 1980



Margherita's Restaurant & Pizzeria

ICE COLD BEER ON TAP

134 EAST MAIN STREET
 NEWARK, DE 19711

302-368-4611
 Fax 302-368-1666

(continued from front page)

worshiped animals in cults thinking of them as vessels of the gods. They even used them as oracles to answer important questions. Since then, people have learned a lot about animals but people will probably never cease to wonder when they look at an animal - whether it is tiger in the zoo, a horse on their farm, or just a pet dog - 'What are you thinking?' People have portrayed animals as being intelligent and even capable of speech since ancient times. Even in modern culture, we continue to portray them the same way in movies such as, *Finding Nemo*, *Good Boy*, and *Planet of the Apes*.

But that's just in the movies. New science has found that the animals of the real world are smarter than we first thought and although they can't talk, they can do far more amazing things. Alex was one such animal. He was an African Gray parrot purchased in 1997 at a pet store by Irene Pepperberg. His name was an acronym for Avian Language EXperiment (later changed to Avian Learning EXperiment). As of 1999, Alex had a vocabulary of 150 words. He was able to distinguish colors and shapes and understood concepts such as same and different, bigger and smaller, and over and under. But what made Alex so special was that when he talked he wasn't just mimicking, he actually knew what he was saying. When shown an apple and asked what it was he said "banerry," which Pepperberg thought to be a combination of banana and cherry - two fruits he was more familiar with. He also came up with his own name for a walnut - a "cork nut." He could ask for things. Once when he asked for a banana and was handed a nut he threw the nut at Pepperberg and again asked for a banana.

Of course when we think of animal intelligence, we think of monkeys and apes, in particular chimps. Everyone knows that chimps are smart. After all, they share over 90% of our DNA. Chimps share so much of our DNA that most of the other differences between humans and other animals don't apply to them: they use tools (including sharpened sticks as spears), they have a good memory (a chimp even bested the British memory champion), and there was even a chimp named Washoe who learned sign language.

But the one thing that sets humans and chimps apart is that humans grieve and chimps don't. Or so it was thought. Recently, scientists for the first time saw a chimp die in the wild. It was the old matriarch of the troop. First, the troop looked at her face as if to see if she was sleeping. Then they started stroking her, especially the lead male (her mate). Later, they seemed to be very subdued as if grieving.

Of course, chimps aren't the only smart apes. According to Mandy Fischer, the head keeper at the PECO primate house, "The orangutans really seem to sit and think about something. If they're put into a new situation, if we're asking them to move into an area we don't usually ask them to while we clean or fix some thing, it seems like we're able to rely on the relationship we build with them as keepers a lot more to get them to trust us. A great example of this is we teach our apes to trade and trading is really important. Sugi, our male orang likes to dig up rocks and bang them on the windows. We don't like him to do that, those types of things we get them to trade."

An orang named Chantek was able to take trading a step further by learning to

(continued on page 14)

(continued from page 13)

barter with poker chips earned by cleaning his room. He could then spend these chips on treats and rides in the researcher's car. The most amazing part is that although Chantek was taught to barter, he figured out other concepts. Two examples are inflation - by breaking the poker chips and counterfeiting - when washers were used instead of poker chips, he used bits of tin foil to make fake ones.

But not all oranges are so nice to their keepers. A male orangutan named Fu Manchu got out of his cage three times before he was caught. He escaped by climbing down into the moat and using brute strength to pull open a furnace door (which was latched from the other side) just enough to slide a wire into the gap and pop the latch. He bent the wire lock pick to fit between his gum and upper lip. It shows great smarts on Fu's part that he was able to devise an escape route, make a tool and utilize it, and hide that tool between escapes.

Language, grieving, bartering, inflation, and counterfeiting are all ideas we think of as human and yet we have examples of non-humans doing all of these. Rights are another concept we think of as human, yet if animals are capable of human-type behaviors why shouldn't they be given human-level rights?

One country has already given great apes the rights to life, liberty, and freedom from torture. Ironically, that country is Spain, the country whose national pastime is watching men in tight pants do battle with sharp-horned beasts using a red cape and thin swords. However, in spring 2008, the Spanish parliament made a decision to grant great apes important rights - rights that the

Great Ape Project, founded in 1993 by Peter Singer and Paola Cavalieri, has long pushed for. What do these rights mean for the great apes of Spain? It is now illegal to do harmful experiments on apes as well as use them in TV commercials, filming, and circuses. It is still legal to keep them in zoos but conditions for the 350 apes in Spanish zoos will have to improve as 70% of the apes live in sub-human conditions. All of this has had a positive affect on the apes of Spain and has been generally well received.

But not all Spaniards are so happy with the law. Many people didn't think that the parliament should make apes a priority when Spain has no wild apes of its own and has other things to worry about, like an economic downturn. There is also a religious aspect to all of this. According to the bible, humans are superior to other animals. The Archbishop of Pamplona says, "This is either a ridiculous society or a dislocated one. Asking for human rights for monkeys is like asking bull rights for men."

Bull rights? Those words definitely provoke the question: why give apes these rights and not other animals? The reason that the Great Ape Project focuses on apes is because of their mental and emotional capacity, which is higher than other animals. Another reason for these rights to be given to just apes and not bulls is that bull fighting is still a major tourist attraction and brings in a lot of money. Pedro Pozas, Director of the Great Ape Project in Spain, explains: "I've always said that as activists, we have to separate our campaign against bullfighting from that of other animal rights because if we don't, bullfighting will stop the whole thing. They're too powerful." Although Pozas is right, Spain has still made a bold step and other countries are already following suit.

(continued on page 15)

(continued from page 14)

There are several reasons why animal rights activists approve of the new law in Spain. It would help raise awareness for endangered species. If the great apes had certain rights it would make it illegal to destroy their rain forest homes without their consent. Ecuador took it one step further and gave an entire ecosystem rights - not just the animals but also the trees, the stream, the rocks, even the dirt. This means that to destroy anything in that ecosystem is a violation of its rights.

Another reason is that these rights make people think hard about animal cruelty. You might think twice about abusing a dog if doing so was infringing on that animal's rights and would be punished as such. These rights also raise awareness about animal testing and prevent testing on great apes. "In my opinion, and this is just my opinion and I don't speak for the Philadelphia Zoo, I think that primates in general deserve much more respect than they get," says Fischer.

But not everyone is so happy. Some say that whether an animal is intelligent or not is beside the point. They say that it is the ability or inability of the brain to override basic instincts. An example of this is suicide. Animals can't commit suicide because their instinct to survive overrides any want they might have to commit suicide. Most humans are the same, but some people override that basic instinct to live and commit suicide. This is just one example of the mind overriding the instinct.

Another reason people are against human-level rights is that animals can't reciprocate the rights given to them by respecting the rights of another. Does the lion respect the rights of the gazelle?

Others are of the opinion that it might be too hard to find where to draw the line. Does a cockroach have the right not to get sprayed by a can of Raid? After all, Ecuador gave a whole ecosystem rights so maybe this is going too far.

Although Spain was the first, it won't be the last. Already the U.K. has picked up the debate and the U.S. is likely to follow. In a few more years, you might hear something like "sentenced to life in prison for animal abuse" or see empty concrete pools with algae at the bottom where animals once lived at places like Sea World. On the other hand, animals everywhere will lead longer and better quality lives.



(continued from front page)

Normally, texting drivers spend about five seconds just looking down and grabbing the phone. Little do they know that when they looked back up, if they were driving at a regular highway speed, they would have traveled around 100 yards. You could easily hit anything within that time frame or that distance. David Aites, a driving teacher from Pittsburgh, took a "texting while driving test." He failed. He claims that he couldn't understand how someone could push those buttons and still remain on the road. "In the time you look down here, grab the phone and flip it open, it could be over with," Aites says.

Texting while driving has grown in popularity and it is becoming a bigger problem with each passing day. The first text message, sent in 1992, simply wished a friend "Merry Christmas." The idea that one could just punch the "send" button, and another person would have your message in a matter of seconds was exciting but slow. The story was lost in a wave of other new technology. Texting truly began to become popular around the year 2000. The Cellular Telephone Industries Association's most recent semi-annual survey shows that Americans send around five billion text messages per day.

Rachel Marcus, a victim of the new raging issue was hit on June 20, 2009 by a texting 18 year-old driver. She was in front of Jake's Burgers in Newark, Delaware dropping off some money for rent. She slowed to a halt in front of a stop light. The boy behind her didn't stop and slammed into her at about 40 miles an hour. "I remember looking into my rear-view mirror," she recalls, "and I saw that he was going really fast, and I was a little bit afraid

that he wasn't going to stop." A sliver of dark remembrance haunts her voice.

Rachel Marcus was working at C.M.I. Electric. She still is, but her injuries are now obstacles. She shattered her leg bone so badly she had to have surgery to get it fixed. She bruised other parts of her body and still has pain in her neck that may not go away.

She met the man in court and he apologized and promised to never text while driving again. He was fined heavily for his actions. There would have been more of a punishment, but there was not a law against texting while driving in Delaware. He was only fined for "distracted driving." On May 14th, a bill passed the Delaware House of Representatives that would ban drivers from using any hand-held distractions such as cell phones, laptops, and gaming devices while the vehicle is moving. It may soon become law statewide.

Unlike Delaware, some states have excessively tough laws against texting while driving. On September 22, 2006 in Utah, a 19 year-old boy named Reggie Shaw, a brilliant kid with a promising future, was texting while driving. Another man was driving behind him. Reggie's car drifted across the center line and clipped a car coming in the opposite direction. The car, with two men in it, swung around and smashed into the man behind Reggie, killing both of the men in the clipped car. Reggie was sentenced to 15 years, imprisoned in a rough environment with real criminals. "I just think that he is a very, very good kid, who did just a really dumb thing," says Terry Warner, a victim's advocate. The branches of this terrible trend are clawing for altitude every day and have even reached the government.

(continued on page 17)

(continued from page 16)

Arnold Schwarzenegger, the governor of California, recently signed into law a ban on texting while driving. All seemed to be going well until the very next day. The temptation was too great. Arnold's wife was caught red-handed, *on tape*, directly breaking her husband's law.

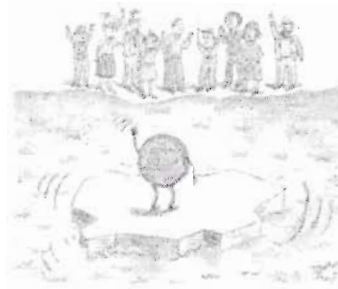
The problem is growing fast. According to a Pew Internet & American Life Project survey, 48 percent of people between ages 12 to 17 say that they have been in a car driven by a texting person. Now that waves of people seem to be infected by texting fever, many states are banning the new hazard. A few still hesitate, risking many lives. Texting in and of itself is not a bad thing. Driving in and of itself is not a bad thing. But texting while driving is.

Jackie Furfaro's husband was killed in the Utah crash. She has a young daughter who due to this terrible issue will grow up fatherless. "We were supposed to grow old together, and retire and all these things... that's not going to happen," she says. "That comradery of being together... is gone." She remains silent for a few seconds, fighting tears. "No text is that important."



IS A PENNY SAVED A PENNY EARNED?

Natalie Freedman
~ Staff Reporter



A song: "Pennies From Heaven," a famous phrase: a penny for your thoughts, a symbol of good luck: a lucky penny. Americans have had a long history with the penny. Some people think getting rid of it would be a crime, but others think it would do national good.

Many people have different ideas about why they want to eliminate the penny. One of the biggest is that they aren't getting spent. According to *Time* magazine, 58% of Americans stash their pennies instead of spending them. The main cause of this is that they aren't worth anything anymore. Even small pieces of candy cost more than one cent and pennies aren't accepted by parking meters, laundromats, or transit systems. In 1857, the penny could buy what a quarter can now.

The second big reason for getting rid of the penny is that we are wasting about two seconds every time someone uses a penny in a transaction. Jeff Gore runs an organization called Citizens for Retiring the Penny and is very public about eliminating the penny. "To me, the primary issue is the use of the penny slows down cash transactions." Gore also thinks that since we retired the half penny 150 years ago (when it was worth what a dime is today), we should have retired the penny 50 years ago.

(continued on page 18)

(continued from page 17)

Another reason for getting rid of the penny is the government is wasting tax money on minting pennies. It costs about 1.7 cents to mint one penny. The reason the government has to make so many new pennies is that people keep them as lucky pennies, use them for art projects, or flatten them at museums or amusement parks. Some people even illegally melt pennies down and sell them to the government for more pennies. Gore doesn't think this is the main issue though. "Even if pennies fell from the sky and were free, I would still think that we should not use them."

One smaller reason for eliminating the penny is that the coin is small enough for toddlers and dogs to swallow. According to a 1999 study in *Radiology Journal*, "The chemical reaction between gastric acid and post-1982 pennies yields a highly absorbable form of zinc, zinc chloride, which may have toxic effects." The study also mentions a five kilogram dog that was killed by swallowing two pennies.

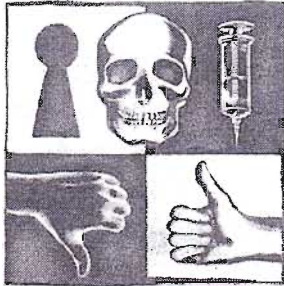
Not only do people have reasons to eliminate the penny, they also have proof that it would work. In the last 30 years, Australia, Sweden, Britain, New Zealand, Israel, the Netherlands, Finland, Hungary, and Brazil have eliminated their smallest coin without much trouble so it should be the same for us.

One of the big names in penny elimination is Jim Kolbe, a retired congressman who, when working, wrote two bills to get rid of the penny. But now that he is retired, Gore says, "We don't really have a champion in Congress right now."

But not everyone shares Gore's wishes. Mark Weller is against eliminating the penny and has an organization called Americans for Common Cents. (A.C.C.), a lobbying group funded by the zinc industry to influence the government into doing things like making special editions of the penny. "Kolbe is a good member of Congress but wrong on this issue," says Weller. A.C.C.'s arguments for keeping the penny range from zinc suppliers losing money to charities that mainly raise money from pennies taking a hit. But the largest argument for keeping the penny is for historical sentiment. They believe it would dishonor Lincoln. Illinois, officially nicknamed Land of Lincoln, declares itself a pro-penny state. Another reason people want to keep the penny is that if we eliminate the penny, transactions using numbers not multiples of five, would have to be rounded up.

François R. Velde, an economist and author of the book *The Big Problem About Small Change* has a different idea about pennies that he hopes will make everyone happy. He suggests we make the penny worth a nickle and stop minting nickels (which cost about 8.5 cents to mint) and the nickels would just be a special edition of the penny.

But right now people are afraid of this change. They would miss the penny's deep history from penny candy and penny arcades to idioms like "penny wise and pound foolish," "penny pincher" and Ben Franklin's famous saying "A penny saved, is a penny earned." Hundreds of people have had a lucky penny tucked safely into their pocket. But Jeff Gore is not afraid of the change: "I don't think that it's going to be an earth-shattering change. I think that it just means we're all going to get through the store a little faster."



THE COST OF KILLING

Becky Heinz
~ Staff reporter

When a murderer is sentenced to life in prison, the state has to clothe, feed, and cover his medical expenses. In Florida, that costs at least \$19,000 a year. One would think that executing the murderer would be less expensive - it isn't.

The cost of executing someone is estimated to be around 1.2 million dollars, depending on the state. A criminal would have to stay in prison for 63 years for the costs to amount to that much. Over the years, there have been many specific arguments over the death penalty such as executing minors or whether people with mental disabilities should be executed. Now, we are wondering if we can afford to execute at all.

The enormous costs are due to the legal process, which is meant to ensure that the innocent are not executed. It typically takes a year for the case to come to trial and there is much preparation. There are two trials: a guilt trial and another for punishment. The jurors are questioned about their views on things such as the death penalty. Death penalty trials are estimated to take three to five times longer than regular trials. More witnesses are required and twice as many attorneys are appointed.

States like California do not have enough money to execute most of their death row inmates, especially this past year. California has 678 prisoners on death row and yet have only executed 13 people since

1977. By converting the sentences of the death row inmates to life without parole, they could save 1 billion dollars over five years. Of course, there are other options.

Texas has had more executions than any other state since 1976 - a whopping 450. That is about ten executions each year. One of the reasons Texas has so many executions is because the defendants aren't represented properly. There have been lawyers under the influence of drugs and some fall asleep during the trial. Overworked, inexperienced public defenders reduces the costs and makes it easier to give the defendant the death penalty. Though Texas is very harsh on criminals, there still seems to be a very high murder rate in the state.

Maryland has carried out five executions since 1978. Each execution cost taxpayers an astonishing \$37.2 million dollars. An Urban Institute study found that on average, a death penalty trial costs 1.9 million dollars more than a non-death penalty trial.

There are many reasons cited to abolish the death penalty, but there are just as many given to keep it. Those for it argue that if there was no capital punishment, the prisons would get too crowded and we would spend more money building prisons. There would also be more of a chance for the inmates to escape and we don't want murderers running loose. Execution is a way to make sure that the murderers don't come back.

One other reason cited to keep the death penalty is that it acts as a deterrent. It shows people what would happen to them if they committed that crime. However, there

(continued on page 20)

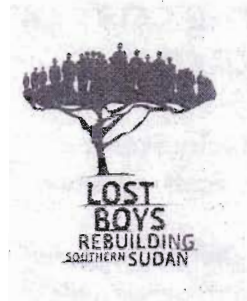
(continued from page 19)

are arguments against that as well. There have been studies to try to show if the death penalty is an effective deterrent. The problem with these studies is that it is difficult to know what people are thinking, so we wouldn't know if and when the the criminal plans on killing someone, if they consider the consequences. They probably don't.

Another way to find out if the death penalty is a deterrent is looking at the homicide rates in states with death penalty verses states without. It turns out that over the past decade, homicide rates have been consistently lower in the 15 states that have abolished capital punishment. The south has the highest murder rate out of the four regions in the U.S., and carries out over 80% of the executions in the country.

Texas, a southern state, is one of ten states trying to pass a bill to abolish the death penalty. Montana, Colorado, Nebraska, Kansas, Washington, Illinois, New Hampshire, Maryland, and Connecticut are the others. The main reason is costs. When states find that they will save money, the moral argument is set aside.

Delaware has had 14 executions since 1976, an incredible number for a state so small. One of the reasons is that it only takes seven out of the 12 jurors to agree to the death penalty. It already costs the taxpayers 181.5 million dollars to keep an average of 5,500 inmates in prison. That costs the state \$33,000 a year. Christy A. Visher, a professor at the University of Delaware's Department of Sociology & Criminal Justice says, "That's a huge cost. Correction costs are eating into money that could be used for education, recreation for children and other kinds of activities that all of us engage in."



THE HEROIC SURVIVORS

Ethan Irvin
~ Staff Reporter

A trip of suffering, terror, and devastating loss. A

trip crossing over four countries. A trip of survival in a rocky climate, rainy forests, and scorching deserts. Who are these heroic survivors? They are "The Lost Boys of Sudan," a group of around 30,000 young boys and a few girls ranging from 5-10 years old who had to leave their home country of Sudan in 1987 because of a civil war.

The Lost Boys' trip lasted over ten years. The civil war made them leave Sudan and head into Ethiopia. Once war broke out in Ethiopia, they were forced to go back to Sudan. But before reaching it, they had to cross the Gilo River. Some couldn't swim and drowned. Some died by the teeth of wild crocodiles or by the bullets of Ethiopian rebels. They stayed in Sudan for a year until finally walking to the Kakuma Refugee Camp in Kenya, where they stayed for 9-14 years.

The back story around Sudan's civil wars is complex. Joan Hecht, Founder and President of the Alliance for the Lost Boys explains:

Basically, Sudan is a divided country, not only in geographical terms, but also in terms of the people who live there. To the North, in the dry arid regions, lives a predominately Muslim population, while in the

(continued on page 21)

(continued from page 20)

south, in the more tropical/fertile regions, resides a predominately black Christian and Animist population (those who practice traditional beliefs). When Sudan gained independence from the British in 1956, the British relinquished control of that government. In large part, the Muslims sought to unite Sudan as an Islamic nation, while the southerners chose to worship God in their own way.

In 1983, there was a great jihad declared against the south beginning a giant civil war. More than two and a half million died, others lost homes, and it seemed people around the world had no idea this was happening. Oil was also discovered in the south in 1976, adding greed to a war of race, religion, and rights. Finally, a peace agreement was signed in 2005.

While in the refugee camp, some of the boys and most of the girls got sorted into American foster families. Others also wanted to go but in the end only around 3,800 were placed. The ones who came, like Simon Nyok Deng, had ambitious goals: "When I first left Africa for America, I had a single goal in mind and that was to go to school and break the curse of history that had been covering my family for so long by being the first in our family lineage to gain formal education. Indeed, I made it and here and I am working under the scorching sun of Juba to reconstruct Southern Sudan," he says.

The Lost Boys encountered struggles in coming to America. Some were a little wary about getting on a plane

for the first time. "They were afraid," says Peter Lagad who watched them get on the plane. "It was as if they were doing a test on you. It was like getting shot to the moon." A group of them arrived in the freezing cold at the Logan Airport in Boston to be placed in homes in Massachusetts. One of them said it was so cold he thought his skin was shrinking. Some of them had a challenge driving. And they had to find jobs or be enrolled in high school. But once they got used to it they really enjoyed it.

There were also some confusing things in America. For instance, in Africa when going from point A to point B, the Lost Boys go in a straight line. In America, they would always crack up in cars when going around a turn. Another shocking thing was when they were in a diner they thought it was weird to have ice in water. When they read a fiction book, they thought it was real. Imagine watching *Star Wars* and thinking, 'Oh no Darth Vader is going to attack us later.' One Lost Boy once saw someone wearing a Chicago bulls t-shirt and wanted to live there thinking it was full of the kind of bulls that his tribe raised back home.

Ten years after their arrival to the U.S., the Lost Boys are spread all around the country - Florida, Cleveland, Chicago, New York City. Upon arrival, some boys were lucky enough to go to high school, while others had to go straight into the workforce. Some are in foster families, some are living in houses, and some have even gone back to Sudan to bring their wives and family members to America. About half of the Lost Boys have gone back to live in Sudan. The Lost Boys really like to

(continued on page 22)

(continued from page 21)

learn so Joan Hecht established the nonprofit, Alliance for the Lost Boys of Sudan. It helps the Lost Boys with their health and education. "They, when first arriving in our city, were more like young boys in young men's bodies," Hecht says. "Now they're actually becoming young men. They're raising families of their own, graduating."

John Kuai was one who graduated and wanted to go to medical school. Deng Chol, Founder and President of the National Lost Boys and Girls of Sudan commends Kuai's efforts to become a doctor. "He will have a better life as an individual, and the people of southern Sudan will benefit from his career as well," Chol says. "He wants to help his people and the best way to do that is by becoming a doctor," says Joan Hecht. Kuai has a pretty hard life. He works overnight in a cigar factory in Jacksonville, Florida. After getting a few hours sleep, he goes to his three classes at the University of North Florida. Back in Africa, things were even harder. He saw his father die in front of him. "I was so devastated," Kuai says. "It was the first experience of loss in my life." But Kuai was a hero to the Lost Boys. When crossing the Gilo River he saved five boys. On their journey, he also helped collect the dead bodies of his companions on the side of the road. "Even up to now, I sometimes ask myself, 'Why did I live?' And the answer that usually comes to my mind is that maybe I lived to tell this story to the world."

If you want to help these heroic survivors, send a donation to:

www.allianceforthelostboys.com
www.lostboyschicago.com or
www.helpsudaninternational.org.



BLOOD SPORT

Matthew Sharp
 ~ Staff Reporter

The crowd is still roaring as the fighters are released from their chains. The fighters run at each other, ram their

heads together, then bounce back. Fighter 1 sneaks up from behind and takes Fighter 2 to the ground. Fighter 2 gets back up, turns and bites Fighter 1 on the neck. Fighter 1 goes to the ground and dies. The owner walks up and lays a sheet over him. He picks up the dead dog and heads out of the warehouse, feeling ashamed of himself for losing.

This is the brutal world of dog fighting. Think of dog fighting as extreme fighting where the dogs are often severely injured or die. Some dogs are even sacrificed for losing or killed by their owners if they are hurt badly. Dogs often die from loss of blood, shock, dehydration, exhaustion, or infection hours or even days after the fight. In a dogfighting "contest," two dogs are placed in a pit (generally a small arena closed in by ply wood walls) to fight each other for the spectators to watch and for entertainment and betting. The most popular dogs used for dogfighting are the American Pit Bull, German Shepards and Doberman Pinchers are usually used in street fights and as bait dogs.

Dog fighting is also a problem for the owners. Dog fighting involves illegal gambling. Owners are often found with drugs, alcohol and weapons. Sometimes dog

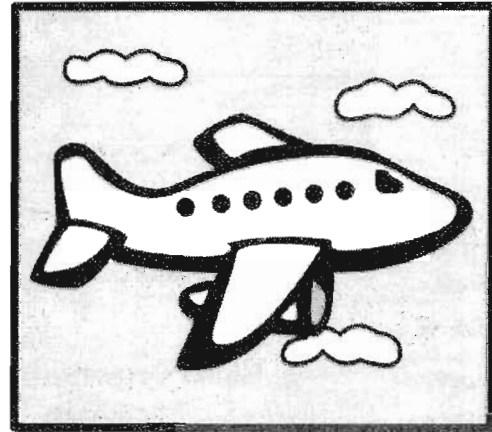
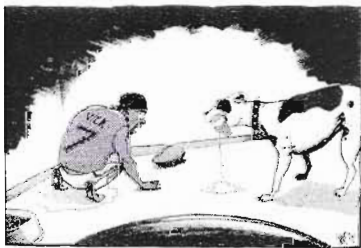
(continued on page 23)

(continued from page 22)

fighters will steal small pets for bait. Small dogs, kittens and rabbits are more at risk of being stolen for bait than larger animals. Arguments over dog fights have resulted in incidents that have led to charges of assault and even homicide. International Boxing Federation Champion Steve Cunningham says, "Dogs are truly man's best friend. Yet some people take advantage of their loyalty by pushing them into dogfighting. It's disgusting and a heinous thing to do. It must be stopped."

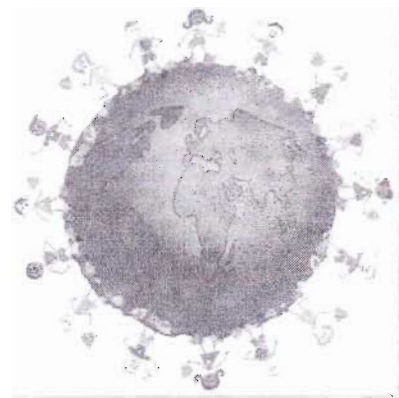
Dog fighting is illegal in all 50 states and a felony offense in almost every state. If you see something, say something. You can notify your local police or animal control of any suspicious activity that could be dogfighting. You can alert the media. Your local newspaper and radio station are always looking for stories. You can try to contact them about the cruelty and dangers of dogfighting. Dog fighting continues as an illegal underground activity in both rural and urban locations. If your children have any questions about dog fighting you can go to the ASPCA children's website, [ASPCA Animaland](http://www.aspcakids.org), for information about dog fighting that's written just for kids.

The fighters are gone now. The warehouse is busy. Inside there are men and women making dog collars for the dogs that were abused and for the ones that were not.



**FOR ALL YOUR TRAVELING
NEEDS COME TO
CHARLIE B. TRAVEL**

**TO CONTACT US:
PHONE: (302) 368-9151
FAX: (302) 368-9191
77 EAST MAIN ST.
NEWARK, DE. 19711**



**The Delaware Institute for
Excellence in Early Childhood
supports quality programs for
children and families. Visit us at:
www.dieec.udel.edu**

HEALTH



STICKS (not stones) MAY SAVE YOUR BONES

Isabel Crowther
~Staff Reporter

The syrup on your pancakes. The chairs at your dinner table. The oxygen you breathe. All these things come from trees. According to a recent breakthrough, so might your bones. At the Institute of Science and Technology of Ceramic Materials in Italy, they have found a way to turn wood into a substance similar to bone. This substance can be used for bone replacements. Bone replacements are called bone grafts. They provide a structure for the host bone to re-grow on that is accepted into the body.

Nearly 500,000 bone graft operations are performed each year. They are the second most transplanted material after blood. People need bone replacements for bone diseases such as osteoporosis and cancer, as well as war and car accidents. Until now, they have used metal and bones from dead bodies as replacements, both having problems, such as rejection by the body. The graft made of wood is one of the only bone replacements that is load bearing.

The process of making the substance isn't too complicated. First, they take a piece of wood (rattan, sipo, and red oak work best because of how similar their pore structure is to natural bone) and they heat it until all that is left is pure carbon, which is pretty much charcoal. Then, they spray calcium on it, making it calcium carbide.

Additional processes convert it into carbonated hydroxyapatite, which is the completed bone substitute. It takes about a week to create one block, which costs \$850. One block can be used for one bone graft. "Our purpose is to convert native wood structures into bioactive, inorganic compounds destined to substitute portions of bone," says Anna Tampieri, the leader of the team.

This bone substitute has been implanted into a herd of sheep at the IsteC Laboratory of Bioceramics in Faenza. The sheep have shown no sign of rejection or infection. If they keep progressing without any problems, the substance could possibly be ready to be implanted into humans in as little as five years. The grafts have been implanted into non load-bearing fractures with great results, so researchers think that soon it may be ready for weight-bearing fractures, such as in the legs. Soon they think they may be able to create a new bone replacement that will slowly dissolve into the body, while being replaced by your body's natural cells.

Today, people are living longer than they used to so they try to make the best of their injuries. "They feel useless and handicapped compared to other people," says Alberto Nicoli, who works on the project with Anna Tampieri. "People nowadays need to have an active and productive life, even when aged."





VIRTUALLY ADDICTED

Jordan Jones
~ Staff Reporter

Il is a Korean boy. On the weekends Il doesn't do homework or play outside, he just plays video games. During the school week, he mostly plays on the computer. Il was ranked in the middle of his class but now he is at the bottom. He doesn't interact with his mom because all he can think about are the games.

Korea has made treatment camps for kids like Il to regain a childhood that they have lost to the computer and other digital devices. Due to video games, most of the children at these camps have eye and ear problems. Korea isn't the only country with video game addiction problems.

reSTART, located in Fall City, Washington is the first treatment center in the U.S. to try to help kids addicted to video games. reSTART is a program to help young people break the video-gaming habit by making the kids take therapy and do outdoor activities so they're not on the computer.

The development of video games made them more popular over the decades. In the 70's, Pong was popular. In the 80's, Pac Man was one of the biggest characters of its time and Super Mario Brothers, Tetris, and Legend of Zelda were in demand. In the 90's, Street Fighter and DOOM were favorites and first-person shooter games started to get popular. In the 00's, The Sims, Halo, and Grand Theft Auto started to get big. The video game industry makes about 20 billion dollars a year.

Games like World of Warcraft and Second Life have turned character-based games like Mario and D&D into a world so big and so real that you don't want to stop playing. A generation ago, kids didn't play video games that much because video games were more simple. One reason kids can spend more time inside these days is because the games they play now are so much more elaborate.

When computer games are played frequently, it stimulates a part of the mind that makes you want to play more. The reward system changes your brain so that you always want to get to that next level or get that new weapon. Online games like World of Warcraft and other interactive online games can almost destroy people's lives. Kancey Sparacio is a World of Warcraft player and says: "I got so into World of Warcraft that I was getting up at about 9:00 or 10:00 in the morning and I'd play straight through the day and I wouldn't get logged off until about 1:00 or 2:00 in the morning. I even kind of quit my job because I really didn't want to do anything other than [be] playing World of Warcraft."

Some symptoms of video game addiction are the same as drug or other types of addiction. When a person becomes addicted to games, they start to only care about their interaction in the game, so it makes them want to keep playing. Video game addiction breaks up addicts' sleep pattern and disrupts relationships with friends and family. Kids who are addicted often see their school grades drop and they find themselves only playing games instead of going outside or playing with friends. Although games can affect people and their relationships, there is treatment.

(continued on page 26)

(continued from page 25)

All around the world there are treatment centers for young people addicted to video games. In the U.S., reSTART's focus is to make it so after patients leave the program, they can monitor their time on the computer and how they use it. Some ways to keep video gaming under control include: setting a timer for one hour while playing, scheduling daily time to read or go outside, or avoiding the purchase of games altogether if you think your kids will get addicted.

Despite the fact that video games can be damaging, they can also be positive. Though many people play video games, they also play with friends. People who play online interactive games can make very strong relationships while playing. Two people who play World of Warcraft got married in real life! Janice Gosnell plays World of Warcraft and says "People who do not game and do not have the experience don't understand the friendships, the connection, and how close you can get to someone who you've never seen."

Today, society is starting to treat video game addiction like other addictions. By looking at it this way, professionals are able to better deal with the problem. Cosette Dawna Rae, Executive Director of reSTART was asked how she feels when people first came to the program: "Hopeful. I feel really hopeful that they're making a big step in order to start to address the problem."



FOOD FOR THOUGHT

Marshall DeHaven
~ Staff Reporter

A calf is born. It is chained to a post and not allowed to move until it's slaughtered for its tender meat. A group of pigs are herded onto the "killing floor" - a large machine that crushes them until they are dead. Chickens are genetically enhanced before they are born so they will grow faster but they can't walk because their legs are unable to keep up with the growth of their bodies.

Many people think that simply the death of these animals is very upsetting but it is necessary for our food. It is the way these animals are being grown and slaughtered that is upsetting. Not only is it inhumane, it is unclean, very dangerous and sometimes, just down right irresponsible. But this is just the surface of the mysterious, dark, and disturbing world that is the food industry.

One of the biggest problems with the food industry is the deaths that come from tainted food. They could easily be prevented but continue to go on because it costs less money. The big companies that control the food processing plants or "farms" are the only sources of food in the U.S. If one of them shuts down, a large number of people go hungry. But that's only if there's a reason to shut them down. In 1972, the FDA conducted about 50,000 food safety inspections. In 2006, they only conducted 9,164.

One of the problems lies in how these "farms" are operated. When we hear the word farm, most of us think of cows



(continued on page 27)

(continued from page 26)

eating grass or chickens laying eggs. But that is not how it works. In reality, these are industrialized farms where animals are not born, but grown. These "farms" are very unclean. A 2007 safety inspection report on 34 farms found that all of them lacked hot water and hand-washing facilities.

As a result, about one quarter of the U.S. population (about 76,000,000 people) gets sick from tainted food every year and about 5,000 of them die. One of them was a two year-old boy named Kevin Kowalczyk who died from eating a tainted hamburger patty. For two weeks, he suffered with intense pain. He was not allowed to eat or drink anything. His mother recalls him saying "Mommy, I'm so thirsty" and the only thing she could do was give him a few dabs of water from a sponge. His mother is now one of the biggest food safety advocates in the country and is using her son's story as a testimony to what can happen when a food company doesn't do it's job.

The reason behind Kevin's death can be summed up in one word - corn. We feed all of our cattle corn. The problem with that is cows are not supposed to eat corn - their bodies aren't made for it. Unlike grass, their natural food source, corn doesn't support their immune system. To compensate for this, we give them antibiotics to boost it. In fact we give them 70% of all the antibiotics that are made in the U.S. The other 30% are for us. Unfortunately, bacteria evolve and become immune to antibiotics. So what do we do? We give the cows more. It's usually a tainted food outbreak that leads to a recall of all the bad meat so we can study and fix the problem.

But the problem isn't just how we use corn, it's also how much we use it. Corn is the absolute greatest resource of all time.

It is everywhere and there is no escaping it. Gas, food, books, even the ink you are reading right now in some way is made from corn. The reason is that corn is very easy to change on a molecular level and can be molded into almost anything. It is so widely used that the place where it's studied is located in an underground bunker. If anybody ever found a way to kill corn effectively and quickly we would all starve to death. We use it that much.

So why is the food industry so poorly managed? Well there are two reasons. The first one is simply because they can. The FDA and U.S. Department of Agriculture are run by people who in some way have ties to the big food companies. Usually they were lobbyists for the one of the companies or lawyers. Now they are in charge of things like food safety and laws that help the companies stay in business. Some of the laws are about what people can publish about the companies. A law in Texas says no one is allowed to take pictures or criticize the meat packing plant. The second reason for poor management is that it's profitable. With all these laws protecting food companies, they can do almost anything to cut costs and that means if they want to change something, they can do it even if it's unsafe.

Everybody eats - that is a fact. But how people get their food is different for everyone. Some grow it, some hunt for it, but most just buy it. When you buy food you are making a choice - to either eat healthy or eat poorly. That choice is being recorded for all the big food companies to see. It works like this, when a company introduces a new product, they keep track of the sales of that product. If it sells well, the company makes more. If it does poorly, they stop production. As the product gets

(continued on page 28)

(continued from page 27)

more popular, people buy more of it. The more of it consumers buy, the more the company has to make. This is supply and demand.

In a sense you are voting with your wallet. You have the choice to make a difference by buying organic instead of processed food, eating more vegetables and less red meat, by saying no to those large fries. So it's up to you - the future of what we eat is in your hands. "You can change the world, with every bite." - *Food Inc.*



A young man named Sam has been taking therapeutic riding lessons for over ten years. Sam has not let anyone interact with him in any way, except for his close family members. For the first time, he has talked with one of the long-term volunteers who has worked with him often. Not only has his mental state improved, so have his riding skills. He is now a single rider, which means he can ride solo.

Therapeutic riding is an old type of therapy that is becoming more well known. In 2006, the amount of programs the North American Riding for the Handicapped Association has supported reached 940. By 2009, the number grew to 1189 programs helped or partnered with NARHA. The number of horses in these programs numbers 6,305.

Sam has mental challenges, yet riding hasn't just helped him with his mental state, it's helped him in physical ways too. The physical benefit is the biggest advantage when talking about therapeutic riding. It ranges from improved balance and muscle strength to improved eye-hand-coordination. It strengthens core, legs, and arms. The reason therapeutic riding is so good for people with physical disabilities is because people in wheelchairs don't have to put pressure on their legs while riding yet riding a horse is the exact replica of walking. Therapeutic riding is the only thing that can replicate our human gate. No hospitals or physical therapy centers have the ability to do that. Pam Liverman, Head of a therapeutic riding program called "The Center," says "The rider knows that they aren't walking but their muscles and bones don't know that, so they're being moved as if they are typically walking. That is the very core of therapeutic riding."

Mental benefits are the second largest benefit. Surprisingly, therapeutic riding is great with mental disabilities. Pam Liverman says, "We've had riders who have chained their two words together, where they always spoke with one word then put three words together, "Walk on Polly" and it was their first sentence. I mean their mom just went crazy, it might as well have been winning the Olympics, to see this kid put words together."

A new type of program for helping kids with emotional problems is located in Loa, Utah. Aspen Ranch helps kids with severe emotional, grief and loss, and behavioral problems by having kids work with a small group of horses with health

(continued on page 29)

(continued from page 28)

problems that require a lot of attention, special care, and hard work. The kids do everything with the horses: riding, feeding, and grooming. The kids are constantly working with these horses. They find a passion and learn a lot by taking care, and having a friend of their own.

Some smaller benefits of therapeutic riding include: educational benefits, socio-emotional benefits, social benefits, and psychological benefits. The list just doesn't end. One horse or approach might help one person and a totally different horse or approach might help another.

It's not easy being a non-profit therapeutic riding organization. Grants, fund-raisers, horse shows, and trail riding, are some of the ways they make money. There are all different ways to raise money for programs, but grants are one of the biggest ways. There are an endless amount of grants out there including: state grants, foundation grants, and community grants.

Therapeutic riding programs also try to cut costs. The Center, located at a barn called C-Line Stables, has worked out a deal with one of the leading brands of horse food called The Legends. The Center, asks all of the horse-racing barns around Delaware to contribute their used bags of that brand. Not only do the race tracks give their used Legends bags, but so do the families and barns that use that brand. The Center tries to raise as much money as possible. Each bag is worth 25 cents to their program. Last year, the bags raised over \$4,000. "We go out, we get the bags, we cut the bags, we take the bags to recycle, and therefor we are being green to the environment. Plus, we are helping our program," says Pam Liverman.

Therapeutic riding isn't as well known as it should be. It is an amazing way that injured or disabled people can regain their strength. Therapeutic riding is a way to get your life back, whether it's from a disability, or mental issue. Nothing is holding you back, you just keep moving forward.

A Brief Timeline of Therapeutic Riding:

600B.C. - Therapeutic riding was first started.

1875 - The first real study was done on the value of riding as a therapy. It was found to help posture, balance, joint movement, and psychological improvement.

1900 - Therapeutic riding was found to help wounded soldiers who came home from war.

1946 - Scandinavia has amazing breakthroughs in the knowledge of therapeutic riding.

1950 - British physiotherapists explored the ideas for therapeutic riding for all types of handicaps.

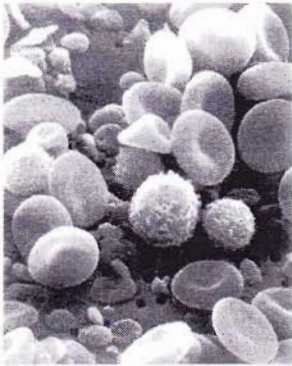
1952 - A woman named Liz Hartel won the silver medal for dressage in the Helsinki Olympic Games. Liz Hartel was a physical therapist who used horses for all her patients.

1960 - Therapeutic riding was brought both to the United States and Canada with a program called Community Association of Riding of the Disabled.

1969 - A new therapeutic riding program was made called Riding for the Disabled (RDA). It was founded by the British Royal Family.

1969 - A program in Michigan started called The Cheff Center for the Handicapped. It is the longest running program and the oldest center specifically for people who have disabilities in the U.S.

1969 - The North American Riding for the Handicapped Association was started. The organization makes the guidelines to help other programs know the standards.



SYNTHETIC HEALERS

Zachary Lees
~ Staff Reporter

A soldier on the battlefield has been shot. Somebody's son is bleeding rapidly and is in danger of dying. He is taken to the medic's camp and injected with synthetic nano-platelets. His wound heals in half the time.

Synthetic nano-platelets were designed by Erin Lavik, a biologist at Case Western University in Cleveland, Ohio. If successful, they will help people with serious injuries heal a lot faster than it would take for normal wounds to heal.

Synthetic nano-platelets work just like regular platelets work except much faster. When a person starts bleeding, the platelets zoom to the cut and make a scab. The scab is the platelets binding together creating a hard surface of dried blood. Sometimes this process takes less than an hour but it can take days or even weeks. Synthetic nano-platelets speed up this time frame drastically. "All we're doing is what biology does naturally," says Lavik.

There are some down sides. Wounded patients have to be treated within an hour with these platelets or their chances of survival decline rapidly. Imagine how many people or soldiers are more than an hour away from a hospital. Synthetic nano-platelets can't be used for head or spinal cord injuries either. Approximately two million people come into hospitals with head injuries and 300,000 people come in with spinal cord injuries in the U.S. every year.

Lavik and her team have only tested their product on rats but not pigs or humans yet, so they don't know what to expect. Synthetic nano-platelets also don't last long. "It only has a short shelf life," Lavik says.

The main benefits of synthetic nano-platelets is their effectiveness. In the rat study, it took about two minutes to heal wounded rats with the synthetic platelets. Imagine what the results would be on pigs and humans if it took that fast to heal the rats. If this product is successful, it could help doctors heal people better and faster than ever before. There are some problems but if they can be overcome, the death rates of people would go down quite a bit. More soldiers would be able to see their families again.



Do you enjoy rock concerts, a day at the pool, the sunset, or a swim in the local lake but are afraid to leave home and face the germs? Get a "Roly Poly" - the hamster ball for humans. You won't be scared again! Call 302-757-6834 and order yours today!

National

5¢ & 10¢ STORES, INC.

68 East Main Street
 Newark, Delaware 19711
 (302) 368-1646
 FAX (302) 368-8620
brian@national5and10.com



Gecko Fashions
 146 E. Main St.
 Phone: (302) 456-1929

Our Boutique features women's fashions, lingerie, and unique, one of a kind jewelry by local artists.




Amazing Grace 

Outreach Ministries/U.S. Food Rescue

Our organization helps disadvantaged families primarily in the Tri-State Area by providing food, clothing, & other living essentials. All services are free of charge.

We are one of three food warehouses in the State of Delaware designated by the United States Department of Agriculture (USDA) to distribute food to Delaware residents in the event of a local State of Emergency.

Amazing Grace also sends relief to disaster areas such as the 9/11 clean up effort, Hurricane Katrina, & the recent earthquake in Haiti.

Visit us at www.agomusfr.org
 Donations accepted through Paypal
 Volunteer information or food assistance
 302-777-7791

Amazing Grace Outreach Ministries is a 501 c-3 tax exempt organization

REDEFINING NEWARK

HOME OF THE \$19 RISK-FREE TRIAL



280 East Main St • Suite 118
 Newark, DE 19711
 302.738.4580

fusionfitnesscenter.com

gloss salon

276 East Main Street, Suite 101 • Newark, DE 19711
 302.737.8080 • www.glosssalon.net



Create with us this summer!

Camp Imagine, July 26-Aug. 6 for ages 7-11 and offers visual art, dance, theater and singing, M-F, from 9am-4:15pm. Extra-care /scholarships available. Cost: \$400. Other camps: "Pretty in Pink", "Monsters & Aliens", "Around the World", "Kids Clay Camp", "Color of Water" mixing art & Science, and much more! Request a brochure!



302-266-7266 www.newarkartsalliance.org
 276 E. Main St., Suite 102, Newark, DE 19711

GAMBLE'S
NEWARK FLORIST
302-366-1211
www.gamblesnewarkflorist.com

258 E. Main St. 302-366-1219
 Newark, DE 19711 800-230-1818



614 NEWARK SHOPPING CENTER
 NEWARK, DE 19711

(302) 454-0200

MONDAY - SATURDAY 10:00 A.M. - 8:00 P.M.
 SUNDAY 11:00 A.M. - 6:00 P.M.



Bill Wood Storyteller

Lively and engaging programs for all ages and all venues:
 610-869-7575
 www.BillWoodStoryteller.com

GrassRoots

Extraordinary items for unique people

93 East Main Street
 Newark, DE 19711
 (302)-453-9751
 (302)-369-3406 (Fax)
 ghandcraft@aol.com

Amalfi Pizza

AND

ITALIAN EATERY



738-5950



208 SUBURBAN PLAZA
ELKTON ROAD
NEWARK, DE 19711

(Next to Acme & Suburban Liquors)
website: amalfieatery.com



Newark Center for Creative Chiropractic



Utilizing
Network Chiropractic Care

A Powerful Approach to Wellness

- Feel Better – less pain & stay healthier
- Stress Less – better navigate challenges of daily life
- Improved State of Mind – manage moods & boost focus
- Enjoy Life – feel more relaxed and happy

"I am stronger, more inspired, creative and healthy because of this work. It has personally and professionally helped me to maximize my ability."

Anthony Robbins

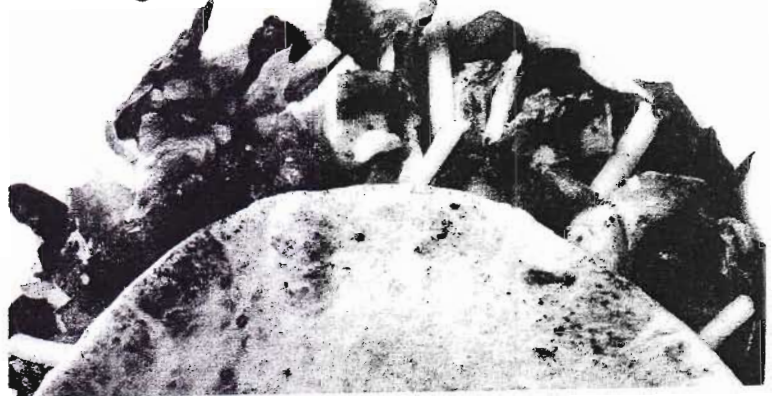
Best-Selling Author and Motivational Speaker

For more information or to book an appointment:

Dr. Lisa Lewis, DC
The Singing Chiropractor

206 W Silver Fox Rd,
Newark, DE 19702
302-824-0743
www.singingchiro.com

There's a **FREE** taco waiting for you right around the corner.



You are *sooo* close to a **FREE** Blackened Chicken Caesar Taco!

Bring this coupon and a friendly smile to the California Tortilla at 55 East Main Street and our spunky staff will give you one of our famous darn tasty Blackened Chicken Caesar Tacos for **FREE!**

Eat it there, take it home, devour it on the street, wear it as a hat, show it off at the office – just take it! It's **FREE!**



Might as well have a little fun while you eat...

55 East Main Street • Newark
302.368.2011

Please, one per customer. Thanks.
This offer not good with any other discounts.

FREE TACO? Visit californiatortilla.com

rainbow

MUSIC & BOOKS

Chris Avino
Owner
chris33avino@yahoo.com

www.rainbow-online.com

54 East Main St.
Newark, DE 19711
(302)368-7738
(302)368-7792 fax

ENVIRONMENT



SYNTHETIC SEAS

Xander Geiersbach
~ Staff Reporter

A mother Albatross scans the water looking for food to feed her hungry young. Her wings beat against the ocean as she looks around. She dives, snatching what she thinks to be a large plankton. Flying back to her nest, she swallows the prey. Hours later, she dies from a tan bottle cap that fatally damaged her inner organs.

Thousands of birds and fish die the same way. They mistake plastic for food and choke to death on it. If the plastic gets past the throat, it dissolves their inner organs, killing them slowly and painfully. Every year 15 billion pounds of plastic are produced but only one billion is recycled. The rest ends up in a landfill or becomes litter. But it doesn't stay there for long. The plastic is blown into the oceans and eventually ends up in one of the three major trash vortexes, each roughly twice the size of Texas. Plastic already litters the streets and if we can't find a way to stop it, it might litter every ocean too.

As the amount of plastic in the ocean increases, so does the death toll on marine life. In the "Great Pacific Garbage Patch" studies have been done showing the ratio of plastic to plankton to be even six to one in favor of the plastic. Scientists believe that there is no reason this ratio will turn around. "You can see how you could cut yourself on a sharp piece of plastic so if a large animal swallowed that, it could do

some serious damage to inner organs," says Jeremy Firestone, professor in the Department of Earth Ocean and Environment at the University of Delaware. Plastic has another harmful habit up it's sleeve. It absorbs unnatural chemicals in the ocean such as DDT and other pesticides. When the fish swallows this infected plastic, it kills it from the inside out. The unlucky fish's condition worsens until it dies. Everything from McDonald's toys to video game controllers end up in the ocean some way or another and the chemicals follow.

Albatrosses are only one example of second-hand victims. Fish killed by the chemical-infected plastic float to the surface, an easy target for a hungry bird. Once inside the bird, the chemicals do their horrors but not in time to kill the bird before regurgitating the fish to its young. Due to the regurgitating of chemicals in it's system, the stronger adult bird will die slower than its now poisoned young. But the process isn't through. If the dead birds are eaten by a fox or other scavenger animal, the chemicals may very well continue the chain of death.

Zooplankton are the base of all food. Many species of fish feed on zooplankton and in turn, other fish feed on the ones that feed on the zooplankton. Without key species like zooplankton, the entire system can break down. When you add tan plastic to the equation, things can get messed up. Why tan plastic and not another color? Well, after being constantly thrown about in the ocean, the plastic falls apart and eventually turns into small, plastic fragments. These plastic fragments float about in the top layer

(continued on page 35)

(continued from page 34)

of water and imitate the tan-colored zooplankton. These pieces of plastic are usually larger than the actual zooplankton and therefore removed because of their size.

Recently, scientists found what they think to be another trash vortex. Scientist working off the coast of Puerto Rico found something out of the ordinary. Every time they pulled up a trawl of the ocean water, it was full of plastic. This vortex however is not new. The amount of plastic in the Atlantic Garbage Patch scientists say, is about equal to the amount of plastic in the Pacific Garbage Patch, which was discovered a few years ago. If the way we dispose of plastic keeps up, soon there might be an Arctic Garbage Vortex or an Indian Ocean Garbage Vortex.

But trash is not the only thing polluting our waters. Ocean acidification is another problem. The way it works is pretty simple. "The more CO₂ you put in the atmosphere, the more settles in the ocean, and when you put more CO₂ in the atmosphere, it causes the ocean to become more acidic," says Professor Firestone.

Settled CO₂ acid eats through the exoskeletons of shellfish, making them more vulnerable to injury and other predators. "Crabs and lobsters are the equivalent of underwater vultures. They clean up the bottom, which is like taking out the trash. You wouldn't like it if no one took out the trash in your house so if those species die off, what happens then?" says Professor Firestone. Coral and other plants die off making it harder for animals to find food. When that generation of fish spawns, some of the eggs will be weaker due to lack of food. Those eggs will thin due to the acidic

CO₂ and since the eggs are already weak, the acid may cause the eggs to die before fertilization even occurs.

Ocean eutrophication is the opposite of acidification but just as bad. In simple terms, it's a giant plant bloom deoxygenating the water around it. When farmers spray artificial fertilizers on their crops, some of it runs off. On average, 97% of that fertilizer reaches beyond its intentional target and some of that runs into the water. Floating vegetation then picks up the fertilizer and grows to enormous proportions, creating what is known as a bloom. Algae is one of the most common examples of this. Once the algae bloom starts, it doesn't stop for a few years.

With more and more algae to be accounted for, it sucks up all the oxygen in the water, depriving the fish and plants of it. The marine life that can move, goes to different places with more oxygen to breathe. Thus, if the bloom can't be stopped, the algae spreads until the marine life has nowhere else to go. Once out of oxygen, the fish and other plants die quickly, polluting the water with rot. After some time, the algae levels die down to normal but all other life is dead.

Despite the grim effects of pollution, there are ways we can help. Recycling is just one way you can make a difference. You don't have to be an eco-freak to recycle. "You don't need to get a paper cup," says Professor Firestone about ordering coffee. "You can use a mug and it usually keeps the coffee hotter." Just picking up trash helps too. Ninety-three percent of all trash in the ocean comes from land, so just picking up that loose soda bottle or runaway plastic bag can make a real difference. Beach and coastal clean ups are

(continued on page 36)

(continued from page 35)

good for everyone. Getting the washed up trash out of the water as soon as possible is crucial to preventing further damage to marine life. Lots of organizations go out on roadside and forest cleanups. Reducing our use of energy does wonders for the environment. Every time you turn off unneeded energy users, you reduce the amount of CO₂ going into the atmosphere.

Curing eutrophication is harder but is still possible. Creating buffer zones where the fertilizer runoff can't go past the buffer is one way but the more plausible solution is organic farming. Studies have shown that organic farming dramatically reduced the amount of runoff even more than the buffer zones.

Pollution in the ocean is a serious matter. Humans, the makers of the only substance mother nature can't chew up, need to take responsibility for it. If the human race will sit and watch as the world dies, then we are no better than the poison, seeping into our earth. "Only after the last tree is cut down, only after the last river has been poisoned, only after the last fish has been caught, only then will we realize that money cannot be eaten." - Cree Indian Prophecy

If you're interested in being part of the solution to ocean pollution please visit:

-riseaboveplastic.org
-greenpeace.org/usa



STEALING THE WILD

Kate Minker
~ Staff Reporter

Ivory carvings, fur coats, crocodile purses, snail shell jewelry, and the

occasional exotic pet all have something in common. What is it? Please choose one of the following:

- A. All are rare objects.
- B. All are fashionable objects
- C. All are most likely illegally taken from the wild.

If you chose A or B, prepare to be surprised and maybe change your views of fashion. If you chose C, thank you for realizing the situation of animals globally.

Whether people take animals to poach or sell as pets, the incentive is the same - cash. Tigers are an example of an animal that was taken after they came in fashion. Tigers are now hunted for their pelts, bones (for Asian medicine), and as exotic pets. In America, there are about 5,000-7,000 captive tigers. Worldwide, there are only 5,000-7,000 living in the wild. Thousands of animals die all the time for these reasons.

The merchandise often goes through two stops before it reaches its final destination. The first stop on the "black market bus" is to pick up the one hired to catch or kill the animals. For extremely small amounts of cash they might kill a rhino or capture a tiger. After this, the bus has two directions it might take. The first direction is directly to a street market, where the "passengers" will be "let off," then sold to

(continued on page 37)

(continued from page 36)

an unknowing buyer. The other direction is to "drop off" the hunters and then "pick up" the people who resell it for thousands of dollars.

Sometimes the "bus" is a boat. In the jungle, on a river in Equador, there are canoes stuffed with furs, birds, and other things from animals or the creatures themselves. "At one market in Ecuador, I was offered a parakeet. I asked the seller how I would get it on the airplane. 'Give it vodka and put it in your pocket' he said. 'It will be quiet,'" writes Charles Bergman in the *Smithsonian*. People who resell animals often make lots of money off the trade. "It would be something like a drug dealer in the United States," says Jill Karlson, Curator of Education at the Brandywine Zoo in Delaware.

The illegal animal trade is a worldwide issue that has many problems and few benefits. When animals are taken from the wild, many animals, whether it is for poaching or pets, often end up the same way - dead.

Animals are often taken for their parts, rather than sold intact. The parts become bush meat (meat for human consumption), decorations (snail shells, furs and ivory carvings), or traditional Asian medicine (tiger bones, deer antlers, dried seahorses, bear gull bladders). "There's lots of forest where there are no big animals left," says Chris Shepards of Traffic, The Wildlife Trade Monitoring Network. "There are some forests where you don't even hear birds."

Birds, reptiles, and amphibians are some of the most popular imported pets. Sidney, a cougar, used to live at Delaware's Brandywine Zoo. She got there from her old owner who took her to birthday parties.

After she bit someone's head, she got sent to the zoo. "It's not like she was an evil cougar," Jill Karlson said. "She was a cougar." Now if you go to the zoo, you may see a serval (a medium-sized African wild cat) named Savannah. She was captured for breeding so her babies could be sold. The exotic animal pet industry is estimated at 6-9 billion dollars annually. A baby tiger costs from 900-7,000 dollars. A baby chimp could go for 50,000 dollars.

Around the world there are many types of animals that have value in the black market:

In the Middle East, there is smuggling of some very rare and exotic species: young chimpanzees, gorillas, leopards and certain parrots to name a few. The abusers in this area are fined the equivalent of just 15 dollars for violating wildlife protection laws. In February 2009, a zoo was shut down because of its neglected and abused animals. Among the starving animals that were pulled from the zoo were monkeys, jackals, a chimpanzee, bears and a vulture that was attached to a chain that prevented it from moving out of its 20 square foot cage or flying.

In Southeast Asia, over 35 million animals have been taken over the past decade. And they were just the legal ones. The more popular ones include: sea horses, butterflies, lizards, snakes, turtles, coral, macaques (a type of monkey), and birds. Much of the illegal trade is controlled by gangs. The pangolin (an anteater with scales) has been taken so often that poachers had to move from Asia to Africa on their search for more. "In Asia, everybody knows the value of wildlife, so people go into the forest and, whatever they encounter, they know it has a value and that there is someone they

(continued on page 38)

(continued from page 37)

can sell it to," says Vincent Nijman, a researcher at Oxford Brooks University.

In South America, armadillos, monkeys, and especially birds are some of the most commonly taken species. Macaws, parrots, and parakeets are the most popular. They are often taken in the trafficking method described earlier.

So how can we stop the illegal wildlife trade? Help with the big picture. Donate to charities such as Traffic, The Wildlife Trade Monitoring Network and Species Survival Network, who work to keep the wildlife preserved. Don't buy animal products if you don't know they are legal and don't interfere with nature. No matter how cute that baby racoon is in your backyard don't take it in unless you're prepared to keep it through adulthood. Now let's go back to that quiz (see beginning of article). It is important to know that the correct answer is C. The wildlife is depending on you.



THE FATAL FROGGY FUNGUS

Sally Lyell
~ Staff Reporter

You're on a hike, you see a creek and you go over to see if there are any frogs or tadpoles in it. This is your favorite creek to look for frogs. There are none.

Impossible you say? Maybe not. Chytridiomycosis is an infectious fungus that targets certain amphibians. It is happening in places with rising temperatures and could soon come to Delaware.

The chytrid fungus was discovered in 1993. Since then research has shown that it has been present since 1978. It is currently in Africa, the Americas, Europe, New Zealand, Australia and Oceania. In a few countries, it has seemed to just appear and expand its range just as frog numbers decline. It has become more present in the environment and most populations seem to have become less resistant to the disease. The oldest reports of the disease were from African clawed frogs which were sent all over the world to test for pregnancy in women. They are still shipping them today.

Scientists think that one of the reasons the chytrid fungus has picked up is because of global warming. Rising temperatures are helping it spread. Scientists suspect that the chytrid fungus travels through water. Another reason it's spreading is when you go to another country or state and you visit a river, creek, or stream you might take it with you.

(continued on page 39)

(continued from page 38)

Frogs, toads, salamanders, and newts are amphibians. Amphibians are cold-blooded animals. They don't breathe or drink through their mouths like we do, they breathe and drink through their skin. The chytrid fungus grows on the amphibian's skin, which makes it very hard for them to breathe or drink. Amphibians are very sensitive to climate change and they can serve as a warning sign to other species that includes us.

The good news is that there is a program called Amphibian Ark that takes the amphibians in and makes sure they don't have the deadly fungus. Zoos and aquariums are housing them until a cure is found. The goal is to keep large amounts of amphibian species safe that are endangered. Frogs in captivity can be cured by being soaked in an antifungal bath for 10 minutes for 10 days but they can get it again if they are released. Scientists are trying to make a cure that helps amphibians but doesn't harm other wildlife.

The reason we need frogs so much is because they eat harmful insects, clear algae from water, and provide food for other animals such as birds, reptiles, and fish. They are also fun to catch, watch, and study. Imagine going to creek or stream and not seeing tadpoles swimming around in it. That's what could happen if the chytrid fungus takes its toll on frogs. We might have another mass extinction like the one that occurred during the Ice Age. "Amphi" means double and "bios" means life so amphibian means "double life." With the help of researchers, the hope is that frogs around the world will get their second chance on life.



A WAKE-UP CALL ON SUBURBAN SPRAWL

Sophie Poindexter

~ Staff Reporter

A mother possum lies where her home used to be. Her eyes stare at the sky, lifeless. Ten feet away, is her killer - a backhoe. Many animals like this possum lose their lives and homes when neighborhoods replace their habitat.

Suburban sprawl started after WWII when people wanted homes out of the cities. People wanted bigger houses with more space. The houses were farther away so they had to get a car to go where they wanted to go. People wanted to get away from the cities, away from the crowds.

One of the problems of suburban sprawl is loss of habitat. Ever since humans have set foot on land, permanent human settlements have been built. Habitat loss is one of the most important causes of species extinction worldwide. Tropical rainforests have received most of the attention when it comes to habitat destruction. Many old growth forest stands have lost more than 98% of their previous area because of human activities.

Animals are also affected by suburban sprawl. The Florida panther is among the most endangered large mammals in the world. Its southern habitat of hardwood hammocks and wetlands loss has already put the Florida panther into a small area. In Tucson, Arizona, the Sonoran pronghorn is disappearing. The Sonoran

(continued on page 40)

(continued from page 39)

pronghorn is a graceful animal that looks like an antelope. Its family origins date back 20 million years.

Cars are a big part of the problem with suburban sprawl. They are the leading source of air pollution. People are not getting enough exercise because they drive a lot. The average person in Atlanta drives 34.1 miles a day. "You're sacrificing convenience for a large house," says Dr. Marcia Scott, a local government specialist at the University of Delaware. "People don't walk because of cars and then it is causing obesity." People are not getting to know their neighbors because they stay inside their houses. Cars are causing motor vehicle crashes. Automobiles cause about 110,000 injuries among pedestrians nationwide. Each day 167 people die in a car crash.

Americans want cheap, clean water. Sprawl may threaten the quantity and quality of the water supply. Water pollution occurs when rainfall or snow melt comes through the ground, taking contaminants into lakes, river, wetlands and groundwater. One study in Sierra Vista, Arizona by Jeffrey R. Kennedy showed that a 32-acre, residential neighborhood watershed containing 62 large houses produced 30 times more runoff than an 80-acre natural watershed.

Smart growth is trying to combat suburban sprawl. "People are trying to make sidewalks so people can go from one neighborhood to another neighborhood to your school," says Dr. Scott. Locally, people are trying to move closer to Newark so they can walk to all the shops on Main Street instead of going in a car. In Philadelphia, the average person only drives 19.9 miles a day. Smart growth is trying to return

to the city lifestyles of the 19th and 20th centuries when people lived in apartments and walked or took trolleys. People are trying to make neighborhoods more walkable. "You're getting exercise if you don't hop in a car," says Dr. Scott. A study in the Brookings Institution found that America's suburbs are now more likely to be home to minorities, the poor, and a rapidly growing older population as many younger, educated whites move to the cities for jobs and shorter commutes.

Smart growth wants to save land and animals. Many builders build houses where there is lots of land so people can have big yards. When they cut down trees it impacts wild life. The back hoe is gone - a building is replacing it. But the dead possum is still there. The baby possums are squeaking for mommy but she's gone.

HELP YOUR CHILD SUCCEED!

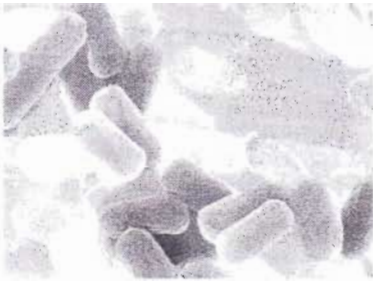


K-6 TUTORING

- *Certified K-6 Teacher
- *Creative tutoring designed to meet your child's unique needs, learning styles, and interests
- *Flexible hours
- *Affordable rates
- *References available
- *Contact Suzanne today!

SuzanneL@comcast.net 302-416-2005

SCIENCE & TECHNOLOGY



DO MICROBES HAVE FRONTAL LOBES?

Katie Buell-Fleming
~ Staff Reporter

Little tiny beings are inside you. Some are soldiers at war with your immune system, others are like helpful citizens assisting you in many ways. The name of these tiny beings is bacteria. Recent studies show that bacteria are not just mindless blobs that make people sick, they communicate. The kind of communication that they use is called quorum sensing. Bacteria accomplish this when one bacteria sends out a low concentration of molecules and another bacteria senses and understands what it means, thus communicating something.

What scientists know about how bacteria communicate with quorum sensing is very limited. "Because they do not speak the same type of language as we do, it's tough to know exactly what they [bacteria] are talking about, but we can take some educated guesses," says Kristen DeAngelis, a microbiologist at Lawrence Berkeley National Lab in California. "What seems most clear is that bacteria want to know what other bacteria are around. They can tell if other bacteria are around that are closely related or if the other bacteria around are not related at all, and then make some decisions about being friendly or not." When a bacterial cell wants to know if it is in a group or not it will send out a low concentration of molecules. If it is alone, the concentration will stay the same. If they

are in a group, the concentration will become higher. And if the bacteria wanted to do something like making you sick, once the concentration of molecules reaches a threshold point, they will launch an attack with their fellow siblings and have more of a chance of taking over the host instead of just one bacterium alone.

Discoveries of bacterial communication go back over 50 years. In the early 1960's, a microbiologist at the university of Illinois, named Woody Hastings noticed something strange about the *V. fischeri* grown in his lab. The population of bacteria would double every 20 minutes but the amount of the bacterial cell's light-producing enzyme would stay the same for four to five hours, dispersed among more and more bacteria. Only when the population had vastly increased would the flask light up with a lighting-blue light.

From the perspective of a single light-producing *V. fischeri* cell, the delaying of creating light makes sense. Sending out photons is hard work and a single dot of light in the hugeness of the ocean is easy to be overlooked. But how do the bacteria know when they have reached critical mass? A student of Hastings, Ken Nealson, theorized that the bacteria secrete a molecule that builds up in their environment until it reaches a certain density. Nealson named the unknown molecule an autoinducer (AI-1). His idea turned out to be right and the way that the *V. fischeri* used to keep track of how many bacteria were around them was eventually called quorum sensing.

(continued on page 42)

(continued from page 41)

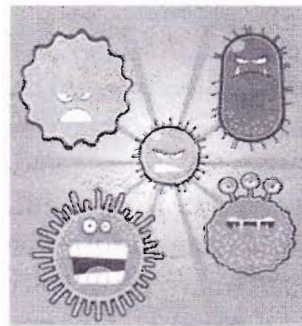
Bonnie Bassler a microbiologist at Princeton University studied a different kind of marine bacteria called *V. harveyi*, which, like *V. fischeri* glow when their population reaches quorum density. She determined that what seemed to be one signaling system was actually two, one sensed the presence of the bacteria's own species and the other received signals of other types of bacteria in the area. Bassler and her team created mutant "reporter strains" that only responded to one signal or the other to separate the two circuits.

After that, Bassler decided to pinpoint the molecule that allowed *V. harveyi* to communicate with other species. In 2002, her team finally found it, naming the molecule AI-2 (autoinducer 2). With the help of the Princeton Chemistry Department, they found that the AI-2 molecule contains the element boron, traces of which are lurking everywhere in the biosphere, though few biological roles for it have been found. They then cloned the gene and discovered that at least 50 bacterial species have the genetic machinery to make the molecule.

One main way quorum sensing can help humanity is with medicine. "Right now, if you get an infection, the best way to treat it is to kill the bacteria. That's why you take antibiotics. Imagine if we could figure out a way to tell the bacteria not to infect! This would be a very powerful, new type of way to treat infection," says DeAngelis. Some researchers have found a way to genetically alter the bacteria so they are "programed" to do certain things which can be hugely helpful in the medical field. The same people created something called a synthetic

gene circuit. Synthetic gene circuits are the combinations of genes that can be "loaded" into some bacteria or another kind of cell to control their actions - kind of like when you put a program into a computer. The re-programed bacteria would exist in a synthetic ecosystem. "Each population will synthesize a subset of enzymes that are required for the population as a whole to produce desired proteins or chemicals in a coordinated way," says scientist Lingchong You, Assistant Professor of Biomedical Engineering and a member of Duke's Institute for Genome Sciences & Policy and Center for Systems Biology. The scientists may be able to re-engineer the bacteria to take certain drugs to different parts of the body or to selectively kill cancer cells.

Kristen DeAngelis says that there are at least 30,000 different types of bacteria that scientists know of right now. And that at least one third of that number have quorum sensing. But there are probably a million or even a billion different types of species of bacteria in the world and lots of them have quorum sensing that we don't even know about yet. "Each bacterium in a species is perfect for the niche in which it resides," says microbiologist Bonnie Bassler. "If one survives, the whole species survives. They're better than us. They're the ultimate, stripped-down version of life."





ANOTHER BIG LEAP

Jack Mecca
~ Staff Reporter

July 20, 1969, Neil Armstrong walks on

the moon. "That's one small step for a man, one big leap for mankind." In 2019, NASA hopes to make another bound to the moon, except this time to land for good.

Scientists have recently discovered a lava tube on the moon that a colony might be able to live in. A lava tube is a hole carved out by molten rock. Usually, these tubes are very unstable because of meteor strikes but this one has hardened rock around the surface so it's relatively stable. The tube is 213 feet wide and more than 260 feet deep.

Finding this lava tube could bring the human race one step closer to finishing the Constellation program's goal of colonizing the moon. After the moon bombing mission last year to discover water in the moon, researchers found the hole by looking at pictures taken by Japan's old Kaguya Lunar Probe. The hole, located in the Marias Hill region near one of the polar caps, is unlikely to have earthquakes and has hardened rock around the rim of the structure, which protects the lava tube from meteor strikes. A recent breakthrough means we won't have to crash ships into the moon to get water. Scientists have figured out how to recycle urine into drinkable water.

Lava tubes are not the only areas on the moon where the human race could live. Moon craters are another suitable place for a moon colony. If humans could find a crater that is always in sunlight and casts a large shadow then we could set up mirrors around the edge to make solar energy. The

energy would be used to make oxygen, run lights, and heat the colony. Having the colony in a crater would also make it easier to get water. Scientists have recently discovered ice inside craters. Their shadows create permanent darkness therefore making ice.

Even if colonizing the moon was foolproof, it still would not be put into action until at least the 2030's. The new budget doesn't give NASA enough money to colonize the moon. Mitzi Adams, a solar scientist at NASA, has another reason for not reaching the moon. "In 1971...the U.S. was involved in a war in Vietnam, there were concerns about nuclear proliferation, and so the American people decided that the Apollo program was not economically feasible. Today, we have a similar situation, but with *two* wars and a world-wide economic crisis." Adams adds, "Until the world can solve some of its problems *and* agree to explore the universe together, it is unlikely that we will be able to have a colony on the moon anytime soon."

What is so great about going back to the moon to colonize it? First of all, it could be another right turn through the labyrinth that is reaching Mars. The moon is closer to Mars so it is a shorter trip, which means less supplies and less weight, which means less rocket fuel, right? Not entirely. It would actually use more rocket fuel if you stopped on the moon. Because the moon has no atmosphere, which means no terminal velocity, you have to fire rockets to keep from destroying the ship while landing. A different reason not to go to the Red Planet is obvious; "If Apollo 13 happened on the way to Mars, the crew would die," says Harry Shipman, a professor of physics and

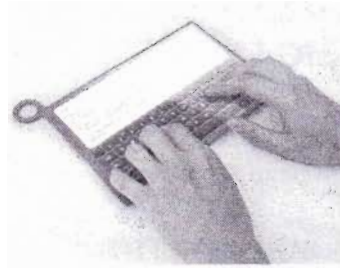
(continued on page 44)

(continued from page 43)

astronomy at the University of Delaware. In other words, if the ship had a major malfunction on the way to Mars such as air leakage, the ship would be too far away to save it.

Though the mission to Mars is dangerous, President Obama is proposing six billion dollars for the mission to the Red Planet. Buzz Aldrin the second man on the moon says that NASA needs to go farther than the moon in space exploration and not "retrace 40-year-old footsteps." Not everyone is happy about the funding though. Along with the six billion-dollar proposal, Obama wants to stop the Constellation program. Stopping the Constellation program could mean 7,000 people would lose their jobs and would mean no moon colony.

However, there are still things NASA is doing, besides trying to build a moon colony. Take robots for example. NASA has two explorer robots named Spirit and Opportunity on Mars right now. They are taking data and learning more and more about the Red Planet. On March 25, the team that operates Opportunity and Spirit received the 2010 International Space Ops Award for Outstanding Achievement. These robots may mean that instead of leaping to the moon, we bound straight to Mars.



TAKING A BYTE OUT OF EDUCATION

Maya Brooks
~ Staff Reporter

You go on a trip to Africa. You look in a school to observe how children here learn. They are sitting at tables with laptops. Laptops?...okay. You head home the next day. People in your neighborhood are also using laptops. They look the same as the ones in Africa. That's because they are.

Nicholas Negroponte, an MIT professor and head of One Laptop Per Child, created the XO laptop so that children in Africa can use a computer for educational purposes. The question is, how do they afford a laptop? They don't. If someone buys an XO, an extremely poor child in Africa gets one for free. In 2007, 10,000 laptops were donated to Rwanda. The laptops are sent to countries like Peru, Rwanda, Uruguay, and Ethiopia. Imagine how great you would feel if you got a free laptop and you didn't even have enough money to afford shoes.

The original XO is a small laptop. It has a keyboard covered in flexible rubber that makes it waterproof. It's flexible enough to still be able to type. It's also really sturdy. Everything but the screen, the touch pad, and the keyboard is covered with very strong plastic. The laptop can be dipped in a bath tub and not be harmed. It has a video camera and two antennae that make its wireless capability about 20 times better than a normal laptop. It can also be used for games.

(continued on page 45)

(continued from page 44)

OLPC is building a new, improved version of the XO - the XO-3. The laptop is a touchscreen that's strong, water proof, and semi-flexible. It's half the thickness of an iPhone and it has a camera. The company hopes to have the XO-3 introduced by 2012. You would think that something with all of those qualities would be really expensive but the truth is it's actually \$75. "We don't necessarily need to build it," Negroponte said, "We just need to threaten to build it." Negroponte is more interested in making a cheaper XO by pressuring the industry. He wants a more education-focused laptop.

So why exactly is it worth buying an XO so that another XO will be sent to Africa? Well, you'd be being really nice to a child that works barefoot in the burning sun all day. Mrs. M. from the Galadima School in Abuja, Nigeria says, "With the laptop we can say that our school is really elevated because the children are really learning more...They see themselves discovering things that they have never been doing before." With a computer, they're much more likely to be in school than in the sun.

For more information visit:
www.laptop.org



APOPHIS= APOCALYPSE?

Ethan Lewis
~ Staff Reporter

Imagine that you are watching Jeopardy on Friday, April 13, 2036. You're nearing Final Jeopardy, and then the screen becomes a field of static. Not thinking much of it, you turn the TV off and start getting the kids ready for bed.

The next morning, you hear on the radio that an asteroid the size of the Rose Bowl stadium, known to scientists as 99942 Apophis, has hit California, releasing dust into the air that will stay in the atmosphere for about a year, block out the sun, and most likely wipe out all life on Earth. Whoa, wait a minute. An asteroid the size of the Rose Bowl is going to hit Earth in 2036? Not exactly. Apophis, first discovered 5 or 10 years ago, has less than a 1 in 250,000 chance of impact and that is undoubtedly going to decrease. However, this thing could still hit.

Friday, April 13, 2029 is a critical point in time because Apophis is going to pass by and depending on how close it comes, it could be put on a direct collision course with Earth in 2036. Apophis will also come closer than the communications satellites surrounding Earth, so scientists will be able to study it more closely.

Apophis brings back thoughts of the asteroid that hit the Yucatan Peninsula about 65 million years ago and very likely was the cause of the extinction of 70% of Earth's life (including the dinosaurs). If Apophis hits, history could easily repeat itself.

(continued on page 46)

(continued from page 45)

Apophis could be stopped though. Scientists believe that an unmanned spacecraft could be sent into space as early as 2011 to calculate what it would take to get it out of Earth's way. Once the examination is complete, there are a number of possibilities. Scientists were considering using a gravitational tractor, which is a futuristic spacecraft that would use gravity to push Apophis off course. Unfortunately, Apophis is too large to do that, so we may be forced to use nuclear weapons on it, which poses its own risks.

"Nuclear weapons make me a little nervous," says Harry Shipman, an astronomy professor at the University of Delaware, "and it's also not clear to me that a nuclear explosion is the best way to deal with an asteroid like this. If you were to take a typical asteroid and hit it with a nuclear weapon, you might only break it into two or three pieces." An easier way is, if there was a moon nearby, it could deflect Apophis. NASA is going to need to decide their method fast, though.

Then there's the money. The world only has so much to spend on this problem. Most of the strategies to stop Apophis cost hundreds of millions of dollars and some wonder if it's worth it. "People's lives are at stake," says Anatoly Perminov, Head of Russia's Federal Space Agency. "We should pay several hundred million dollars and build a system that would allow us to prevent a collision, rather than sit and wait for it to happen and kill hundreds of thousands of people."

There's also the question of what will happen if Apophis hits. "It depends on what water, and I think it depends on what

land," says Shipman. If Apophis hits water, it will cause tsunamis that will probably cause several million dollars in damage. If it hits land, however, it would cause a chain reaction. Dust released into the atmosphere would block out the sun, killing most plants, which would starve the animals that eat those plants, starving the animals that eat those animals, eventually leading to us.

Despite all of the danger that Apophis poses, there isn't cause for panic. The 1 in 250,000 chance is likely to decrease and scientists are working to on the problem as you're reading this. Considering that Apophis isn't indestructible, there is a decent chance of it being stopped before it even comes near Earth.

Imagine once more that you are watching Jeopardy on Friday, April 13, 2036. You get through the whole show, there is a new champion who finishes with \$21,400, and you think to yourself how amazing it was that the Apophis asteroid was stopped three years before.



ENTERTAINMENT

TRAVEL



THE WASHINGTON IRVING ROUTE Spain Paula Felices ~ Staff Reporter

Imagine yourself walking along the streets of two magical Andalusian cities. Imagine also watching them with the same eyes as Washington Irving. The route from Seville to Granada is not only a cultural itinerary, but also a path to picturesque and beautiful nature.

In 1829, Washington Irving started his journey and promoted a commercial route in the south of Spain. This route attracted artists, writers, and travelers.

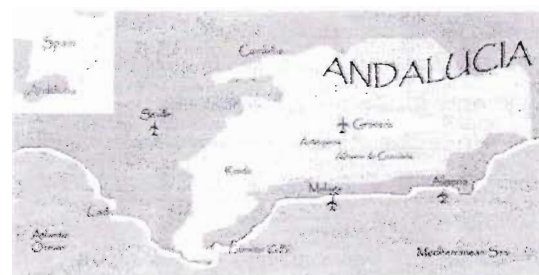
Today, you can taste the delicious cuisine of this unique region: the best olive oil of the world, the typical Spanish omelette, the Andalusian gazpacho, or sherry. Come visit the Alhambra, one of the top ten wonders of the world and do not miss the Giralda and Sevilla Cathedral either. This path also offers excellent hotels. The Parador de Carmona is worth a visit. Do you want to learn about the Muslim heritage in Spain? You will have a chance to enjoy the charm, culture and, above all, the surprising magic from the past.

Mountains, lakes, forests, rivers - imagine all this on the way to the most beautiful cities in Spain where Washington Irving fixed his eyes. You will have to cover 150 miles in order to know the two

Andalusias: the higher and the lower. In those years the famous American writer paid a professional visit to Seville and was so shocked by the magic and exoticism of the region that a few years later he decided to return and also visit Granada. He then went to the Alhambra and was so impressed that it was a source of inspiration to write the most beautiful stories ever told: *Tales of the Alhambra*.

This route is also very special because it will not be one more route but a trip in which you will be accompanied by a great writer. A series of historic villages, towns, and cities will open their gates in front of you: Ecija, Carmona, Montefrío, Loja, Santa Fé and the mountain range of Sierra Nevada. Here you will find the perfect condiments to the chef's menu of Seville and Granada. So do not lose the opportunity to do different things every day and meet new challenges on your way. What about climbing down a mountain gorge or climbing up the highest peaks in Spain?

Why don't you feel how it was in Washington Irving's times? A time when so few people could afford to travel and those who did felt like explorers in a new world. Would you like to rediscover the wonders of the Moorish route and breathe the oriental atmosphere? You can still sense this in this southern corner of Spain, exactly the same as Washington Irving did in 1829.



Book Review -***Sabriel*****Garth Nix****Reviewed by****Cole Wood**

Sabriel is a book written by Garth Nix. The setting is two countries divided by a wall. To the south is Ancelstierre with the technology of 20th century England. To the north is the Old Kingdom, a place of magic and dead creatures, which are raised up by necromancers. There is also the Abhorsen, a sort of reverse necromancer who sends dead back into death. The main character is Sabriel, the current Abhorsen's daughter, who finds out while in school in Ancelstierre that her father has disappeared and she goes to rescue him. She goes to the Abhorsen's house and meets Mogget, a cat-like creature who is a servant of the Abhorsen. He tells her that the Old Kingdom is threatened by a great evil being named Kerrigor. He also tells her that her father is dead but she doesn't believe him. Not only does she not want him to be dead, she also doesn't want to assume her duties as the next Abhorsen. Sabriel and Mogget continue on their journey. They meet Touchstone, a man imprisoned in a ship's figure head, who actually is the illegitimate prince of the Old Kingdom. He joins them on their quest. They find the Abhorsen trapped in death and Sabriel brings him back into life, but he has been in death too long and can no longer stay in life for an extended period of time. While the Abhorsen and Mogget stay to defeat Kerigore, Sabriel and Touchstone



go to Ancelstiar to destroy Kerrigor's body so that his spirit can't return to life.

Sabriel was a very good book. It had a good plot line, great character development and an interesting setting. It also has a good internal conflict with an interesting resolution. *Sabriel* has two sequels: *Lirael* and *Abhorsen*, but it can stand on its own. There are some mild sexual references, but they don't take away from the book. I would rate this book 5 out of 5 stars.

Food Review -***California Tortilla*****by Becky Heinz**

I walked to California Tortilla on Main Street in Newark and ordered a Grilled Chicken Southwestern Style Salad with chips and salsa. The salad was perfect. The salad itself was cold and the grilled chicken was warm, creating a nice balance. I had it with Caesar dressing so it was somewhat creamy. The guacamole added extra flavor. The chips and the salsa were too salty and the salsa was rather bland - you couldn't taste the tomatoes. The service was great. The food came quickly and the employees were cheerful, friendly, and somewhat silly. The college students having lunch there could be loud at times, but they weren't a problem. I would give California Tortilla 4 out of 5 stars.



OBITUARIES



BYE BYE BIG BIRD

Big Bird died last Wednesday. He was walking home after playing hide-and-seek with Ernie and heard rustling down Oscar's alleyway. Big Bird and his friend walked down the alley and Ernie heard these fatal words "Bye-Bye Big Bird!" The next morning Big Bird's body was found inside Oscar's trash can. Oscar is currently being held in Sesame Jail awaiting trial for the murder of the friendly bird. His friend Ernie had a few things to say: "I never trusted Oscar for a second - that grouch. I can't believe Big Bird is dead, though I expect foul play." The lovable hulk of yellow will always be remembered as a great bird and shall be dearly missed. Big Bird's funeral will be held next Friday. Please come to pay your respects.



MICKEY SQUEAKED ONCE TOO OFTEN

Mickey Mouse died on January 15, 2010 when he decided to take a jog in the park. After remembering that he had asthma and that he forgot his inhaler, he slowly hyperventilated and died. "ARROOOOOOOOOOOOO" said Mickey's dog Pluto. "I remember he wanted to play a lot but he always forgets his inhaler," said Mickey's friend Goofy. "Weth worth wothdering whyth he wath taking tho lothg onth hith wathk," said Mickey's other friend Donald Duck. Translation: "We were wondering why he was taking so long on his walk." Micky's funeral will be held at Disneyland with all the Walt Disney characters invited.

CLIFFORD CAN'T RESIST

Clifford, the big, red dog, died Thursday. His body was found in his dog house along with ten 20 pound bags of chocolate. It turned out that Clifford, like all dogs, was allergic to chocolate and had a heart attack after eating it. His owner, Emily Elizabeth, is being sued by the island for neglect. Clifford's best friend T-bone, a bull dog, could not be reached. Although his other friend Cleo, a poodle, had something to say, "Arf, arf, arf, arf." Translation: "He was always so weak when it came to chocolate. I thought it would be his doom." The service will be held on Sunday. Please come to pay your respects.

Dear Delilah**Dear Delilah,**

My mom says that three is a hard number to work with. I always thought that she meant only in Math, but this year I'm discovering what she really means. I have two best friends in my class. They're both nice but they don't get along at all. They get in these giant fights and they pressure me to take sides! I think that I'm on the brink of losing a friend! Maybe even both of them! What should I do?

Signed,

"Caught In the Middle"

Dear "Caught In the Middle,"

Obviously, you really like both of them and you can't leave one and take the other. Be nice to both of them. Force them to look at the parts of themselves that are alike. If they tell you to take sides, just tell them in a very calm tone that you like them both equally. If they are the stubborn kind of pals and they keep hounding you with: "Oh, you know that's not true. You like one of us better, you just won't tell us," don't blow your top and burst out with something you didn't think over carefully that you'll regret later. Stare straight into their pupils and say: "No, it's true. You're both just as good." Keep a firm silence if they ask you again.

Dear Delilah,

"We are friends and nothing else. We are friends and nothing else." I don't know how many times I've repeated that phrase. A boy in my class and I are friends and *nothing else*. My friends all tease me because they think I love him but I don't. What should I do?

Signed,

"Just Friends"

Dear "Just Friends,"

If your friends don't listen to you then maybe they aren't really your friends. You could say "Yeah, of course I like him. I like him just as much as I like you as a friend, so yeah, of course I like him." If they still are making fun of you after that, think which is better, do you really value his friendship? If you do, you shouldn't care what anyone else says. Whatever you do, don't stop being friends with him just because of the teasing.

Dear Delilah,

I have a friend at school who is really self-conscious about her weight. She always eats a huge amount of food and then goes to the bathroom. I had a feeling that she was throwing it up. One day, while I was at her house, she told me that it was true and she is bulimic. She made me swear that I would never tell anyone - not even her parents or my parents. She is starting to get really unhealthy. What should I do? Will it ruin our friendship if I tell on her?

Signed,

"Conflicted"

Dear "Conflicted,"

You are put in a very difficult situation. Is it better to be friends with your friend and not take care of her or to maybe ruin your friendship and tell her parents? If you really care for your friend, you should tell her parents. This is serious. If she doesn't let the food get into her system, she could starve and consequently die. In most cases, she will forgive you. Her parents and other adults will help her to see herself as she is - thin. She probably will notice how terrible a situation she was in and forgive you. If not, at least she would still be alive. She'll thank you later in life.

HOROSCOPES**Capricorn****Dec.22-Jan.19**

You have your head in the clouds. Changes are going on around you and you don't even notice. You are too wrapped up in your personal life. You should just stop and smell the roses. You could benefit greatly from it.

**Aquarius****Jan.20-Feb.18**

You are very down to earth. Be careful, a slight change may occur that you will need to stay alert for. You may be in contact with a Pisces, even though it may be a secret.

**Pisces****Feb.18-Mar.20**

A lot of things are changing. Pay attention - they could help you in the future.

**Aries****Mar.21-Apr.18**

You are very imaginative. You should listen to things more. You may find comfort from everyday stress in your animal friends.

**Taurus****Apr.20-May 20**

Your life may seem boring right now, but you will soon find a small, uplifting surprise if you look hard enough. A financial transaction may be in your future.

**Gemini****May 21-June 20**

Your life is very peaceful right now. You can find happiness in small, seemingly useless things.

**Cancer****June 21-July 22**

Your very laid back. You see things differently than a lot of other people, which will be helpful in your everyday life.

**Leo****July 23-Aug.22**

You are worrying over small things. Kick back and relax - you have no reason to be stressed.

**Virgo****Aug.23-Sep.22**

You will possibly find relief from stress in a Gemini. Your life is jam-packed full of excitement in the smallest of places, even if you don't notice it yet. You could benefit from reading Aries also.

**Libra****Sep.23-Oct.22**

You feel sort of left out. Don't worry, your loved ones are thinking of you. Just stay focused on what you need to do in your life and things may become clear to you.

**Scorpio****Oct.23-Nov.21**

You are very quiet. Speak up! People listening to you could be a refreshing change.

**Sagittarius****Nov.22-Dec.21**

You need to listen more. People around you are telling you things in secretive ways.



PET ADOPTIONS

THE DELAWARE HUMANE ASSOCIATION HAS APPROXIMATELY 25 DOGS AND 70 CATS AT THEIR SHELTER AT ANY GIVEN TIME.

THE COST TO ADOPT A DOG RANGES FROM \$67.50 TO \$195.00, DEPENDING ON ITS AGE. DOG ADOPTION FEES INCLUDE SPAYING/NEUTERING, AGE-APPROPRIATE VACCINATIONS (RABIES, DISTEMPER, AND BORDATELLA), HEARTWORM TESTING, PERMANENT MICROCHIP IDENTIFICATION, A PRE-ADOPTION VETERINARY EXAMINATION, COLLAR AND LEASH, AND A CERTIFICATE FOR A FREE VETERINARY EXAM.

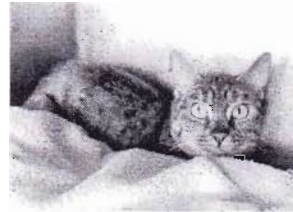
BAXTER



I'M A FRIENDLY, ACTIVE LITTLE GUY WHO CAN'T WAIT TO FIND A NEW HOME. SHORTLY AFTER I ARRIVED HERE I WAS DIAGNOSED WITH BLADDER STONES AND AM CURRENTLY BEING TREATED FOR THIS CONDITION. THE STAFF WILL HAVE A URINALYSIS DONE SOON TO DETERMINE IF THEY NEED TO BE REMOVED SURGICALLY. MEDICAL CARE PRIOR TO ADOPTION WILL BE TAKEN CARE OF BY THE SHELTER.

THE COST TO ADOPT A CAT RANGES FROM \$37.50 TO \$100.00, DEPENDING ON ITS AGE. CAT ADOPTION FEES INCLUDE SPAYING/NEUTERING, AGE-APPROPRIATE VACCINATIONS (DISTEMPER AND RABIES), FELV/FIV (FELINE LEUKEMIA/FELINE AIDS) TESTING, PERMANENT MICROCHIP IDENTIFICATION, A PRE-ADOPTION VETERINARY EXAMINATION, COLLAR, AND A CERTIFICATE FOR A FREE VETERINARY EXAM.

TIDY



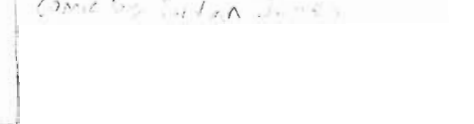
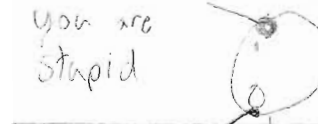
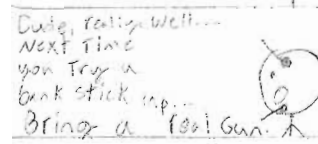
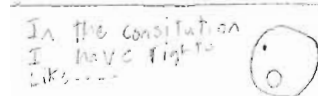
I WAS BORN IN OCTOBER 2009 AND ABANDONED WITH MY SISTER FRESH ALONG WITH A NOTE: "LOST MY JOB AND HAVEN'T BEEN ABLE TO FIND WORK FOR 5 MONTHS, SO NOW IT'S EITHER THE CATS OR THE KIDS."

BINEY



I LOVE PLAYING WITH TOYS, ESPECIALLY BALLS, STUFFED MICE, AND FEATHER TOYS! MY EAR WAS PROBABLY CLIPPED TO SHOW THAT I WAS A SPAYED STRAY, BUT I THINK I'M BEAUTIFUL ANYWAY.

COMICS



Comic by Oliver Quinn



PHOTOGRAPHY

Butterfly by Xander Geiersbach and Niagra Falls by Paula Felices



ABOUT NEWARK CENTER FOR CREATIVE LEARNING'S WRITING PROGRAM:

Above all else, writing is communication. If we think of what constitutes good writing, we think of a writer who has reached us with an idea or feeling, clearly, uniquely, expressively. The chief goal of the writing program at NCCL is to nurture a child's ability to communicate and develop his ideas in this way.

Many of us remember writing experiences in school where we handed in a piece of writing that the teacher saw for the first time, graded, made a few comments on, and handed back. What did we learn about writing? Probably, that writing is only an assignment and that the audience is often just the teacher.

At NCCL, we spend hours each week working with children throughout the crafting process. We listen, consult, ask questions, and praise children on their writing in one-on-one conferences. Kids share their writing with each other. We want children to become intimate with the process of writing as well as being proud of a finished product that will be shared with and read by a community.

We start by looking at writers who've reached us. What do we like about this passage or poem? How did the writer get her idea or feeling across so well? We point children's attention to subjects, words, styles, techniques, and elements that inspire us as writers across genres.

We give children the opportunity to write in many genres at NCCL. This allows children to experiment and find strengths as well as appreciate the breadth of writing. Projects include: poetry, journal writing,

stories, letters, reports, family history, ABC books, personal narrative, newspaper writing, essays, historical fiction, and vignettes. Since the beginning of the school, we've found it essential to give children the freedom of choice within these genres. What they write needs to be important and meaningful to them. How can you learn to invest yourself in and cultivate a piece of writing when you're not even interested in the subject you're writing about?

Writing for an audience adds to this sense of purpose. We begin with each other. Group I (K and 1st grade) students share their writing with classmates in a special "author's chair" and as the kids get older, they gradually learn how to support each other as a community of writers by offering constructive feedback and praise. The idea is that we're all part of this together and that we can learn from each other.

Ultimately, our audience is larger than the classroom. Sometimes our writing appears on the walls and hallways of our school. Often we go further, submitting work for publication or producing our own newspaper that we deliver to area businesses such as local barber shops and take-out food restaurants. Unlike many other subject areas, writing offers this big payoff and we relish it. More than any other part of the process, publishing allows kids to see themselves as writers and feel a sense of accomplishment.

There are times of course when we need to bring children's attention to the nuts and bolts of writing. When not done well, functions of writing like spelling, capitalization, punctuation, sentence

(continued on page 55)

(continued from page 54)

structure, and organization can interfere with communication. We approach each of these functions at a developmentally appropriate level. In Group 1, kids are often using invented spelling and learning to put spaces between words. They're just getting comfortable with these basic elements.

In Group 2 (2nd, 3rd and 4th grade), kids are learning to become more regular with spelling, capitalization and punctuation and are learning beginning paragraphing. They continue to smooth out these areas in Group 3 (5th and 6th grade) and begin to tackle organization, learning to see the whole rather than just the parts of their

writing. All of these elements continue as the children move into Group 4 (7th and 8th grade). They also learn more nuanced functions like the use of semi-colons.

By the time a child reaches Group 4, we want him to see himself as a writer with the habits of mind of a writer. We know if we encourage his strengths and support his struggles, he'll improve while he's with us. In the end though, we want him to become patient, flexible, thoughtful, and to challenge himself because these habits are what will allow him to grow in his writing abilities beyond NCCL. We encourage these habits of mind to help children develop into good writers, but of course, we nurture children in this way across all of our studies at NCCL.



NCCL SCHOOL

Newark Center for Creative Learning

"Educating and inspiring children since 1971"



Grades K-8,

11:1 student/
teacher ratio

401 Phillips Ave.
Newark

302 368-7772
NCCLschool.com

Discover the JOY of Learning!

Staff

Main Articles:

Entire Staff
Editor/Teacher - Sean Kerrane

Layout:

Zachary Lees
Alex Rash
Tyler Yates

Advertising:

Katie Buell-Fleming
Maude Ceruso
Marshall DeHaven
Natalie Freedman
Clayon Hansen
Andrew McDermott
Matthew Sharp
Nick Viscardo
Kate Minker

Reviews:

Becky Heinz
Cole Wood

Obituaries:

Ethan Irvin
Jack Mecca



Comics:

Jordan Jones
Olivia Quincy

Pet Adoptions:

Sally Lyell
Sophie Poindexter

Horoscopes:

Maya Brooks
Isabel Crowther

Advice:

Guen Geiersbach
Natalie Orga

Top Music:

Ethan Lewis

Photography:

Paula Felices
Xander Geiersbach

***The staff of *The Nautilus* would like to thank the interviewees, parents, printer (Terry Foreman), and advertisers for their support.**